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Director General Exp. Farm
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Vol. LIII.

LONDON, ONTARIO, OCTOBER 3, 1918.

No. 1358

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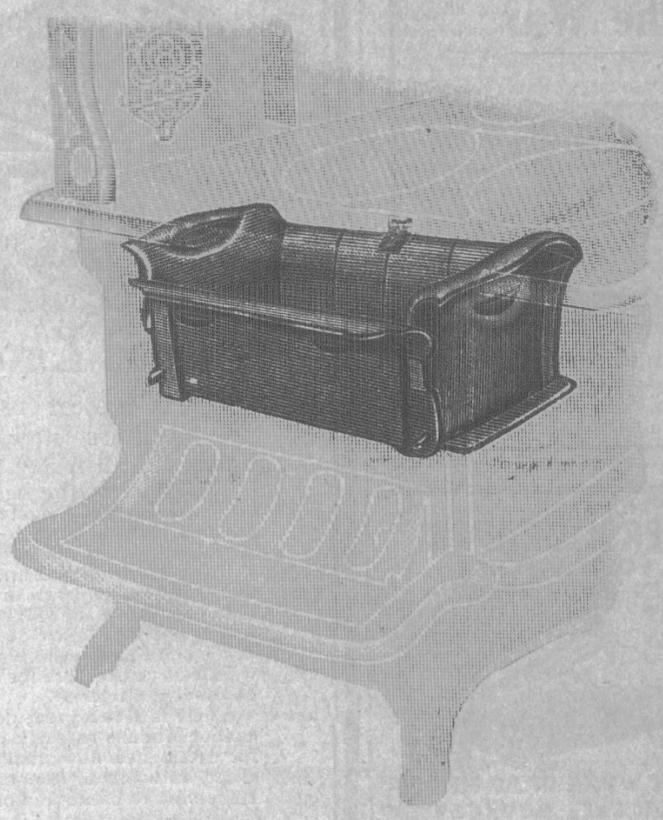
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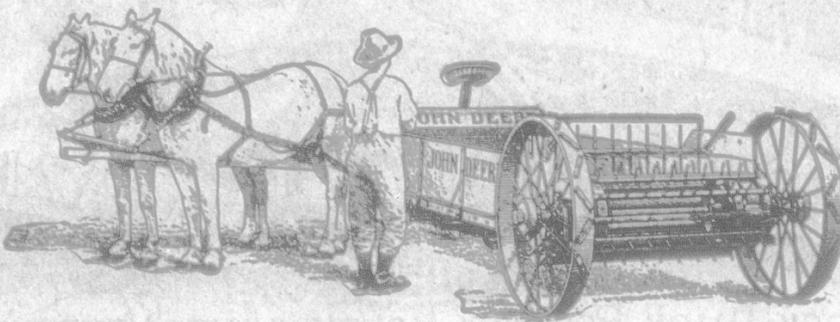
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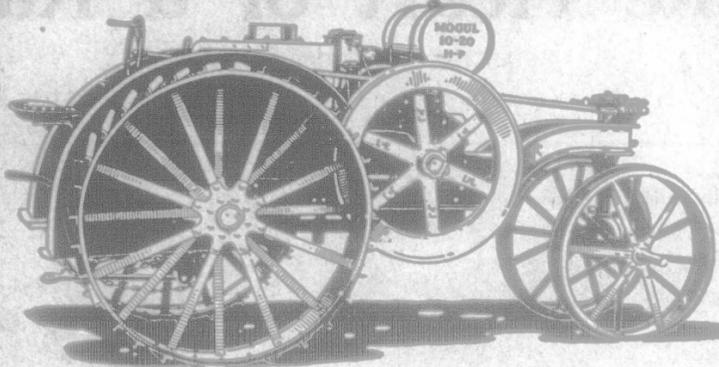
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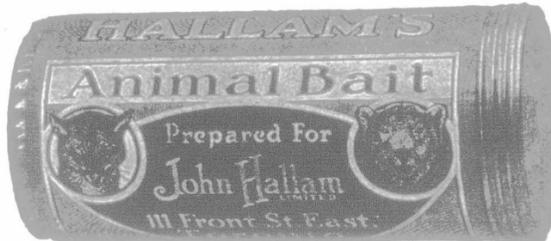
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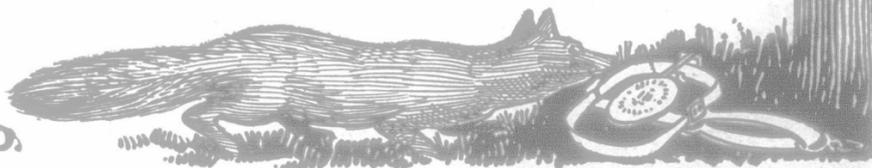
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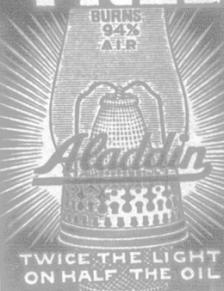
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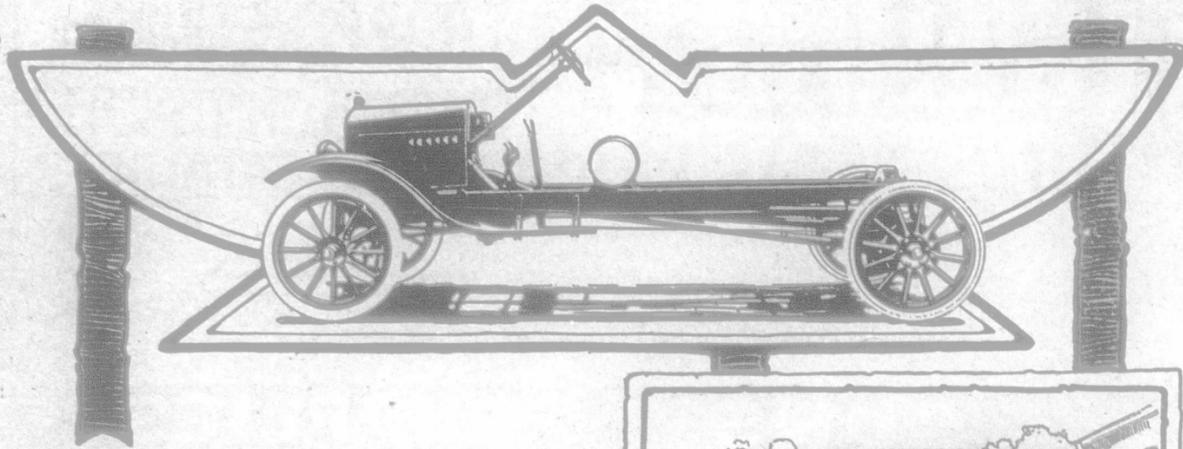
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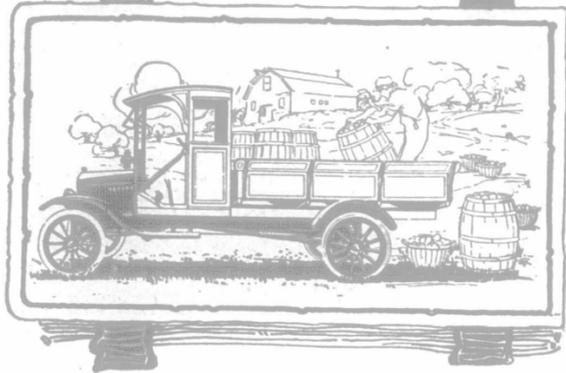
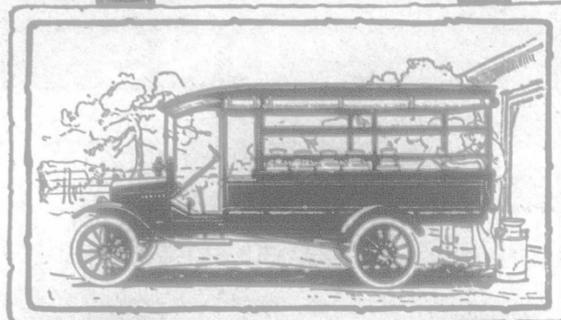
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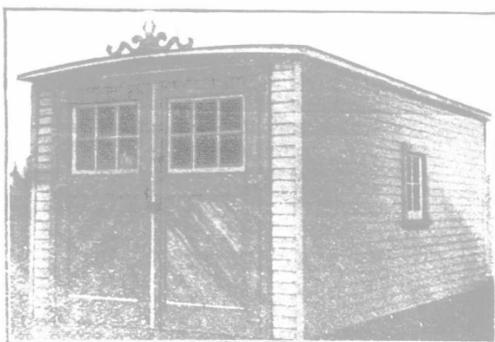
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LIII

LONDON, ONTARIO, OCTOBER 3, 1918.

1358

EDITORIAL.

Begin to put the stock ram in condition for the breeding season.

Think twice before allowing the cattle on the new seeding, even if feed is scarce.

Select the site for the root pit on a dry knoll, and if necessary provide artificial drainage.

Have the ewes in a gaining condition when mated with the ram. It will make a difference in the lamb crop.

Corn left standing in the fields made dollars this year after dates, when on former occasions, it was cut down by frost.

Those of the civilian population who have had so many excellent ideas as to how the war should be won seem now quite satisfied to leave it with Foch.

Saving the dollar means saving the labor of someone for war work. The production of unnecessary commodities simply takes labor from more useful occupations.

Prepare the stables for winter so they will be convenient, and so the high-priced feed will be put to good use on account of the live stock being in condition to respond.

The allied nations are now tuned for war, and the adoption of thrift principles has added greatly to the achievements of England and France, who have felt the strain most.

There is not much use of giving a lot of extra care and attention to the pullets this winter if they have not been well weeded out before being put into laying quarters. Now is the time for selection.

Apple buyers have not been over active so far this season, but prices have been good for the long-keeping winter sorts. Growers should be cautioned against lump selling. This has always been the bane of the apple industry.

Dairymen should not make the mistake this winter of carrying young stock through on too little feed. A steady gain of about one pound per day will be found most profitable in the long run, and this will require some concentrates in addition to corn silage and some dry roughage.

Canada is starting on a new era in railroading, and the reconstituted C. N. R. Board should, by all means, take a lesson from the past of the Intercolonial and avoid any recurrence of the practices which have long made it an argument against public ownership. The Directors have been successful business men, and if patronage and undue Government influence are not allowed to interfere, the reborn C.N.R. should develop into an asset to Canada.

There has not been much said lately about the "Unspeakable Turk," except that he has received a crushing defeat at the hands of the British force on the old battle grounds near Palestine. Turkish atrocities could only be duplicated by the Huns, and the two nations are fitting Allies. The one should be driven out of Europe altogether, and the other so chastened as to no longer constitute a menace to the safety and comfort of mankind.

Saving Gasoline.

In the majority of cases the request to conserve gasoline by refraining from Sunday motoring has met with a gratifying response. There are localities, no doubt, where the patriotic spirit is not so pronounced or where indifference is allowed to influence one's otherwise good judgment. However, the Canadian people as a whole have accepted this appeal in a reasonable way and have helped to conserve motor fuel for the more useful form of transportation that must be conducted beyond the seas. It is generally understood that petrol must be conserved, and while we are doing something to that end in a voluntary way, it is doubtful if the method which has been in vogue is the most equitable and efficient. If we must save gasoline, let's save it in the same way we have conserved white flour and other commodities much needed overseas. Furthermore, let us go about it so as to get the best results with the least annoyance and the least unfairness. A pleasure car can burn 50 gallons or more of gasoline from Monday morning till Saturday night without violating any law or even bringing upon the owner any measure of public ill-will. It is perfectly legitimate. On the other hand, a farmer busy in the fields during the same period draws forth unfavorable comment if he takes his car out on the Sabbath to attend church or other religious functions. The same is true regarding the man in the city, busy all week with the demands of business and with the evenings now short looks forward to Sunday as a day when he can conveniently take his family for a spin. Let us do this thing with the same degree of efficiency and in the same spirit as the boys are doing their job "over there." Strict rationing is the proper method by which gasoline should be conserved. If the conservation of gasoline must be continued, or if the bars are let down to put up at some future date, the rationing system should be instituted.

Start the Local Club Along Right Lines.

This is the season of the year to revive the local club, and a good way to start it off on a period of usefulness is to place through it your order for concentrates. It is not always good business for the club to go over the head of the local dealer, who may be an honest merchant, interested in the prosperity and development of the community. In many cases clubs are affiliated with a central association, and loyalty in instances such as this is a prime requisite to successful organization. However, farmers and other citizens in the one locality are often indebted to the local dealer for maintaining a place of business and affording the opportunity to get supplies on short notice. Furthermore, the local dealer frequently advances credit during the summer months, when the farm revenue is at a low ebb, and those who take advantage of this service are to a certain extent bound by honor to continue doing business at the same store, that is, if they have been treated fairly. There have been instances where farmers in some sections, remote from good markets, have been persistently and inexcusably "fleeced." Under such circumstances we would recommend a strong club with a good business manager who can sell produce on the best market and purchase supplies where prices and quality warrant, regardless of any local feeling that such action might create. Buying on credit is poor business. It would be far better to borrow the money at a reasonable rate of interest and then purchase supplies wherever one likes. We hold no brief for merchants or dealers, but we do like to see a healthy community spirit in every locality, as well as friendliness between all classes making up the population of the district, and its town or village where business is transacted.

If members favor the local club with only a half-hearted loyalty, it will always remain a weakling so long as it lives. When you organize decide what you

are organizing for, and determine at the start in what way the society is going to assist those associated with it. If the club is to become affiliated with a central, first ascertain what the requirements and regulations of the central will be, and once accepted, live up to them to the very letter of the law. The stick-together sentiment must get a deeper root-hold among farmers, and when any association or club is organized members should join with the determination to give it their whole-hearted support.

In this connection it might also be well to point out the inadvisability of cutting prices. By this we mean selling goods and supplies below the regular prevailing market price. A better form of business is to sell at ruling figures and then refund profits to the patrons of the club in proportion to the amount of business they do, after expenses have been met and ample allowances have been made for a reserve fund to carry the club or association over less prosperous periods. Start the club going this winter along right lines and make a study of co-operative methods. The Ontario Department of Agriculture has a Co-operation and Markets Branch; get in touch with it or the Department in whatever province you reside. If there is a desire to affiliate with some central organization, study the methods and regulations of the same and, if they appeal to your membership, join up and make the coming season one of the best yet experienced by agricultural organization in Canada.

Select the Sire With Your Needs in View.

There is a marked difference between selecting a sire and just buying one. In the latter case a breeder should be satisfied, and often is, if he gets a normal increase in his herd or flock, while the man who selects a new herd or flock header expects it to do him some good. He looks for improvement; he desires to go ahead. The breeding herd may be a trifle lacking in constitution; if so select a bull that is strong in the heart and is masculine enough to give some assurance that he will transmit the strength you are breeding for. Again, the breeding herd tending to coarseness, which frequently accompanies size, should be mated with a smooth, compact bull, excelling in quality; a compromise in this regard may bring about the desired results. There are dozens of defects in the females that may be remedied through the proper selection of a bull, and instances are not uncommon where the former sire stamped some undesirable characteristic on the young stuff which should be gotten rid of in the next generation. With more particular reference to dairy cattle, the selection of a sire affords a splendid opportunity for the improvement of the herd along the lines of production, and this is a very important factor in dairy cattle breeding. Individuality and backing of the right kind can be secured in the one animal, and any breeder who sets out to obtain a new herd header and does not pay attention to the requirements of his breeding females as regards type and conformation as well as the production, which all are looking for, allows a golden opportunity to pass.

Owing to the rapid increase which takes place in the woolled tribe the shepherd is in a position to alter the whole character of his ewe flock in a few short years; this change will be for good or for bad, just as good or bad judgment or the lack of judgment enter into the practice of mating. We have seen show flocks stand at the top one year and go down the next on account of the inferiority of the lambs due to an unwise cross. Type, size, conformation, quality, character of wool, constitution and general strength or vigor can be injured or improved by the influence of one ram. Surely it pays to select the flock header.

Swine are even more susceptible to the influence of the sire than are sheep, on account of their powers of

THE HORSE.

Stables Should be Well Lighted.

The fact that a large percentage of farm stables are poorly lighted is indisputable, and as a result horses are not as comfortable and free from disease as they otherwise would be. Sunlight is an essential to health in either man or beast. It purifies the air, destroys germs, hence is an excellent disinfectant and health-giver.

It is probable that poorly-lighted stables have a more marked effect upon the eyes than upon other organs. The eyes become accustomed to semi-darkness, and an animal that is kept in such a place can see fairly well, and if kept constantly under such conditions it is probable that his sight would remain practically uninjured. But the injury to the eyes arises from the extreme or violent changes from semi-darkness to bright light and vice versa. During the time he is in semi-darkness the muscles which contract and dilate the pupil act so as to dilate it, when, instead of being well-marked elliptical in form its shape approaches that of a sphere. The optic nerve in the meantime accommodates itself to circumstances, and sight is fairly good, but as soon as the animal is taken out of the stable into strong light the circular muscular fibres of the iris contract, thereby contracting the pupil. These frequent and violent changes have a tendency to weaken the eyes and, no doubt, are responsible for many cases of eye trouble.

Some claim that cataract is often due to this cause, but we are not of this opinion. Cataract is, in most cases, the result of repeated attacks of a constitutional periodic disease, known as periodic or specific ophthalmia, and we are of the opinion this disease will not be produced by usage, where the predisposition or hereditary tendency does not exist. At the same time such usage as has been noted, by weakening the eyes, may act as an exciting cause of the disease, the predisposition to which exists, and which, under more sanitary conditions, might not have become acute. Another disease of the eye which causes blindness, and is called "amaurosis," which consists in paralysis of the optic nerve, a disease in which at first little or no structural change of the eye can be observed except a dilated and spherical form of the pupil, may be induced by insufficient light.

The general health of the animal is also more or less affected by the degree of light or darkness in the stable, in which he spends several hours daily. Insufficient light in a stable is often the result of a desire on the part of the builder to have the building so constructed as to conserve heat. This is a mistake. If windows are properly constructed, and especially if double windows are used in cold weather, it does not follow that they will admit cold, and even though they may, a horse or other animal can endure a comparatively low temperature, provided the air is pure, the general surroundings dry, and sunlight freely admitted.

Few will dispute the fact that it is better to have a stable built especially for horses; one in which other classes of stock are not kept. This, of course, is in many cases inconvenient or impracticable, and we find the majority of modern farm buildings consist of a large barn on a stone or cement basement that affords stabling for all classes of stock. The habit of having the basement built on a hill side, hence largely under ground, has fortunately generally been discarded. A building where all compartments are under one roof certainly makes things more handy, and is more economical in many ways, even though the horse stable may not be as ideal as under other conditions. Where this type of building is erected special care should be taken to have stables, more particularly the horse compartment, well lighted, and, while we cannot have all particulars as well looked after as we can where we have a special building, we should endeavor to approach as nearly as possible to perfection.

Our ideal stable (so far as the comfort of the horses is concerned, but to some extent at the expense of convenience to the attendants) is one of sufficient width to have a row of stalls facing the wall on each side and a wide passage between the stalls. If space can be spared we would have a box stall for each horse, but this is generally too expensive. Whether the stalls be single or box there should be a small window in each, one that can be slid back into the wall in warm weather, and of sufficient height to require the horse to elevate his head in order to see out or protrude his nose. The windows admit the sun and light at all times, and when those on each side are open it creates a draft across the stable, which in warm weather is very grateful to the horse, and the draft is so high that it does not strike the body, which removes the danger of chill if the

weather should suddenly turn cold while the windows are open. The stable is well lighted at all times, and horses enjoy standing in stalls of this kind much more than when facing a dead wall. Even when facing dead walls, if the windows be plentiful and of the proper height behind them, they do not suffer from want of light. Of course, in arranging a horse stable in the basement of a barn, it is seldom, if ever, possible to construct it so that each horse will face a window, but we should do the best we can in this respect, and at all events have plenty of glass, even though it may be at the expense of a certain amount of heat. Horses appreciate sun and light, so let us supply them with as much as possible while tied in a stall or loose in a box.

WHIP.

LIVE STOCK.

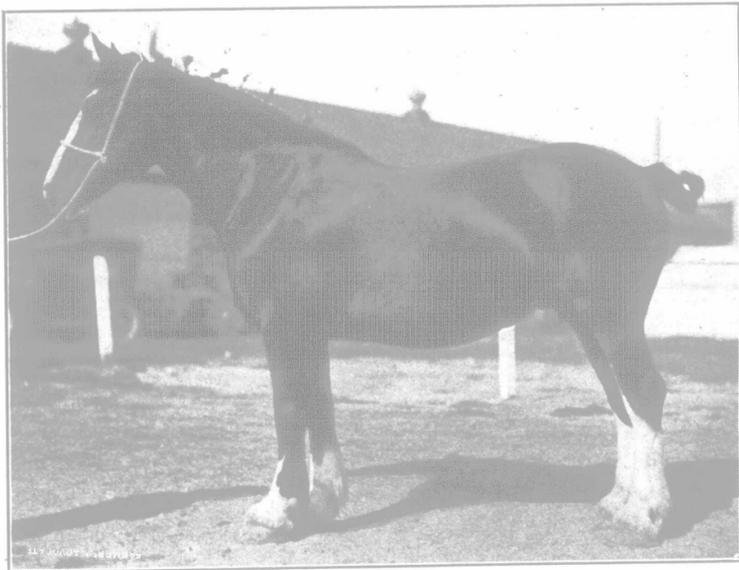
If remodelling or changing the stabling, consider permanency and convenience.

Don't be stingy with the feed; good stock are oftentimes spoiled for lack of proper rationing.

When putting the finishing touches on the hog, it is advisable to confine it to a well-bedded pen in preference to allowing it free range.

An extra window or two would be an advantage in many stables. Arrange to have them put in before the stock are stabled.

A little corn chop will help balance the ration of those calves getting skim-milk. Corn helps supply the fat which has been removed from the whole milk.



Ella Fleming.

Champion Clydesdale mare at London for A. Watson & Sons, Forest, Ont.

Besides possessing good breed type and character, the herd or flock header should have a strong constitution. Breeding animals with weak constitutions should not be retained.

Young stock require special attention in the way of feed and housing. If neglected they become stunted and as a result never make the quality of mature animals they would have with proper care.

Condition and appearance of the stock counts in the sale-ring. If contemplating having a sale this fall or winter it will mean many dollars to you to have the animals in good condition and well groomed.

Sweep down the cobwebs which have gathered in the stable during the summer, and then give the stable a coating of whitewash, to which has been added a little crude carbolic or other disinfectant. Whitewash makes the stable light, clean and healthy.

Comparatively few stockmen keep feed records and as a result are unable to say what it approximately costs to feed the herd or any member of the herd. Would it not be a good plan to make a study of feed costs in order to estimate the real profit obtained from the various feeding operations?

A little milk can advisedly be fed young pigs to supplement what they get from their dam. The milk can be placed in a shallow trough in one corner of the pen and the sow barred from getting it by tacking a couple of boards or scantling across the corner. It is a good plan to stir a little middlings into the milk, increasing the amount as the pigs grow older.

The Fall Litter.

During the gestation period the sow should be fed so that she will be in moderately good condition. If over-fat she is large and clumsy and her offspring may lack vitality. During the summer most sows have been on pasture, but they should be brought to the pen a few weeks before farrowing and given a little meal to accustom them to its use. Sudden changes in feeding should be avoided, consequently a few roots might advisedly be fed with the grain. Every care should be taken to avoid constipation, if the lives of the young pigs and the sow are to be saved. This trouble is liable to be brought on if the sow is taken directly from the pasture field and fed on an exclusive meal ration.

See that the farrowing pen is dry, well ventilated, and provided with a guard rail which will prevent the sow from lying against the partition and injuring the young pigs. Two-by-ten or twelve-inch plank fastened with the edge against the side of the pen makes a very good guard. This may be placed about ten inches above the floor. The large piggery does not make a satisfactory place for a farrowing pen. The small, portable pens, or colony houses, which are about 8 by 10 feet or possibly a little larger in size, have been found very satisfactory and may be used even in cold weather.

After farrowing care should be taken not to over-feed, but gradually increase the ration, taking ten days or two weeks to reach a full feed. The attendant must use judgment in the amount of feed given. The sow with a large litter will require more liberal feeding than if the litter were small. Oat chop and middlings make a very good ration for the sow. To this may be added roots or other green feed.

If the pigs seem a little weak, or the sow is restless, it is advisable for the attendant to remove them from the pen and place them in a box in which hot bricks or a hot water bottle are placed in the bottom. This will keep them warm. We have seen pigs, which were apparently dead, revived by placing them in water at a temperature of about 98 degrees and then rubbing them until dry. By a little care before and at farrowing time the lives of many young pigs might be saved.

Exercise is important with young pigs. Get them outdoors if the ground is dry and the weather fine. If they must be confined to the pen, they should be induced to take exercise. This may be done by scattering a little grain in the straw. When the pigs are about three weeks old they should have access to a separate pen in which is kept a small trough with a little skim-milk and middlings. In this way they soon learn to eat. If the young pigs have been well fed they should be ready to wean at six or seven weeks of age. Skim-milk and middlings make about the best feed for young pigs after being weaned. Middlings and finely-ground oats, mixed with skim-milk, also make an ideal ration. When skim-milk is not available it is well to leave the pigs with the sow a little longer. Only small quantities of feed should be given at a time and the trough cleaned regularly. Care should be taken not to over-feed the young and growing pigs. If the pig becomes stunted through indifferent feeding, or feeds which do not agree with it, it makes very poor gains. With the present high price of all feeds, a considerable saving can be made by adding roots to the ration, especially with growing pigs. On some farms there is an abundance of clover leaves at the edge of the mow. These may be scalded and fed to the pigs. No hard and fast rule regarding the amount of grain or other feeds to give a pig can be set down. The attendant must watch the pigs closely and give them enough but not too much feed, and feed so there will be a clean trough after each meal.

Shorthorn Cows in Record of Performance.

EDITOR "THE FARMER'S ADVOCATE":

The Canadian Record of Performance was opened to Shorthorns only a few years ago, the first certificate issued bearing the date of April 11, 1914. Owing to the fact that most Shorthorn breeders allow their cows to nurse their calves it could not be expected that the number of cows entered for the Record of Performance would compare with the numbers entered from a strictly dairy breed. A few breeders, however, have interested themselves in testing the milking qualities of their cows, and up to the present date 195 certificates of Performance have been issued to Shorthorns.

An analysis of the results shows the following: In all, 92 certificates have been issued for Mature cows: 24 for four-year-olds; 43 for three-year-olds; 37 for two-year-olds.

Mature records average	8,251 lbs. milk,	and 327 lbs. fat.
Four-year-olds	" 8,004 "	" " 320 "
Three-year-olds	" 6,649 "	" " 266 "
Two-year-olds	" 6,272 "	" " 258 "

Fifty-three records, 11 four-year-old records, 13 three-year-old records, and 9 two-year-old records have an average annual production of over 300 lbs. fat, and 15 mature records, 2 four-year-old records, and 2 three-year-old records average over 400 lbs. fat.

The highest Canadian Record is held by the cow Coquette 2nd = 107052, which produced 17,723 lbs. milk, and 636 lbs. fat, a very creditable record for a dairy cow of any breed.

Taking into consideration the fact that the Shorthorn is primarily a beef breed, and that the breeders of Dairy Shorthorns must keep in view their dual-purpose character and not sacrifice their value as beef producers in order to obtain milking records, the showing made by the breed is certainly a very creditable one, and proves beyond a doubt that the dual purpose animal is a possibility.

G. E. DAY.

Consider Conveniences and Permanency When Remodelling the Stable.

It will not be long until the stock will have to be stabled, and many of the stables are not in condition as yet for the animals. During October and early November considerable repairing, remodelling and changing will be done in order that the stock may be made comfortable during the cold winter months, and that time may be facilitated in feeding and choring. No matter how well built the stable may be, the wood-work is bound to decay in time, the mangers become loosened, the tie chains broken, the watering system leaky, etc. During the summer, when the stable is not in use, parts which break are not usually replaced, owing to the rush of other work. Thus, there is always a considerable amount of repairing to be done, even in the best regulated barn or stable.

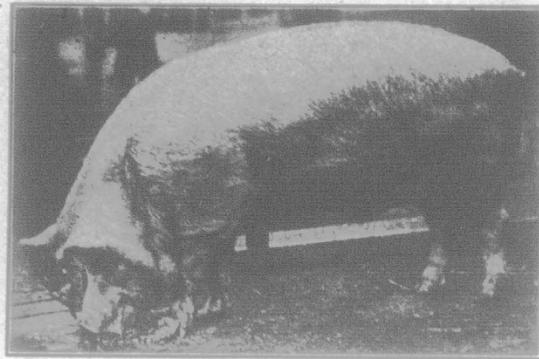
Before commencing to rearrange the stalls, or put in a new floor, it is advisable to visit stables which have been remodelled, or to consult plans of good stabling in order that one may make the most of the space which is available within the four walls. Convenience and permanency should ever be kept in mind. It may cost a trifle more for material to make a permanent job, but in the end it is much cheaper than merely making a makeshift of a repair. With the present scarcity of labor, convenience should be a great consideration. There are many stables in which many minutes are lost every day by the poor location of the feed-mixing room, the chop box, the water system, or an unsatisfactory arrangement of the stalls, or placing of the doors. Minutes soon run into hours, and hours to days. We recently heard one stockman say that "if he had changed a certain door soon after he had purchased his place, he would have saved six months of time." As it was, he had been going around the end of the barn to get into the stable for nigh on to thirty years before he took the time or the notion to cut a door in the side of the stable in a direct line with the house, which saved him approximately forty feet of distance to travel every time he went to and fro from house to barn. The accompanying plans show some convenient and well-arranged stables. Probably the size of the old barn will not permit of arranging the stable similar to that shown in any of the plans; however ideas may be gleaned which may be worked in to the space which you have available.

The arrangement of the stable will depend a good deal on the line of stock raising in which you are engaged. For dairying, where the mature animals must be tied, it is necessary to have stall room, and if possible a number of loose boxes for the calves. In every stable there should be a number of good-sized box stalls. They may be used for young calves, for cows at calving time, or for a sick animal. On some farms, where all classes of stock are kept, the hogs are kept under the same roof as the other stock. In such cases, the hog pen should be located at one end of the stable, and it is advisable to have a tight partition separating it from the cow or horse stable. On many farms the horse stable is separate from the cattle barn, but this cannot be arranged on all farms. Consequently, a horse stable may be placed across the end, as is shown in Fig. 1. Where many hogs are kept it is well to have a separate building for them if possible, but it may be connected with the main building by a passageway to prevent the feeder having to go out in the open when doing the chores.

In rearranging the stalls in an old stable one cannot always do as he wishes, owing to the placing of the posts which support the barn floor. These posts must

come in line with the mangers or rear of the stalls in order that there will be no blocking of the feed or rear passage. Where the stalls can be run lengthwise in the stable, more stock can, as a rule, be stabled than where the stalls run crosswise. It also makes it more convenient for the feed and litter carrier.

Many of the stables are altogether too dark for the welfare of the stock and for convenience in doing chores. One of the first changes which many should make is to enlarge some of the windows and possibly put in several new ones. Figures 1 and 2 show stables which are fairly well lighted. A very good rule to go by is to provide 6 to 8 square feet of glass per cow. A very good window frame to install is one with two equal-sized sashes, the one placed above the other, with the top one hinged to drop inward so as to give ventilation without causing a draft on the stock. Each sash might well contain six lights, 10 by 12 inches in size. This will give a deep window which will permit of the sunlight shining well into the interior of the stable.



Champion Yorkshire.

Champion Yorkshire boar at Canadian National for J. E. Brethour & Nephews, Burford, Ontario.

Good lighting makes it easier to do the chores quickly, and it is better for the animals than a dark stable. It might be necessary to put storm windows on the north side in the winter.

Ventilation is another point which should be considered in order to keep the stable dry, free from objectionable odors, and healthful. Without openings to permit the entrance of pure air, there is no circulation of the air in the stable, and as a result it becomes stagnant and heavy. The walls and floor become damp and as a result stock become affected with rheumatism and chills, as, like a person, animals housed in a damp atmosphere cannot withstand the cold as well as those confined in a comparatively cool but dry place. Dampness is believed to be the breeding ground of many contagious diseases. Animals will not do as well in a poorly-ventilated stable as they will in one where the air is reasonably dry and pure. There may be an exchange of air in the stable through the windows and doors, but where possible it is well to have some system whereby the fresh air is brought into the stable and the foul air drawn off. The warm air, which is lighter

than cold air, rises to the ceiling and contains more dampness than cool air. Carbondioxide and other stable gases are heavier than air, with the result that they settle near the floor. Thus, in order to give proper ventilation, a circulation of air must be set up. Fresh air intakes may be placed at intervals along the wall, bringing the fresh air in near the floor, and the outlets may be placed in the ceiling near the centre of the stable to draw off the foul air. These outlets should run to the peak of the barn and should be about two feet square. These outlets should be made of two-ply of one-inch matched lumber with a ply of paper between in order that the cold air in the barn will not cause the moisture from the stable to condense.

The wooden floor soon decays and makes it very awkward for cleaning the stables. Concrete if properly put in, will make practically a permanent floor, and one which is fairly easily kept clean. Objections have been raised; for instance, the cement is cold and hard for cattle to lie on. This may be overcome by a liberal use of straw. Some object to concrete owing to it being slippery when wet. However, the passageway may be made with a slightly roughened surface, and it will not be much more slippery than a wooden floor. When putting down a concrete floor, the idea is that it will stay there for many years. Consequently, considerable time should be spent on planning the lay-out of the stable, because once it is finished it will not be easy or economical to change the lay-out. Where the cattle are tied a 6-foot stall will give room for two fairly good-sized cattle. Three and a half feet is needed for a single stall. In arranging the depth of stalls some stockmen plan to start with a deep stall at one end and gradually taper down to a shorter stall at the other end, so that the different sized cattle may be accommodated. Five feet from manger to gutter is a very good depth of stall. The gutter should be about fifteen inches wide, but we do not like to have it too deep. From five to seven feet should be allowed for rear passage. While having the rear passage slope to the gutter facilitates cleaning the stable, there is a little more danger of the cattle slipping than where a square gutter is built. For drainage purposes the stall should be at least one inch lower at the back than at the front.

There are a number of different styles of mangers in use. The rectangular kind, about twenty inches wide, fifteen inches high facing the cattle and about two and a half feet high at the feed passage is very satisfactory. The hay and grain are fed in one manger, with practically no waste. The old plan of having a high rack for hay is being abandoned. Not only was it more difficult to feed the hay, but these racks tended to darken the stable. The cement manger is being used in place of wood, and some are using cement stall partitions in place of the wood or iron. We like a separate manger for each animal, so that one may be fed a little differently from the other without being robbed of its feed by its stablemate. The system of having a shallow manger opening right into the feed passage makes it very handy for cleaning the manger, but it is very difficult to keep one animal from robbing the other. Stanchions are coming into use on both beef and dairy farms, but the old system of tying by chain attached either to the side of the stall or from the centre gives an animal more freedom.

Where possible to have a water system, the water may be piped through the stable so that the stock may drink at will. The individual water buckets are preferred by many, but the double bucket installed

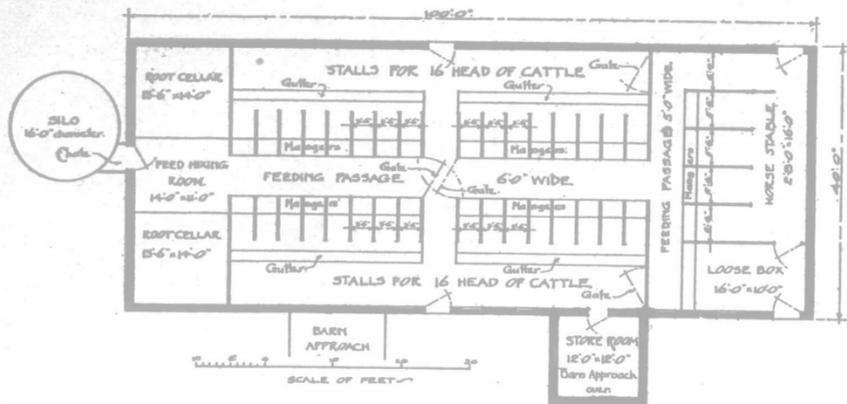


Fig. 1—A Conveniently Located Feed Room is Important.

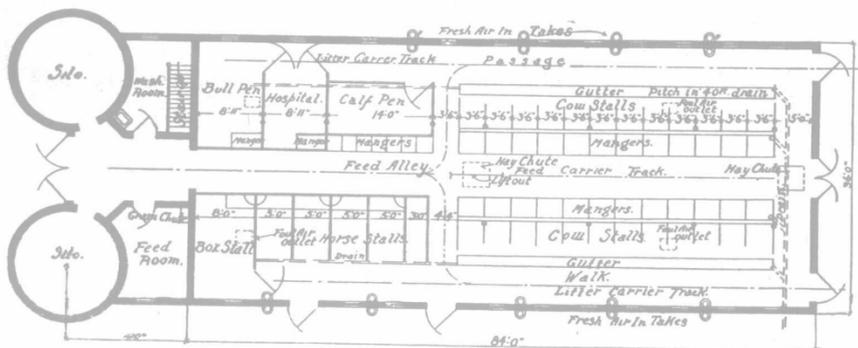


Fig. 3—A Well-planned Stable.

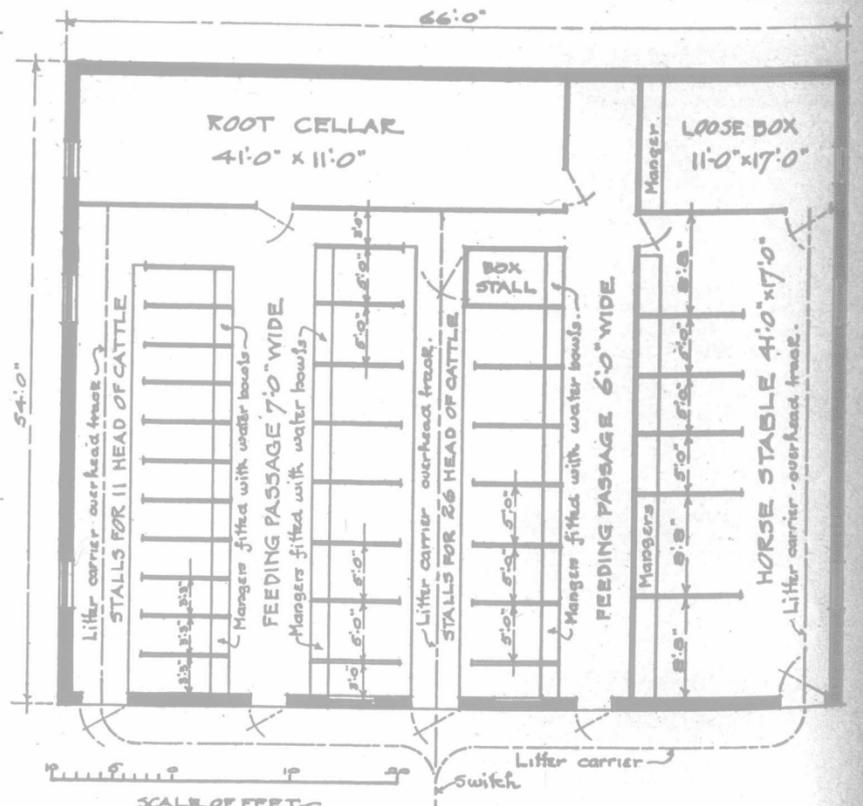


Fig. 2—A Very Good Lay-out for a Wide Barn.

ling

and contains more side and other stable the result that they order to give proper be set up. Fresh valves along the wall, door, and the outlets the centre of the these outlets should be about two made of two ply of paper between will not cause the

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system, the water stable so that the dual water buckets e bucket installed

in the partition between the stalls is possibly more economical and will mean considerably less piping and valves to look after. The iron buckets are in common use. Where cement stall partitions are used we have seen the supply pipe brought up through the partition to the water bowl, which is built of concrete and forms a part of the partition. These bowls are not hard to construct at the time of putting in the concrete partitions. Wooden or metal troughs may run the full length of the stable and be placed just in front of the stock. The chief objection to this is the danger of spreading disease. The height of water in the troughs or bowls is usually regulated by a float placed in a box at one end of the stable. Where the well is a considerable distance from the barn, the water may be pumped in to a large supply tank by a windmill or gasoline engine. If the well is not too deep a suction pump may be placed in the stable and the water drawn in. At any rate, water should be handy to the stable so the stock will not have to go any great distance for water during the cold weather. Once a day watering is scarcely enough, even in the winter time.

It is a good plan to mix feed, that is silage, cut straw and roots. The one lends palatability to the other. Figure 1 shows a very satisfactory arrangement. The silo is at the end of the barn, and the feed mixing-room is in between two stalls used for root cellar. Once the feed is mixed it is in a direct line with the feed passage, and can be given to the cattle with the least number of steps. Figure 3 shows an arrangement which is somewhat similar, with the feed-carrier running from the feed-room down in front of the stalls. In both of these there is sufficient room for grain boxes so that the grain is handy for feeding. The hay and straw chutes should also be arranged so as to save time in feeding. In many barns the hay and straw are first thrown from the mow to the floor and then pushed through a trap hole to the stable. By building a chute from the stable up to the beam of the barn, both hay and straw may be put direct to the stable with one handling.

In Figures 1 and 3 the stock face the centre of the stable, which is, as a rule, considered to be a better arrangement than having them face the wall. In Figure 2 there is a slightly different arrangement with the stalls, but for the width of barn it is a very good lay-out. The root cellar is conveniently located with a door leading to each feed passage.

The litter and feed carriers are labor savers. They take a good deal of heavy lifting out of the chores. Unless the sills in the stable are particularly low, practically every stable lends itself to the installing of the carrier. The litter carrier is possibly a greater labor saver than the feed carrier, although the latter is very handy.

As a guide in laying out the stable, we might say that the following width of passage, manger, etc., proves very satisfactory. Six feet for feed passage, twenty inches for the manger, five feet for stall, fifteen to eighteen

inches for gutter, and from five to seven feet for rear passage. A barn thirty-four feet wide should accommodate two rows of cattle. If forty feet wide a row of calf stalls could be put along one side, which are very convenient; if forty-five feet wide, a row of box stalls could be put along one side. For horses it would require a little wider manger, about a nine-foot stall, five feet wide, and it is advisable to have a good wide rear passage. In mixing the concrete, one part cement to eight parts good gravel will make a solid floor. The same strength can be used for the building of the mangers.

In Figure 3 there is a stall marked "hospital." While this may be but an ordinary box stall, it is well to provide for such in every stable and keep it for sick animals only. It might be well to have it boarded off entirely from the remainder of the stable so that an animal suffering from any disease would be less annoyed by the other stock than if in the open stable. This stall should be regularly cleaned and disinfected so as to avoid danger of infection from it.

The illustrations or plans, while not showing perfect stabling, may furnish a few ideas which may help some



Lancaster Lord.

Senior and grand champion Shorthorn bull at Toronto for J. G. Barron, Carberry, Man.

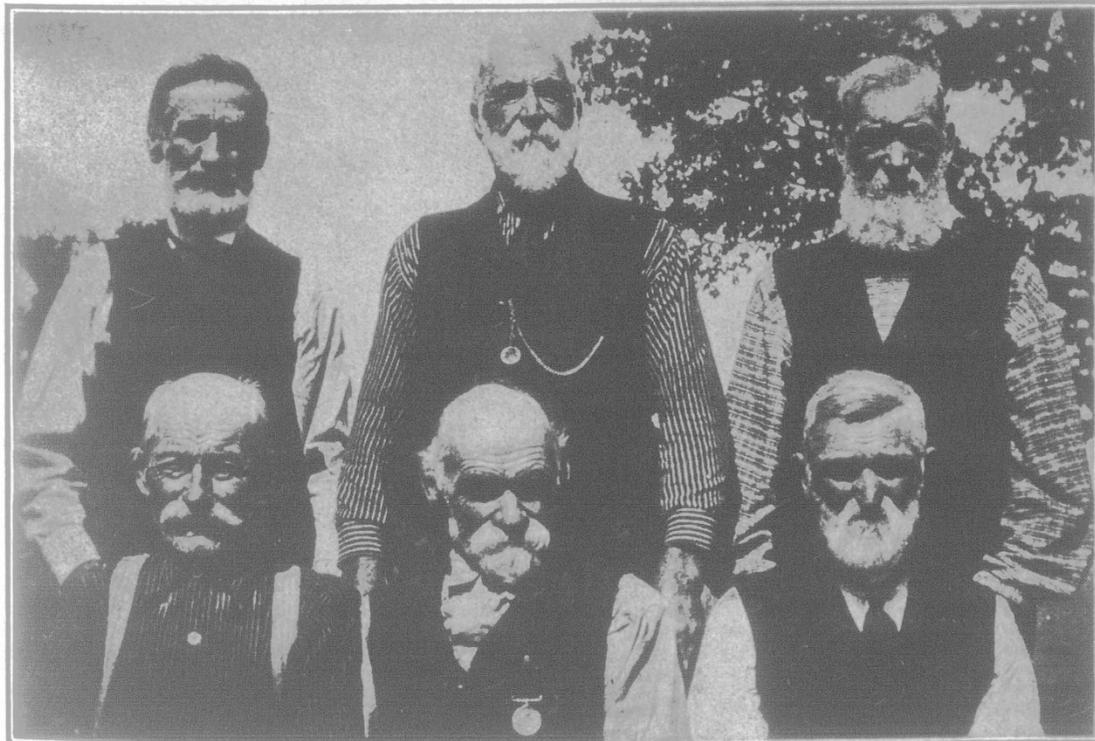
who contemplate remodeling their stables this fall. Plenty of light, convenience, and permanency should ever be kept in mind.

THE FARM.

A Group of Peel County Veterans.

EDITOR "THE FARMER'S ADVOCATE":

The accompanying group of veteran farmers, recently photographed on the farm of Samuel J. Wolfe, Peel County, Ontario, is typical of the brain and brawn which has helped to make Ontario the banner province of the Dominion. These gentlemen, most of whom are retired farmers, like scores of other patriotic Canadians, since the war began, have jumped into the breach "on the second line of defence," as Margaret Slattery in her recent book aptly puts it, and have done valiant



Some Agricultural Veterans Who Again Did Their Bit in 1918.

service in helping to "keep the home fires burning." The six old-timers are practically all neighbors, residing within a radius of two-and-a-half-miles of Streetsville. They have just finished harvesting, each helping sons or neighbors, and when the writer turned his camera on them a few weeks ago, he classed them all in Category A-one, physically fit as a fiddle. They are, however, somewhat past military age, as their average is within a few months of eighty years.

John Ross (left corner, standing) lives retired with his wife in Streetsville and was born 79 years ago, on the farm now occupied by his son, James B. Ross, where three generations of the Rosses have lived. James Ross is a successful breeder of pure-bred cattle and frequently exhibits at the local fairs.

Nathaniel Steen (centre, standing) was born near Meadowvale, 77 years ago and now, with his wife, lives retired near Streetsville. For the greater part of his life he farmed in Trafalgar Township. His son Wm. E. W. Steen is also a cattle fancier and a very successful breeder in the pure-bred line.

Nathaniel Elliott (right corner, standing) was born in Grey County 79 years ago, but has lived almost his entire life in the Township of Toronto. He resides with his son, James N. Elliott, a progressive farmer and honey producer.

Jacob Boyce (left corner, sitting) has farmed with S. Wolfe for the major part of the past five years, though his home is in West Toronto. He was born in Frontenac County 82 years ago last August. He ploughed fourteen acres of summer fallow this season and did his full share of all the harvest work.

The central figure (sitting) is Corporal Samuel Richey, a native of the County of Monaghan, Ireland. He came to Canada 65 years ago, and for the past 38 years has farmed in Toronto Township. He is a veteran of 1866, and will (D. V.) reach his eightieth birthday on Hallowe'en. The remaining member of the sextette is Eddy Treanor, born at Meadowvale 82 years ago, having spent his entire life in Toronto Township, residing now with his son, Martyn.

In conclusion, we cannot forego the pleasure of venturing the assertion, that the vigor of body and the splendid condition of natural faculties possessed by these tillers of the soil, is very remarkable, and is, doubtless, the result of lives carefully lived in close contact with nature. J. H. BEAMISH.

Crossing the Atlantic in War Time.

BY JOHN WELD.

It has been the wonder of the world that the British Admiralty could transport such enormous armies of men across the seas since war began, with so little loss of life, while the submarine seemed to be lurking everywhere, intent on destruction, and without any regard whatsoever for the generally accepted rules of modern warfare. It is reported at time of writing that the United States has over 1,750,000 men on all fronts, and it is doing no injustice to the wonderful war spirit of that Republic or to the preparations they have made on land or sea to state that the success they have achieved in the matter of ocean transportation is in a very large measure due to the remarkable efficiency and strength of the British Admiralty. The Canadian boys in uniform have crossed and re-crossed. New Zealand and Australia can say the same regarding their troops; the warriors from India have gone to and fro across the seas, but in all these sister Dominions there exists the feeling that in spite of any cowardly craft in which the Germans may lurk beneath the waves, the British fleet still commands the highways of the ocean. Imbued with this feeling of confidence, a number of Canadian Pressmen accepted the invitation of the British Ministry of Information to visit the war zone, and as one of that party the writer experienced the dangers as well as the pleasures of an ocean voyage in war time. I shall attempt to set down something regarding the precautions taken by the Admiralty to safely transport the troops and materials from this Continent to the scene of war and conflict. My experiences were largely those of a civilian, but all passengers travel under military rule, the same regulations governing the conduct and safety of civilians and soldiers alike.

The nature of our errand lessened the difficulties in meeting the requirements of the passport and customs regulations, but when we arrived at the port of departure we began to have some conception of army and Admiralty rules. The great piers were separated from the curious and inquisitive outside world by barb-wire fences. There were plenty of entrances to the war zone within, but an armed sentinel at each demanded of all their reasons for desiring admission. Once inside the freight sheds the passports are closely examined and the credentials of the would-be voyager must be satisfactory before he is allowed to proceed to the ship's side. Here the baggage is closely examined and, if passed, the owner undergoes a ship's observation examination, after which he is assigned to his cabin where he answers still more questions. All this while one is probably observed at close range by what appears like a fellow passenger, but who is really a "plain-clothes" man much interested in your personal character and intentions. These are the various steps a civilian must take to get abroad an ocean going ship.

While we were going abroad thousands of United States men and their officers were waiting to embark. Y. M. C. A. workers were performing their duties on the docks, serving buns, coffee and cigarettes. The ship on which we made the voyage carried over two thousand of these troopers, and as we came into close contact with them we could not help but admire their manners, physique, spirit and determination. There is no better type of men in uniform to-day than the stalwart sons

ROSE BOX 11'-0" x 17'-0"

HORSE STABLE 4'-0" x 17'-0" Litter carrier - overhead frame.

of Uncle Sam, who are going in millions to the relief of France and Belgium. Between thirty-five and forty thousand of these warriors crossed the ocean under the same convoy and protection as the ship enjoyed on which the Canadian Press party were conveyed.

In the morning a shrill whistle from our transport warned the river craft that we were about to move. All night the wires had been busy making arrangement for our departure and ascertaining the safest route, for the ships carrying in all somewhere between forty and fifty thousand human lives. There were few farewells for the coming and going of these ocean craft are known to very few. As we neared the sea we were joined by eleven other transports, our convoys began to take up their positions, two hydroplanes and an aluminum dirigible appeared in the air above, and we were off. The various ships making up the party were arranged in definite order about one-half mile apart, and no matter how dark or foggy the night our companion vessels appeared in approximately the same place in the morning as they occupied the previous evening when ship orders cleared us from the decks. Cruisers, torpedo-boat destroyers and submarine chasers cast a protecting arm about the group of transports and we moved along slowly as the speed of the slowest ship was the maximum rate at which we could travel.

We were introduced to our life belts at the start and these we were obliged to have constantly with us. They were not uncomfortable, however, being somewhat different from the bulky, cumbersome type common on all ships in pre-war days. Those now in use somewhat resemble a jacket and have a collar fitting half decently about the neck. Everyone, except the military guard, including about 150 men, was ordered off the decks at eight o'clock p.m. The ship was well lighted inside, but all port holes and openings were so effectively sealed that no light leaked out to betray our presence on the deep. We were also given strict orders not to throw anything overboard, not even a match, for such fragment might furnish evidence of some passing ship to any hostile craft in search of prey. Boat drills made us acquainted with the whereabouts of the particular life-boats to which we were assigned and everyone had to practice getting quickly to his boat, there to await the captain's orders. This daily drill and discipline aboard ship is responsible, no doubt, for the little time taken in leaving sinking vessels.

During the second night out our torpedo-boat destroyers and submarine chasers disappeared. They are small craft and unaccustomed to long voyages. Still with ample protection we took our way Eastward, keeping well to the North. Dominion Day and the Fourth of July were fittingly celebrated, and the time passed pleasantly without any experiences of a dangerous nature known to us.

At about nine o'clock in the morning of July 8 we were met by a number of British destroyers who encircled our flotilla and began their relentless search for submarines. At noon the American cruiser bade us adieu and turned her bow Westward, no doubt to hasten home that she might assist some other convoy soon to follow us across the Atlantic. Some of the party slept with their clothes on that night for we were in the most dangerous sea zone known, where submarines work in numbers. Next day we were in the Irish Sea, a very hazardous part of the water adjoining the British Isles. Here we could count twenty-seven destroyers, four chasers, two dirigibles, and there were thirty-nine ships in sight. As we neared the coast of Scotland several large vessels altered their course and steamed up the Clyde with their valuable cargoes. After the narrows had been passed and all down through the Irish Sea, mine sweepers could be seen in all directions searching and sweeping the sea. On the tenth of July we landed at Liverpool much impressed with Britain's defence against the submarine, which had once again stood the test and had brought to her shores over 40,000 human beings and enormous supplies of raw material, munitions and food. In this voyage we saw depicted the futility of Germany's under-sea campaign and the failure of such effort to starve England and bring her to her knees.

The Agricultural College.

EDITOR "THE FARMER'S ADVOCATE":

The agricultural colleges of both Canada and the United States had a long, hard struggle in order to win a place in the sun of public opinion. Having won that place, there is now great danger of going to the other extreme, and of the public thinking that all is well at the agricultural colleges of America.

Frank A. Waugh, of the Massachusetts Agricultural College, has written a book, which for candor, and evidences of deep thought with reference to problems in connection with agricultural colleges, is delightfully refreshing after reading the "slush" which has been served up to the public during recent years, on this subject.

In his preface the Author says, "Nearly all the books dealing with college problems have been written by college presidents. They are good fellows, those college presidents, and their point of view is important. But the teacher's point of view is important too. The teacher is the man who stands closest to the real college problem—the problem of teaching."

The foregoing touches on one of the vital questions relating to the future development of agricultural colleges. The time has gone by when the president of an agricultural college can be considered as the whole brains of the institution. No longer can members of the staff be treated as a lot of schoolboys who "kow tow" to the head of the college as if he were some god. The cause for this trouble lies in the fact that practically none but the president can get the ear of those in authority. The Minister of Agriculture is usually too busy

with politics to give any attention to details in connection with college matters, hence relies almost wholly on the head of an institution for information which he ought to obtain at first hand. Speaking from nearly twenty-eight years experience in college work, I can recall but one instance where the Minister of Agriculture (and I have served under five) consulted with me regarding any matter concerning my department. In this instance, the "Boss" effectively squelched the Minister's apparent intentions.

Under "Purpose and Ideals" the Author says: "The first of these is the purpose of vocational training: the second is the purpose of personal human culture."

With reference to "College Organization," we read: "It is not without significance that the great German universities have attained their world-wide influence with an organization in which no such officer as a college president is known, while the universities of Great Britain are almost equally innocent of any central executive authority. It is fair to guess that the monarchical form of university government has reached its zenith in America, and that from the present it will gradually decline."

Regarding the "Faculty" he says: "Traditionally the faculty is the governing body of the college and the embodiment of all power. Practically it is a negligible congress of unorganized whims and prejudices." There are two reasons for this—first, each member of the faculty sees practically nothing outside his own department and seldom has a thought of the college as a whole; and the second reason is that most members are so afraid of "losing their jobs" if they should dare to interfere with the prerogatives of the Monarch of the institution, that they are usually as "meek as Moses" on college questions, which by right should be decided by the Faculty as a whole, whose combined wisdom may be presumed to be greater than that of a part. The Author suggests small committees of the faculty who would decide on routine matters.



In An English Barnyard.

With reference to buildings,—"The most obvious and ghastly mistakes in most colleges are advertised in brick and mortar." This statement is particularly true with reference to the "O. A. C.," known and loved by men in every part of the civilized world. The original building is built of Guelph limestone. Instead of continuing with this material for all the buildings, nearly every kind of building material known to contractors may be seen on the campus, while the architectural layout would make an architect weep. It is to be regretted that a master hand had not been placed in control of the building arrangements at the Guelph College. We may expect a continuation of the past hideous building policy unless there be a radical change before any further buildings are erected.

Speaking further of buildings: "In all probability the future will show that in the last decade we have erred in building too large. Our typical teaching building is an architectural hybrid between a shirt factory and a Carnegie library. Looking at our dormitories a visitor would be wholly uncertain whether this is a college, a lunatic asylum, or a home for inebriates.—Certainly college students ought to live in a more human, home-like way during these most critical years of all. It is a well-known scandal that some agricultural colleges have provided better for their pigs than for their pupils."

His ideal is outlined as follows: "Picturing the physical college as a whole, I like to see it as a model village, made up of small, comfortable, homelike, detached buildings, some for residence, some for business, some for work, some for social greeting, recreation and worship. All should be simple, dignified, democratic and suited to the day's work."

His conclusions are: "Emphasis must not be placed on buildings or equipment, but upon teachers. Buildings and equipment are only incidentals, and instead of compensating for any lack of human ability they only make more apparent the deficiencies of poor instructors."

Regarding college courses, he says the two-year and the four-year courses should be wholly different—"To

make up a two-year program, along the lines of the four-year work is an educational solecism and hardly excusable." Of short courses—"The first thing to be done to make short courses effective is to place their management in the hands of a special executive officer. Separate teachers are also greatly needed for the short courses. The common custom of piling the short-course work on to the long-course teachers is burdensome to the teachers and wholly unfair to the pupils." We presume by "pupils" the Author includes the regular course students, who are the chief ones to suffer by an invasion of short course students, known in college phrase as "Shorthorns."

OF DEPARTMENTS.—"It is much better to have a few departments well manned, well equipped, well administered, than to have many departments undermanned, half equipped, and heedlessly administered."

With reference to teaching—"The whole theory of agricultural teaching has changed in recent times. At first the intention was to teach 'practical' farming; then came the idea of teaching 'bookfarming'; there followed the ideal of agriculture as a science, to be taught as a science; there is now emerging the ideal of agriculture as a profession, to be taught as a body of technic. . . . Science is not and never has been a practicable foundation for agricultural teaching. Science rather offers detached explanations of sundry observations in agriculture, and may become the correlating principle in agricultural practice. In either role it should follow agriculture in the curriculum."

OF TEACHERS.—"Agricultural teachers are lamentably weak on general methods of teaching. Not one in a hundred has ever had the slightest training in pedagogic methods or has been told the first principles of the teaching art." How true this is. It is an absurdity to expect a man or woman who graduates this May or June, to take up teaching work the following autumn, if they have had no previous experience or training as a teacher. The writer well remembers his first five years

as a lecturer at the O. A. C. They were years of sorrow and failure to a large extent, chiefly because he knew practically nothing about teaching methods. Every man and woman appointed on a college staff as lecturer ought to be required to take a course in pedagogics.

METHODS OF TEACHING.—"The lecture course is beyond all comparison the laziest and least effective method of teaching ever invented. Professional field camps offer one of the best methods in sight for technical instruction in agricultural and horticultural subjects. The teacher must know his subject—know how to teach—but most of all, that he have a strong, winning personality."

THE EXPERIMENT STATION.—"At practically all the agricultural colleges in America there is an experiment station but not all the experiment stations have an agricultural college in connection with them. No doubt

the station feature has done much to make the agricultural college popular, but now there is danger of the college overshadowing the station. The time has come when these two phases of agricultural advancement should be more sharply differentiated. A good deal of time and public money is no doubt wasted by college teachers who are able to give but part time and indifferent superintendence to experimental and research work. It is impossible for a man who is teaching for eight or nine months of the year to give the necessary time to investigations, hence there should be some officer who would, in a general way, supervise all experiments and research of the station connected with an agricultural college and have specialists under him in each department who are specially trained men and who do little or no teaching. These men should be well-qualified for short-course teachers as they are studying problems of particular interest to practical men. The Author says of these: "Men for station work should be educated, yet deeply experienced in some specialty. They must be patient, reliable investigators, rather than popular, attractive expositors."

He further says: "The usual departmental type of organization is of doubtful utility in the experiment station. In general it would seem better to organize the research work around definite problems. . . . Careful study ought to be made of station publications with a view to reducing their quantity and improving their quality."

SUMMER VACATIONS are, "an anomaly and an absurdity in an agricultural college, and should be immediately, eternally, and universally abandoned."

The foregoing are but a few of many topics which are discussed in a frank, intelligent manner by one who evidently knows what he is writing about. We commend the book to all those engaged in, or are interested in, college and experiment station work from an agricultural viewpoint.

H. H. DEAN.

Automobiles, Farm Machinery and Farm Motors.

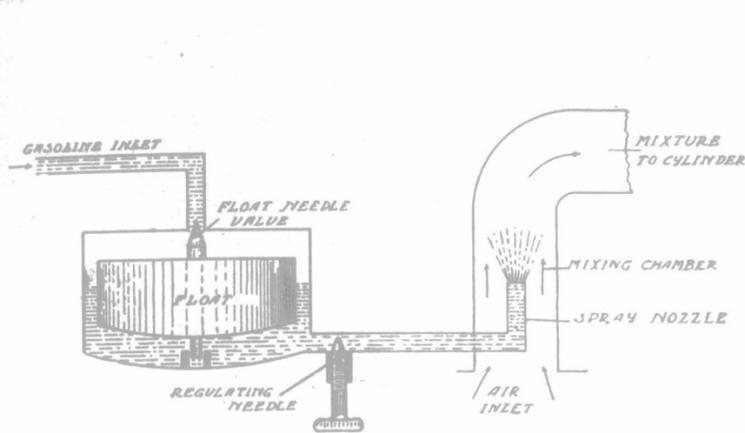


Fig. 1.

Carburetion.

BY PROF. W. H. DAY.

Since the fuel requires air mixed with it for combustion, there must of necessity be a part of the engine devoted to this purpose. The simpler forms are called "mixers," the more complicated carbureters, though the latter term, from its derivation is applicable to any device for mixing carbon or hydrocarbons with air. In fact, carbureter is derived from the word carbon—gasoline and oils are largely composed of this element.

Gravity-Float Feed.

Figure 1 shows a simple form of mixer. From the storage tank the gasoline flows by gravity through the inlet pipe into the chamber containing the float. As the chamber fills the float rises, and forces the needle into the pipe, thus closing it and stopping the flow of gasoline from the tank. The float and spray nozzle are so arranged that the float needle valve closes when the surface of the liquid is just level with the nozzle, or perhaps a shade below it. On the suction or intake stroke the engine draws air rapidly through the air inlet. This in turn draws some gasoline out of the nozzle, the amount of which may be varied by adjusting the regulating needle. The wider open the needle the greater the charge, and vice versa. As each charge is drawn from the chamber the float is lowered a tiny bit, and this allows another charge to come from the tank to the feed chamber. This is known as the gravity float feed. The float is usually made of cork coated with shellac. Sometimes after long use the coating is destroyed, allowing the gasoline to soak into the cork and thus become water-logged or rather gasoline-logged. In this condition the float does not ride high enough to close the needle valve until the surface of the liquid is level with the spray nozzle or above it, and consequently the gasoline runs out of the nozzle continuously, and drops down through the air inlet. This is known as "flooding." It makes the mixture so rich that it will not burn at all, and the engine will not even start, just giving two or three weak explosions. It is also sometimes caused by having the regulating needle too far open. Flooding gives beginners more trouble than perhaps any other single cause. Remedies will be discussed later.

The spray nozzle is very important. Gasoline will not burn until it is vaporized. The air rushing past the nozzle tears the gasoline into a very fine spray, and this aids evaporation, both in the mixing chamber and in the cylinder later on—the finer the spray the more rapid and complete the vaporization. Hence in all mixers and carbureters great attention is paid to this feature. It is found that if the air intake is narrowed down just at the nozzle the velocity of the air at this point is greatly increased, and this in turn aids in producing fine spray. This narrow part is called the "venturi" or venturi tube. More air will pass through a venturi tube in a given time than through a straight tube the same size as the narrow part.

Pump Feeds.

Sometimes the gasoline tank is located in the base of the engine and a pump used to elevate the fuel. In this case a different type of mixer is required. This is shown in figure 2. The feed chamber instead of having a float to control the level of the fuel has an overflow pipe which leads back to the storage tank, this overflow being a shade below the level of the spray nozzle. It will be seen that although the control in this case differs from that in the former yet the principle is the same, viz., having a small supply of gasoline in a feed chamber connected with a spray nozzle, and with a regulating needle to control the quantity that may pass through the nozzle at each charge.

Fuel Requirements.

The fuel requirements of an engine vary with the load placed upon it. At full load it must be supplied with all the fuel it can use economically, at half load, with half as much, approximately, and at quarter load with one-quarter fuel, and so on. There are two ways in which the quantity of fuel used may be varied, first the "hit-and-miss" method, and secondly, the "throttling" method.

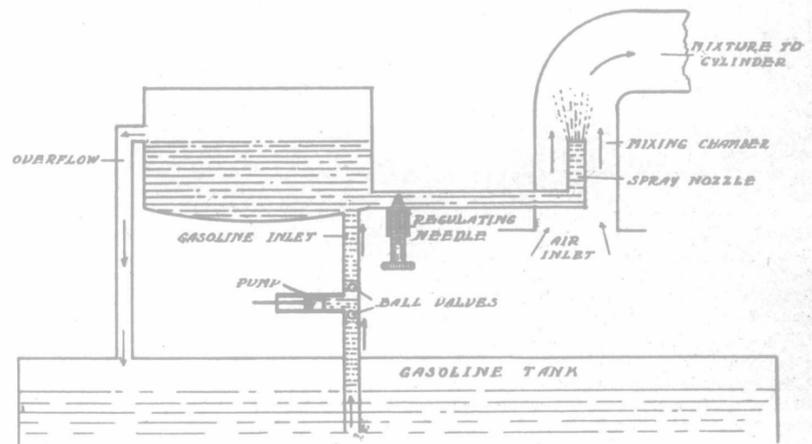


Fig. 2.

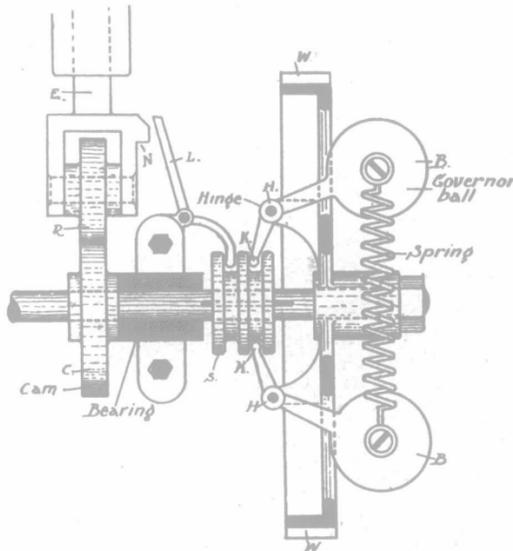


Fig. 3-A.

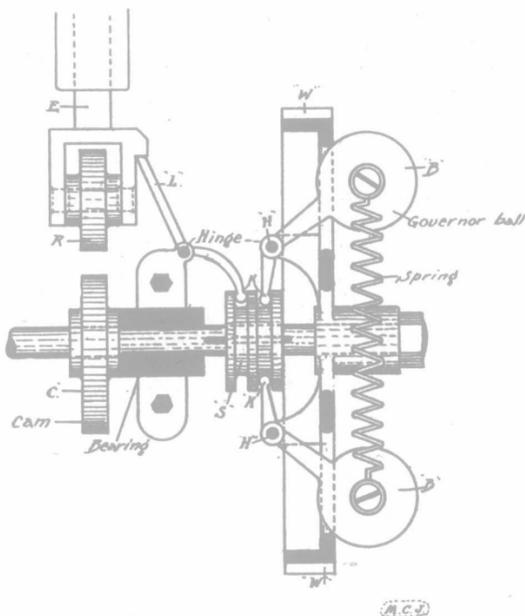


Fig. 3-B.

Hit-and-Miss Principle.

In the hit-and-miss engine when the regulating needle is once set the quantity of gasoline is the same at each charge. Hence, if fuel were taken in at every intake stroke and fired, one can readily see that the engine would "run away" on light loads, but on heavy loads the speed would drop down to normal. To avoid this fluctuation the engine is fitted with a governor which prevents fuel being taken in when the speed rises above a certain point, and consequently the engine misses an explosion, on what would otherwise be a power stroke. This is usually done by holding the exhaust valve wide open all the time till the speed drops down again. While it is open the piston on the intake stroke draws air back through the open exhaust valve into the cylinder and consequently there is not sufficient suction to open the intake valve. (The hit-and-miss method is used on engines having automatic intake). If the load is light the engine misses perhaps four or five or even as high as seven or eight explosions in succession, and then "hits" once or twice and then

misses again. But at full load it will "hit" every time, thus using several times as much gasoline on heavy as on light loads.

One manner in which the missing may be accomplished is shown in figure 3. Two balls, B hinged on the fly-wheel at H are held together by springs. S is a sleeve which is free to be moved back and fourth on the shaft. L is a lever hinged on the bearing and engaging with a groove in the sleeve. While the wheel W which carries the governor is turning slowly the spring holds the balls together and the knobs K hold the sleeve so as to keep the lever L free of the notch N on the side of the push rod as shown in A. But when the speed of the wheel rises high enough the outward throw of the balls overcomes the spring and moves the sleeve over into the position shown in B. This causes the lever L to engage with the notch N. When the cam C opens the exhaust valve by acting on the roller R and push rod E. The valve cannot close as long as the lever engages with the notch. When the speed drops down again so that the centrifugal force of the balls is less than the strength of the spring, the latter pulls the lever out of the notch and the engine "hits" on the next power stroke. There are many modifications of this device.

While the exhaust valve is held open the drawing in and expelling of air results in scavenging the cylinder, consequently in this type the mixture is especially pure and the efficiency high. This action also aids in keeping the engine cool.

The engine can be made to miss in another way, viz., by preventing the exhaust valve from opening on what would otherwise be an exhaust stroke. The gas in the cylinder would then be compressed instead of expelled and would expand on the outward stroke thus preventing any suction, and, consequently, the intake valve would remain closed. This method is not common, and is inferior to that just described, because it does not aid in scavenging the cylinder.

In figures 1 and 2 the reader will observe that in order to vary the proportion of the mixture it is necessary to change the regulating needle, and since this has to be done by hand it is inconvenient to adjust the mixer except at occasional times, e. g., when starting the engine and later when it has become warmed up. Consequently these types are only applicable in cases where a constant mixture is used, or in other words on hit-and-miss engines.

Prony Brake.

What is the best length of arm for a prony brake, and how do you find out the H. P. when testing a gasoline engine with it? How do you figure the horsepower of an engine running 350 revolutions per minute, with a 5½-inch bore and a 9-inch stroke, single cylinder, four cycle.

Ans.—1. The formula for the prony brake is:
 $H. P. = W L N$

Where W = weight required to hold brake in pounds.
 " L = length of brake arm in feet.
 " N = revolutions per minute.
 If L = 5½ ft. then the formula is:
 $H. P. = W \times 5\frac{1}{2} \times N$

$$\frac{5,250}{= W \times N}$$

Hence 5 ft. 3 inches is the best length for the arm, it makes it very easy to calculate the H. P. There are a number of formulas for calculating the H.-P. of an engine. Perhaps the most common is:
 $H. P. = D \times 2L \times N$

Where D = diameter of piston in inches.
 " L = length of stroke in inches.
 " N = revolutions per minute.

This formula gives the H. P. of one cylinder. For a multicylinder multiply by the number of cylinders.

THE DAIRY.

An Attractive Milk House.

One of the most attractive and useful milk houses that have come to our attention for a long time is to be found on the farm of I. Tabor, in Oxford County. An illustration of this house appears herewith and, as can readily be seen, it is by no means so prepossessing in appearance as to imply much waste of money for the sake of mere beauty or ornament. Externally it would not call forth much praise except for the fact that it is neat in appearance and well painted. It is, moreover, not so large as to put it beyond the reach of the man with a herd, of from a dozen to twenty cows, who is inclined to give his milk the care and attention that it needs. In fact, Mr. Tabor's herd now numbers only fifteen cows and, to the best of our knowledge, this is about the usual number of cows kept on the farm.

The house was built largely by the owner and has been used now for two seasons. It was built as time would permit, and during one season only the framework and the cement work was finished, the remainder being done in the fall so as to have the house completed for the winter months when protection from frost would be necessary. Frost protection is secured by alternating several layers of paper and lumber. The inside of the house strikes one as being particularly neat and clean looking, as both walls and ceilings are lined with a closely-matched material that is often used for ceilings. This gives one the impression that there is no room in this house for dirt. Between this inside finishing material and the studding there is a layer of paper, while on the outside of the studding there is a layer of rough sheeting material, then a layer of paper, a layer of siding, another layer of paper and finally another layer of siding. The cement work is very neatly done, the floors and the water tanks being smoothly finished so that no dirt can accumulate as is the case with the rougher finish one frequently sees. A ventilating shaft runs through the ceiling to the roof, and in the back of the house there is a shuttered window by means of which the air can circulate through the house. In the front, as can be seen from the illustration, there is a large double window screened with a fairly close screen. The idea of the window being built in this particular style was so that if at any time milk should be required to be sent away in the large thirty-gallon cans instead of the smaller eight-gallon cans, a track could be installed over the tanks and the cans hoisted out through the windows to a wagon backed against the platform.

The water supply is secured from a well near the house, and the water is pumped by a gasoline engine located in the building to the left of the milk house. The water enters the tanks in the milk house from the bottom, one of the tanks being filled with fresh water in the morning and the other one at night. The water comes from the well at a temperature of 48 degrees, and after cooling, the milk is liberated to a large circular cement watering trough situated in the open yard near the barn. There are two water tanks in the house, one of them holding four cans and the other five. No difficulty has been experienced in maintaining a sufficiently high temperature in the house during the winter, provided that in very cold weather the water is kept running.

Cow Testing.

There has never been a time when the value of feed and the labor question demanded a sound analysis of the cost of producing milk as much and as carefully as it does now. Strictest economy in feeding and marketing are necessary. Just as important as economy in feeding and marketing is a close observation of the kind of cows we are feeding. How many farmers with half a dozen or more cows cannot tell how many pounds of milk each cow gives in a year, and how much butter-fat it contains? We venture to say there are many. Few farmers keep accurate account of the actual cost of any operation. The reasons are not hard to find, but it is doubtful if they really offset the leaks that would be evident and the gains that might be made if more accurate bookkeeping were done. Not many farmers are versed in accounting, and fewer have time with their many duties to keep books. It is not the purpose of this article, however, to discuss the advantages or disadvantages of bookkeeping on the farm, but rather to outline one means of detecting leaks in the dairy business, which entails so little work that it is surprising it is not in more general use, viz., finding the actual amount of milk individual cows give in a year, and the approximate amount of butter-fat their milk will yield.

The necessary equipment to undertake this work consists of a milk scale, record sheets, a lead pencil, and a milk-testing outfit. The milk-testing outfit may be dispensed with as the Agricultural College in your province will test milk free, or your local creamery manager will do it for a very small fee. This is probably the simplest method of getting milk tested where time is limited. The process of testing milk is very simple, but requires some knowledge and some time.

When sending milk through the mail to be tested it is best to get instructions from the party to whom it is to be sent. Briefly the points to observe are: 1. milk the cow all in one vessel; 2. stir the milk well; 3. take a couple of ounces and place in a bottle. A suitable bottle for the purpose is a small sealer. Some sort of preservative is necessary, such as a small tablet of corrosive sublimate to prevent the milk fermenting. 4. take samples like this from the milk of each cow,

morning and evening for one day and place samples taken from one cow in one bottle. 5. do this once per month during the lactation period.

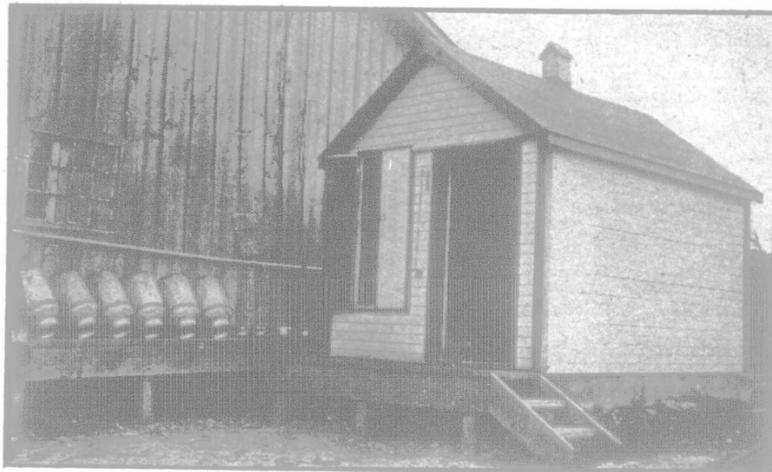
The butter-fat content of an individual cow's milk is readily affected by many conditions, so one should not be surprised if the percentage varies considerably at intervals during the lactation period. An abrupt change in the weather when cows are in pasture, sickness, or oestrus are factors which alter the percentage of butter-fat considerably.

To weigh the milk any kind of a spring balance will answer the purpose, but a regular milk scale is best. These scales are self-registering, weigh up to sixty pounds and cost about \$5.00. Record forms may be improvised, or may be obtained free from any of our departments of agriculture. A common type is a sheet with the dates from 1 to 31 down the left hand side, and so ruled that there are two lines opposite each date, one for morning and one for evening. The cows are numbered or named in spaces at the top.

The milk scale should be hung at a convenient place in the stable, and the milk sheet immediately beside it. The same pail should hang on the scale during milking, and the milkers dump each cow's milk into the pail on the scale, note the weight and mark it on the sheet under the cow's name and opposite the date on the left-hand side of the sheet. At the end of the month the columns are totalled up and the exact amount of milk each cow gives for the month is known. By keeping these records throughout the lactation period, the yearly production of the cow is ascertained. Then with the tests for butter-fat it is a few minutes' work to find out exactly where your cows stand in butter-fat production, as compared with one another and with what a good cow might reasonably be expected to do.

The simplicity and the small amount of work and time entailed in keeping records of this kind almost need to be seen to be appreciated.

Some of the things which record keepers are constantly noticing will show the value of records of this kind. The table below illustrates one of these:



A Very Neat and Modest Milkhouse.

Month	Cows	
	No. 1 lbs.	No. 2 lbs.
1st.....	716	943
2nd.....	805	1,012
3rd.....	794	793
4th.....	797	840
5th.....	763	682
6th.....	702	571
7th.....	680	363
8th.....	508	108
9th.....	341	14
10th.....	102	
Total.....	6,208	5,470

Cow No. 1 is a heifer in her first lactation period. Cow No. 2 is a nine-year-old cow. The old cow begins by giving quite a heavy flow for about four months. After that her flow becomes less and less, and she dries up early in the ninth month. The heifer didn't give as much as the old cow; in fact, considerably less the first four months, but she keeps giving a fairly good flow practically until the end of her lactation period, which is well on in the tenth month. The cow No. 2 was not due to freshen again until the thirteenth month and the heifer until the fourteenth. Here we have an excellent example of how the scale points out the persistent milker and the record points out her superiority over the cow which gives a heavy flow for a comparatively short season.

The butter-fat test nails another type of cow. Glancing over some records, I see one cow which gave 10,106 pounds of milk, testing 2.8 per cent. which means that her milk contained 283 pounds butter-fat. Another cow gave in a year 7,719 pounds of milk, testing 4.4 per cent., which means that her milk contained 340 pounds butter-fat. This brings out the point that it is not always the cow which gives a lot of milk that is the most valuable cow.

Judging milk cows by the eye alone is often disappointing when the milk scale and the Babcock test expose their real worth. It is true that type, constitution,

digestive capacity, development of mammary system, quality and temperament are indications of a cow's ability to produce milk. It remains for the scale and the test, however, to measure her ability exactly.

A writer in a recent agricultural publication says: "Feed never was so dear that it did not pay to feed a good cow, and it never was cheap enough to feed a poor cow." These are the words of an experienced dairyman. They express very tersely the reason why a man should know whether he is feeding the good kind or the boarder type.

Wintering Dairy Heifers.

The feed requirements of growing animals differ radically from those of mature stock and consequently in carrying young stock through the winter it is the object of the feeder not only to feed as economically as possible the stock that is not yet productive, but to feed so as to make a steady growth which will finally develop the young stock into the most valuable mature animals. The mature animal stores but little protein in its body and the same applies to mineral matter. The young and growing animal, however, needs both these substances in abundance because as development of the body takes place there comes an increasing demand for substances with which to form muscles, ligaments, tendons and the internal organs. These parts of the body are built almost wholly of protein and the same is true of the nervous system and the organic matter in the bone. Mineral matter is also required in order to develop the skeleton or meet the requirements of the protoplasm in the body cells. It can readily be seen that the skeleton does not increase after maturity and that therefore there should be no such demand for mineral in the mature animal as in the young. As for protein, Ormsby gives figures from various authorities to show that at eight days old a calf is storing about 4 lbs. protein daily in its body tissues, or about 2.35 per cent. of all the protein in its body. The storage

of protein practically measures the growth of muscular tissues in the body and this gradually decreases as the calf grows older, until, at the age of 100 days, a calf stored 1.19 lbs. or less than one-third the amount stored by the young calf. When nearly mature and 28 months old, a steer stored only .09 lb. protein daily per 1,000 lbs. body weight.

The emphasis placed upon good breeding and the presence of high producing ancestry in the pedigree of young animals demonstrates in a practical manner the fact that individuality is one of the most important factors determining economical milk production. It is, however, a well known truism which says that an animal stunted during its normal growing period rarely develops its full inherent capacity as a producer either

of milk or beef. Just how much one can augment the natural milking qualities of a heifer by careful feeding until maturity is not definitely known, but it is well known that size is considerably affected. Some years ago the Missouri Agricultural College directed a question bearing on this subject to some hundreds of breeders in the United States, and of the 301 replies received, 82 per cent. mentioned liberal feeding as the main factor to be taken into account in developing large animals. The remainder were about equally divided between the selection of large parents and the encouragement of later calving. Later investigations by the college confirmed the breeders' opinions and pointed to the fact that liberal feeding of grain when young not only causes a much more rapid growth, but makes a somewhat larger animal in the end. The age of calving as well as the size of parents are both factors, however, the former being of great practical importance. If, for instance, a heifer, fed lightly during her growing period, is made to calve at an early age, she will not attain the size of a well fed heifer. Young heifers, lightly fed, will grow longer than heavily fed heifers, however, and according to Eckles will reach practically their full size if they do not come into milk until they are three years of age.

This factor of liberal feeding, and particularly the use of roughages, has another bearing on the case, especially of dairy cows. Not only is heredity important in determining the production of a cow, but her power to digest large quantities of feed and assimilate them is of well known value in this connection. It is not the practice of good breeders to keep the growing stock fat, although, except for the increased cost of feeding, there is probably no harm in doing so, even in the case of dairy animals. Some breeders believe that it is injurious to the milking qualities of a cow to have become fat while young. While it is not good for dairy animals to have a tendency for beef, so long as this tendency is not inherited experimental evidence has not shown any disadvantage, except, in cost of fattening young dairy animals. On the other hand there is a prevalent belief that plenty of coarse feed with just enough concentrates or nitrogenous roughages to maintain a steady growth will aid in developing the digestive system so that as a cow the individual will have her maximum powers of digestion

mammary system, conditions of a cow's for the scale and exactly.

publication says: not pay to feed a enough to feed a of an experienced the reason why ing the good kind

Heifers.

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and assimilation. It is true that a heavy grain fed heifer, when put for the first time upon a typical dairy ration will not consume as much roughage as a heifer raised on rough feeds, but Eckles states that after about two months this difference disappears and the digestive system of the grain fed heifer seems to adapt itself to the change of feeds.

No special difficulties are experienced by the breeder in bringing dairy heifers into milk from the time they are 6 or 8 months of age. Grass usually furnishes the cheapest and best food for growth and so long as the heifers are on pasture no further attention is necessary. In the winter, however, the owner must feed so as to maintain a thrifty condition and this can usually be accomplished by the use of roughage. Where corn silage is plentiful the heifers have a roughage that has both succulence and palatability, but is deficient in the necessary protein for increase in weight. For this reason some concentrates are necessary if clover hay is not available in sufficient quantity. Leguminous hays such as clovers, or alfalfa, are palatable and possess considerable protein and ash, but when these are not available or for some reason it is desired to use silage as the sole roughage, experiments conducted for three years in Virginia would indicate that 20 pounds for heifers weighing 275 lbs., 25 lbs. for heifers weighing 425 lbs. and 30 lbs. for heifers weighing 650 lbs., are the maximum amounts that should be fed daily. The concentrates added to the ration where these amounts are fed should not be too bulky. Just what concentrates are fed will depend on the number that can be obtained and the price. Each dairyman must decide this for himself.

POULTRY.

Accurate Individual Egg Records.

High and low producers are found in every flock, and every poultry raiser knows that in his or her flock there are probably a number of hens whose production is far below what it should be. For the average farm flock trap nests are out of the question because they mean more or less constant attendance upon the flock. Trap nests also mean more or less extra equipment, all of which costs money, or, what is equally valuable, time. Some farm flocks are worthy of good care, and their owners are interested in developing their greatest production. This is frequently impossible because of the time necessary to look after trap nests. Nevertheless, it is quite reasonable to suppose that if some simple method of securing egg records and thus providing an intelligent basis for the building up of the flock, could be secured, a more rapid improvement in the general average of egg production would take place.

It will be difficult to arrive at such a simple method for the farm flock, but experiments made at the Utah Agricultural College were an attempt in this direction and are worthy of passing on to our readers. Egg production is at its height during the spring months when the pressure of other work is also greatest, and any method which is capable of effectually weeding out the poor producers with a saving of time, labor and equipment, is worth consideration.

The basis for the Utah method of securing egg records is the fact that during the formation and development of the egg in the hen's body, it remains in the uterus for a period of from 12 to 24 hours in order that the shell may be formed and the mechanical operation of laying completed. That is to say, if a hen is about to lay an egg on Friday, the egg will be in the uterus early that morning with the shell partly formed. Actual practice at the Utah Station has determined that if a hen is to lay at any time during the day the egg can easily be felt "by a slight pressure with the finger on the side of the abdomen just below and nearly to the end of the pelvic bone." This pressure, we are told, "should be very light and should come from the face of the last two joints of the first finger rather than from the end, so as not to injure the hen or the egg."

The big problem is to catch the hens each morning in order to make the test. It was found, however, that the hens soon become accustomed to the morning's examination and accept it as a matter of routine, providing it is done in a quiet, systematic way. The testing should be done shortly after daylight each morning and, we read, "may, therefore, be done as one of the morning chores, since it requires no time during the day when other work is pressing." It has one advantage over the trap-nest method in that the hen gets credit for every egg she lays, whether she lays it on the floor, in the nest or makes a stolen nest in the yard. The accuracy of the test can also be checked by the number of eggs actually gathered, but some eggs will occasionally be laid in out of the way places which frequently makes the test count higher than the number of eggs gathered. Another advantage claimed for this method is that it is quicker than the trap nest. Two men in a trial of this method against time tested 500 hens in 37 minutes, going through 30 pens in a long house, and 16 colony houses, to test this number. Against this time, amounting to one hour and 14 minutes for one man each day, it took a man more than 5 hours to look after the same fowls where trap nests were used. In this case he merely looked after the nests, recorded the eggs and freed the fowls.

Where eggs from certain hens are wanted, however, for hatching purposes, this system must give way to the trap nest, where you are always sure that the hen in the nest has laid the egg you find with her. This difficulty could only be overcome by isolating in a separate pen all the hens whose eggs are equally valuable for hatching.

HORTICULTURE.

Six Hundred Acres of Onions.

It was our privilege to visit, in the third week of August this year, that part of Essex County known as "the Marsh" or Pelee Point. It is here that the land, some thousands of acres of it, deep black, rich muck, has been reclaimed from Lake Erie and devoted to agriculture. Like the agriculture of Holland, the agriculture of this southernmost part of Ontario is an intensive practice. The lake is higher than the soil and is kept back by dykes, huge walls of earth, surrounding all of the cultivated areas and upon the top of which roads have been built. The whole marsh is divided into what are known as the East and West schemes, the former being pretty much broken and occupied with crops, while the latter is even now undergoing breaking and hundreds of acres still remain for the tractors with their wide, flat wheels to travel over ahead of the breaking plow. The wild land, to call it such, is too boggy for horses to work and will probably be soft for a year or more after breaking. Sometimes horses can be fitted up with big, flat shoes, almost like snowshoes, so that they can be worked in soft soil, but the tractor has a good use here and is certainly being utilized to advantage.

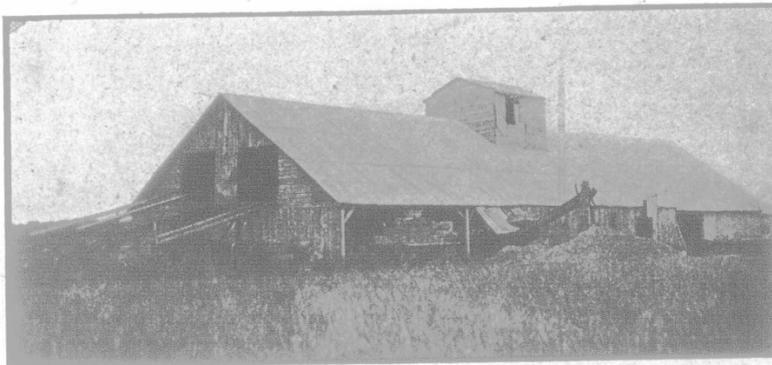
The country is flat as a pancake, and looks almost as barren as it does flat. It is what might be called a summer farming section, since with few exceptions the

the soil. Consequently they "killed the goose that laid the golden egg" and burned it up. The result is that spots of clay are to be found, and clay loam; and onions are not grown here successfully. The layer of humus goes down for varying distances but will average about three or four feet. Old residents testify to the fact that the soil "grows" if not cultivated for a year or two, and that it shrinks or "goes down" as cultivation proceeds.

Thirteen years ago the first onions were grown in the marsh by Henry Campbell, according to Adolphus Roach, now the most extensive grower in the district. Mr. Campbell grew only one acre the first year, and Mr. Roach, starting the following year, grew five acres. Each succeeding year he grew more onions until he reached as high as seventy acres. The second year he grew six acres, then seventeen, then forty, and from there the acreage climbed. This year sixty-five acres were put in and at the time of our visit, the largest curing shed in the marsh, with 10,000 square feet of storage space, was being got ready to handle the crop.

Some idea of the importance of the onion crop may be gleaned from the fact that the annual crop is approximately 350 cars, taken from approximately 600 acres of land that fifteen years ago sold for \$20 per acre and now changes hands at from \$250 to \$300. There is much room for expansion still, since there is at least 400 or 500 acres of the new land at Point Pelee which it will take four or five years to break and get ready for onions. The biggest market for the crop is in the Maritime Provinces where competition must be met from the

onion section about the City of Boston, Mass., and the Connecticut Valley. British Columbia likewise grows many onions, and we understand that one man last year shipped 400 cars from B. C. There the Chinese grow much of the crop, and will do it for about half what Canadians, or the foreigners found in Pelee Marsh demand. We are informed that practically seventy-five per cent. of all the labor employed in the Marsh is foreign, and Belgians predominate. They are faithful workmen and the women may be found doing a man's work everywhere. In the winter they return to Detroit with enough money to live on, or they can, if



Large Onion Curing Shed in Pelee Marsh.

inhabitants migrate to nearby districts for the winter to escape the bleakness and barren coldness of that wind-swept area. The habitations belie the value of the land, since the houses are for the most part low shacks, except for here and there a small frame house which rises among the low trees and shrubs to be found in scattered patches and along the dykes and banks of the big ditches, just inside the dykes. These ditches take the water from the soil and serve as drains, from which the water needs to be pumped over the dykes into the lake, by the pumping stations, one of which is occasionally to be seen along the inner side of the dyke. Nature and man's industry have made it possible for this rich vegetable soil to be recovered from the lake bottom, but it is not attractive as a place of habitation; only as an opportunity to specialize in a crop peculiarly adapted to that soil, does it possess any attraction for man, or, perhaps some enthusiastic bird lover may take frequent trips some miles down to the "Point" to see the coming or return of some rare species.

Nevertheless, the land sells for from three to four times the price of the best general farm lands in the province and every year for about six months during the summer, residents from Leamington, Belgians, Russians, Mexicans, and other foreign workmen from Detroit, move down to the muck flats to work. And all because of the onion crop, for no place in Canada grows such onions as the Pelee Marsh. As we drove through the good section of the marsh we saw nothing but onions. Onions were everywhere and, in fact, there is practically nothing grown but onions. Like all other sections of so-called good land, there are good and poor streaks, but it is only on the good land that onions are the principal crop. Like other pioneers in other places, the first people to till the black soil there did not realize the inestimable treasure stored up in the deep layer of decayed vegetable matter which really constitutes

they like, get work in the factories.

A great many of the Belgians work on shares. A fifty-fifty basis is adopted whereby the owner of the land furnishes the land, machinery, and prepares the land for the seed, while the Belgians do the work of cultivating and harvesting. The cultivating is no joke, especially since it must all be done by hand as many as eleven times during the season. Wheel hoes, well known to vegetable gardeners, are used and the fields are kept as nearly weedless as possible. In addition to the above arrangement, the owner and share grower each pay half the cost of seed, bags and hauling the crop to the station. Practically all the hauling is hired, even the larger growers having use for only comparatively few horses except at this season of the year. These Belgians and share growers make good money too, and last year Mr. Roach paid a single Belgian as much as \$2,500 for his five months' work. Other men, some of them Canadians, by taking twenty acres or less on shares, have been paid much more than this for their season's work.

Not a great deal of equipment is necessary for share growing. Neither a seeder nor a wheel hoe are expensive. At harvest time, a topper is not necessary, since, if machine topping is desired, arrangements can be made with one of the larger growers at a rate of three cents per bag. About 500 crates per acre should be provided for harvesting and curing, but aside from this, practically no equipment is necessary. Toppers are very expensive, four-roll toppers costing \$700 f. o. b., shipping point, so that only the large growers possess them. Many of the Belgians do all the topping by hand rather than pay for topping. One group of four that we met consisted of three men and one woman and they were handling twenty acres between them. Together they could pull an acre in a day of twelve hours. In this case the topping was to be done by hand and the onions



Onion Crates Stacked in the Field Ready for Gathering the Crop.

were placed on the ground in a particular manner so as to be able to take off the tops of a bunch with one clip of the shears when the topping was done a few days later. Shearing goes about twice as fast as pulling, and the Belgians told us they could shear by hand as cheaply as the machine would do it for them. At pulling time, which extends from early in August in some seasons to October in others, the onions are pulled by hand and four rows of onions are placed in one windrow. If the tops are to be sheared off they are laid with the bulbs together in bunches, and two rows of tops pointing outward. If the machine is to be used for topping, the tops are allowed to cover the bulbs so as to protect the latter from the sun. Five or six days later, when the tops have dried out sufficiently, the onions are gathered into crates, previously stacked thickly over the field, and drawn to the machine at the curing shed on flat wagons. The onions are then dumped from the wagon on to the feeder of the topper and two men stand there feeding the onions down the slanting alley-ways in which two sets of rollers revolve rapidly, the two rollers of each set revolving towards each other and catching the tops of the onions as they tumble down, pinching them off before they get to the bottom. The onion is then delivered to a slatted grader where onions off color or those which passed over the rollers unscathed are picked out before they reach the bagger at the bottom. Here stand two, three, or four more men to bag the onions, weigh the sacks and carry them away ready for hauling to the station.

These topping machines work very rapidly and require eight men to operate them and take care of the onions. When it is considered, however, that a four-roll topper can turn out about three carloads per day, it is easy to realize how valuable a piece of machinery they can be. One grower, who operates one of these machines, told us that two years ago he was able to turn out three carloads between 8.30 in the morning and 5 o'clock in the afternoon. This is a matter of 1,200 bags, as there are 400 bags to a carload.

Until last year all the onions from Pelee Marsh were shipped in 75-lb. bags, but last year the 100-lb. "peek-a-boo" bag made of paper, and so thin that the onions can be plainly seen through it, was used. This is the U. S. onion bag and was made necessary by the requirements of U. S. markets and certain customers in Ontario. These bags have risen tremendously in price, costing 35 to 37 cents each now, whereas before the war they could be bought for from 7 to 10 cents. For this reason many growers are using old sugar bags costing 16 and 17 cents each. The regular onion bag, formerly used, now costs 27 cents each, whereas it was bought previously for 10 cents.

Perhaps someone wonders, as we did, whether onions are grown year after year on the same ground, and whether anything is done to replenish the soil of the plant food removed by these heavy crops of onions. And there are some heavy crops too, as may be realized when we say that the yields are from 250 to 350 bags per acre. Some yields have been secured as high as 400 bags, or a full carload. We asked some growers about their methods of conserving and replacing plant food and found, naturally, a variety of practices. One grower, who this year has 34 acres, plows only every second year, discing only in alternate years. He grows onions year after year on the same soil, but applies 1,000 pounds of a ready mixed fertilizer per acre yearly and also the manure from the small number of stock kept, as well as the tops from the onions, which are gathered from the machine and put on the manure pile to rot. Then, too, he says that alternate discing and plowing turns up a little new soil from below every second year and this refreshes the soil. The soil settles the year it is disced, and the next year the plow brings up virgin soil. Another grower assured us that fertilizing was a necessity and very profitable. In his opinion muck soil is not properly balanced for the most successful crop and needs both phosphoric acid and potash. It will give plenty of growth but will not finish the crop properly. For this reason he uses about 200 pounds of muriate of potash when it can be obtained, and 1,000 to 1,200 pounds of acid phosphate per acre. In his opinion acid phosphate gives more satisfactory results as a food than basic slag. He has also used nitrate of soda at the rate of 200 pounds per acre, and one year when this was done, instead of having a very late crop, his onions were ready for market by July 29. This man believes, however, that nothing is to be gained by growing onions year after year, and is planning to grow rye or clover on one-third of his onion land each year. On another farm of 125 acres where there is 90 acres of muck, 65 acres are in onions, 15 acres of beans, 5 acres of carrots, and some pickling onions, or little "silverskins" as they are known to the trade. This farm carries about \$10,000 worth of equipment. It should be mentioned here some place that seed is used at the rate of four pounds per acre, and the varieties Southport Yellow Globe and Southport Red Globe are almost wholly grown. Cultivation is given about once every ten days. In the spring the soil requires very little preparation because of the way it readily breaks up when the harrows are drawn over it. The soil is very fine and dusty and for this reason, probably, the Belgians who work in it all day long do so with bare feet invariably.

This year pulling started in the marsh on August 7, and already at the time of our visit, about 25 cars had been shipped out. These, however, were for immediate consumption only and not for winter storage. Dealers do not begin to store onions until about October and, consequently, the bulk of the crop will not be dug until sometime this month. Just a few days previous to our visit, onion prices took a bad slump and dropped inside of three days from \$3.25 per bag to \$1.75. This stopped the digging in some places, and each shipper seemed in-

clined to blame the other for beginning to cut prices early in the season. The growers are practically at the mercy of the market, since few have any amount of storage space. Practically none have frost-proof storages and the result is that except they feel safe in leaving the crop in the ground for a time, the onions must be harvested and immediately shipped. We did see one frost-proof storage large enough to hold eight cars of onions in crates, and we were informed that it was perfectly satisfactory unless the temperature got down below ten or twelve degrees below zero. It was protected by fourteen plies of paper alternating with lumber. Good curing sheds are few and far between, although on one farm we saw cribs being installed, in which the cribs were eighteen inches wide, divided with chicken wire and separated by a four-inch air space.

Years ago there used to be an Onion Growers' Association; in fact, it disbanded only a year or so ago. Its manager was E. E. Adams, who is now the oldest shipper of onions in Leamington, having shipped, we are told, the first car of onions grown in the Marsh. Four shippers practically send out every onion from the Marsh; one of the large growers ships independently, the gentleman mentioned above handles a lot of cars each year, the Erie Co-operative Co. are taking over an increasing quantity every year, and a small group of growers and shippers known as The Essex Growers handle the rest. As high as fifteen cars of onions have left Leamington in one day from the Marsh, and what is needed is another association which will take the onion industry in hand and steady it against the fluctuations of the market. Lack of storage is bad for the grower, but there is still good money at present prices.

Potato Seed Selection.

Like begets like in the potato field as elsewhere, but judging by the quantities of inferior tubers used for seed purposes, the importance of this law is not appreciated by many. The use of small potatoes taken from the bulk of the crop, year after year, and used for seed will eventually lead to yields of inferior potatoes.

At potato digging time the great opportunity for seed selection is offered. With the product of each plant spread on the soil it is an easy matter to select out those plants that have given the largest yield of the most desirable type of potato and are free from disease. The potatoes from such plants only should be gathered and saved for use as seed the following year. This saving of seed at digging time may seem to many as an extra burden during a rush of work, but it is not.

There is less actual labor attached to seed selection at the time of the potato harvest than there is by practicing any other method of seed selection. Furthermore, the results from hill selection are reasonably certain while with other methods there is some speculation. Potato growers would do well to watch closely for exceptionally good plants. These, harvested and saved apart from the main crop, may become the fore-runners of fine potato fields in the future.—Experimental Farm Notes.

FARM BULLETIN.

The Canadian Seed Growers Meet.

A war-time session of the Canadian Seed Growers' Association was called for September 26, to meet in the office of the Secretary-Treasurer, L. H. Newman. No attempt was made to make it a large meeting and no program was arranged, other than the ordinary business arising out of the year's work. Those present from outside the city were: L. J. Tullis, Regina, Sask.; S. Savoie, Prof. Jas. Murray, J. Simard and Mr. Hodgins, from Quebec; J. Lockie Wilson, Justus Miller and Frank Hart, from the Ontario Department of Agriculture, Toronto; Seed Commissioner G. H. Clark, Prof. Macoun, E. D. Eddy, G. Lalacheur, and T. G. Raynor, of the Dominion Department of Agriculture, Dr. Robertson and Secretary-Treasurer Newman.

The Secretary-Treasurer in presenting the Directors' report said the season of 1917 had not resulted in success to all the members, owing to climatic conditions. Ontario had been well favored, the Western Provinces less so, and the Eastern Province men still less favored. However, 361 members had produced an aggregate of 65,000 bushels of registered seed. This, however, was far short of supplying the demand, and Dr. Robertson pointed out that the Directors' report directed the discussion along these lines: First, how are we to increase the supply of registered seed? Second, how can we get the provinces to form co-operative associations for cleaning and distributing the seed? And third, how can it be made easier for farmers to take up the growing of registered seed? In the discussion that followed it was pointed out that six years ago an effort was made to allow anyone to grow registered seed, whether a member or not, as a means of increasing registered seed stocks and inducing more to become members. The restriction as it now stands is meant to be a protection to bona fide members, that a man had to show himself approved for one year before he was allowed to grow seed that could be sold as registered seed. A resolution was passed doing away with this restriction and throwing the work open to any and all who will use approved seed from any of the experimental stations, or elite seed of the first or second generation grown by any of the Association members, and which will pass inspection in

the field and in the bag. It is thought in this way that not only will more seed be produced that will register but that the membership will be greatly increased. This action in a measure solves the first and third problems raised by the Directors' report. With regard to the second one, it was pointed out that a co-operative organization under the auspices of the Provincial Agricultural Department of the Quebec Government had been operating most successfully at St. Rosalie, Que., as headquarters. Cleaning plants had been installed there and members got their seed grain cleaned for three cents per bushel, while non-members paid five cents per bushel. To show the effectiveness of one machine they have installed, the Secretary-Treasurer had samples of the graded seeds from registered seed oats that had been duly inspected and passed as seed oats measuring up to the required standard. From 100 pounds of the seed the machine discovered 14 pounds of tare, worse than useless for seed, as quite a lot of it was wild tares. A large percentage of hulled oats were separated, and the secondary kernels were almost as it were hand-picked for the primary ones.

The Association has approached all the Provincial Departments of Agriculture with a view to forming a similar organization to the one in Quebec, with some degree of encouragement. The meeting felt that even more than one such association might be organized in some of the provinces. Seed Commissioner Clark said that one association could serve a very large constituency, as at a cost of about seven cents per acre for seed grain prepared at such centres it could be transported over a radius of 600 miles. This was considered reasonable enough for all practical purposes. The idea of co-operation along this line, as well as in other ways, was further emphasized by what Dr. Robertson had observed on his trip to Europe this summer. He found that a war-time organization, which no doubt would exist after the war is over, because of its direct benefits to agriculture, existed in each county in England and Italy having what are known as Agricultural Committees, made up of the best farmers in the counties who lay out a policy for the others to follow in all lines of production. As a result of this, in a large measure, he cited one instance of seeing not one but many fields of wheat that would thresh on an average of 75 bushels per acre. The Doctor was so enthusiastic over the matter that he expressed the hope of having not only every county but every township in Canada so organized.

Among other points of interest brought out was an experience of Prof. Jas. Murray, of St. Anne's, who had superintended a competition among the young farmers of Quebec, from fourteen to eighteen years of age, in growing Marquis wheat. He said ninety per cent. had been successful in their work, and many, if not all, would be glad to learn that they had registered seed to grow or sell, as the wheat used for seed by them was all registered Marquis.

The value of the Field Crop Competition work was duly emphasized and many competitors had won out in using registered seed as their foundation stock. It was beginning to dawn upon a lot of these competitors that they might as well be growing registered seed and thus securing a better market for their surplus. J. Lockie Wilson said that there were no less than 7,500 competitors this year working through 200 societies, who would furnish an incredible amount of good seed as it was a banner year in production for Ontario farmers.

Saeger Wheeler, of Rosthern, Sask., who has done so much to advertise the work of the Association in his prize winnings, has recently played in the role with potatoes at an International Exhibition, capturing the highest award on the best bushel of potatoes. The President said he had seen the sample of wheat with which Mr. Wheeler had landed a prize some years ago in a keen competition, but at a competition carried on by a farm paper as a bit of advertising he had seen more than twenty lots that would equal, if not excel, Mr. Wheeler's wheat. This same paper had used registered seed in their competition and there were sufficient half-bushel samples shown to take two well-known grain experts, as judges, two and a half days to decide on their merits.

Growing out of the Secretary-Treasurer's report, 65 new members were duly accepted into full membership, making 393 members in good standing and 1,411 members and applicants.

The directors for the ensuing year are: British Columbia, W. Scott and Mr. Hadwin; Alberta, H. A. Craig, and one to be appointed; Saskatchewan, L. J. Tullis, who takes Prof. Harrison's place on the Executive Committee, and J. A. Bracken; Manitoba, Prof. T. J. Harrison and Geo. Dow; Ontario, Justus Miller, who takes the place of C. F. Bailey on the Executive Committee, and Dr. Zavitz; Quebec, N. Savoie and Prof. Jas. Murray; New Brunswick, Mr. McLeod and W. Palmer; Nova Scotia, J. A. MacFarlane and Prof. M. Cumming; Prince Edward Island, Mr. McGregor and Mr. Tennant. Dr. Robertson remains President, and L. H. Newman Secretary-Treasurer. Auditors, E. D. Eddy, and the Agricultural Accountant, Mr. Fraser.

T. G. RAYNOR.

Outbreak of Foot and Mouth in England.

The Veterinary Director General informs us by wire that owing to an outbreak of foot and mouth disease at Burwash, East Sussex, England, all permits for importation from the United Kingdom to Canada of cattle, sheep and other ruminants have been cancelled, except for those on the water by September 28.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending September 26

Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending Sept. 26	Same Week 1917	Week Ending Sept. 19	Week Ending Sept. 26	Same Week 1917	Week Ending Sept. 19	Week Ending Sept. 26	Same Week 1917	Week Ending Sept. 19	Week Ending Sept. 26	Same Week 1917	Week Ending Sept. 19
Toronto (Union Stock Yards)	8,524	8,644	9,617	\$15.25	\$11.00	\$15.00	760	651	930	\$17.50	\$15.50	\$17.75
Montreal (Pt. St. Charles)	2,167	2,130	2,201	13.25	10.40	13.50	924	774	897	15.50	14.00	15.50
Montreal (East End)	2,462	2,021	2,701	13.25	10.40	13.50	1,240	588	828	15.50	14.00	15.50
Winnipeg	13,575	7,921	7,518	15.00	11.00	15.00	384	268	243	11.50	11.00	12.00
Calgary	3,817	2,699	3,647	13.50	10.00	13.50						
Edmonton	1,748	1,225	1,485	13.50	8.75	13.00	81	178	43		10.00	7.75

Market Comments.

Toronto (Union Stock Yards.)

Trading at the stock Yards was uneventful and while over ten thousand cattle were on sale, only a small proportion of these were of choice killing quality, the remainder being largely eastern dairy stock of rather inferior finish. The inquiry for choice butcher cattle remained active with prices on a level with those that prevailed during the previous few weeks, but common cattle were in slow demand and many of Monday's receipts were still unsold by Wednesday. The tendency was for prices to go to lower levels and many cattle were weighed up at values fully 50 cents per hundred below the previous week's quotations. Farmers are taking advantage of the lower market and the improved condition of Ontario pastures, and larger numbers of feeding cattle are going back to country points, than for some time, almost ten hundred head being shipped out during the week. The demand for this class of cattle is likely to continue strong during the next two or three months. A few loads of choice heavy cattle were on sale on Monday. Of these, one load averaging thirteen hundred pounds sold at \$16 per hundred, the top price of the week, nineteen head of thirteen hundred and sixty pounds were weighed up at \$15.75, and twenty-five of fourteen hundred pounds at \$14.40. Of steers ranging from ten hundred to twelve hundred pounds a few head sold at \$15; twenty head of ten hundred and fifty pounds at \$14.25; twenty-four head of equal weight and quality at a similar price, while a number of other good sales were made between \$13.50 and \$14 per hundred. Only a few loads of choice quality steers and heifers weighing under ten hundred pounds were on sale. Of those offered, one extra good load averaging nine hundred and ninety pounds per head, was weighed up at \$13.25 per hundred, while most of the good lots moved out at from \$11.75 to \$12.50. Common and medium eastern cattle sold anywhere from \$7.50 to \$10 per hundred. There was little change in prices on choice cows and bulls, and from \$10.50 to \$10.75 was paid for well finished stock while the common and medium quality were in slow demand at prices 50 cents per hundred lower. Quotations on stockers and feeders could be classed as steady. Choice feeders were sold from \$11 to \$11.75 per hundred and good feeders from \$10.50 to \$11. Good quality steers under eight hundred pounds were bought at \$9.50 to \$10.25, and common stockers from \$7.50 to \$8.50. Common and medium calves were off about 50 cents per hundred, while choice veal was unchanged at a top price of \$17 per hundred.

Lambs and sheep were in steady demand and there was little change in quotations. Choice lambs sold at \$17 to \$17.50 per hundred, while light lambs were purchased for feeding purposes at prices from \$15 to \$15.50 per hundred. Sheep sold from \$13 to \$15.50 per hundred. Most of the useful breeding ewes are being purchased by Ontario farmers and three hundred and fifty were shipped to country points during the week.

Hog receipts were light and quotations for the week remained at \$19.50 per

CLASSIFICATION	No.	TORONTO (Union Stock Yards)			Top Price
		Avg. Price	Price Range Bulk Sales		
STEERS heavy finished	143	\$14.87	\$14.00-\$15.50	\$16.00	
STEERS good	362	14.25	13.75-14.75	15.25	
1,000-1,200 common	115	12.25	11.50-12.75	13.25	
STEERS good	818	12.25	11.75-12.50	13.00	
700-1,000 common	995	9.00	8.00-9.75	10.75	
HEIFERS good	727	12.43	11.75-13.00	13.50	
fair	380	10.00	9.75-10.50	10.50	
common	229	8.46	7.50-9.00	9.25	
COWS good	769	9.69	9.00-10.00	10.75	
common	971	7.59	7.00-8.50	8.50	
BULLS good	91	9.75	9.00-10.25	10.75	
common	339	7.73	7.00-8.50	9.50	
CANNERS & CUTTERS	368	5.92	5.25-6.50	6.50	
OXEN	4				
CALVES veal	627	14.73	14.00-16.50	17.50	
grass	133	8.00	7.00-9.00	9.00	
STOCKERS good	725	10.19	9.50-10.50	10.50	
450-800 fair	1,089	8.94	8.00-9.75	9.75	
FEEDERS good	294	11.30	11.00-11.75	11.75	
800-1,000 fair	105	10.75	10.50-11.00	11.00	
HOGS selects	4,360	19.56	19.50-19.75	19.75	
heavies	10	19.50	19.50-	19.50	
(fed and lights	94	18.00	17.50-18.50	18.50	
watered) sows	140	17.61	16.50-18.50	18.50	
stags	4	15.50	15.50-	15.50	
LAMBS good	7,232	17.28	17.00-17.50	17.50	
common	524	15.37	15.00-16.00	16.00	
SHEEP heavy	80	12.00	11.00-13.00	13.00	
light	292	14.19	13.00-15.50	15.50	
common	167	9.80	8.00-11.00	11.00	

CLASSIFICATION	No.	MONTREAL (Pt. St. Charles)			Top Price
		Avg. Price	Price Range Bulk Sales		
STEERS heavy finished	166	12.75	12.50-13.25	13.25	
STEERS good	171	12.00	10.75-12.50	12.50	
700-1,000 common	218	9.25	8.50-9.75	11.00	
HEIFERS good	26	10.25	9.75-10.50	11.00	
fair	56	9.00	8.50-9.50	9.50	
common	181	8.00	7.50-8.50	8.50	
COWS good	85	9.25	9.00-10.50	10.75	
common	301	8.00	7.25-8.50	9.00	
BULLS good	9	9.10	9.00-9.25	9.25	
common	695	7.25	6.50-8.00	8.75	
CANNERS & CUTTERS	204	6.00	5.50-6.50	7.00	
OXEN	13	11.00	10.00-12.50	12.50	
CALVES veal	246	12.00	10.00-15.00	15.50	
grass	678	7.00	7.00-	7.50	
STOCKERS good					
450-800 fair					
FEEDERS good					
800-1,000 fair					
HOGS selects	1,680	20.00	20.00-	20.25	
heavies					
(fed and lights	460	19.25	18.25-19.75	19.75	
watered) sows	117	17.00	17.00-	17.00	
stags	20	16.25	16.00-16.50	16.50	
LAMBS good	1,941	16.25	16.00-16.50	17.00	
common	1,730	15.00	14.50-15.50	15.50	
SHEEP heavy					
light	179	12.10	12.00-	13.00	
common	208	11.00	11.00-	11.50	

hundred, for selects, fed and watered, while a few decks went to local butchers at \$19.75.

Of the disposition from the Yards for the week ending September 19, Canadian packing houses purchased 507 calves, 6,788 butcher cattle, 3,575 hogs and 5,783 lambs. Local butchers purchased 325 calves, 703 butcher cattle, 633 hogs and 1,161 lambs. Shipments back to country points were made up of 82 calves, 49 milch cows, 754 stockers, 614 feeders, 5 hogs, 100 sheep and 253 lambs. United States shipments were made up of 72 butcher cattle, 177 stockers, 257 feeders and 1,010 lambs.

The total receipts from January 1 to September 19, inclusive, were: 192,688 cattle, 46,707 calves, 246,108 hogs and 53,681 sheep; compared with 191,786 cattle, 38,141 calves, 336,119 hogs and 63,835 sheep, received during the corresponding period of 1917.

Montreal.

The most noticeable changes in prices for the week were in the sales of lambs and hogs. The market for cattle was possibly 50 cents lower on some grades, particularly on common to medium quality cows and bulls, nearly 25 cents off on light bulls, and from 50 to 75 cents off on some grades of light steers and heifers. Well finished steers sold at

prices equal to those of the previous week. The two best loads on the market averaged between eleven hundred and twelve hundred pounds per head and sold from \$13 to \$13.25 per hundred. A number of loads weighing slightly under eleven hundred pounds per head were weighed up at from \$12 to \$12.50. Light and common steers were harder to sell than steers of heavier weights and quality. A large percentage of those weighing from eight hundred to nine hundred pounds sold around \$9 to \$9.50. Small bulls weighing from four hundred and fifty to five hundred and fifty pounds sold from \$6.50 to \$7 per hundred, as compared with \$6.75 to \$7 during the previous week. Bulls sold from \$6 to \$9, chiefly according to weight. The best finished bulls of which there were very few, sold for \$9 to \$9.25. Good cows realized as high as \$10.75, while the majority of the sales were made around the \$9 mark. One lot of seventeen head averaging nine hundred and eighty pounds sold at \$9.25. Medium cows do not sell as well in comparison as those of good quality, as the majority of the medium grades are used for boning along with the common stock. Grass calves sold at \$7 per hundred and veal calves around \$15 for the best.

Sheep and lambs were from 75 cents to \$1 lower, compared with values of the previous week. Receipts were heavy,

totalling seventy-eight hundred head on the two markets. One choice lot of lambs sold at \$17, a few sales were made at \$16.50 for good lambs, while from \$16 to \$16.25 was paid for most of the stock. Lambs were shipped to Boston and New York during the week and were purchased at about \$16 per hundred.

A large number of the hogs being marketed are of only feeder quality, weighing mostly less than one hundred and thirty-five pounds. As the British Buying Commission has discontinued the purchase of bacon sides made from hogs weighing less than one hundred and sixty pounds, the packing houses are making cuts ranging up to \$2 per hundred on light hogs. Heavier cuts are probable in the near future.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending September 19, Canadian packing houses and local butchers purchased 574 calves, 222 canners and cutters, 793 bulls, 1,082 butcher cattle, 2,110 hogs and 2,065 lambs. Shipments back to the country were made up of 11 milch cows and 67 bulls. Shipments to United States' points consisted of 323 calves and 1,141 sheep and lambs.

The total receipts from January 1 to September 19, inclusive, were: 32,851 cattle, 54,757 calves, 50,361 hogs and 27,286 sheep; compared to 31,409 cattle,

ht in this way that d that will register greatly increased the first and third port. With regard that a co-operative the Provincial Agri- Government had St. Rosalie, Que., had been installed in cleaned for three paid five cents per of one machine they er had samples of eed oats that had eed oats measuring 100 pounds of the nds of tare, worse f it was wild tares. ere separated, and as it were hand-

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asurer's report, 65 o full membership, and 1,411 members

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G. RAYNOR.

Mouth in

forms us by wire mouth disease at permits for im- Canada of cattle, cancelled, except 8.

Incorporated 1865

Farmers Who Call
at any of the Branches of
THE MOLSONS BANK
are always made welcome.

Especially at this time when
increased production is so
essential, our Managers will
cheerfully discuss with
farmers their financial
situation.

Savings Department at all Branches
Interest at Highest Current Rate.

46,282 calves; 65,318 hogs and 33,788
sheep, received during the corresponding
period of 1917.

EAST END.—Of the disposition from
the Yards for the week ending September
19, Canadian packing houses and local
butchers purchased 449 calves, 2,138
butcher cattle, 1,635 hogs and 1,755
sheep and lambs. Shipments back to the
country consisted of 366 milch cows.
Shipments to United States' points were
made up of 379 calves.

Buffalo,

Cattle.—Receipts of cattle were again
liberal at Buffalo last week, the supply,
however, running largely to a medium
and common kind of cattle, which are
plentiful at all marketing points at this
season of the year. Offerings were espe-
cially liberal at all points the past week,
Kansas City opening the week with
46,000 head, Saint Louis and Omaha
with approximately 17,000, respectively,
while Chicago showed 36,000. Medium
and common cattle sold lower all round,
while real choice grades brought good,
strong prices. At Buffalo, shipping steers
generally, of which there were around
thirty to forty loads and which were
mainly Canadians, sold full strong to
higher, a class of steers running from
\$15.50 to \$16.50 being especially strong
sale. One Buffalo firm, which is filling
a government contract for beef, was an
early and liberal buyer of shipping steers,
and this outlet, with the eastern com-
petition, made the buying active and a
good clearance was had early in the
session. A few real choice to prime
butchering cattle sold at strong prices, a
medium and less desirable kind at about
steady prices, while common butchering
stuff, especially canners and cutters, ruled
about steady to a dime to fifteen lower.
Bulls of all classes sold lower, stocker
and feeder trade was slow and dull at
lower prices, milk cows and springers re-
maining at about steady prices. Too many
of the commoner, light butchering cattle
are moving to market, but sellers are
predicting continued strong values on the
real choice kinds. Offerings for the week
totaled 6,300 head, as against 6,700 head
the previous week, and as compared with
7,375 head for the corresponding week a
year ago. Quotations:

Shipping Steers, Natives.—Choice to
prime, \$17.50 to \$18; fair to good, \$16.75
to \$17; plain and medium, \$13.25 to \$14;
coarse and common, \$11 to \$12.

Shipping Steers, Canadians.—Best
heavy, \$16.25 to \$16.65; fair to good,
\$14.50 to \$15.50; common and plain,
\$10.50 to \$11.50.

Butchering Steers.—Choice heavy,
\$15.50 to \$16; fair to good, \$14 to \$15;
best handy, \$14.50 to \$15; fair to good,
\$12.50 to \$13; light and common, \$9 to
\$10; yearlings, choice to prime, \$16 to
\$16.50; fair to good, \$13 to \$15.

Cows and Heifers.—Best heavy heifers,
\$12.50 to \$13; fair to good, \$10.50 to
\$11.50; good butchering heifers, \$11 to
\$11.50; fair butchering heifers, \$9 to \$10;
light, common, \$8 to \$8.50; very fancy
fat cows, \$11 to \$12; best heavy fat cows,
\$9.25 to \$10.50; good butchering cows,
\$8.25 to \$9; medium to fair, \$7.50 to \$8;
cutters, \$6.75 to \$7; canners, \$5.50 to \$6.

Bulls.—Best heavy, \$10.50 to \$11.50;
good butchering, \$10.50 to \$11; sausage,
\$9.50 to \$10; light bulls, \$8 to \$9; oxen,
\$9 to \$12.

Stockers and Feeders.—Best feeders,
\$9.50 to \$10.50; common to fair, \$8 to



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21 Branches in Saskatchewan, 53 Branches in Alberta, and 8 Branches in British
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WRITE OR CALL AT NEAREST BRANCH.

9; best stockers, \$8.75 to \$9.25; fair to
good, \$8.25 to \$8.75; common, \$7 to \$8.

Milchers and Springers.—Good to best,
small lots, \$100 to \$135; in carloads, \$90
to \$100; medium to fair, small lots, \$80
to \$85; in carloads, \$70 to \$75; common,
\$50 to \$55.

Hogs.—Prices struck a still lower range
on the opening day of last week. Re-
ceipts were around 65 cars, and, com-
pared with the previous week's close,
values were generally a dime lower. A
few scattering scales were made at \$20.25
but the bulk of the good hogs had to take
\$20.15, and pigs landed mostly at \$19.50.
Tuesday's market was steady to a dime
higher, bulk going at \$20.25, with pigs
\$19.75, and Wednesday's trade was
strong. Thursday values were up a
quarter, and Friday's market was steady,
with Thursday, better weight grades
selling from \$20.40 to \$20.50, with pigs
\$19.75. Roughs brought around \$17.25,
few up to \$17.50, and stags went from
\$15 down. The past week's receipts
totaled 17,400 head, as against 20,240
head for the week before, and 15,200
head for the same week a year ago.

Sheep and Lambs.—Last week started
with top lambs selling a quarter lower
than the previous week's close. Bulk of
the choice lots moved at \$18.75, and culls
ranged from \$16.50 down. Tuesday
prices showed a further decline of a
quarter, and the next two days the trade
was slow and about steady. Friday's
market was 50 cents lower on the tops,
and as much as \$1 lower on culls. General
price for choice lots was \$18, and the
seconds ranged from \$15 down. Sheep
were slow and generally lower. Wethers
were quoted from \$13 to \$13.50, and
ewes, unless a good breeding kind, were
hard to sell above \$12. Cull sheep
ranged from \$6 to \$8. For the past week
receipts numbered 10,100 head, as com-
pared with 7,321 head for the week be-
fore, and 10,600 head for the same week a
year ago.

Calves.—On the opening day of last
week choice veals sold generally at \$20;
Tuesday's market was slow, with tops
ranging from \$19 to \$19.50, and the next
two days prices were quoted steady.
Friday the demand was keen and prices
showed a sharp advance, bulk being
placed at \$20.50. Cull grades were steady
all week, ranging from \$17 down. Heavy
calves, for which there was little demand,
were very dull. Few of these, unless
something on the vealy order, brought
better than \$12, some good heavy fat
westerns had to take \$11 and \$11.50, and
common weighty calves ranged as low
as \$7. For the past week receipts were
2,400 head, being against 1,902 head for
the week preceding, and 2,000 head for
the same week a year ago.

Toronto Produce.

Live-stock receipts at the Union
Yards, West Toronto, on Monday,
September 30, consisted of 323 cars, 6,181
cattle, 345 calves, 2,466 hogs, 2,868 sheep
and lambs. The market was slow; all
classes of butcher cattle 25 to 50 cents
lower. Good stockers and feeders, steady;
milk and springers strong and higher.
Calves slow. Sheep steady; lambs 50 to
75 cents lower. Buyers are taking in
hogs and sows at the price of selects,
which makes the price much higher than
\$19.50, which they quote. They deny
doing this.

Trouble comes to all of us at one time or
another.

The man with a snug bank account, is
fortified against the "slings and arrows of
outrageous fortune".

It is the duty of every man to lay aside
something for the inevitable rainy day.

Open a Savings Account today—and
take your first step along the road to
Independence.

THE MERCHANTS BANK

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Breadstuffs.

Wheat.—Ontario, No. 2, winter per
car lot, \$2.31; No. 3, winter, per car lot,
\$2.27; No. 2 spring, \$2.26; No. 3, spring,
\$2.22; (basis in store Montreal). Man-
itoba wheat, in store Ft. William—not
(including tax)—No. 1 northern, \$2.24½;
No. 2 northern, \$2.21½; No. 3 northern,
\$2.17½; No. 4 wheat, \$2.11½.

Oats.—(According to freights outside)
(new crop), Ontario, No. 2 white, 76c. to
78c.; No. 3 white, 75c. to 77c.; Manitoba
oats, No. 2, C. W., 87½; No. 3, C. W.,
84½c.

Barley.—(According to freights outside)
malting, new crop, \$1.05 to \$1.10.

Peas.—According to freights outside,
No. 2, nominal.

Corn.—American (track, Toronto), No.
3 yellow, kiln dried, nominal; No. 4
yellow, kiln dried, nominal.

Buckwheat.—(According to freights
outside), nominal.

Rye.—(According to freights outside),
No. 2, nominal.

Flour.—Manitoba flour, new crop,
\$11.35, (Toronto). Ontario flour
(prompt shipment), war quality, \$10.75,
in bags, Montreal and Toronto.

Hay and Millfeed.

Hay.—Track, Toronto, No. 1, \$19 to
\$20 per ton; mixed, per ton, \$7 to \$18.

Straw.—Car lots, per ton, \$9 to \$9.50,
track, Toronto.

Bran.—Per ton, \$36.40.

Shorts.—Per ton, \$41.40.

Hides and Skins.

Prices delivered, Toronto:
City Hides.—City butcher hides, green
flat, 13½c.; calf skins, green, flat, 30c.;
veal kip, 22c.; horse hides, city take-off,
\$6 to \$7; sheep, \$3.50 to \$5.50.

Country Markets.—Beef hides, flat,
cured, 15c. to 17c.; green, 12c. to 13c.;
deacons or bob calf, \$2.25 to \$2.75 each;
horse hides, country take-off, No. 1, \$6
to \$7; No. 2, \$5 to \$6; No. 1 sheep skins,
\$2.50 to \$5; horse hair, farmers' stock
\$25.

Tallow.—City rendered, solids, in bar-
rels, 16c. to 17c.; country solids, in
barrels, No. 1, 15c. to 16c.; cakes, No. 1,
18c. to 19c.

Wool.—Unwashed fleece wool, as to
quality, fine, 60c. to 65c., washed wool,
fine, 80c. to 90c.

Farm Produce.

Butter.—Butter prices were quite firm
at stationary quotations, selling as follows,
wholesale: Creamery, fresh-made pound
squares, at 47c. to 49c. per lb.; creamery
solids, at 45c. to 46c. per lb.; dairy, 44c.
to 45c. per lb.

Oleomargarine.—32c. to 33c. per lb.
Eggs.—There was not any change in
prices during the week, selling as follows
wholesale: Cold storage, 50c. per doz.;
new laid, 55c. per dozen.

Cheese.—Cheese sold at unchanged
prices during the past week: Old and new
cheese selling at 25c. per lb., wholesale,
and twins at 25½c. per lb.

Honey.—Five, 10 and 60-lb. pails, per
lb. 26c. to 27c. Comb, 30c. to 40c. per
section.

Poultry.—Receipts were heavy and con-
tinued to be quite heavy with prices
having a lower tendency and a decline
in some lines. The following being paid
for live-weight to the producer: Spring
chickens, 28c. per lb.; roosters, 20 per
lb.; fowl, 4 lbs. and under, 23c. per lb.;
over 4 lbs., 26c. per lb.; ducklings, per lb.

Farmers— Bank Here By Mail

Just mail your
cheques to us—we
deposit them to your
credit and send you
a prompt acknow-
ledgment.

If you need cash
we cash your
cheques by mail, too,
sending you the
money in a register-
ed letter.

We understand
the farmer's pro-
blems and gladly
assist him in every
way possible.

We will wel-
come your account.

Paid-up Capital \$ 6,500,000
Reserve Fund 12,000,000
Resources 130,000,000

THE BANK OF NOVA SCOTIA

We invite your account. Special
facilities for banking by mail. Over
hundred and ninety branches.
General Office, Toronto



20c.; turkeys, per lb., 30c.; turkeys, old,
per lb., 25c.

Wholesale Fruits and Vegetables.

Peaches predominated on the whole-
sale fruit market during the past week.
Heavy shipments being received daily.
Plums began to wane; pears continued
to only be shipped in lightly commanding
exceedingly high prices. Grapes were
an exceptionally good sale at firm prices
owing to the supply not exceeding and
really not satisfying the demand.
Better quality apples brought higher
prices. Cantaloupes declined owing to
their inferior quality; very few choice
quality being in.

Apples.—Apples 40c. to 75c. per 11-qt.
basket; B. C's., \$3 to \$3.25 per box.

Cantaloupes, 30c. to 60c. per 11 qts.,
50c. to \$1 per 16 qts.

Grapes, 40c. to 50c. per 6-qt. flats
50c. to 60c. per 6-qt. lenos; \$1 to \$1.25 per
11 qts.; Tokays, \$3.25 to \$3.75 per case.

Lemons, California, \$6.50 to \$7.50
per case.

Oranges, \$9.50 to \$11 per case.

Peaches, 40c. to 65c. per 6-qt. flat;
55c. to \$1.10 per 6-qt. leno; 75c. to \$1.35
per 11-qt. flat; \$1 to \$1.75 per 11-qt. leno.

Peas, 50c. to \$1.25 per 6 qts.; 60c. to
75c. per 11 qts. for Keiffers and Bartletts
at \$1 to \$1.75 per 11-qt. lenos.

Plums, 45c. to \$1 per 6 qts.; 65c. to
\$1.75 per 11 qts.

Tomatoes, 30c. to 40c. per 11 qts.

Beans and carrots, \$1.25 per bag.

Corn, 10c. to 25c. per dozen.

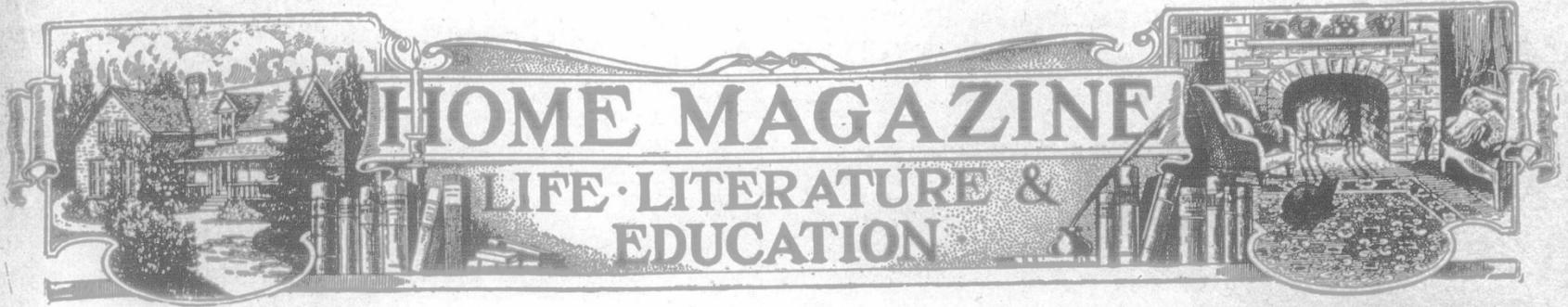
Onions, \$2.50 to \$2.75 per 75-lb. bag;
\$3.25 to \$3.50 per 100 lbs.

Potatoes, \$2.40 to \$2.50 per bag.

Cheese Markets.

St. Hyacinthe, 22½c.; Vankleek Hill,
22½c.; Cornwall, 22½c.; Montreal, finest
easterns, 22½c. to 23c.; New York,
specials, 30c. to 30½c.; average run,
29½c. to 29¾c.; Watertown, N. Y., 29¾
cents to 29¾c.

Continued on page 1608



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30c.; turkeys, old,

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to \$3.75 per case.

, \$6.50 to \$7.50

1 per case.

5c. per 6-qt. flat;
leno; 75c. to \$1.35
.75 per 11-qt. leno.

per 6 qts.; 60c. to
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per 6 qts.; 65c. to

c. per 11 qts.

\$1.25 per bag.

r dozen.

.75 per 75-lb. bag;

lbs.

2.50 per bag.

arkets.

c.; Vankleek Hill,
c.; Montreal, finest
23c.; New York,
c.; average run,
town, N. Y., 29%



Mrs. Harley.

A Hope of Peace.

BY DAVID A. ROBINSON, IN THE "DAILY CHRONICLE," LONDON.

If peace should come and find us bond-
men still

Of kings and passions, and the world
begins

Again to build on craft and evil-will,
Triumph who may, 'twill be the Devil
wins!

If we have struggled through the blood-
drenched years

For tinsel glory or a bagman's gain,
And learned not a new awe of human
tears,

Pity the dead, for they have died in
vain!

Nay, we drew sword for Truth, be Hers
our peace,

Born of pure heart, not spawned from
scheming brain,

Wherein shall all men find at last release
From Fear, and her dark brood of Hate
and Pain.

Helping "The Boys."

At first I wrote that heading in this
way, "Helping the Boys," then I
changed it as above, for surely they
are THE boys with a very capital "T,"—
those lads who are away out there, laugh-
ing, and singing, and suffering, and gazing
away out over No-man's-land, and fol-
lowing the fiery curtain of the barrage,
driving back the greatest enemy of liberty
and democracy in all the world!

Then who are "helping The Boys"?

I am thinking now of the great army
of women workers across the ocean.

On his return from overseas Mr. Weld
of this paper, spoke again and again of
their marvellous help in winning the war.
Indeed, as a result of finding out even a
little of their work, one's candid opinion
must be this: We in Canada think we
have worked hard for the war—and we
have, some more than others, of course;
but we do not begin to realize, as yet,
what the women overseas have been accom-
plishing.

The story has been fascinating to me;
perhaps you will like to hear something
of it, too.

The Doctors and Nurses.

IN the big parade on Women's Day, at
Toronto Exhibition, the nurses were
placed first, and rightly so. The nurses
have not done more towards winning the
war, perhaps, than some other branches of
the Women's National Service, but they
have come into closer contact with the
men, in the moments of supremest
suffering, they have closed the eyes of the
dead, and they have been more con-
tinuously exposed to personal danger than
most of the other women workers.—
Hence we shall put them first here,—the
women doctors and the nurses.

In *Women of the War*, by Hon. Mrs.
Francis Maclaren, the story of some of
the leaders among these and of other war
workers has been graphically given, and I
shall not scruple to quote freely from her
work and to condense for you some of the
stories she has told; for that is what she
wants—to have the greatest possible
publicity given to great things that have
been done, and are being done every day,
by the women in Great Britain and
France.

It was not easy for women doctors in
Europe, at the beginning of the war, to
obtain countenance for doing their work
to capacity—not so easy as it would have
been here in America—but during the
very first month after the war broke out,
two women, Dr. Garrett Anderson and
Dr. Flora Murray, undertook the step of
organizing a Voluntary Women's Hospital
Unit, to be entirely staffed by medical
women. They offered their services to
the French Red Cross, and, because of the
great need at the time, were given per-
mission. As a result, in September, 1914,
they established a hospital of 100 beds
in Paris, in a hotel on the beautiful
Champs Elysees.

Could women run a hospital? Mark
this: So excellent was the work in Paris
that very soon the British War Office
asked Doctors Anderson and Murray to
organize a larger hospital near Boulogne,
attached to the Royal Army Medical
Corps.—So for the first time the British
Government gave women doctors equal
responsibility with their "brothers" in
medicine.

Subsequently Doctors Anderson and
Murray were asked to take up still more
expansive work, and to take entire charge
of the big Endell Street Military Hospital
in London. This hospital contains about
600 beds, and is entirely staffed by wo-
men—"surgeons, doctors, pathologists,
oculists, dental surgeons, anaesthetists,
dispensers, nurses, orderlies. *The only men
are the patients.*"

Major operations equal to those in any
other hospital are performed, and the
hospital has been noted for its adoption
of a new and successful method of treat-
ing wounds. Although set in the very
heart of busy London, the atmosphere of
the whole place is cheerful, restful and
confident, and the men from the trenches
who occupy the snowy beds are contented
and sure that the very best that can be
done is being done for them.

TO another woman, Dr. Elsie Inglis,
is due the honor of having origi-
nated the wonderful Scottish Wo-
men's Hospitals, which are known where-
ever the story of women's work in the war
has been told.

When the war broke out Dr. Inglis was
filled with the idea that the medical ser-
vices of the women of her country should
be organized to help, and so she thought
out the plan for the units which has
since proved so successful, and so far-
reaching—for hospitals under this manage-
ment have been established in France,
Serbia, Corsica, Salonica, and even in far-
away Russia and Roumania, the up-keep
being entirely managed by the funds
raised by women's organizations at home
in Great Britain.

In 1915 Dr. Inglis herself went to

Serbia to act as Commissioner to several
Scottish Women's Hospitals which had
been speedily established there, and were
doing grand work in spite of the bitter
hardships everywhere encountered, chiefly
through lack of supplies and sanitation.
Over the one at Kragujevatz she
had personal charge. Then came the
crush of the great Teuton roller, and the
dreadful Serbian retreat. As a result
most of the hospitals fell back, with the
retreating armies, across the mountains
towards Albania, but Dr. Inglis decided
to stay, with her staff, at Kragujevatz, to
care for the Serbian wounded during the
German occupation. Another unit, un-
der Dr. Alice Hutchinson, also stayed,
and were taken prisoners.

In February, 1916, Dr. Inglis and her
staff were also sent as prisoners to Vienna,
but were eventually released through the
efforts of the American Embassy.
For her work in Serbia, Dr. Inglis was
decorated with the White Eagle—being
the first woman to wear this mark of
honor from the Serbian Government.

After a short rest in England, Dr.
Inglis again set out, at the head of a
fresh unit, for service with the Serbian
army fighting in South Russia. This
unit, splendidly equipped, numbered 76
women, including an X-ray operator, a
dispenser, 17 nurses, with orderlies, cooks
and laundresses, in addition to the staff of
doctors. Landing at Archangel on the far
Arctic Ocean, the brave women travelled
across Russia to Odessa, and thence to
Roumania, where they started a field
station. "The day after the unit arrived,"
wrote Dr. Inglis, "the wounded began to
pour in and ambulances to ply between
there and the firing line. There were no
roads, just tracks across endless plains,"
while here aeroplanes bombed the camp
daily, and finally, before pressure of the
Bulgarians, retreat was again inevitable."
Eventually Dr. Inglis reached Braila, in
Roumania, where she and some others of
the unit remained to care for the Rou-
manian wounded, who were very short of
medical aid.

"Wherever the odds against the Allies
seem overpowering," wrote one who
knows, admiringly, "there one may be
nearly sure of finding a unit of the Scottish
Women's Hospitals working for the
wounded. You do not find them in the
well-equipped hospitals, surrounded by
every modern appliance, with crowds of
men orderlies to carry out the heavy
work, but rather in back-blocks of the
war, as one may say, fighting a desperate
battle of their own against dirt, disease,
and wounds, and winning back precious
lives of men whose language is, in many
cases, unknown to them."

Since the above words were written
we may be thankful, the "odds" have
turned, but, wherever she is, Dr. Elsie
Inglis is finding the work of a ministering
angel to do.

ANOTHER woman who has found a
wonderful work to do, in Serbia
too, is Lady Paget. As wife of a
former British Minister to that country
she already knew much of conditions
there, and, indeed, had gained a wide ex-
perience of hospital work during the two
preceding wars in the Balkans. With
sympathies rooted in the East, she, too,
organized a hospital unit as soon as the
war broke out, and in November, 1914,
just when the Serbian armies were at the
height of the struggle, her party reached
Uskub.

Here a hospital was hurriedly estab-
lished, and was soon filled to overflowing
with Serbian soldiers. For three months
this work went on without ceasing, then
the great typhus epidemic swept over the
country. Total lack of sanitation among
the Serbian armies and in the Serbian
towns had done its work.

With two doctors and two nurses to
help her, Lady Paget prepared a Typhus
Colony at Uskub. "By the labors of this



Dr. Elsie Inglis.

gallant staff of five," says Mrs. Maclaren,
"and some Austrian prisoners working
under them as orderlies, huge barracks
were converted into hospital buildings and
filled with hundreds of typhus-stricken
soldiers within little over a week. Then
Lady Paget herself caught the deadly
fever, and for many days her life was
despaired of. She was so much beloved
throughout Serbia that her danger was
felt as a national disaster, and the children
of peasants in far-away places, where she
was known only by name, were taught to
pray for her daily, while in the synagogues
a special day was set apart for prayers for
her recovery."

During the great retreat that followed
in October of the next year, Lady Paget
and her staff remained at their post, and
not only were Serbian, Austrian and
Bulgarian wounded cared for at their
hands, but also the work was undertaken
of feeding and clothing Serbian refugees.
Throughout the worst weeks of that
winter between three and four thousand
were fed and clothed daily.

To mark the national gratitude for her
great work King Peter has bestowed upon
her the first class of the Order of St. Sava,
an honor that had never before been
given to an uncrowned woman.

AMONG those women who have made
the "supreme sacrifice" for the
war was Mrs. Harley, sister of
Field-Marshal Viscount French.

In 1914 Mrs. Harley went to France as
administrator of the first unit sent out
by the Scottish Women's Hospital, and
her first work was to establish the wonder-
ful hospital in the historic Abbaye de
Royaumont, one of the most complete in
France, with perfect X-ray facilities espe-
cially chosen by none other than that very
great woman, Madame Curie.

Subsequently Mrs. Harley started a
hospital at Troyes, the first under canvas
to be used by the French. Later in the
year the military authorities requested
that this unit of Scottish women go to
Salonika, which, accordingly, they did,
establishing the hospital that has done
such good service there.

Mrs. Harley herself, however, spent
much time, with Dr. Agnes Bennett, of
an American unit, in nursing soldiers close
to the firing line, in a "flying column"
that moved with the forces. When com-
parative peace came, she established an
orphanage at Monastir, where she col-

lected more than 80 children and cared for them at her own expense. Here she met her death. During one of the bombardments of the place, while actually engaged in giving food to some starving Serbians in front of her house, she was struck in the head by a shell-splinter.

Her body was buried at Salonika with full military honors, the coffin draped with the Union Jack, symbol of her beloved home-land.

AMONG war-workers noted for their great executive ability must be mentioned Miss Edith Holden, who has been Matron of the Third London General Hospital since August, 1914. This is one of the biggest military hospitals in the country, containing over 2,000 beds, 550 of which are for officers,—the largest number of beds controlled by one matron.

In running this immense institution a staff of women numbering 520 is required: nurses, "V. A. D's," women orderlies, clerks, cooks and scrubbers, and these are all under direction of Miss Holden. Among the helpers are a number of soldiers, blinded in the war, who have learned to give massage treatments. As an aside it may be mentioned that a very interesting department of this hospital is the facial branch in which Lieut. Derwent Wood and his staff work constantly at repairing the faces of those who have been apparently hopelessly disfigured by the war.

"To keep this big crowd of women workers at their best," says Colonel Bruce Porter, the commanding officer of the institution, when speaking of Miss Holden, "could only be done by a woman of exceptional ability, and I am fortunate in having that type of woman as my matron."

The Nursing-Sisters.

ABOVE have been given short accounts of the war-work of a few outstanding women more directly connected with medical and supervising work. Among the nursing-sisters—the rank and file of the great nursing army—the name of martyred Edith Cavell perhaps stands first, yet there are thousands more of whom volumes could be written; if their names are not known to the general public it is simply for one reason—that there are so many of them.

At the base hospitals they are on duty night and day, on the hospital ships, right up close to the battlefields in the casualty clearing stations. In every country they are to be found—wherever suffering men need their care. Hardships are smilingly faced by them, death itself has been met with fortitude by no inconsiderable number of them.

When Canadian Hospital No. 3 was bombed by the Huns, three of our own noble girls paid the price, two others unflinchingly worked on, in the very portion destroyed by the bombs, helping to extricate the dead and care for the doubly wounded. The story was repeated in later attacks on the same hospital and at Etaples. . . . Out upon the high seas, when ships have been sunk, some of these brave women have met death. Others have died of fever and dysentery in far eastern countries whose climate has exacted its toll.

In closing this brief appreciation, one cannot, perhaps, do better than quote the words with which Mrs. Maclaren pays tribute: "To the nurses of the war, it will be admitted by all, belongs the crown of women's war service. Their ranks contain many heroines whose names and deeds will never be chronicled; but their selfless devotion, their courage, their unquestioning acceptance of any risk, and their willing sacrifice of personal comfort health, even life itself, will stand for all time in the proudest memorials of these tragic years. JUNIA.

(To be continued).

Professor vs. Amateur.—Little Nelly told little Anita what she termed a "little fib."

Anita.—"A fib is the same as a story, and a story is the same as a lie."

Nelly.—"No, it's not."

Anita.—"Yes, it is, because my father said so, and my father is a professor at the university."

Nelly.—"I don't care if he is. My father is a real-estate man and he knows more about lying than your father."—Kansas City Star.

Please Read This.—Prizes For You.

Dear Readers:—

In casting about for something *different* for this year's Christmas Number, it has occurred to us that we cannot do better than leave the matter with *you*. There are so many of you, you see, that many things well "worth while" must come from among you. Accordingly we have decided to offer prizes of \$15.00 each for letters ("stories" or "articles," if you choose to call them so) on the following subjects:

1. Fifteen Dollars for the best letter on "War Help Work in My District."—This should be suggestive to other war-working societies and districts.

2. Fifteen Dollars for the best letter on "What My Neighborhood Needs for Its Advancement."



Lady Paget, G. B. E.

3. Fifteen Dollars for the best letter from a school teacher on "Methods of Education in a Rural School."—This competition is open to school teachers only.

4. Fifteen Dollars for the best letter on any literary subject, the choice left to yourself.

5. Fifteen Dollars for the best letter on "Woman's Work on the Farm," dealing especially with the subject of how to accomplish with the least waste of health and strength."

6. Fifteen Dollars for the best "farmerette" letter.—"My Experiences as a Farmerette."

We do not limit you in regard to length further than to say that no article should be over 3,000 words—over three solid columns in our paper. A letter of half that length, or less, that is interesting, bright and suggestive, is quite as likely to win the prize.

All letters must be received at this office not later than October 15th.

Only one letter in each class will receive a prize, but a number of others will be published later and will be paid for according to our usual rates, payment being made at the end of the month following publication.

Address all letters to:

"COMPETITION, HOME DEPARTMENT,"
Farmer's Advocate and Home Magazine, London, Ont.

You can write such an article as we ask for in half a day, if you are ready with the pencil.—And you need not copy it with ink, provided it is clearly and legibly written with pencil. You run your chance of winning \$15.00, and a very fair chance, even if you fail that, of receiving something later. At the same time you will be helping to make our Christmas Number what it should be—a pleasure and an inspiration to all who read it. Now, see what you can do, will you not.—We thank you in advance.

Hope's Quiet Hour.

A Curtain of Fire.

For I, saith the LORD, will be unto her a wall of fire round about, and will be the glory in the midst of her.—Zech. 2 : 5.

In these days we hear of soldiers going forward, led and protected by a "curtain of fire." Is not that the way God's great army has always been led and protected? In every age the Church has been in the midst of foes. In every age her enemies have prophesied her speedy defeat and downfall; and her weak-hearted friends have trembled for her safety. And yet she has gone forward conquering country after country for her Lord. Still the Cross of Christ towers above the wrecks of time. Mighty nations, like the Empire of Rome, have despised the Christian Church and tried to destroy it. But it was their power that went down, while the church marched forward, growing mightier through the centuries. Prosperity and luxury tried to undermine the foundations of the City of God; yet it has often been awakened from lethargy and roused to fresh vigor. Still the great host marches on, pouring through the gates:

"From every clime and kindred,

And nations from afar,

As serried ranks returning home

In triumph from a war:

I heard the saints upraising,

The myriad hosts among,

In praise of Him Who died, and lives,

Their one glad triumph-song."

If I indulge in mixed metaphors it is because the Bible uses many images to describe the Church and God's relation towards her. She is His Holy City and His great Army. She is His Temple and His dear Family, she is the Bride of Christ and His Body. Torn, as she is, by inward dissension, she is yet one, called by her Master "My Church". At last—after many years of pride in our petty divisions—we are weary of strife and longing for harmony. Now that we really desire unity we may expect to find it.



Miss Edith Holden, R. R. C.

Read the chapter from which our text is taken. When the prophet wrote about his visions the city which he loved was lying ruined and desolate, yet that did not dishearten him. With sure faith in God's tender care of His people Zechariah looked forward to the restoration of Jerusalem. He saw a man going out with a measuring line to measure the length and breadth of the city which would surely rise from the ruins. An angel ran to meet him and to explain that no measuring line man could make would be long enough for the task. That City of God—the New Jerusalem—should spread in every direction, "as towns without walls for the multitude of men and cattle therein." It should not be hemmed in by any earthly wall, and yet it should be absolutely safe, for Jehovah Himself was pledged to be a wall of fire round about, as well as the Glory in the midst. The Lord of Hosts sent this message to the nations which spoiled His people: "He that toucheth you toucheth the apple of His eye." He called the daughter of Zion to sing for joy, because the Lord was not far off, but had come to dwell in the midst of the people He loved.

I have been reading a number of articles in the New York "Churchman" (Aug. 24) which were so disheartening that I almost felt afraid the church in rural districts must be dying of exhaustion. The church has often seemed to be in a bad way. I once read of a village in England where there was only one Bible to be found and that was used to prop a flower-pot. But the smoking flax was not quenched. Christ was there, and blew the flame of love into new life.

One encouraging symptom about the present condition of things is that we are aware of our weakness. We are not boasting about our strength but sadly confessing our worldliness and lack of spirituality. That is one point gained. The outside world is very frank in its criticism of Christians, and points out scornfully the difference between our profession and our practice. It can see little likeness between Christ and His professed followers. We don't angrily deny the accusation or resent the criticism; but sorrowfully acknowledge that we deserve all the abuse that is heaped on us.

Is there reason for despair, or for hope in this position of affairs? I think it should rouse us to vigorous hope. The world admires Christ, if it does not admire us. Should not we rejoice to know that His love and courage have won their hearts? They don't admire our selfish lives—thank God for that! Is there anything so very beautiful to admire in us?

God is still in the midst of His Church—as He has always been. Even the Laodiceans, who were lukewarm and self-satisfied, content with earthly riches and blind to the fact that they were spiritually "wretched, and miserable, and poor, and blind, and naked," were lovingly invited to come to Christ for gold tried in the fire and white robes to cover the shame of their nakedness. The Lord who loved them was patiently knocking at the door of their hearts, and inviting them to be His guests and sit beside Him in His heavenly home. Will He refuse His power and life to us, if we confess our sins and seek Him with all our hearts?

Think how close and intimate the relation is between a man and his own body. He sees through its eyes, hears through its ears, thinks by means of its brain. Let the man leave his body, and every member is helpless and lifeless. The eyes cannot see nor the ears hear, the brain cannot think nor the heart love.

So it is with the church. It is the Body of Christ, but apart from Him it is a dead body and can do nothing. We—each one of us—are members of Christ. He can use us as His instruments if we allow Him to be our Life. We are weak and cowardly, but His strength and courage are for us—if we will. The martyrs suffered and died with marvellous endurance, because His Life throbbed in their veins.

People who talk of being Christians and yet stand apart from Christ's Church—His Body—might just as well go to the war and fight apart from the army. They might just as well think that a hand, an eye or an ear could do their work apart from the living body.

You are one of Christ's members and "he that toucheth you toucheth the apple of His eye." You know how instantly a man feels a touch in the eye-ball; so swiftly does pain of yours touch the heart of the Church's Lord. Perhaps you are troubled and alarmed because people say that the church is worn out and dying. That has been said by many people in many ages of history. But the church has knelt with bent head at the feet of her Master and confessed her many sins, then she has gone forward again to do her appointed work, strong in His strength and safe under His protection.

No measuring line of man can mark the boundaries of the New Jerusalem, for the City of God is always reaching out farther and farther. It may seem to be defenceless as an unfortified town; but the King of Kings is invisibly present in the midst of us, and His promise to His loved church has always been fulfilled and always will be fulfilled: "For I, saith the LORD, will be unto her a wall of fire round about, and will be the glory in the midst of her."

"In Thy Light may we see Thee,
The true Light.
With Thy Love love Thee.
Let there be but one will between us,
And that Thy Will;
And one heart between us,
And that Thine own.

DORA FARNCOMB, 6 West Ave., Toronto.

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.]

DEAR Ingle Nook Friends.—Do you ever wonder and wonder what will be conditions after the war?—whether there will be a "slump", as some pessimistically-minded people predict, whether things shall go back, and all progress be held in abeyance for a time, or whether the very contrary shall prove true, and everything worth while shall go ahead faster than ever before?

It's an interesting speculation, but one upon which, perhaps, it is futile to pronounce very positively. I for one have lived long enough—and probably many of you who read this have too—to know that there are few things upon which one can pronounce an *ipse dixit* with much confidence. Most things are in a state of flux; the thing that may be true for one age or generation may not be true for the next; certain things may be indicated, and yet a hundred unforeseen occurrences and conditions may arise to bring out a result exactly opposite to that expected.

Speaking only for myself, I may say that my own expectation is that, in many respects, things will work out better after the war than ever before—perhaps because of it. It seems to me that we shall arrive at new, and better values of things in general. The boys will come back—or should come back, on the whole,—bigger-minded than when they left, although, possibly, a "rowdy before he went" may be a rowdy still, just as a gentleman before he went away will be a gentleman still. The deep thinking and unselfish work at home, too, consequent upon the war, must be having its effect in making many people broader-minded and more tender hearted. The point is this—that everywhere a man or woman of the broader mind settles, he or she must serve as a leaven in that community, and so the ultimate result must be uplift.

Moreover, even before the war some forces were under way that will take more than a big war in Europe to stifle, and in America, perhaps, least war-torn as it is, these forces will find their greatest impetus.

I was thinking of all these things when going to Toronto the other day, and especially as the train passed through the piles of ugliness heaped up by commerce along the lake-front approaching that fine city.—Ugliness, and yet not unadulterated ugliness, for, emerging from the jungle of flat buildings, and tracks, and cars, and chimneys, one noted, here and there, and especially near Sunnyside, that a beautiful front is being reclaimed from the lake. One saw a broad shore, new and clean, stretching out to blue waters, and covered with bathers in their care-free suits of blue and pink and green,—and one knew that here, at the very front door of the city, Toronto can never be wholly ugly again. The work of making beautiful has begun, and it will not stop.

When Toronto was but a baby-city, there was not, perhaps, in all the Province, a more beautiful site. A land-locked bay, with green hills covered with trees,—what could have been better? And early Toronto was beautiful. Then as the years went on and anxiety for gain increased, the lake-front became cluttered up with warehouses, and docks, and cinder-covered roadways, and rail-way tracks. Not a thought was there of saving for the city a portion of her delightful lake-border with its harmonies of color and its music of waves plashing up along the beach.

For fifty years commerce and ugliness held sway. But the spirit of beauty was not killed. To-day, not only is Toronto dragging up her lake-front from the water, but there is talk of a fair esplanade that will run for miles towards the Humber and along it. Commerce is still King, but commerce must move back, somewhat, to make way for Queen Beauty.

I suppose it has been with Toronto as it has been with almost every part of Canada. In the days of pioneering, wresting a living from the new land, building dwellings and roads for communication, took up so much of the time and energy of the people that thoughts of preserving beauty-spots were driven back.



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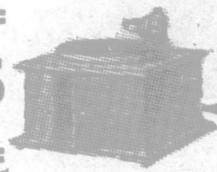
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"Unto the least of these"

RIVET your eyes on this picture of a Belgian mother and child, until you feel the full horror of the situation! Thousands of these orphans, dying of starvation, might now be living in comfort and plenty, had their soldier fathers not flung themselves into the breach when the Hun invaded Belgium.

The fathers died to save us. Are we going to let the orphans starve?

Conditions are simply ghastly. The United States loans to the Belgian Government finance the general relief work, but this only provides a bowl of soup and two pieces of bread to each person per day.

What is that for a growing child?

The Slaughter of the Innocents is less terrible than what is now occurring in Belgium—practically a whole generation of the Belgian nation in the grip of Consumption, Rickets and other ills all directly due to insufficient nourishment.

The Canadian Bureau in Brussels will administer funds, and provide means for getting the ailing children into Holland and into orphanages where they can be saved from a hideous death.

Before you sit down to another meal, do SOMETHING for the Belgian children.

Make cheques payable and send contributions to

Belgian Relief Fund

(Registered under the War Charities Act)

115

to your Local Committee, or to

Ontario Branch, Belgian Relief Fund

95 King St., W., Toronto, Ont.

Or, if one still loved beauty one could find it at a stone's throw in the forests that covered the land, so thickly, perhaps, that to some they were not even beautiful but only a huge enemy to be overcome, hewn down, cut to pieces, committed to the flames. Not a thought was there of the time when forests would be no more, and when the land, in all too many places, would look bleak and bare for lack of them—yes, exposed to flood, and storm and change of climate for lack of them.

So ugliness came and held revel.

It seems now that just when the war broke out, people everywhere were getting their eyes, at last, opened. (I speak of Canada). More attention was being paid to real beauty in architecture; re-forestation was becoming a vital question; factories were beginning to plant vines and flowers about their grounds as well as to provide good lighting and sanitary conditions, horticultural societies were springing up everywhere.

To all this the war came as a check. But the movement will go on again.

Right out to the farms, too. For the influences will go out to them. Horticultural societies will be an inspiration; movies and other pictures will teach the difference between artistic houses and those that are unmeaning and in-artistic, between gardens that are laid out for beauty and harmony and those that are unsatisfying and restless.

During the latter part of October planting may be done. Spring is better—but so few farmers have time in spring. Evergreens may be set out even as early as August; the deciduous trees should not be disturbed until the leaves have gone and their resting time has come. The tender hand—the hand of the true plant-lover and beauty-lover—will remember not to cut the roots, if it can be avoided, and to make the holes large enough so that the roots and rootlets can be spread out, not left cramped and uncomfortable and in poor shape to suck up nourishment from the soil.

Just note a point here: There are positively no trees, shrubs or vines better for home beautifying than those to be found in our own woods. They grow better, are quite as effective, fit into our landscape more naturally than any foreign growths. So why not use them?—balsam and spruce; maple and beech; dogwood, high cranberry, elderberry and sumach; Virginia creeper, wild grape, wild clematis and bitter-sweet. Who could want better variety?

WE have come from a great war topic down to consideration of the little shrubs and vines that grow almost at our doors. It seems to me I am always doing that—dragging you from some great subject down to the little things about home. But, after all, it is at home that we must all work. And, too, are we not all—and all of the little things we do—part of the great whole? As the little things are done well, so will the sum total be well or ill.

Nor is the subject of mere beauty of flowers and trees and homes so far from the subject as it might seem. War in itself is the ugliest of all ugly things. It is the spirit of war upon war—killing ugliness so that beauty of all life may be restored—that keeps up the hearts and wills of our boys over there, who are suffering and dying so nobly. Perhaps some of them do not know that this is the reason—they may be just "slugging away," doing the duty that has to be done the best they know how—yet subconsciously that is the force at work: to kill war itself that war may be no more. Heaven grant that when peace comes it may be so managed that they will not have suffered in vain. JUNIA.

Needle Points of Thought.

"Germany has lost the war. The peace offensive is now her most dangerous weapon."—*The Tribune*, New York.

"America has become a world power. She must now become a world intelligence. Otherwise her new power may be dangerous to herself and the world."—*The Independent*.

Pickles.—Elderberry Wine.

Beet Relish.—Take 2 doz. small beets, ½ cup grated horseradish, 2 blades of mace, 1 level tablespoon ground ginger, 6 cloves, 1 quart vinegar. Boil, peel and

chop the beets. Add the horseradish. Put the ginger, cloves and mace into a small cheesecloth bag, place them in a saucepan, add the vinegar, bring to boiling-point and pour scalding hot over the beets. Seal tight.

Spiced Grapes.—Eight lbs. grapes, 4 lbs. sugar, 3 cups vinegar, 4 sticks cinnamon, 1 oz. whole cloves, 2 blades mace. Put the skins of the grapes in one pan and the pulp in another. Add the vinegar to the pulp, also the spices tied in a bit of cheesecloth, and cook. When soft put through a fine colander to keep back the seeds. Add the skins and return to the fire. When boiling add the sugar and bag of spices. When thick, seal.

Raw Pickle.—Two quarts firm ripe tomatoes, two-thirds cup grated horseradish, 2 onions, 2 heads celery, 2 red peppers, 1 cup sugar, two-thirds cup salt, ½ cup mustard seeds, ½ teaspoon cinnamon, ½ teaspoon cloves, ½ teaspoon ginger, ½ teaspoon mace, 1 qt. vinegar. Prepare the vegetables and chop rather fine. Drain in a colander. Place in a crock, with the spices tied in cheesecloth, also the sugar, salt and vinegar. Cover closely.

Elderberry Wine.—Add to 3 gallons crushed berries 3½ gals. water, ½ cup raisins, 2 oz. whole allspice, 1 doz. whole cloves, 1 oz. ginger root, 4 oz. stick cinnamon. Boil all for ½ hour then strain. To every gallon of liquid allow 3½ lbs. sugar. Put into a cask and when nearly cold drop on top a piece of toast spread with 1 yeast cake softened in a little tepid water. Let ferment, and when fermentation has ceased close the cask tightly. It will be ready in 3 months.

Another.—To 1 quart juice from crushed elderberries add 3 quarts water, 3 lbs. sugar, and boil 20 minutes. When cool put on top a piece of toast covered with dissolved yeast cake. Let stand 3 days in a jar. Skim, then put in a jug with 1 cup raisins. Let stand 9 days, then close tight for 3 months.

Grape Pickle and Marmalade.—Pulp the grapes, putting the pulps in one vessel and the skins in another. Stew the pulp until very soft, put through a fine colander or sieve to remove the seeds. Put the skins through a food chopper and add to the pulp. For the pickle add sugar, a little vinegar and cinnamon; if marmalade is wanted simply add sugar. Cook and seal. If the marmalade is rich enough pour it into glasses and when cool cover the surface with melted paraffine.

Note.—When making pickles or preserves do not let tin touch the ingredients, as it may spoil the flavor. All vessels, even to the dippers, colanders and spoons, should be granite or enameled ware.

War-Time Cookery.

Onion Custard.—Peel and cook in water until tender 4 to 6 fairly large onions. Set them in a greased baking dish. Make a white sauce of ¼ cup each of butter and flour, ½ teaspoon salt, ¼ teaspoon pepper, 2 cups milk. Beat 2 eggs until well mixed, dilute with a little of the sauce, then turn into the rest of the sauce. Mix and pour over the onions. Let cook in the oven in a dish of hot water until firm. Serve hot as the main dish for luncheon or supper.

Rye Bread.—Scald 2 cups milk (or half milk and half water); add 2 tablespoonfuls shortening, 2 tablespoonfuls sugar or molasses, and 1 teaspoon salt. When lukewarm stir in one cake (or more) of compressed yeast mixed through ½ cup of lukewarm water, 1½ cups wheat flour and enough rye flour to make a batter. Beat thoroughly, cover and let stand, out of drafts, until light. Add rye flour for a dough that may be kneaded. Knead thoroughly, cover and set aside to become light. Shape into loaves, and when again light bake nearly one hour.—*American Cookery*.

Meal Muffins.—Melt 2 tablespoons shortening in 1 cup hot, cooked oatmeal porridge. Add 1 teaspoon salt, 1 egg, beaten light, and ¾ cup milk. Mix all together thoroughly. Mix and sift together 2 cups cornmeal, 4 teaspoons baking powder, and ¼ cup sugar, and stir into the first mixture. Bake in hot, well-greased muffin tins about 25 minutes.

Honey Filling. Use 4 tablespoons honey to one egg-white. Boil the honey until it forms a soft ball when dropped in cold water, then pour it over the stiffly beaten egg-white and whip until cool. This makes a creamy filling, but is almost too soft to use on top

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...quarts firm ripe...
...cup grated horse-...
...heads celery, 2 red...
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...cloves, 1/2 teaspoon...
...mace, 1 qt. vinegar...
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...tied in cheesecloth...
...and vinegar. Cover

...Add to 3 gallons...
...gals. water, 1/2 cup...
...spice, 1 doz. whole...
...root, 4 oz. stick...
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...top a piece of toast...
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...marmalade.—Pulp the...
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...and cinnamon; if...
...simply add sugar...
...e marmalade is rich...
...in glasses and when...
...ace with melted

unless a coating of confectioner's chocolate is put over it to form a hard surface. The filling keeps indefinitely and can be kept in a glass jar ready for use.

Macaroni Pudding.—Break the macaroni into pieces about 4 inches long and cook in boiling salt water until tender. If the dish is greased before the hot water and macaroni are put into it, it will not be so likely to stick. When tender turn into a colander and pour cold water through. This is called blanching, and is done to prevent the macaroni from sticking together. Now put the macaroni on a bake-board and cut into small bits. Cook figs or any kind of fruit with water and sugar, and serve on top of the macaroni in a glass dish. You may put whipped cream on top.

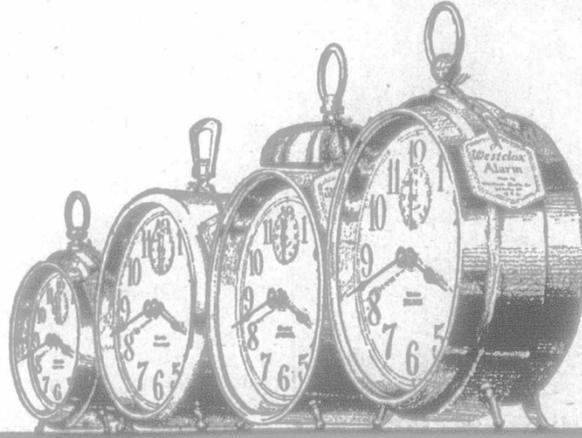
Apple Mint Jelly.—Some liquid from boiled mint leaves added to boiling apple jelly, makes a nice jelly to serve with mutton, etc.

Lemon Cheese Pie.—Two-thirds cup milk, two-thirds cup honey or corn syrup, 2 tablespoons corn starch, 1 egg-yolk, beaten light, 1 cup cottage cheese (milk curd), 1 lemon grated rind and juice, 1/2 teaspoon salt. Scald the milk, mix the sweetening and corn starch and stir in the hot milk until thickened. Cover and let cook 10 minutes, stirring occasionally. Add the egg and stir until cooked. Add the cheese, lemon and salt. Pour into a pastry shell baked over a plate, and cover with a meringue made of the sweetened egg whites. Let cook in a moderate oven for 6 minutes.

Potato Bread.—For 2 loaves of bread. Pare and wash 2 or 3 potatoes. Let boil with just enough water to cover. When done remove the potatoes, and add to the water enough scalded milk to make 2 1/2 cups liquid. In it dissolve 1 or 2 tablespoons shortening and add 1 tablespoon sugar or syrup, 1 teaspoon salt, and 1 cup of the potato pressed through a sieve or ricer. When lukewarm take out 1/2 cup of the liquid, crumble into it from one-third to a whole cake of compressed yeast (one-third at night, the whole cake if mixed in the morning), mix and return to the rest of ingredients. Again mix, then stir in 1/2 cup barley flour with wheat flour to make a dough that can be kneaded. Knead until smooth. Cover and leave until light. Shape into 2 loaves. When

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light again bake about 1 hour.—*American Cookery.*

Parsnip Culllets With Beans.—To 2 cups mashed parsnips add 1 cup grated cheese 1 tablespoon melted butter or substitute, 1 teaspoon salt, 1/2 teaspoon pepper and yolks of 2 eggs. Mix over the fire and turn out to cool. Form into neat cutlets, brush over with egg, roll in breadcrumbs and fry in smoking hot fat. Pile boiled or baked beans in the center of a hot platter, arrange the cutlets around and serve. To make more tasty, stew the beans for 10 minutes in a saucepan in which has been placed 2 tablespoons butter or dripping, 1 teaspoon each of molasses and mustard, 2 teaspoons minced onion and strained juice of half a lemon mixed with 1 cup hot water.

Fish Pie With Potatoes.—Flake cold fish, mix with a little white sauce and put in a greased baking dish thickly lined with mashed potato. Put some slices of fried bacon over the top, brush the potato part with beaten egg yolk and brown in the oven. Garnish with a little chopped parsley and serve very hot.

Baked Squash.—Cut a summer squash in two and remove seeds. Scrape out most of pulp and mix with 1 cup bread crumbs, 2 slices onion chopped, 1 tablespoon butter, 1/2 cup milk, 1 tablespoon chopped parsley and seasoning of salt and pepper. Fill the shells with this, sprinkle buttered crumbs over the top and bake slowly until tender. Serve on a hot platter garnished with parsley.

Baked Fruit.—Tomatoes, peaches, etc., are delicious when baked. Split the tomatoes and cover with buttered crumbs. Split the peaches also, stick a clove in each and cover with sugar.

The Scrap Bag.

Scraps of Wool.

Keep every scrap of old woolen sweaters and stockings, wash them and make into a pad for bed-comforters, which will be warm and cozy on cold winter nights.

Boiling a Ham.

Be'ore boiling a ham trim off the rind and most of the fat. Enough fat will remain to season any vegetables cooked in the liquor, and the trimmings may be rendered into drippings that will be much

...ng pickles or pre-...
...touch the ingred-...
...oil the flavor. All...
...dippers, colanders...
...granite or enamel-

Cookery.

Peel and cook in...
...to 6 fairly large...
...a greased baking...
...sauce of 1/2 cup...
...flour, 1/2 teaspoon...
...per, 2 cups milk...
...mixed, dilute with...
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...ix and pour over...
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...l firm. Serve hot...
...cheon or supper.

2 cups milk (or...
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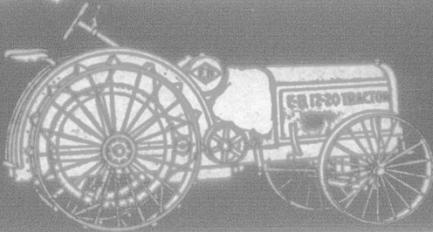
e 4 tablespoons...
...e. Boil the honey...
...all when dropped...
...pour it over the...
...e and whip until...
...creamy filling...
...t to use on top

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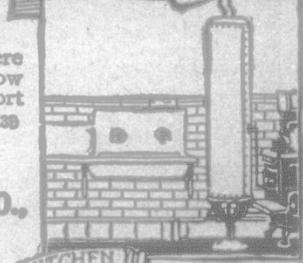
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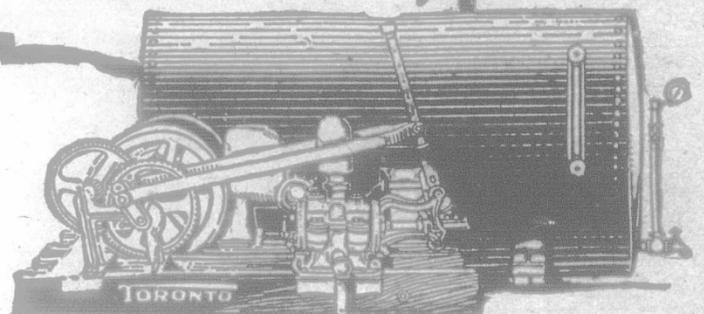


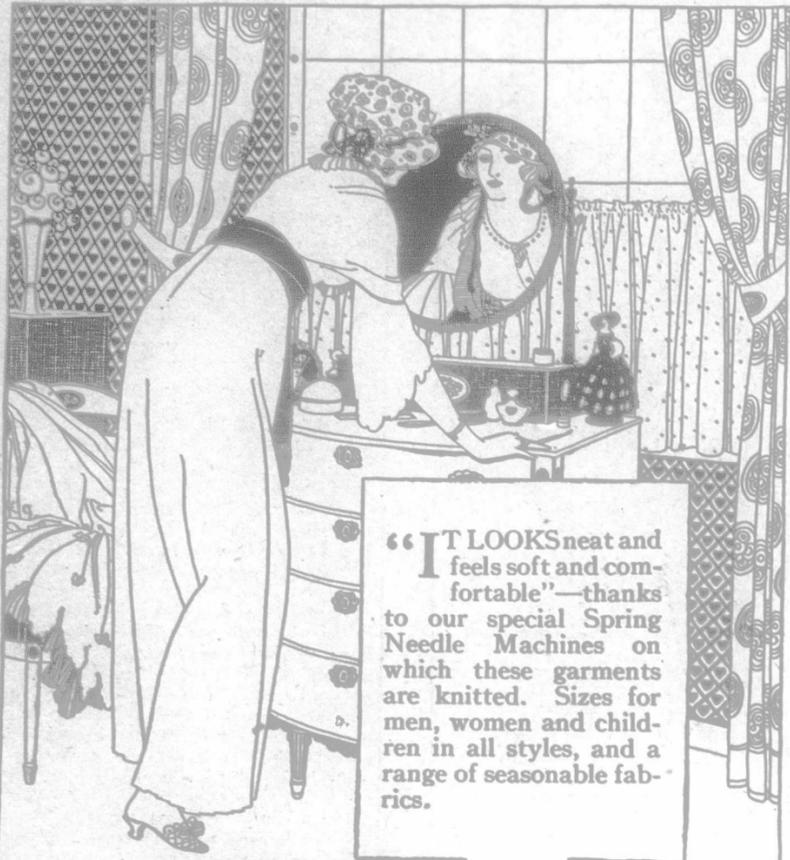
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better than those skimmed from the cold ham water. The best way to make drippings from any kind of fat is to put it through the meat chopper then try out in the oven.

Use For Old Tires.

Old inner tubes from automobile tires make splendid coverings for the knees of overalls used when working in the garden.

Dustless Dusters.

Wring old cotton out of a solution of 2 tablespoons of coal-oil to a quart of warm soft water. Hang up dripping and let dry. Or, if you use an O-cedar dustless mop, pour a little of the liquid preparation for it on your dust-cloth.

Saving Enamel Ware.

Before using new enamel ware thoroughly grease it with lard or fat and leave for a day or two. This will help to prevent chipping and cracking.

Cooking Squash and Pumpkin.

When cooking squash and pumpkin wash the vegetable, remove a piece from one end and scoop out seeds and pulp. Put half a cupful of water in an ordinary tube cake tin, place the pumpkin or squash in it to bake, with the cavity of the vegetable over the tube. This conveys heat and steam to all parts, thereby cooking it quickly. When done, the skin will peel off like paper and there will be no moisture. *McCall's Magazine.*

Home-made Vinegar.

Use any kind of sweet juice you have. If there is any jelly in the house that has gone to sugar or that did not form, or a little sorghum syrup or anything of that kind, put it into a stone jar with just enough warm water to make a sweetened water. Cut a piece of brown wrapping paper about the size of the jar lid and put with it a thin layer of bread dough the size of the paper. Roll both together and drop into the jar. This will form the plant. Any kind of fruit juice may be added at any time, rinsings from jelly glasses, or anything of the sort. Keep the jar in a warm place. The contents will be vinegar in about three weeks after the jar is filled and will taste just like cider vinegar.—*The Globe.*

To Dry Pumpkins.

Pumpkins can be dried and kept for winter use by the following method, in use by my grandmother for many years.

Pare the pumpkin and stew it slowly until it is dark-brown in color and the moisture is cooked out of it. Put it through a colander, then make it into little pats and place on a granite or stoneware dish in the hot sun. Or a slow oven may be used, if more convenient. When thoroughly dry, put into tin boxes or cans to keep. To use, soak in warm water till soft and proceed as with freshly cooked pumpkin.

To Keep Grapes.

Pick over the grapes and put a 3-inch layer of them into the bottom of a stone jar. Cover with 1½ inches of sugar, and continue to put in grapes and sugar until the jar is full. The top layer should be of sugar; either brown or white may be used with equally good results. These grapes will keep at least seven or eight months. They should be covered, but need be weighted down with nothing more than a plate. Serve the grapes plain with the juice drained off. The juice may be used as a delightful beverage.—*Pictorial Review.*

The Dollar Chain

For the soldiers and all who are suffering because of the war.

Contributions from Sept. 20 to Sept. 27:
J. E. McIntyre, St. Thomas, Ont., \$5.

Previously acknowledged.....\$5,629.50

Total to Sept 27th.....\$5,634.50

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

The Beaver Circle

[Rules.—Write on but one side of the paper. Do not use pen-name. Sign name, post-office, age and class at school]

At the Garden Gate.

BY TIMOTHY C. MURPHY.

The poor old dog at the garden gate
Was worn and tired and sad,
Things hadn't been going so well of late,
So the poor old dog felt bad.

The bones he had hid by the garden wall
Were gone, and the neighbor's cat
Was now curled up in his master's hall,
And he didn't approve of that.

The neighbor's hens were abroad on the lawn,
He'd been ordered to leave them alone,
Their rooster had crowed on our fence at dawn
As proudly as if 'twere his own.

His rest was disturbed by the children at play,
And thus by the turning of fate
The world was looking quite dark to-day
To the poor old dog at the gate.

But some one's coming! the world grows bright,
He's off; for the step in the lane
Will surely set all these things aright—
'Tis his master's coming again.

His master's caress all his troubles dispel,
And nothing his heart can annoy,
The long, sad story he meant to tell
Is forgot, in his boundless joy.

And as for the hens, an affair so small
Like the rest of the troubles can wait,
The world is a good place after all
For the glad old dog at the gate.

Little Bits of Fun.

“Can you imagine,” said the facetious teacher of natural history, “anything worse than a giraffe with a sore throat?”
“Yes, sir,” came the answer from one boy.
“What, pray?” asked the teacher in surprise.
“A centipede with corns.”—Selected.

Well Instructed.—Yells from the nursery brought the mother, who found the baby gleefully pulling small Billy's curls.
“Never mind, darling,” she comforted.
“Baby doesn't know how it hurts.”
Half an hour later wild shrieks from the baby made her run again to the nursery.
“Why, Billy,” she cried, “what is the matter with baby?”
“Nothing, muzzer,” said Billy, calmly: “only now he knows.”—Tit-Bits.

Senior Beavers' Letter Box.

Dear Puck and Beavers.—I have not written to your Circle for a long time. My last letter was not in print, but in the Honor Roll. So I was tempted to try again.

How many of you Beavers have a garden of your own? I have. I planted potatoes, beans, tomatoes and cabbage. My potatoes, tomatoes and beans grew well, but my cabbage is no good. I hoe and water them often and keep the weeds out of them.

Isn't this war terrible? I have a lot of cousins “over there”. One was killed and another has been gassed. The rest are getting along fine.

I live on a farm of three hundred and thirty-eight acres. I helped daddy with the hay this year. I can rake, mow, and build loads for daddy.

How many of you Beavers have seen the “B” on the oat leaf? I can see it plainly on our's. I would like to know what it means. As my letter is getting long I will close with a riddle:

I sit in the corner, and never was heard,
To make a petition, or utter a word.
Though I travel by night and travel by day,

And carry your message whatever you say.
I am blue, I am green, I am pink, I am red,
The largest of prizes, are set on my head.
When I start on my journey though I stick to my place,

I'm sure to receive a hard blow in the face;
I'm generally square, my character such,
It's best not compel me to work over much.
I run you one errand, and that errand run,
My life work is ended, my usefulness done.

Ans.—A postage stamp.

I remain

Your Beaver,
GRETBA BAILEY, (age 13, Bk. IV.)
Evansville, Manitoulin Isle, Ont.

verCircle

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C. MURPHY. the garden gate and sad, going so well of late, felt bad.

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r Beaver, 13, Bk. IV.) a Isle, Ont.

Dear Puck and Beavers.—I have written to your Circle many times before and am trying again. I am glad to tell you that I passed the Entrance and hope that all the other Beavers who tried have passed. We bought a pony about a week ago. Her names is Blanche and she is two years old. Sometimes when we go to pethershe will squeal assoon as you touch her and she nearly kicked me one day.

I guess most of the Beavers helped in haying and harvest this year. I guess there will be a lot of wheat needed next winter if this war keeps on. I will close with a riddle or two:

Why does a lady like to look at the moon?

Ans.—Because there's a man in it.

A man went up a hill on Friday and stayed a week and came back on the same Friday.

Ans.—His horse's name was Friday.

I will close wishing the Beaver Circle every success.

LLOYD WAGG, (Age 11). Tehkummah, Manitoulin Is., Ont.

Dear Puck and Beavers.—This is my second letter to your charming Circle. I read the letters of the other Beavers and enjoy them very much. This summer my father and mother and I took a trip to the American Soo. We went from Owen Sound on the "Manitoba Boat". It was a lovely trip. I passed Entrance and am going to go to High School. It wont be long now. I guess the little ones will be glad, but those who have gone a while won't think so much of it. Although I hate to stop school.

Well I guess I will close with a riddle. Will some one please answer it?

What's as round as an apple and never stops going?

Yours,

DOLLY R. ARD, (age 14 years.)

Allenford, Ont.

Would some of the Senior Beavers write to me?

Junior Beavers' Letter Box.

Dear Puck and Beavers.—This is my fourth letter to your Circle. I have been away from home quite a lot this summer and had a very good time. I have a banty I call Bidy, for a pet. I suppose all the Beavers will be glad when school starts. Since I have not been in the "Beaver Circle" very long I do not understand what the "Honor Roll" is.

I am knitting a pair of socks for my brother. We have had a big crop of oats this year. I will now close with a riddle.

Why do the Germans spell "Kaiser" with a "k"?

Ans.—Because Britain has control of the sea's.

HELEN M. GILBERTSON.

R. R. No. 2, Simcoe, Ont.

P. S.—I would like Margaret McKenzie to write to me.

The Honor Roll, Helen, is for the names of those who write quite good letters, but not quite good enough to be published.

Honor Roll.

Senior Beavers.—Ella Hoerner, Ellen Davidson, Mark Lee, Petè Davy.

Junior Beavers.—Mary Peavy, Ira Fox, Pearl Gibbs.

Beaver Circle Notes.

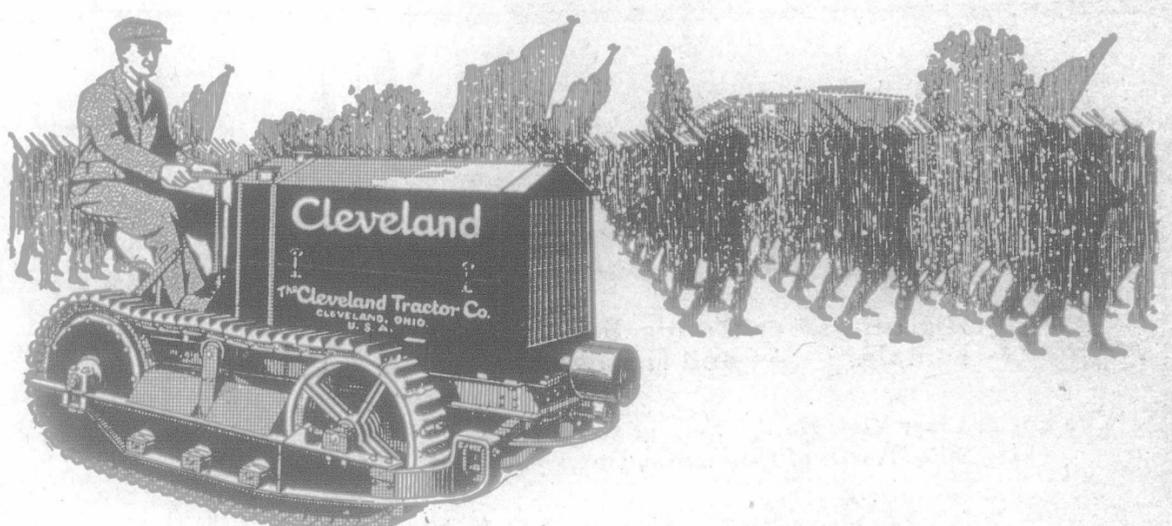
The following wish some of the Beavers to write to them: Ella Hoerner (age 14), Magnetawan, Ont.; Ellen Davidson, (age 12), Clear Lake, Muskoka, Ont.

Current Events

Six Canadian nurses were recently gazetted for the award of the Military Medal for conspicuous bravery during air raids. They are Matron Edith Campbell, of Pointe Claire, Que.; Leonora Herrington, Napanee, Ont.; Lottie Urquhart, New Glasgow, N. S.; Mary Williamson, Grenville, Que.; Meta Hodge, Hamilton, Ont.; Eleanor Thompson, Valleyfield, Que.

The oldest Trappist Monastery in the Dominion, at Tracadie, N. S., has been sold to the Government to be used as a hospital and home for disabled soldiers.

Curtailment of the manufacture of bicycles and accessories has been announced by the War Industries Board in the United States.



The Farm Labor Army decreases as the National Army increases

In spite of the labor shortage more food must be produced—more acreage must be put under cultivation. More work must be done by fewer men.

There is just one solution,—machinery must fill the gaps in the ranks of farm labor.

Tractors must be used—thousands of them—tractors that will actually do the things you want a tractor to do—tractors that will work on practically any kind of ground—in any part of the country.

These are exacting demands but Cleveland tractors by the thousands are meeting them effectively.

They are producing food—in larger quantities than ever before—and are consuming none of it.

They are plowing 3 1/2 miles an hour, eight to ten acres a day and under medium soil conditions are pulling two fourteen-inch bottoms. This is equal to the work of three men and three good three-horse teams.

And the work is not only done faster but better with the Cleveland.

The Cleveland is an all-purpose tractor that does a wider range of work than is possible with other types. It is the tractor that works successfully on the side hill.

It plows, harrows, sows and reaps. It hauls, does grading and road work, cuts ensilage and does the hundred and one odd jobs which are always to be done about the farm.

It is tractor and stationary engine in one.

The Cleveland is built on the same prin

ciple as the giant battle "tanks." It crawls on its own tracks, laying them down and picking them up as it goes along. It will work practically anywhere—over rough ground, ditches and hummocks, close up to fence corners, and under small trees.

With 600 square inches of traction surface, it goes through sand, gravel, gumbo, mud and even wet clay. It travels over the newly-plowed ground without packing the soil.

The Cleveland is only 96 inches long, 52 inches high and 50 inches wide. It can easily be operated by one man and can be housed in less space than is required for a single horse. It weighs less than 3,200 pounds.

Yet in spite of its small size the Cleveland develops twelve horse-power at the drawbar and twenty at the pulley.

The Cleveland Tractor was designed by Rollin H. White, the well-known automotive engineer, and is built under his personal supervision. Only the best materials are used throughout. Tracks and gears are protected from dirt and dust, and the track sections are joined by hardened steel pins which have their bearings in hardened steel bushings.

Every farmer can fill up the gaps in the ranks of his farm labor profitably—can help the nation meet the food crisis profitably—by installing one or more Cleveland Tractors now.

Speed up your production. Make more money. Write us for complete information and the name of the nearest Cleveland dealer.

The Cleveland Tractor Co.

19107 Euclid Ave.—Cleveland, Ohio

The largest producer of crawler-type tractors in the world

Cleveland Tractor

Reports from Germany state that there is great unrest and dissatisfaction in that country, and the people are calling more insistently for a Parliamentary Government.

News from Peking states that on Sept 10th the German Emperor issued an order to all German and Austro-Hungarians in Russia to join the Bolsheviks to oppose Japan and the Allies in the East.

On Sept 26th, Gabrielle d'Annunzio, the famous Italian novelist and aviator, landed in France from his airplane,

having flown from Italy across the Alps a distance of 290 miles.

At time of going to press the war-bulletins everywhere are emblazoned with the glad news that the great Hindenburg Line, as an asset to Germany, has practically ceased to exist. Along the whole Western front a terrific battle has been raging for days, and on Sept. 28 and 29 Sir Douglas Haig's armies, with Canadians, New Zealanders and Americans assisting, made a furious onslaught on the main defences of the great Line, which everywhere gave way over a front of over 30 miles. On those days British and American troops crossed the St. Quentin

Scheldt Canal, while Englishmen from North Midland crossed the Scheldt north of Bellenglise. Meanwhile Canadian troops, singing, as they went into battle, crossed the Canal du Nord. To them had been entrusted the positions before Cambrai, towards which they had prepared the way by their conquest of Bourlon Wood on Sept. 25th, and such headway did they make that before this reaches it readers Cambrai will probably have fallen into their hands. Simultaneously Petain's French legions in the Champagne have been forging ahead, fighting desperately, towards the Forest of Argonne, one of the strongholds of the enemy, while Americans farther to the

Unreserved

Holstein Sale

37 High-class Females 2 Young Bulls and Herd Sire

The Entire Clear View Herd. Selling at the Farm
1½ Miles North of Unionville, Ont.,

Tuesday, October 8th, 1918

In this dispersion will be found the largest number of two and three-year-old heifers that has ever come into any sale-ring in Ontario during the last year. The majority are sired by well-proven sires, such as Ourville Sir Abbekerk, Sir Lyon's Hengerveld Segis, Sir Riverdale Echo Segis and others of equal note, including a son of King Segis Walker. In nearly every case these heifers are bred to the Clear View herd sire Rivermead Pontiac De Kol, referred to above. This sire is just two, and is a son of a 25-lb. four-year-old cow, while his sire is a 29-lb.-bred son of King Pontiac Artis Canada. There is also one two-year-old heifer selling from a 21-lb. cow and bred to the noted Unionville Syndicate sire May Sylvia Pontiac Cornucopia, whose dam is a daughter of the great May Echo Sylvia. In reviewing the catalogue breeders should note that there will be every opportunity here of getting young, untried heifers with breeding that should insure results in a herd whose testing is carried on. In young bulls, one is a grandson of Inka Sylvia Beets Posch, and the other a son of May Sylvia Pontiac Cornucopia.

Wire at once for catalogue. Terms cash or credit on approved notes bearing interest at 6%. All trains met on morning of sale.

T. O. LOWERY, Unionville, Ont.

R. W. E. Burnaby, Sales Manager. J. H. Prentice, Auctioneer.

Holstein Breeders!

This is the last word regarding

The Kennedy Dispersion

The most important small sale in years

At no time in the history of the Holstein cow in Canada has there ever been a sale of such importance, where only 12 head were catalogued. If you attend this sale on Oct. 9th, you will say you have been to scores of sales where herds of fifty and sixty head has been dispersed, and saw no larger number of real good cows—COWS THAT WOULD STAND OUT IN ANY COMPANY. A number of them, it will be noticed, have good official records, but all were made before coming to the herd and have never since been tested. A 25-lb. cow here should, and has every appearance of being a 35-lb. cow in experienced hands, and ALL ARE BRED TO MAY SYLVIA PONTIAC CORNUCOPIA, whose dam is A DAUGHTER OF THE GREAT MAY ECHO SYLVIA. There are already three daughters of this great young sire in the herd, and all are catalogued. IF IT'S FOUNDATION ANIMALS YOUR AFTER DON'T MISS THIS SALE AT

Unionville, Ont., Wednesday, Oct. 9, 1918

Wire at once for catalogue.

At the same time there will also be sold all the farm stock, machinery, etc., including practically everything needed on an up-to-date, small farm. THE FARM HAS BEEN SOLD AND THERE IS NO RESERVE. The horses selling, in addition to the grades, includes one imported mare by Barron Ruby, a son of the great Baron's Pride, and her year-old filly and her 1918 horse foal. The former is by Baron Celtic, and the latter by Dunure Guffstria.

TERMS.—Six months' credit will be given on all sums in excess of \$10.00. 6% per annum will be allowed off for cash.

L. M. Kennedy, Unionville, Ont.

T. H. Prentice, Auctioneer. All trains will be met on day of sale.

south have been pressing forward upon the other side, between the Meuse and the Forest of Argonne, having now reached the hilly wooded region, almost devoid of roads, which runs northward towards Sedan.

While all this has been going on the news arrives that Bulgaria has arranged for an armistice with the Allies, looking to a separate peace, news which, it is reported, has caused the greatest consternation in Germany. Reports in detail state that during the days before negotiations opened, British, French, Italian and Serbian armies made great advance along the Vardar Valley, while French troops captured the town of Pulep, the key to the Road System of Southern Macedonia. By a separate peace with Bulgaria 700,000 in Macedonia would be liberated for the Allies' use, and to some extent, the armies in Mesopotamia and the Holy Land. Reports from Palestine indicate the thoroughness of Gen. Allenby's recent victories there, in which the Turkish Seventh and Eighth armies were practically blotted out of existence, 50,000 prisoners were taken, and 325 guns.

Markets

Continued from page 1600

Montreal.

Horses.—The decision of the British Government to purchase army remount horses in Canada has not, up to the present, had any marked effect on the demand for horses, so far as is felt in the local market. It might naturally be supposed, however, that, inasmuch as horses will be taken out of the country, the effect would be to strengthen prices. Up to the present heavy draft horses weighing from 1,500 to 1,700 lbs., were still quoted at \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175; culls, \$50 to \$75; fine saddle and carriage horses, \$175 to \$250 each.

Dressed Hogs.—Weekly fluctuations in the prices of dressed hogs are very light, and prices were approximately the same last week. Abattoir fresh-killed stock was quoted at 28½c. per lb.

Poultry.—Although it is rather too early to speak of established prices for

DISPERSION SALE

Wednesday, October 9, 1918, at 1 p.m.

Fred B. Lovekin & Son, "Kilcolman Farm", Newcastle, Ont.

WILL SELL

30 HEAD REGISTERED POLLED ANGUS CATTLE

Cows, heifers, bulls and calves. Also 25 heifers and steers, Berkshire hogs, 40 Leicester rams, ewes and lambs. Trains met.

GEO. JACKSON, Auctioneer

poultry, there is every reason to believe that it will be at least as high as a year ago. Practically no stock remains in cold storage, and ere long buying will begin for the coming season.

Butter.—The market for creamery was very strong during last week, and prices advanced more than once during that period. Finest was 47c. to 48c.; with fine at 46c. to 47c.; and dairies at 38c. to 42c. per lb.

Cheese.—No change. Commission quotes No. 1, 23c.; No. 2, 22½c.; No. 3, 22c.

Grain.—The market for oats was steady, with No. 3 Canadian Western at 98c.; extra No. 1 feed, 97½c.; No. 1 feed, 95c.; No. 2 feed, 90c.; Ontario No. 2 white, 91c.; No. 3 white, 90c. per bushel, ex-store. Car lots of Ontario extra No. 3 barley, \$1.32; No. 3, \$1.30; Manitoba No. 3, \$1.33; No. 4, \$1.28 per bushel, ex-store. Chicago sample corn, \$1.56, ex-track.

Flour.—New crop Government standard Manitoba flour, \$11.50 per barrel, in bags, ex-track, and \$11.65 delivered to city bakers, less 10 per cent. cash. Old crop, \$1.35, and \$1.45; Ontario winter wheat flour, \$11.60 per barrel, in bags. Rye flour, oat flour and corn flour sold at \$12 per barrel, in bags, and barley flour at \$11.50. Government standard corn flour, \$10.50.

Millfeed.—Bran was firm at \$37.25 per ton; shorts, \$42.25; feed cornmeal, \$68; mixed mouille, \$55; pure mouille, \$68; barley, \$62 to \$63.

Baled Hay.—The market was slightly higher, with No. 1 at \$18; timothy mixture, \$18; No. 2 hay, \$17; No. 1 clover mixed, \$16; and No. 3 timothy, \$15, ex-track.

Hides.—The market was steady, cow hides at 19c. per lb.; bulls, 17c.; steers, 24c. flat; veal skins, 50c. per lb.; grassers, 23c.; sheep skins, \$3.75 each; horse hides, \$5 to \$6.75 each. Tallow, 3½c. per lb. for scrap fat, and 8c. for abattoir fat, and 16c. to 16½c. per lb. for rendered.

Chicago.

Hogs.—Butchers', \$19.50 to \$20.10; light, \$19.60 to \$20; packing, \$18.60 to \$19.35; rough, \$18 to \$18.50; pigs, good and choice, \$18 to \$18.50.

Cattle.—Bulk of common, medium and good native and Western steers, 50c. to \$1 lower. Cowstuffs 75c. to \$1 lower.

Bulls 25c. to 50c. lower. Calves \$1 lower. Stockers and feeders, 25c. to 75c. lower.

Sheep.—Compared with a week ago best range lambs and fat sheep 50c. to 75c. lower. Other killing and feeding lambs unevenly \$1 to \$2 lower, medium and common declining most. Feeding and breeding sheep and yearlings 25c. to 50c. lower.

Gossip.

T. O. Lowery, of Unionville, is holding an unreserved sale of Holstein cattle, on Tuesday, October 8. There are 37 high-class females and two young bulls, besides the herd sire. A large number of two and three-year-old heifers are being offered, the majority of which are sired by well-proven sires as Ourville Sir Abbekerk, Sir Lyons Hengerveld Segis, and Sir Riverdale Echo Segis. The heifers were bred to the herd sire, River-

mead Pontiac De Kol, a son of a 25-lb. four-year-old cow. In looking over the catalogue, Holstein breeders will note that practically all the heifers have splendid backing. This is an opportunity of securing the quality of stuff with which to build a herd. Remember the date, October 8, and all trains will be met at Unionville on the morning of the sale. For further particulars consult the advertisement in another column of this issue.

L. M. Kennedy, of Unionville, is holding a dispersion sale of Holstein cattle, on Wednesday, October 9, the day following Mr. Lowery's sale. Thus prospective purchasers will have an opportunity of attending the two sales in the one neighborhood. Mr. Kennedy has sold his farm and is offering his herd which are outstanding. Not only have they excellent breed type, but also splendid backing. The females are bred to May Sylvia Pontiac Cornucopia. If looking for foundation stock, plan to attend the sale. For further particulars consult the advertisement in another column of this issue.

Sale Dates.

Oct. 8, 1918.—T. O. Lowery, Unionville, Ont.—Holsteins.

Oct. 9, 1918.—Fred B. Lovekin & Son, Newcastle, Ont.—Polland Angus.

Oct. 9, 1918.—L. M. Kennedy, Unionville, Ont.—Holsteins.

Oct. 15, 1918.—Robt. Currie & Son, Florence, Ont.—Shorthorns.

Oct. 23, 1918.—Jas. Fallis, Brampton, Ont.—Shorthorns.

Oct. 29, 1918.—Alex. Shaw, Lakeside, Ont.—Holsteins.

Oct. 31, 1918.—Ontario Agricultural College, Guelph, Ont. Sale of Pure-bred Live Stock.

Nov. 20, 1918.—Fred E. Hilliker, R. R. No. 2, Norwich, Ont.—Holsteins.

Dec.—3, 1918.—Arbogast Bros., Sebringville, Ont.—Holsteins, sale at Union Stock Yards, Toronto.

Dec. 11, 1918.—Niagara Peninsula Holstein Breeders' Club, W. C. Houck, Sec., sale at Dunnville.

Dec.—18, 1918.—Brant District Holstein Breeders' Club, Brantford, N. P. Sager, Sec.

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Hand or Power Feed Cutters

No farmer should be without a feed cutter, and nearly every farmer realizes that he could save tons of good feed if he had one. Write for our catalogue and prices to-day. Peter Hamilton feed cutters are easy running and will stand the hardest kind of work.

The Peter Hamilton Co., Ltd. Peterboro, Ont.



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.

EXPERIENCED MAN, SINGLE, DESIRES job as working manager on well equipped farm. Good references. Free 7th October. Box L, "Farmer's Advocate", London.

FOR SALE—100-ACRE FARM, NEW BARNs and stables, hog pens, hen house, silo, lots of water, frame house with natural gas for light and heat, soil clay loam, school across the road, church 1/2 mile, 2 miles to Port Stanley railway, 2 miles milk powder factory, 3 miles to cheese factory, 8 miles to London. This is a No. 1 dairy farm. Owing to sickness owner compelled to sell. \$4,000 cash, remainder on mortgage 6 1/2%. Apply Box "W", Farmer's Advocate.

FOR SALE—FINE 80-ACRE FARM, TWO miles from St. Thomas post office. For particulars and price, address D. E. Mains, R. No. 8, St. Thomas.

FARM FOR SALE—GOOD BUILDINGS first-class land, tiled; plenty of water and timber. F. H. Orris, Springfield, Ont.

WANTED—HERDSMAN FOR SHORTHORN herd; married man preferred. Apply by letter, stating experience and salary. H. M. Pettit, Freeman, Ont.

WANTED—MARRIED MAN TO LOOK AFTER stock and to milk, wife to board men. References required. Apply to W. K. Gooding, Islington.

ELM PARK, ABERDEEN-ANGUS

From 1893 to 1918 inclusive our herd has been shown at Toronto and other large Canadian shows from Halifax, Nova Scotia to Edmonton, Alta., and have during these years won more prizes than any competitor. Our herd now numbers over 80 head and we never had a better lot of bulls and females for sale.

JAMES BOWMAN, Box 14, Guelph

WANTED Alsike, Timothy, Red Clover, Ontario Grown Alfalfa, and White Blossom Sweet Clover.

If any to offer please mail samples, and we will at once let you know highest prices we will pay f. o. b. your station. TODD & COOK, Seed Merchants, Stouffville, Ontario



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

40 BARRED PLYMOUTH ROCK YEARLING HENS, 200 egg line \$5.00 pair; cockerels for late fall delivery. Jno. Fenn, Plattsville, Ont.

WANTED Dressed Poultry

WALLERS, 702 Spadina Ave., Toronto. Write for price list.

HAY

SHIPPERS! Consign your carloads to The E. L. RICHMOND CO. DETROIT The Old Reliable Firm. In business a quarter of a century. Reference—Any Bank.

Questions and Answers. Miscellaneous.

Second Growth on Potatoes.

My potatoes have green tops but new sprouts are shooting out from the tubers. Should I dig them? J. P.

Ans.—This is a second growth which is apparent and sometimes occurs when a wet spell follows a dry period. This will not make any addition to your crop, and it would be advisable to dig them.

Cow Bought at Auction.

I purchased a cow at an auction sale the first of January that was due to freshen on March 15, which did not freshen until four to six weeks after she was due. Can I collect compensation, as we purchased this cow to tide us over between the time our own went dry and would freshen again? H. A. G.

Ans.—Unless the owner gave a guarantee that the cow would freshen on or about a certain date, we doubt if your case would be strong enough to collect compensation.

Planting Raspberries in Fall.

Is it advisable to plant raspberry canes at this season of the year or later in the fall, or would it be better to set them out in the spring? A. S.

Ans.—Many make a practice of planting raspberry canes late in August or early in September if the weather is suitable for growth. The plants if well rooted in the fall produce a crop of fruit the following year. Rather than plant as late as this we would prefer leaving it until spring, as that is really the natural time of planting.

Tests—Rations for Cows.

1. What is the meaning of A. R. O. test and R. O. P. test?

2. Are black teeth in pigs a disease?

3. What is a favorable ration for feeding cows on test? D. L. C.

Ans.—1. A. R. O. or Advanced Registry in U. S., is an additional registry based upon production of milk and butter-fat. The short-time test in Canada is known as the R. O. M. and is official. The R. O. P. is the Canadian semi-official test. The milk is weighed regularly at time of milking, and an officer of the Department visits the farm every six weeks or two months and checks up the weights and also tests the milk.

2. Black teeth are not considered a disease. When they occur in young pigs to the extent of lacerating their lips or tongues they should be broken off.

3. The ration will depend a good deal on the milk flow and also on the feeds available. For a cow giving around 30 lbs. of milk, and weighing 1,000 or 1,100 lbs., 30 lbs. of silage, 20 lbs. roots, 5 or 6 lbs. of straw, 10 lbs. hay, and then grain according to the milk flow, would be a very fair ration. Bran, oil cake and oat chop, or oat chop, bran and cottonseed would make a very good grain ration. One pound of grain may be fed for every three and a half or four pounds of milk produced.

Weight of Silage.

1. What is the weight per cubic foot of silage in a 10 by 50-foot silo when most of the corn at the time of cutting was in the milk stage? What would be the weight if the corn were well eared and in the dough stage? J. A. W.

2. What are the respective values per ton of the grades of silage in the field standing, and in the silo? J. A. W.

Ans.—1. The nearer one gets to the bottom of the silo, the more will a cubic foot of silage weigh. It is estimated that a cubic foot will weigh from 30 to 35 pounds. There would be very little difference in the weight of silage from corn in the milk stage and in the dough stage. Corn that was matured or frosted would not go together quite so solidly and would weigh less.

2. It is difficult to place a value on the grades of silage. It must be figured according to the price of other feeds and also depends on the class of stock to which it is fed. For dairy cattle the mature corn without ears may have as high a feeding value as the mature corn that is well cobbled. With feeding cattle, the reverse might be the case. Several feeders valued their silage at from \$4 to \$4.50 per ton, with feed at the prevailing prices last winter. The cost of cutting, hauling to the silo, and putting it in the silo, would have to be considered when reckoning on the value of the standing crop.

FIRE PREVENTION

Extracts from PROCLAMATION

Issued by His Honour the Lieutenant-General of the Province of Ontario.

Whereas next to the care of those who are offering their lives on the front line of battle, the conservation of all our energies and substance is our most important problem;

And whereas the saving of human life, thrift, and the prevention of loss of property through destruction by fire, is an aid which every one should give willingly to the community at large;

And whereas the reckless and impoverishing fire waste that confronts the people of our Province is appalling;

Therefore, believing that the loss can be minimized only by awakening in the public mind a universal watchfulness against carelessness, accumulation of rubbish and unsanitary conditions;

and Because of this great need and in order to arouse a sense of watchfulness, carefulness and cleanliness, and to create a greater personal responsibility in reducing the number of preventable fires;

We have thought fit, by and with the advice of our Executive Council for our Province of Ontario, to name, and do hereby name Wednesday, the

9th DAY OF OCTOBER, 1918

AS FIRE PREVENTION DAY

And We do hereby urge that on this day, throughout our Province of Ontario, attention be called in schools and public places to the conditions that exist and to the need of immediate action and co-operation on the part of everyone; and special exercises, addresses and other means be employed to impress on the public mind lessons of Fire Prevention.

To insure the success of this great Clean-up Campaign it will be necessary to have the hearty and harmonious co-operation of all who have for their objects civic, social and industrial betterment.

The Proclamation should be read in all Schools and at Public Gatherings. Office of the Fire Marshal of Ontario, Department of the Attorney-General, Toronto, Sept. 21st, 1918. GEORGE F. LEWIS, Deputy Fire Marshal.

Hens Moults and Lay When Fed Our Way

Feed your hens Royal Purple Poultry Specific and it will shorten the moulting period. It will keep your hens in the "pink" of condition, and supply the nourishment for forming new feathers. This is very important if you want eggs during the winter months.

Royal Purple Poultry Specific

Our specific contains all the necessary food elements to keep poultry healthy and greatly assists them in digesting the other foods they eat.

Hens generally start laying in about one week after you start feeding Royal Purple Poultry Specific. Hundreds of our customers have written us to this effect.

If your hens are in poor condition, moulting or not laying as you think they should, start feeding our Poultry Specific.

Royal Purple Poultry Specific will enable you to fatten your cockerels and old hens in two-thirds the time it would ordinarily take. Order a supply at once from our dealer in your town or direct from us.

Sold in large and small packages.

W. A. Jenkins Mfg. Co., Limited London, Canada

FREE BOOK Our 30-page book describes the common diseases of Poultry and stock. It tells how to build and remodel poultry houses and feed fowl properly. Also how to raise calves without milk.

CRATE FATTENED POULTRY

We are open to handle large quantities of crate fattened poultry of all kinds; highest market prices paid according to quality. Write us for prices.

HENRY GATEHOUSE & SONS, 344 Dorchester St. W., Montreal.

FOR SALE

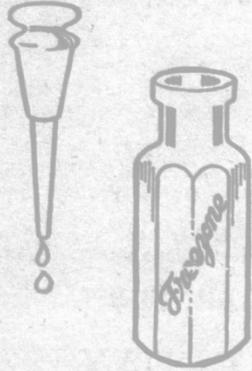
20 short-keep grade Shorthorn steers 2-year-old. JAS. SLOAN, R. R. No. 5, Kemptville, Ont.

Great Britain alone has sent to the Great War, on land and sea, a total of six and a quarter millions of men. Her colonies have added to these two and a quarter millions more.

SO EASY! CORNS LIFT RIGHT OUT

Doesn't hurt at all and costs
only a few cents

Magic! Just drop a little Freezone on that touchy corn, instantly it stops aching, then you lift the corn off with the fingers. Truly! No humbug!



Try Freezone! Your druggist sells a tiny bottle for a few cents, sufficient to rid your feet of every hard corn, soft corn, or corn between the toes, and calluses, without one particle of pain, soreness or irritation. Freezone is the discovery of a noted Cininnati genius.

SEEDS BOUGHT

Highest prices paid for: Fancy Red Clover, Alsike, Alfalfa, Timothy and Pure Seed Grain. Send samples. State quantity and price.

WM. RENNIE COMPANY, LIMITED
130 Adelaide Street, East, Toronto, Ont.

FOR SALE: The Prize Winning Butter Bred Jersey Bull

Lass Fontain's Perfection

First prize sen. calf, Ottawa 1918; sire Brunette's Perfection. Undefeated in his class and defeating his sire Bonnie's Perfection, Grand Champion, Toronto, 1917, first aged bull, 1918.

Dam Lass of Meadowview, Champion R.O.P. three-year-old of Canada, test 745 lbs. 1916-17. Grand Champion, Sherbrooke, 1918, in class of 19 aged cows; only time ever shown. For further particulars apply:

SIMEON MCGINN, Manager.

Sicawai Jersey Farm, North Hatley, Que.

ALL ABOUT THE TRACTOR

Complete, practical course by mail on the construction, operation, care and repair of all kinds of gas and gasoline tractors. You learn at home. Write for circular.

Canadian Correspondence College, Limited
Dept. E, Toronto, Canada

Tile Machines For Sale

Buckeye Machine in good condition at reasonable price and terms. Can be seen at M. C. Ry. Station, Amherstburg, Ont. Write:

W. S. FALLS, Amherstburg or
B. JASPERON, Kingsville.

Butter Wrapping Paper

"Choice Dairy Butter" 8 x 12 in lots of 15,000 or over \$2.20 per thousand, freight paid. Two-pound wrappers \$3.25 per M in lots of 20,000 or over. We pay freight as far as Ontario points. Finest Butter Parchment in America.

THE MARITIME PUBLISHING CO., LTD.,
Sussex, N. B.

FOR SALE—limited quantity, Good clean

FALL RYE

\$2.40 per bus., F.O.B., Maple. Good sound bag charged at 55 cents each. Terms cash with order. H. C. BAILEY, MAPLE, ONT.

Questions and Answers.

Veterinary.

Heaves.

Mare is thick in her wind. She does not wheeze. No difference can be noticed when driving her except that she voids gas per rectum. She has a hard, dry cough.

T. R.

Ans.—She has heaves which is incurable. Feeding small quantities of first-class hay, and, if working, giving an extra grain ration and damping everything she eats will have a tendency to lessen the symptoms. When possible avoid working or driving shortly after a full meal.

V.

Injury to Spine.

Horse when being driven to single wagon on a side hill slipped and fell on the shaft and broke it. Since then he does not seem to have full control of his hind quarters. When walking on rough ground his hind part sways and he has difficulty in rising.

J. W. D.

Ans.—The fall caused an injury to the spine which caused the partial paralysis. A recovery may take place. It will be well to keep him as quiet as possible in a roomy, comfortable box stall, purge with 8 drams aloes and 2 drams ginger, and follow up with 2 drams nux vomica 3 times daily. Feed on laxative food. Benefit may be derived by blistering each side of the spine from the withers to the croup with 3 drams biniodide of mercury mixed with 2 oz. vaseline.

V.

Result of Nail Puncture.

Mare punctured her hind foot by picking up a nail. I had her treated by a veterinarian. The accident occurred on June 10. All discharge, heat and soreness has ceased, but the hoof is deformed. She walks sound and suffers no pain.

H. J. M.

Ans.—No doubt your veterinarian did all that could be done, as deep nail punctures are very serious, hard to treat and frequently prove fatal. All that can be done now is to pare the foot to as near a natural shape as possible, and blister the coronet once every month with 2 drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline, to encourage the growth of horn, and in the meantime keep the foot trimmed to as near normal as conditions will permit. When about to blister clip the hair off for two inches high above the hoof all around. Tie so that she cannot bite the part. Rub blister well in; in 1 to 24 hours rub well again, and in 24 hours longer apply sweet oil and turn in box stall. Oil every day until the scale comes off.

V.

Umbilical Hernia.

When about one month old my thoroughbred colt developed a rupture at navel. It is now larger than the large end of a goose egg and seem to be increasing in size. There is no veterinarian available.

H. B.

Ans.—The only amateur treatment is the application of a truss. Make a band of leather or strong canvas about 6 inches wide. In the centre arrange an elevation about the size of half of a baseball. Put this around the colt with the elevation pressing the intestine back into the abdominal cavity, and with straps and buckles or strong cords attached to the band adjust to the proper pressure to keep it up. As the bandage will tend to work backwards it will be necessary to have a strap or cord attached to the centre and come forward between the fore legs, and one on each side, all to be fastened to a strap or little collar on the colt's neck, in order to keep the truss from slipping backward. Care must be taken to not adjust the truss too tightly or with straps, etc., that will scarify the skin. It should be examined frequently, and if necessary be readjusted. This should be kept on from two to three weeks, or until the hernia fails to reappear when it is removed.

In many cases this form of hernia makes a spontaneous cure, but as this one did not appear until the patient was a month old, and is increasing in size, it is necessary to treat. When this treatment fails an operation by a veterinarian is necessary.

V.

In the report of the Western Fair, published in issue of September 19, T. E. & H. C. Robson were credited with securing first and second placings with three animals get of one sire. These placings were won by John Gardhouse & Son, of Weston, on the progeny of Sultan Choice and Lavender Sultan

Men of the Nation

Men at the plow and men at the throttle, who perform the heavy tasks of the nation, find the rugged strength their work demands in

KITCHEN'S "Railroad Signal" OVERALLS



The requirements of the hardest workers are considered in the making of Kitchen's Overalls. The material is genuine and long wearing. Strongly stitched and reinforced where the wear comes hardest. Kitchen's Overalls are comfortable and neat to wear.

Made expressly to endure hard work

The Kitchen Overall & Shirt Co.

LIMITED

Brantford - Ontario

10

When writing advertisers will you kindly mention The Farmer's Advocate.

Do You Read Advertisements

IF YOU DO NOT, YOU MISS VALUABLE INFORMATION THAT WOULD BE TO YOUR ADVANTAGE FINANCIALLY AND IN OTHER WAYS.

The Farmer's Advocate and Home Magazine

has many interesting things to tell you in its own advertisements, and many of our subscribers take full advantage of the information given. But there are still a number who evidently have not read our offers.

Do You Know

that subscribers to the Farmer's Advocate can have the paper sent to them for nothing for a whole year?

This Is A Plain Business Offer involving no more effort on your part than the sending to us of the names of Two New Subscribers, with money order for the \$3.00,

each subscriber giving you \$1.50 for his subscription for one year.

We Make This Offer

because we would rather receive the names of new subscribers from those who have taken the paper themselves and know its merits, than to send out men to get subscriptions who would simply be working for pay and not from any interest in the paper and the work it is doing.

Take Advantage of this Offer Now we want your co-operation. More co-operation among farmers it needed. To obtain it induce more to subscribe to the Farmer's Advocate.

COUPON The Farmer's Advocate & Home Magazine, London, Ont.

Gentlemen,—Enclosed find money order value \$3.00 covering two new subscriptions for one year. Kindly advance my own subscription one year free of charge.

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It is better to do washing by power, either gasoline, wind engine or electric.
That cuts down human labor to almost nothing.
But if power is not available, the

"PATRIOT" Hand Power Washing Machine

cuts the labor in half, in fact to less than half



It is a well-built, easy-working, reliable machine that is preferred over other hand power washers by many thousands of farmers' wives in Canada. The

DOWSWELL

line includes every kind of washing machine. Send for illustrated pamphlets and state your washing problem; we will help you to solve it.

Dowswell, Lees & Co., Ltd.
Hamilton, Canada

SEND A PORTION OF YOUR WHEAT FLOUR OVERSEAS BY SUBSTITUTING

5¢
WORTH
OF

CANADA
FOOD BOARD
LICENSE NOS.
FLOUR 15, 16, 17, 18
CEREAL 2-008



THAN	
50c. worth of Beef	
35c. " " Pork	
20c. " Cheese	

Use Them to Save Wheat Flour in All Your Baking

Wheat Saving Recipes Mailed Free

WESTERN CANADA FLOUR MILLS CO. LIMITED
Head Office: Toronto

Questions and Answers. Miscellaneous.

Snow Plow.

Is there a catalogue published describing road snow plows and giving price of same?
F. L.
Ans.—Not to our knowledge. They may be listed in catalogues of other machinery.

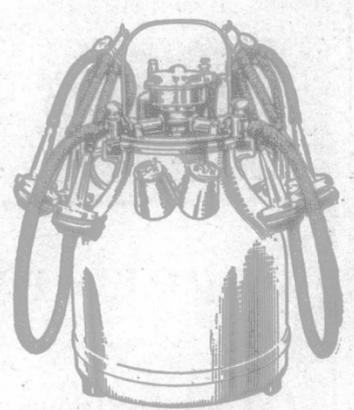
Legal School Hours.

1. What are legal public school hours?
2. Has any school board the right to change the school hours from nine o'clock to ten o'clock and dismiss at five o'clock, instead of four?
3. Has a teacher to abide by such rules if she doesn't desire to do so?
4. Has a ratepayer a right to ask for a dismissal of his pupils at four o'clock if he so desires?
I. H.

The preference of the farmers in many localities for standard time has caused confusion in the management of some of the schools. Our Wellington County correspondent, "I. H.," asks four questions bearing on the powers of school boards in the matter of changing the school hours all of which can be answered by a study of the following quotation from the School Law and Regulations: "Unless otherwise directed by the board, or with the approval of the Minister, the pupils attending a day school shall assemble for study at nine o'clock in the forenoon and shall be dismissed not later than four o'clock in the afternoon, but in no case shall there be less than five hours of study a day, including the recesses in the forenoon and afternoon." Exception is made for primary and kindergarten grades.

"Daylight Saving" time is legal time in Canada; but there is nothing in the regulations to prevent the school board from opening the school at 10 a.m. and closing it at 5 p.m. If the board determines on such change by a properly adopted resolution, teacher and pupils must govern themselves accordingly.
J. D.

Will Your Herd Be For Sale



BURRELL B-L-K MILKER

Good for the
Herd

D. DERBYSHIRE CO., LTD., Brockville, Ont.

If you milk by hand the chances are you will want to sell your herd before the year is out.

Dairymen have written that they had intended selling their herds because of labor trouble and low profits in hand-milking; that they started using Burrell Milkers as a last resort and have since increased their herds.

If you request it we will send these dairymen's statements with the illustrated booklet showing how Burrell Milkers increase milk profits, reduce dairy troubles and do this year after year.

PLEASANT VALLEY FARMS

Present offering, 20 young bulls sired by such bulls as (Imp.) Right Sort, (Imp.) Loyal Scot and Belmont Beau; also cows and heifers bred to (Imp.) Newton Grand Champion, some with calves at foot. Inspection invited. Geo. Amos & Sons (Farm 11 miles east Guelph, C.P.R.) Moffat, Ontario

When writing advertisers will you kindly mention The Farmer's Advocate.

The Care and Preparation of the Farm Buildings for the Housing of Live Stock for the Winter Months.

This is the season of the year when every farmer should be considering the putting of his farm buildings in the best shape possible for the winter housing of his live stock, that is, 1, in regard to cleanliness; 2, light; 3, ventilation, and 4, warmth.

First, the farmer should see that all dirt and cobwebs that may have accumulated through the summer are swept down and a good coat of whitewash applied with a certain amount of a disinfectant, such as is used on all farms added to the whitewash, in order to eliminate as much as possible any disease which may be present.

Second.—See that there are as many windows as possible in your buildings and that the glass is tight in all of them, for there is no better preventive of disease than plenty of light. If it is not possible to have double windows for all your stables be sure to use what you have on windows on the north side in order to conserve heat.

Third.—Ventilation is one of the most important things in live-stock industry, and unfortunately, one that there is not enough stress laid upon, for without proper ventilation, it is practically impossible to get the good, healthy development and benefit from feed consumed that we should have in our live stock.

Fourth.—It is also very important to see that all boarding is tightly nailed down and all cracks closed in order to keep as uniform a temperature as possible and prevent drafts which are very detrimental to our live stock at certain times.

The Experimental Farm system is pleased at all times to forward bulletins on farm buildings, ventilation, etc., also answer questions and help prepare plans of such buildings as may be required on your farms.—Experimental Farms Note.

DOUGLAS EGYPTIAN LINIMENT

Stops Bleeding Instantly. Prevents Blood Poisoning. Sure Cure for Thrush.

For sale by all dealers.

DOUGLAS & COMPANY MFRS. TORONTO, ONTARIO

IMPORTED HACKNEY PONIES

Good pair, 13½ hands, brown mares, 7 and 11, match admirably, and extra good show pair, one by Torchfire, the other London Winner. Offered at low figure.

A. G. HARDY, Brockville, Ont.

SUNNY ACRES Aberdeen-Angus

Present offering: 15 young bulls, 5 to 10 months; also 6 breeding females.

G. G. CHANNON

P. O. and 'Phone - - - Oakwood, Ont. Railway connections: Lindsay, C.P.R. and G.T.R.

Alloway Lodge Stock Farm

Angus—Southdowns—Collies SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edward, 1st prize, Indiana State Fair.

Robt. McEwen, R.R. 4, London, Ont.

BEAVER HILL Aberdeen-Angus

MALES AND FEMALES

ALEX. MCKINNEY, R. R. No. 1, ERIN, ONT.

ABERDEEN-ANGUS MEADOWDALE FARM, Forest, Ont.

ALONZO MATTHEWS, H. FRALEIGH, Manager, Proprietor

Patent Solicitors—Fetherstonhaugh & Co. The old-established firm. Patents everywhere. Head Office: Royal Bank Building, Toronto. Ottawa Office: 5 Elgin St. Offices throughout Canada. Booklet free.

Gossip.

The Orchard Leigh Herd.

In calling attention to the Orchard Leigh offering of pure-bred Holsteins, advertised elsewhere in these columns, it seems almost useless to enter into any lengthy discussion regarding either the present offering of young bulls or the foundation animals from which they were bred. Messrs. Currie & Son have long been familiar to Advocate readers as one of Oxford County's foremost breeders of high-producing Holsteins, while the performance of individual members of their herd in both the 7-day and the semi-official yearly tests during the past ten years should taken them "over the top" with the best the breed has ever produced. Among the breeding matrons are cows with official records as high as 34.98 lbs. of butter in 7-days, and three year olds that have produced over 25 lbs. in the same period. There are also yearly producers whose records run as high as 11,235 lbs. of milk for junior two year olds and up to 19,359 lbs. for mature cows. These are the highest in each case, but the average of the entire herd shows up almost as well, while the butter-fat tests as shown on the Record of Performance sheets with every cow in the herd gives an average throughout of almost 4 per cent. butter-fat. We have seen but very few herds with so high an average, and here we do not hesitate to say that breeders who are finding it hard to keep their fat test up to normal would do well to consider a herd sire of Orchard Leigh breeding. In addition to the record test and excellent flow of milk will also be found a strong combination of type, depth and breeding, the three great factors which without doubt have been responsible for the success the herd has attained to-day. Messrs. Currie & Son are following this still further in the selection of the thick, well-proportioned youngster Madam Pauline Sir Abbekerk as their next herd sire. He is a son of Prince Colanthus Abbekerk, a 31.95-lb.-bred son of Prince Abbekerk Mercena, while his dam, Madame Pauline Canary, is a 30.01 lb. sister to Madam Posch Pauline, the 27,597-lb. British Columbia champion. At present he looks the part of a great sire in the making, and with his splendid backing should develop into a most worthy herd sire.

The Ontario Department of Agriculture has recently issued a bulletin entitled "Common Diseases of the Digestive Organs of Horses and Cattle," written by J. Hugo Reed, Professor of Veterinary Science at the Ontario Agricultural College. The bulletin deals with many of the more common diseases and gives the causes, symptoms and treatment of same. The information contained in the bulletin should prove of value to all owners of live stock.

When you buy A HARNESS

When you go to the Harness Dealer, do you just say, "Let's see some Harness?" If you do, you risk buying a set that is not guaranteed by the maker or that does not even have the maker's label on it. In buying Harness know the BRAND and the maker's name. Our goods are trade-marked—IMPERIAL BRAND and known from coast to coast as high-grade. If your dealer does not have IMPERIAL BRAND HARNESS we can supply you direct. Our prices range as low as \$22, single set complete, and \$39 team set, without collars. Our "Team Special," No. 640 is the most popular moderate priced team Harness in Canada. It is sold from Halifax to Victoria express prepaid to any station in Canada on receipt of price. Our No. 56 Rawhide Lined single Harness, is exceptional value at \$35 per set. Write us for anything in the Harness line—we have it—and our prices are as low as honest work and materials allow. Satisfaction guaranteed.

SAMUEL TREES & CO. Limited
48 Wellington St., East. TORONTO

Established 1866



The Maples Hereford Farms

Where size, bone quality and rich breeding count. Headed by Clayton Donald (own brother to Perfection Fairfax) and High Ideal, last year's Junior Champion. For Sale—choice young cows, some with calves at foot and others in calf. Also some good two-year-old heifers in calf to above sires and open; and a few choice bull calves, and one good farmer's bull, 15 months a tried breeder.

W. H. & J. S. Hunter Proprietors Orangeville, Ont.

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding and are thick, mellow fellows, bred in the purple.

WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

SPRUCE GLEN FARM

Herd headed by Nonpareil Ramsden =101081= and Royal Blood =77521=. At present we have nothing to sell but we have some very good ones coming on. James McPherson & Sons, Dundalk, Ontario.

BLAIRGOWRIE SHORTHORNS

I have females all ages and bulls of serviceable age. Worth while to come and see, or write JOHN MILLER Myrtle Station C.P.R., G.T.R. ASHBURN, ONTARIO

Robert Miller, Stouffville, Ont., still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold for a low price, considering the quality, and the freight will be paid.

Write for anything in Shorthorns. One hour from Toronto.

1861 IRVINEDALE SHORTHORNS 1918

Herd headed by Marquis Supreme =116022=; have on hand, a number of good young cows and heifers, bred to Marquis Supreme. Also a right good lot of bulls, all by Gainford Select =90772=. Anyone in need of a good young bull or a nice well-bred heifer will do well to write to, JOHN WATT & SON, (G.T.R. & C.P.R.) R. R. 3, Elora, Ont.

ESCANA FARM SHORTHORNS

Five Bulls For Sale. One roan senior yearling; one choice twelve months white calf; by Right Sort (Imp.); one select, dark roan, ten months calf; by Raphael (Imp.); one roan red yearling, for grade herd. Farm ¼ mile from Burlington Jct., G. T. R. J. F. MITCHELL, Limited BURLINGTON, ONT

SALEM SHORTHORNS

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times. J. A. WATT, ELORA, ONTARIO.

Important Clearing Sale

OF 30 HEAD OF PURE-BRED SCOTCH AND SCOTCH-TOPPED

SHORTHORNS

This offering is made up of 25 females and 5 young bulls, and is one of the most select small herds in Western Ontario. Every animal in the herd will be found to be choice, and a straight breeder's proposition. The families represented are, Clippers, Kiblean Beautys, Stamfords, Claras, Minas, Clementinas, etc. Among the lot are three granddaughters of the great Right Sort (imp.). The sale will be held at the farm near

Florence, Ont., Tuesday, October 15, 1918

Catalogues Mailed on Request.

In addition to the Shorthorns there will also be sold a number of good cattle, horses, hogs and sheep, as well as a quantity of grain and seed corn.

Parties coming by either G.T.R. or C. P. R. trains will be met at Bothwell station on morning of sale.

T. E. Robson, Geo. E. Brown, Auctioneers. Robert Currie & Son, Florence, Ont.

Important Clearing Sale

OF

60 High-class Shorthorns 60

The Entire Elm Grove Herd, Selling at the Farm Near Brampton, Ont., Wednesday, Oct. 23, 1918

In this offering, which is nearly all pure Scotch or Scotch topped are twenty thick good young cows; each with a calf by her side and all carrying the strongest of pedigrees. The families are Butterfly, Broadhooks, Golden Drop, Village Girl, Missie, Clementina and others. The younger females include a large number of one and two-year heifers of the same families and many are well along in calf to the service of Broadhook's Stamford (the herd sire who is also selling). The young bulls catalogued are again bred along these lines and bring in much that is strong herd sire material.

Catalogues ready October 10. Write now and watch these columns for further particulars.

Capt. T. E. Robson Auctioneer JAS. R. FALLIS, Proprietor, Brampton, Ont.



Harness know are trade-marked SPECIAL TEAM SET \$39

Established 1866

Farms

by Clayton Donald

geville, Ont.

NS pure Scotch breeding

T.R.; Oshawa, C.N.R.

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At present we have

HORNS

come and see, or write

SHBURN, ONTARIO

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URLINGTON, ONT

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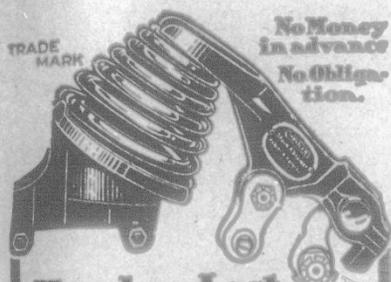
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23, 1918

ch topped are and all carrying hooks, Golden unger females e families and ford (the herd ain bred along these columns mpton, Ont.



Hasslers Last as Long as the Ford

NO ONE knows how long a Ford can last. It is admittedly the car that delivers good service under abuse and outrageous care longer than any other machine. But no Ford can outlast the



Hassler Shock Absorbers are made of chrome vanadium steel. They cushion the car by compression—the spring is compressed to give flexibility and not stretched. The combination—Ford Car and Hassler Shock Absorbers—is irresistible. The Ford is transformed—it rides as easily as a \$2,000 car; sideway is prevented and up-throw eliminated; tires last longer and repair bills are cut one-third. 300,000 Ford Owners recognize their economic necessity.

10-day Free Trial Offer

Try Hasslers 10 days without cost. Then, if you are willing to do without them, they will be taken off without charge. Write today, Now, for Free Trial Blank.

Don't ride without Hasslers simply because someone discourages you from trying them. Accept this offer and see for yourself.

ROBERT H. HASSLER, Limited Lock Drawer H.C.27 HAMILTON, ONT., CAN.

Dr. Bell's Veterinary Medical Wonder, 10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly. DR. BELL, V. S. Kingston, Ont.

Mardella Shorthorns

Herd headed by The Duke, the great, massive, 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R.O.P. test. I have at present two exceptionally good young bulls ready for service, and others younger as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call. Thos. Graham, R. R. No. 3, Port Perry, Ont.

Spruce Lodge Shorthorns and Leicesters

Herd headed by the Butterfly-bred bull, Roan Chief Imp. -80865- Young bulls, cows, and heifers of all ages, of good breeding and quality. W. A. DOUGLAS CALEDONIA, ONT.

Graham's Dairy Shorthorns

I have a choice offering in cows and heifers in calf. Bulls from the heaviest milking strains. Satisfaction guaranteed. CHARLES GRAHAM - Port Perry, Ont.

GLENFOYLE DUAL - PURPOSE SHORT-HORNS.—Eight bulls from 6 to 14 months. Big kinds, with quality. Also choice selection of females. Those of breeding age bred to College Duke. Prices easy. Stewart M. Graham, Lindsay, Ont.

Evergreen Hill R.O.P. Shorthorns

Offering two, ten month bulls by St. Clare; also pure-bred Cotswold lambs, both sexes. S. W. JACKSON, R.R. 4, Woodstock, Ont.

WHEN writing advertisements please mention The Farmer's Advocate.

Our English Letter.

EDITOR "THE FARMER'S ADVOCATE": Pedigree live stock of all kinds continue to make "ripping" prices in England. Red Poll cattle, of not too outstanding quality, are making £101 apiece at herd dispersal sales, one cow fetching 380 guineas, and a bull 580 guineas. Suffolk horses averaged £227 apiece when sold on a Middlesex farm, where they were hard workers all, and of the real utility type and good at the knees and hocks, which all Suffolks are not. At the same farm Large Black pigs averaged £27 apiece, a very good boar, but a proved foundation stone layer, fetching £150.

Robert Fisher, the Leconfield, Yorkshire, breeder of Lincoln Long-wool sheep, averaged £32 5s. for eighty-four rams, and Exmoor horned rams offered at Winsford, Devon, have sold up to 31½ guineas apiece. There promises to be a record run on rams when the sales of those kittenish young things come about. All our old rams—farmers' rams I'm speaking of now—have been sold off because they were heavy and made good money at the fixed prices given for mutton in our marts, and so there will be a big call for virile young rams and shearlings—to carry on, as it were.

The ewe lamb sales have already got started in Scotland, and prices are fairly well maintained. In some breeds they are a few shillings cheaper apiece than they were last year. Leicester-crossed ewe lambs fetched 64 shillings at Carlisle; Suffolk crosses made 53s. 9d., and Oxford crosses 57s. 6d. at Howick; Cheviots were worth 55 shillings apiece at Lockerbie, and black-faced ewe lambs touched 47s. 6d. at Stirling.

In our fat-stock markets, fat bullocks have fetched £51 at Lincoln, and £47 14s. 3d. in Malton mart, where some fat ewes fetched £5 19s. A fat pig at Seamer realized £17 12s., but in Whitkirk (Yorkshire) four fat pigs made £25 apiece. Store cattle for fattening are making nice prices: Three-year-old heifers nearly finished, £37; bullocks, £30; two-year-olds, £22; and yearlings, £14, £16 and £18, according to merit. Store pigs, pretty forward, realized £9 to £10, but suckers can be bought at 45 shillings down to 30 shillings. In pigs, gilts fetch £15 10s. Strong colored calves are worth £3 to £5 each. Dairy cows continue to be dear—up to £75 in Penrith and £70 in Carlisle. In Dublin they make £60, and in Bristol £58. These prices should be interesting to you "mixed"—all round—farmers.

We will reap a most bounteous harvest this year. All the crops are going to make big yields. Labor on the farms has been scarce, but we have got through with all kinds of invaluable assistants—women from towns who have given up their domestic duties; school children spending their holidays; prisoners of war, who have worked exceptionally well (and been well paid for it); the army of land girls and workers of all kinds. Land is already being prepared for winter cultivation. The farmers of England have done right well, and their only regret is that they cannot get sufficient feeding stuffs for their cattle, sheep and pigs. Not much manure is going into the land, and our light lands will be difficult to farm in 1920 and onwards. We must keep more sheep—it's one of the most vital first laws of successful farming.

Over \$5,000 were raised for the Blue Cross (wounded horses) Fund at a soldiers' horse show held at Aldershot, in the presence of thousands of interested "Tommys." There were classes for everyone—children, officers' wives and daughters, but the piece de resistance, as they say in the backwoods, was the class for gun teams complete with gun and limber, and out of a dozen competitors the chief prize winners were reserve batteries of the R. F. A. at Aldershot. Competitors hailed from Canada and other colonies. A military horse show will be the goods to hand over at future state and other fairs. ALBION.

Freddie, accompanied by his governess, was passing a street where a load of straw had been scattered in front of the house in which there had been a serious illness. "Miss Manning, why did they put all this straw here?" "Well, Freddie," she replied, "a little baby came to Mrs. Reed last night." "My" said Freddie, "but it was well packed."



DE LAVAL Separators Save in 7 Ways

QUANTITY of cream that no other separator will recover completely, particularly under the harder conditions of every day use.

QUALITY of cream as evidenced by De Laval butter always scoring highest in every important contest.

LABOR in every way over any gravity system, and also over any other separator, by turning easier, being simpler, easier to clean and requiring no adjustment.

TIME by hours over any gravity system, and as well over any other separator by reason of greater capacity and the same reasons that save labor.

COST since while a De Laval Cream Separator may cost a little more than a poor one to begin with, it will last from ten to twenty years, while other separators wear out and require to be replaced in from one to five years.

PROFIT in more and better cream, with less labor and effort, every time milk is put through the machine, twice a day, or 790 times a year for every year the separator lasts.

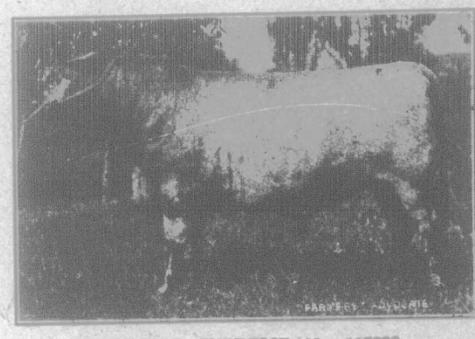
SATISFACTION which is no small consideration, and can only come from knowing you have the best separator, and being sure you are at all times accomplishing the best possible results.

Easy to prove these savings These are all facts every De Laval local agent is glad of the opportunity to prove to any prospective buyer. If you don't know the nearest De Laval agency write the nearest De Laval office, as below.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butter-Workers. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER 50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



Harnelbel Shorthorns

Herd headed by Gainford Supreme, son of the great Gainford Marquis and Jealously the Fourth.

All my cows and heifers are bred to this young bull. Inspection invited. SAM'L TRUESDALE, Farm Manager Islington, Ont.

HARRY MCGEE, Proprietor 61 Forest Hill Road - TORONTO

SHORTHORN CATTLE Write the Secretary for Free Publications are market toppers from baby beef stage to maturity, grow quickly, fatten rapidly, have high dressing percentage and abundant milking qualities. DOWNTON SHORTHORN BREEDERS' ASSOCIATION 13 W.A. DEYLUEN, 1 res., Brooklin, Ont. G. E. DAY, Sec., Box 256, Guelph, Ont.

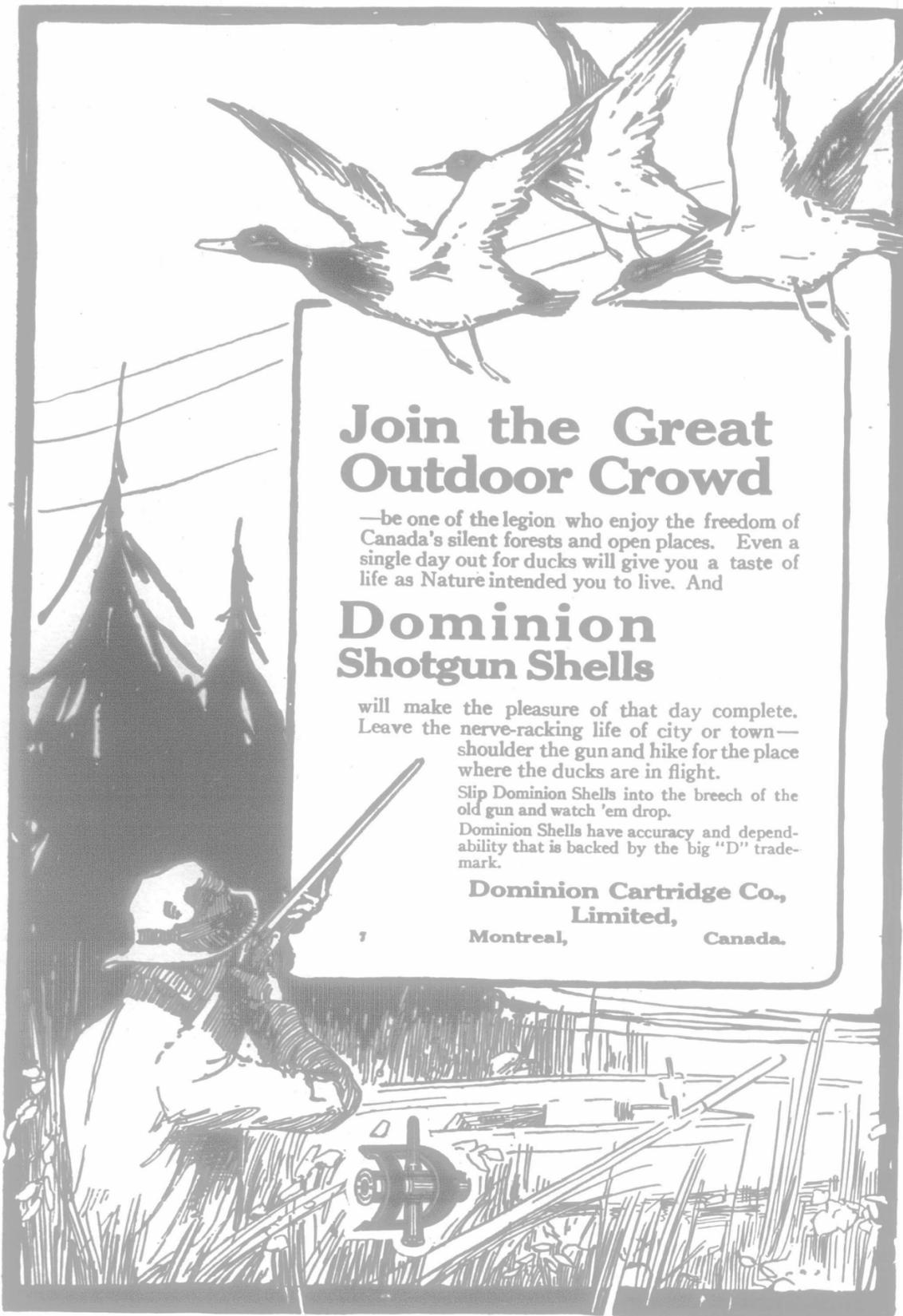
FOR SALE A good red bull, calved September 1917 (grandsire and grandam imported) in good condition, a show bull, if fitted. Two cheaper bulls about the same age, from milking dams. J. T. GIBSON, DENFIELD, ONTARIO.

GERRIE BROS.' SHORTHORNS Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladys, Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer. GERRIE BROS., ELORA, ONT.

BURNFOOT STOCK FARM We are now offering an 18 mos. old Shorthorn bull with R.O.P. records of over 13,000 lbs. on both sire and dam's side. This is a good opportunity for anyone who wishes to improve the milking qualities of his herd. S. A. MOORE, (Farm one mile north of Caledonia) CALEDONIA, ONTARIO.

MILKING SHORTHORNS Herd headed by Dominator 10629; cows with records up to 11,000 pounds of milk in a year. Bulls ready for service for sale. Heifers and cows for inspection. Weldwood Farm, Farmer's Advocate, London, Ontario.

Shorthorns Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head. A. G. FARROW (between Toronto and Hamilton), Oakville, Ont.



Join the Great Outdoor Crowd

—be one of the legion who enjoy the freedom of Canada's silent forests and open places. Even a single day out for ducks will give you a taste of life as Nature intended you to live. And

Dominion Shotgun Shells

will make the pleasure of that day complete. Leave the nerve-racking life of city or town—shoulder the gun and hike for the place where the ducks are in flight.

Slip Dominion Shells into the breech of the old gun and watch 'em drop.

Dominion Shells have accuracy and dependability that is backed by the big "D" trademark.

Dominion Cartridge Co., Limited,
Montreal, Canada.

Gossip.

Orkney Farm Ayrshires.

In so far as lands are concerned there are plenty of pure-bred stock farms in Canada to-day that are far more extensive than the Orkney Farm, owned by Harmon McPherson, of Copetown, Ontario, and the home of the high-testing Orkney herd of pure-bred Ayrshires. Here extensive breeding operations are carried on, on something less than 100 acres, and if we may go by the reports published from time to time under Record of Performance rules there are but few farms in the Dominion (large or small) that can make a better showing. For years records here have always been in the making, and during a recent trip to the farm a representative of this paper saw almost a dozen championship trophies that had fallen to individual members of the herd in the various sections. In some cases the records have since been broken by outside matrons, but, as will be seen in the figures that are given below, there are several that still remain champions of their respective classes. An outstanding feature of the herd is the splendid average work throughout. As everything of mating age has been or is now running in the R. O. P., this may be best exemplified by giving actual figures in each section, taking in all those in the entire herd that have now qualified. Beginning with the two year olds the average for those that have finished is 9,147 lbs. of milk and 378.2 lbs. of fat, while the highest record is that of Lenore 2nd with 12,052 lbs. of milk and 524 lbs. of fat, being the Canadian record when made. In three year olds the average is 12,168 lbs. of milk and 474.6 lbs. of butter, with Milkmaid of Orkney highest with 14,060 lbs. of milk and 534 lbs. of fat. She also stood first for milk at time the record was made. The four year olds did not keep up so well, averaging only 11,519 lbs. of milk and 444 lbs. of fat, but these included Milkmaid of Orkney, again on her second test, and her 596 lbs. of fat for the year still remains the highest for Canada in the four-year form. The mature cows in the herd covering over the same time as the figures given in the other classes, average 12,684 lbs. milk and 499 lbs. of fat, making an average of 11,430 lbs. of milk and 449 lbs. of fat for all ages and taking in every thing that has finished their test in the herd, to date. It is doubtful if there are many herds in any country to-day that can show so high an average. Before passing on to the herd sire we would like to mention Milkmaid of Orkney once again in connection with her records for five consecutive lactation periods, the fifth of which she has still three months to run and has now produced a total of 66,500 lbs. of milk and 2,560 lbs. of fat, or an average of 13,300 lbs. of milk and over 500 lbs. of fat yearly, which will, we understand, give her another record for five years' production unequalled by any other cow of the breed. Unquestionably she is one of the "queens" of the dairy world and she, with the majority of the other breeding females, is now being mated with the newly imported sire Dunlop Corolla, which in the future is to be the chief sire in service at Orkney, and from which we should hear more. He is a splendid type of youngster and is got by the noted bull Howie's Coroner, a Brae Rising Star bull, while his dam, Auchenbrain Mayflower, is spoken of as one of the real strong cows of Scotland. For particulars regarding sales, etc., see advertisement elsewhere in this issue, and if writing kindly mention "Farmer's Advocate."

Flintstone Farm

Breeders of

Milking Shorthorn Cattle,
Belgian Draft Horses
Berkshire Swine.

We offer animals that will raise herds to a level of wartime efficiency. Bull calves from \$125 up.

DALTON
Massachusetts

Shorthorns and Shropshires—We still have a few extra well covered shearing rams. Also a choice lot of ram and ewe lambs. Prices right. We can supply young bulls or heifers, both of which are from high-record dams.
P. CHRISTIE & SON, Port Perry, Ont.

When writing please mention Advocate

Lake Marie Farm Shorthorns

We have sold nearly all the females we have to spare but still have several good, young bulls of serviceable age all of which are sired by the R.O.P. sire St. Clare. They are priced to sell. We are also pricing a number of registered Dutch Belted cows and heifers.

LAKE MARIE FARMS, KING, ONT.

SIR HENRY PELLATT, Owner

THOS. McVITTIE, Manager.

Imported Scotch Shorthorns—A dozen very desirable bulls for sale now. Half of these are imported and will head good herds. Females, imported and home-bred. Collynie Ringleader, bred by Mr. Duthie, heads our herd. Another importation of 35 head will be home Sept. 25th. Burlington Jct. is only half mile from farm
J. A. & H. M. PETTIT, Freeman, Ont.

Shorthorns Landed Home—My new importation of 60 head will be at home to visitors June 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Wimble, etc. Make your selection early.
GEO. ISAAC (All Railroads, Bell Phone) Cobourg, Ont.

Spring Valley Shorthorns—Herd of 70 head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96365, and Nonpareil Ramsden S3422. We have for sale four as good young bulls as we ever had, and a few females.
KYLE BROS., Drumbo, Ont. (Phone and telegraph via Ayr.)

SHORTHORNS FOR SALE

Ten bulls, from 8 to 20 months of age, of the good kind. Also must sell about 25 females before winter. They are the prolific kind and all registered and priced at about half their value to move them. Crown Jewel 42nd. still heads this herd. JOHN ELDER, HENSALL, ONTARIO.

WALNUT GROVE STOCK FARM

Scotch Shorthorn cattle and Oxford Down sheep. Herd established in 1840. Herd headed by the great breeding bulls, Gainford Eclipse = 103055 = and Trout Creek Wonder 2nd. = 120741 =. Extra choice bulls and heifers of the best Scotch families for sale. Also a few Oxford Ram Lambs. Duncan Brown & Sons, M.C.R. or P.M. Shedden, Ont

Advertise.

The constant drop of water wears away the hardest stone
The constant gnaw of Towser masticates the toughest bone
The constant wooing lover carries off the blushing maid
And the constant advertiser is the man that gets the trade.

Don't ever think that printer's ink is money to the bad,
To help you jail a roll of kale there's nothing beats an ad.
You can't fool people always, they've been a long time born
And most folks know that man is slow who tooteth not his horn.

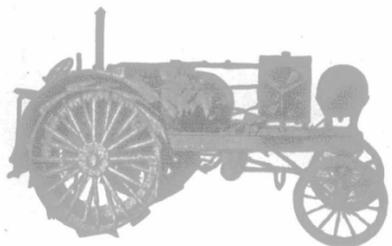
— Exchange.

Stop Cream Waste!

Cream Means Dollars
 IT is like throwing dollars away to waste cream these days. It is worse than waste—it is a crime. Yet good, rich cream is being fed to the pigs owing to inferior separation. Sweden has perfected the most economical, fastest and greatest labor-saving cream separator ever made. This world-famed **VIKING CREAM SEPARATOR** OVER ONE MILLION IN USE Guaranteed for a Lifetime. You, too, can save all your cream with the Viking. It will pay you to investigate. Look up the Viking dealer the next time you are in town. See the Viking in action. Get These Two Free Books They are packed full of profit-making ideas, methods, systems for the dairy farmer. Write for them right now. Swedish Separator Co., Dept. U 537 So. Wells St., Chicago, Ill.

Distributors for Ontario:
The Percival Plow and Stove Co.
 Limited
 MERRICKVILLE, ONT.

The Waterloo Boy



The Three-Plow Tractor for Ontario.
 The Tractor that makes good.
 The Tractor that has stood the test.
 The Tractor that is guaranteed under all conditions.

Write for free catalogue, prices and any information wanted.
THE ROBERT BELL ENGINE & THRESHER CO., LIMITED
 Selling agents for Ontario. Seaforth, Ont.

Clearing Sale of entire herd

Cedar Hedge Stock Farm HOLSTEINS

Tuesday, October, 29, 1918

50 IN NUMBER, OF WHICH 47 ARE FEMALES, all except one are under 6 years of age. There are 9 half-sisters of Queen Butter Baroness, 16 granddaughters of old Brookbank Butter Baron. All the females that are of breeding age are in calf to Lyons Segis Champion three-quarter brother to May Echo Sylvia. Some due to freshen soon. All have been bred on the farm from four sires. This is one of the best herds in the county of Oxford and will be sold without reserve to the highest bidder. A splendid opportunity to improve one's herd.

Sale will be held at the farm one mile west and two miles south of Lakeside C.P.R. Morning and noon trains will be met.

Terms: 12 months' credit on approved paper. Parties from a distance must furnish satisfactory references. 5% off for cash.

Sale will commence 1 P.M.
ALEX. SHAW, Lakeside, Ontario
 Proprietor
T. MERRITT MOORE - - Auctioneer

Holstein Bulls

Ready for service and younger. Cows and heifers bred to ORMSBY JANE BURKE, whose two nearest dams average 38.82 lbs. of butter in 7 days. The three nearest sires' dams and his dam's records average 35.69 lbs. for 7 days, and 112 lbs. milk for one day.
R. M. HOLTBY, R. R. 4, Port Perry, Ont.

KING SEGIS PONTIAC DUPLICATE
 A 34 lb. bull for the \$50,000 bull is the sire of our young bulls offered at present. Two of these are ready for service. Write us also for females.
R. W. Walker & Sons, Manchester Station, G. T. R., Port Perry, Ontario

A Remarkable Manufacturing Plant in England.

BY JOHN WELD.

While visiting England, in company with the Canadian Press Party, I met Sir Ashton Lister, whose acquaintance I made years ago in the Canadian Northwest. It afforded me no small amount of pleasure to renew this acquaintance, and visit his beautiful home and inspect the wonderful manufacturing plant he has, built up at Dursley, in Gloucestershire. A great deal of Sir Ashton Lister's time, as well as his plant, is now given over to war work, but I was much impressed with the picturesqueness of the surroundings and the remarkable efficiency of the organization under his control. In accordance with the practice now common in Britain, Sir Ashton took upon himself the added duties of superintending the construction and maintenance of all the roads in his municipality, thus releasing an engineer who had been employed at a salary of \$5,000 per annum. Men of executive and administrative ability are giving their services free in the countries we visited and making it possible for the younger men to be utilized wherever they can best serve their country in these trying times. This has added wonderfully to the man power of the warring nations.

The residence to which I have referred is located on a hill over-looking hills and valleys, as well as the works which represent the success of this noted manufacturer. In this great hive of industry the writer was particularly interested in the making of munitions, especially primers, vent sealing tubes, shells, etc. All the various stages of manufacture were followed closely from the handling of the raw material to the finished article safely packed for transport to the scene of action. Sir Ashton spoke very highly of the work done by the girls employed in this department of the plant, giving them credit for their patriotic efforts and remarkable efficiency. The manufacture of cream separators was another department where a great deal of activity exists, although this work is considerably curtailed on account of the demands of the Ministry of Munitions. However, every arrangement is being made in order that this line may be taken up with increased vigor and capacity as soon as the war is over.

Oil and gasoline engines are a great feature of this firm's production, and, since power is becoming such an important item in farming operations, the work was followed through all steps from the foundry to the paint shop. A striking feature noticed was the great attention given to the construction of parts so they would be interchangeable and the meticulous care with which the component parts were separately viewed and tested. These, after going through several hands, are put into a finished-articles store, and are then distributed in sets sufficient to make the number of engines that any particular workman might assemble during a definite period. It is the employee's duty to put the whole of these parts together without making alterations of any kind either with reamer or file. The engine is then passed into the test shop where it is tested for the horse power it will give off and the quantity of fuel consumed. A log is kept of every engine and this record is accompanied by the men's names (or numbers) who erected and tested it.

The department where milking machines (now a speciality) are manufactured was not inspected so thoroughly, but enough was seen to assure me that the same high degree of efficiency characterized the plant throughout.

The office staff are located in a house formerly used for religious worship, and whose date of erection carries one back somewhere into the fourteenth century. Its age only adds to the comfort of the office hands for the clerical work of each department is conducted here under the most ideal conditions. Adjoining this old house are delightful gardens where tennis and other outdoor games are enjoyed by the young ladies employed in the offices. A canteen near by provides suitable meals for from 16 to 20 cents. This is equipped with a piano and provision is made for entertainment and recreation during lunch hours.

The ideal surroundings add greatly to the efficiency of the staff and the

Hold Your Horses

HERE at last is the halter you have waited for—stouter than harness leather—tougher than rope—every whit as strong as rawhide, and far superior, because it will not get hard. The

"TRIUMPH" HALTER

is made from 1 1/4" Chrome Leather, doubled and stitched, with extra heavy draw rings. Always soft and pliable. Water and sweat will not affect it. No amount of wear and tear can hurt it. Will hold your hardest "puller" and quickly cure him of the habit.

Every "Triumph" halter is thoroughly tested and carefully inspected before leaving the factory. Ask your dealer to show you this halter. If he hasn't it, he can get it for you, or we will send one, prepaid to any address in Canada on receipt of price—\$2.00 (or \$2.25 West of Fort William).

Sample of Material FREE

Write NOW for a narrow strip of the Chrome Leather stock used in making the "Triumph" halter. Put it to any test you like. You can't break it. Then remember the "Triumph" is made of a double thickness, 3 or 4 times as wide as the thing you tested.

Ask for FREE Literature.
G. L. GRIFFITH & SON,
 68 Waterloo St., Stratford, Ont. 14-E

33-lb. Grandsons of Lulu Keyes

I have at present ten young bulls all sired by my own herd sire King Korndyke Sadie Keyes a son of Lulu Keyes 36.05 lbs. of butter and 785 lbs. of milk in 7 days. These youngsters are all first-class individuals and their dams' records run as high as 33.29 lbs. of butter in 7 days. Several of them must go quick to make room.
D. B. TRACEY (Hamilton House Farms) COBOURG, ONT.

HET LOO PIETERTJE

THE \$12,750 HEIFER

Sold at the great Milwaukee Sale, was only one of the many daughters we have of our senior sire Pontiac Korndyke of Het Loo. We also have sons—brothers to this world's champion heifer; and for the next few weeks, these, along with several other young bulls of serviceable age, are priced exceptionally low. Let us hear from you if interested—at once.
W. L. Shaw, Roycroft Farm, Farm on Yonge St., Toronto & York Radial 1 1/2 hours from Toronto, New Market, Ont.

HOSPITAL FOR INSANE, HAMILTON, ONT.

Present herd sire is one of the best sons of King Segis Alcartra Spofford; we have three of his sons born during May and June last and also a grandson of Lakeview Lestrangle. Apply to Superintendent.

Highland Lake Farms

For Sale: Two extra good (30-lb.) thirty-pound bulls ready for heavy service. Priced to sell. Also younger ones by a son of May Echo Sylvia.

R. W. E. BURNABY - Jefferson, Ontario
 Farm at Stop 55, Yonge St. Radial

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All are from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter in seven days. Correspondence solicited, visitors welcome.

Gordon S. Gooderham Stations: Clarkson and Oakville
 Farm on Toronto and Hamilton Highway Clarkson, Ont.

DUMFRIES FARM HOLSTEINS

Cows for sale, bred to Plus Evergreen, son of Evergreen March.
S. G. & ERLE KITCHEN Bell 'phone. ST. GEORGE, ONTARIO

Choice Grandson of Queen Butter Baroness

I am offering a choice 14-months bull from a 21-lb. junior 2-year-old daughter of Louis Prilly Rouble Hartog, and sired by Baron Colantha Fayne, a son of Queen Butter Baroness, the former 33-lb. Canadian champion cow. Also have others younger. **T. W. McQUEEN (Oxford Co.), Tillsonburg, Ont.**

Walnut Grove Holsteins—I am offering a choice lot of bull calves, all sired by world's champion, May Echo Sylvia. All are from R. O. M. dams and good individuals. Also have the usual offering in Tamworth Swine.
C. R. JAMES (Take Radial Cars from North Toronto) RICHMOND HILL, ONT.

Sovereign Stock Farm—The Home of Canada's Wonder Cow

If in the market for a herd sire write, telling us just what you want. We have five ready for service, others younger, all from R.O.M. or R.O.P. rams. Priced low for quick sale.
WM. STOCK & SONS (L. D. Phone Innerkip) Tavistock, R. R. No. 1, Ontario

SILVER STREAM HOLSTEINS

Special offering—four well-bred young bulls fit for service, sired by King Lyons Colantha whose 6 nearest dams average 30.10 lbs. of butter in 7 days and from daughters of King Lyons Hengerveld whose five nearest dams average 31.31 lbs. butter in 7 days. For fuller particulars and prices write at once. Priced to sell. **J. MOGK & SON, R. R. 1, TAVISTOCK, ONTARIO.**

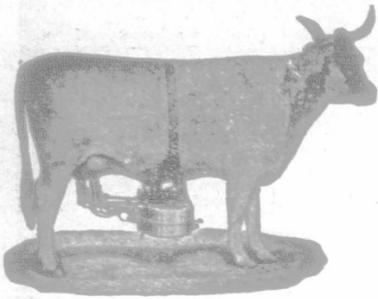
Cloverlea Dairy Farm Holsteins

Present offering consists of three choice young bulls ready for service. Will be priced right for quick sale. For price and particulars apply to **GRIESBACH BROS., COLLINGWOOD, ONTARIO**

ELDERSLIE FARM HOLSTEIN-FRIESIANS

I am offering for immediate sale several young sons of my senior herd sire Judge Hengerveld De Kol 8th who is a 32.92 lb. grandson of De Kol's 2nd Butter Boy. The dams of these bulls all have R.O.P. records running up as high as 195.26 lbs. of milk for the year. Write for pedigrees.
A. MUIR (Take Kingston Road Radial cars from Toronto, Stop 37) Scarborough P. O., Ont

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Care of Milking Machines

Excerpt from an article in the "Implement News":—"One of the most important needs of users of milking machines is that of quick cleaning. It should be done properly at the proper time. The machines should never be allowed to stand until the casein hardens on the rubber tubes or cups."

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Short, transparent, celluloid tubes takes the place of long rubber ones. They do not decay or harbor germs, and are easily and quickly cleaned. This is an exclusive OMEGA feature; another is that the pail and milking parts are suspended from the cows back and the teat-cups cannot fall to the floor and suck up filth.

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A choice selection of young bulls for sale from Record of Performance dams, imported and Canadian bred.

SIRE: Auchinbrain Sea Foam (Imp) 35758 many times grand champion.

Fairfield Mains Triumph (Imp.) 51137 a son of the noted Hobsland Perfect Piece.

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Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. Macarthur, Manager, Philipsburg, Que.

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JERSEYS and BERKSHIRES

Write for catalogue.
Wool Farm Lowell, Mass.

employees engaged by Sir Ashton Lister, who has built up a remarkable institution in one of the most picturesque parts of England.

Doctor Sun.

The sun as a therapeutic agent was used by the ancients, and for centuries mention of this measure may be found in medical literature. Various savage tribes and animals, notably the dog, seem to divine the beneficial action of the sunlight, exposing their bodies when ill to the direct solar rays.

The exposure of a part of the body affected by disease, "local heliotherapy," has been employed with some degree of success for many years in the treatment of various disorders of the skin and bones, but the systematic and scientific dosage to the entire body, "general heliotherapy," is a comparatively new method, evolved and perfected by Rollier, of Loysen, Switzerland, to whom full credit should be given. General heliotherapy, in contradistinction to local heliotherapy, is of paramount interest at the present time on account of the number of "war-wounds" amenable to the solar treatment. In fact, the measure is now being employed in many of the military hospitals of France, notably the American Hospital, with excellent results.

The administration of the solar rays is by no means a simple task, especially in private practice. The closest scrutiny is necessary at all times or the treatment will rarely if ever be carried to a successful termination, I have seen many failures resulting from a lack of appreciation of the importance of employing the measure in a scientific and rigid manner. Dosage and the reaction on the part of the skin and the general condition of the patient must be observed constantly.

We would not expect curative action of the solar ray by bidding our patient to go out in the sun with the instruction "expose yourself as much as possible." Each case must receive detailed instructions as to length of time, the amount of body surface, etc. The greatest care must be taken to avoid dermatitis. The effect of the hemoglobin, white and red cells, should be noted. X-ray examinations must be made at intervals. The correct dosage for each patient should be worked out by experience. Some can stand frequent exposures for short intervals, other continuous exposure. Many are seriously affected by the midday sun, while some do well, regardless of the heat.

About five years ago, I became interested in heliotherapy, and first used the method on an apparently hopeless tuberculous spine and hip joint of an adult, with such a rapid and remarkable cure that I at once instituted the solar treatment in the orthopedic service of several local hospitals. Since which time I have been convinced that the beneficial effect on the diseased process is chiefly due to the action of the sun's rays on the skin surface of the entire body, for there is no comparison in the local and general improvement of patients simply living out of doors in the fresh air and sunshine and those on whom systematic heliotherapy has been properly administered.

In special institutions for the purpose, much undoubtedly could be accomplished in the way of military surgery at the present time, as the method must be carried out under most rigid discipline in order to effect the desired results.

Heliotherapy is far-reaching in its effects and undoubtedly will be found of great value, not only in the treatment of affections of bones and joints, but for the cure of various disorders elsewhere in the body.—Dr. Willis C. Campbell, in Journal of American Surgery, New York.

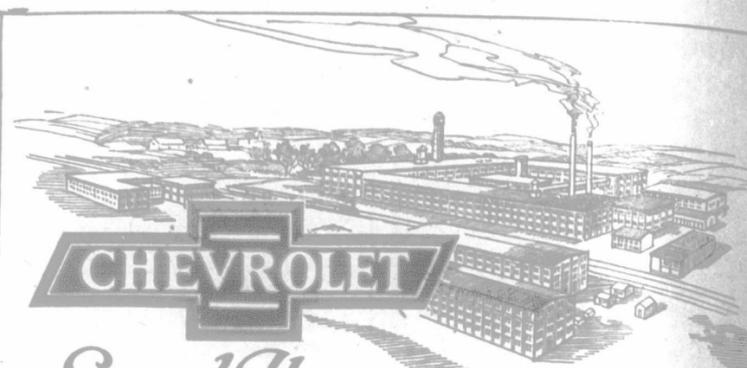
Two brothers once ran a store in a small Western town, where they had quite a large trade in wool on barter. One of the brothers became converted at a revival and urged the other to follow in his footsteps.

"You ought to join, Jake," said the converted one. "You don't know how helpful and comforting it is to be a member of the church."

"I know, Bill," admitted Jake, thoughtfully, "and I would like to join, but I don't see how I can."

"Why not?" persisted the first. "What is to prevent you?"

"Well, it's jes' this way, Bill," declared Jake. "There has got to be somebody in the firm to weigh this here wool"

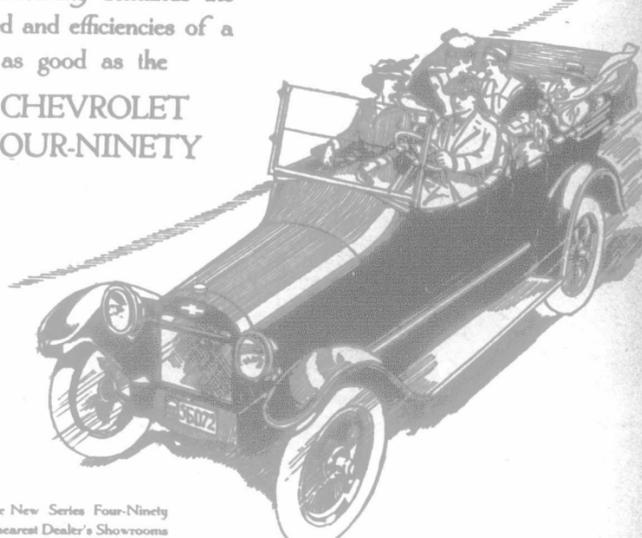


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Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

GLADDEN HILL AYRSHIRES

A choice bull calf two months old; sire, Fairvue Milkman, dam a granddaughter of Primrose of Tanglewyld, for sale. Also a few females.

Laurie Bros., Agincourt, Ont.

BRAMPTON JERSEYS

We bred and owned the dam, and imported the sire of the champion R.O.P. butter cow of Canada. We own the champion four-year-old R.O.P. butter cow of Canada. To make room for 1918 importation, expected to arrive in May, we are making special offerings of females and bulls, all ages.

B. H. BULL & SON

BRAMPTON, ONTARIO

PROSPECT FARM JERSEYS

125 Jerseys in the herd. For 30 years we have been breeding Jerseys for production. Choice young bulls, young cows, and a few high-grade cows and heifers for sale.

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CANADA'S MOST BEAUTIFUL JERSEY HERD
Imported Champion Rower at its head.

This bull, with his get, won first prize on the island of Jersey, 1914, second in 1916, and again first in 1917. Present offering—A few yearling heifers in calf to our great young bull, Woodview Bright Prince, (7788), and bred from imported sires and dams. We show our work cows and work our show cows.

I HAVE FOR SALE JERSEY COWS and BULLS

Six cows at \$200.00 each; bulls from \$50.00 to \$100 each. **T. HETHERINGTON, c.o. 481** from Island Blood sires. Strictly guaranteed as represented. **Aylmer Street, PETERBORO, ONT.**

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Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times.
JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) **EDGELEY, ONTARIO**

Summer Hill Oxfords



The Sheep for the Producer, Butcher and Consumer. Our Oxfords Hold an Unbeaten Record for America.

We have at present a choice offering of yearling ewes and rams, as well as a lot of good ram and ewe lambs—the choicest selection of flock-headers and breeding stock we have ever offered.

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Cloverdale Shropshires and Berkshires

I am offering for quick sale 35 shearing rams and 50 ram lambs at reasonable prices. In Berkshires, my stock boar Elmhurst Augustus 2nd (Imported) one of the best stock boars in Canada; also boars one year old and younger from Imp. sires and dams. Priced to sell.

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I am offering for sale 30 imported Shropshire rams, also home-bred rams and ewes, all at reasonable prices.

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C. P. R. Bell Phone

Shropshires Shearing rams, also ram lambs got by imported ram Buttar 600; also a few E. E. Luton St. Thomas Shorthorns. Ontario
R. R. No. 1 Phone 704 R-4

DORSET RAMS
I am offering a lot of good ram lambs, a number of shearlings and also have some good shearing ewes. Satisfaction guaranteed.
S. J. ROBERTSON - - HORNBY, ONT.
(Formerly of J. Robertson & Sons)

Leicesters and Shorthorns—A grand lot of shearing and lambs for sale this season. Also a few Shorthorn bulls and heifers. Good individuals and choice breeding.
G. B. ARMSTRONG, Teeswater, Ont.

Leicesters For Sale
RAMS AND EWES. Lambs, shearing, and some aged. Choice flock.
Oliver Blake R. R. No. 2, Tavistock, Ont.

SHROPSHIRE
I have at present a very choice lot of shearing rams and ewes of Campbell and Kellogg breeding. Can also spare a few breeding ewes.
C. H. SCOTT, Hampton, Ont., Oshawa Sta., all railroads

ELM VIEW STOCK FARM
Oxford Down Sheep: 25 registered ewes from 1 to 5 yrs., 10 one-year-old rams, 50 ram lambs, 50 ewe lambs; a choice lot from best foundations. Prices reasonable. Visit or write
B. A. McKinnon, Hillsburg, Ont.

SPRINGHILL FARM, Tyrone, Ont.
known for its Shropshire sheep. We are offering 4 shearing rams; also ram lambs and ewe lambs.
LEVI SKINNER & SON, Tyrone, Ont.

Tower Farm Oxfords
Champion Oxford flock of Canada. Choice Oxfords of all ages for sale. Prices reasonable.
E. BARBOUR & SONS, R.R. 2, Hillsburg, Ont.

LINDEN OXFORDS
Shearing rams, ram lambs and ewe lambs of good quality at reasonable prices.
Jos. Mountain, "Linden Farm" R.R. 5, St. Mary's, Ont.

Shropshires
Yearling rams and ewes. A few nice ram lambs by imported ram.
W. H. PUGH, R.R. 1 Myrtle, Ont.

LEICESTERS & SHORTHORNS
I am offering ram & ewe lambs from the Champion Ram of 1917. Also 3 dual-purpose bull calves of choice breeding.
E. R. WOOD, FREEMAN, R.R. 2.

The Touch of Genius.

Mr. Ponsonby was prosperous, portly, and "something in the City." He was also patriotic, and felt a conscious glow of virtue suffuse his being as he subsided with a puff into a corner seat of an empty third-class carriage, instead of "going first," as was his wont before the war.

It was a hot afternoon in August. He mopped his perspiring brow with a large khaki handkerchief, and congratulated himself that only two stations lay between him and home. When, however, at the second of them eight men and a woman with a baby piled into his carriage, Mr. Ponsonby's glow of virtue gave way to disgust. He thought of changing to a first, but the guard, green flag in hand, stood outside. It was too late to transfer himself and his belongings with the deliberation which his portliness and the heat demanded. He sat on frowning in perspiring dignity.

The guard had raised his arm, when a man rushed up, flung open the carriage door, and addressed Mr. Ponsonby's vis-à-vis.

"Ere, Em'ly, come out of this! Mother's ill."

"Oh, 'Erb! Catch 'old a minute," she gasped, dumped her baby on Mr. Ponsonby's knee, and was gone.

The engine and the baby shrieked simultaneously. There was a confusion of calls and shouts further down the platform, and Mr. Ponsonby, outraged, helpless, found himself swept out of the station clutching with both hands the howling baby on his knees. He always prided himself on being able to cope with any difficulty, "given time, sir, time." But time in this instance was exactly what had not been given him. And it was a fifteen minutes' run to the next station. He groaned mentally, then looked at the row of grinning faces opposite. No help there.

"It was probably a plant. The woman would never return." He saw himself saddled with this screaming incubus for life.

"He would call the guard. He would see the station-master. He would insist on the mother being found." So ran his perturbed thoughts, while the baby howled steadily, perseveringly, and waves of chaff ran up and down the carriage.

"Grandpa on a joy ride."
"Got a wy with it, 'ain't 'e?"
"Don't 'arf look 'appy."

Mr. Ponsonby got hotter and redder. He could not even mop his anguished brow, for the baby wriggled and squirmed on his knee, and he held on to it grimly with both unaccustomed hands.

A quiet voice from the far corner opposite pierced the din.

"Strange 'ow some 'asn't no way with kids."

It was a small, dark man who spoke. He wore loud, rather horsey clothes, and his face, with its mouth like a rat-trap, its thin cheeks, and sallow color, looked horsey too. His dark eyes rested judiciously on Mr. Ponsonby and his burden. He philosophised on.

"Kids is like 'orses. They knows 'oo don't like 'em, and takes against 'em, so to speak. Some men will get knocked off a old rocking-'orse what you'd think 'adn't a hick in 'im, and others—well, they can play cat's-cradle on the back of the savagest brute ever foaled."

"Yerself, for instance?" pertly queried Mr. Ponsonby's neighbor, a young man in khaki.

"Exactly, young feller. You've 'it it. And 'ow I do it I can't say. Something like will-power an' liking all mixed up."

"Like thim snake-charmers," suggested another.

"Now don't you go comparing 'orses and kids to snakes or there'll be trouble," was the reply.

The baby's wails rose louder. He nodded towards the unhappy couple.

"Now I could nurse that kid, an'—'e'd stop squealing."

There was general derision. Mr. Ponsonby endured his martyrdom in silent aloofness.

"Will you bet on it?" It was a chorus.

"I will. Ten to one I don't quiet him in five minutes by the watch—always supposin' as his present nuss can bring 'imself to part with 'im."

A general guffaw greeted this sally. A stop-watch was produced. Bets were made. The shouts rivalled the baby's.

Columbia Dry Batteries

Be it auto, truck, or tractor, that spare set of Columbia Dry Batteries will be a good investment and save lots of trouble when ignition troubles come.

It is the work of a moment to wire in a set of Columbias. With these on the job, you're through with ignition troubles until the last hot spark is drained from the cells.

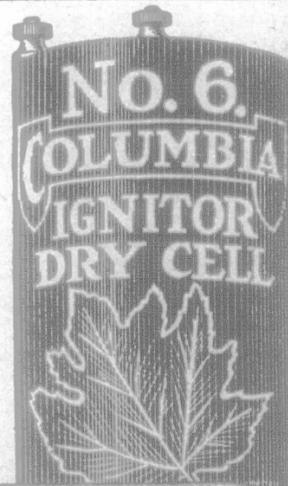
To run a stationary engine; to speed a motorboat; to ring bells, light lanterns, or make telephones talk—use Columbias.

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C. NICHOLSON
has for sale Pedigreed Lincoln Long Wool Rams and Ewes from his world-famous flock of ALL DUDDING-BRED SHEEP. By winning the CHAMPION and "ALL" the prizes in the two-shear and shearing ram classes at the Royal Show of England, 1915, all previous records were broken. Coates Shorthorns and Lincoln Red Shorthorns also for sale.
STATION—BARNETBY

OXFORD DOWN SHEEP

One of the Oldest Established Firms in America

Although we have sold our farm at Arkell, we are still in the sheep business stronger than ever, having secured other land expressly for sheep.

Present offering: 100 yearling rams and 50 yearling ewes. Orders taken for ram and ewe lambs for later delivery. All bred from our own importations. Prices reasonable. Communicate to:

HENRY ARKELL & SON, 70 Beaty Ave., Toronto, Ontario
Phone at present under name of T. Reg. Arkell

Southdowns and Shropshires

We have an unusually choice lot of shearing rams of both breeds to offer as flock headers and for show purposes. Inspection and correspondence invited.

LARKIN FARMS (Please mention Farmer's Advocate) QUEENSTON, ONT.

MAPLE VILLA OXFORD-DOWNS

Present offering—A select lot of yearling and ram lambs, which are rich in the blood of the leading English breeders including Hobbs, Brassey, Horlick and Stilgor.
J. A. CERSWELL, R. R. No. 1, BEETON, ONT.

130 IMPORTED SHROPSHIRE SHEARLING EWES
I have 130 imported Shropshire Shearling ewes, and 25 shearing rams. These are the best possible to procure in Britain and from the best breeders. Will be pleased to quote prices in lots to suit the buyer. **Will A. Dryden, Brooklin Ont. Co. Myrtle, C.P.R., Brooklin, G.T.R., Brooklin, C.N.R.**

OXFORD DOWN MILLBANK OXFORDS

Present offering: a few choice ewe and ram lambs. For sale—5 choice ram lambs, bred from champion stock. Write: **Frank Weekes, Brucefied Str., Varna, Ont.**

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...EDGELEY, ONTARIO

Save your Money and help Canada!

EVERY dollar of money in existence in Canada represents the products of *individuals* because money is the only visible symbol of the work of the hands or brains of individuals.

In this war, victory depends upon the way in which the assets of the people are devoted to fighting the war—in other words, upon how each person spends his *money* which represents his portion of the *combined assets of the nation*.

The nation's assets and resources are in the hands of eight million individuals—every single individual controls *some part*, large or small, of these resources. If those resources, represented by money and effort, are diverted from war purposes to those of *private indulgence* or *needless expenditure*, the war effectiveness of the nation is *weakened* to that extent.

Every dollar needlessly spent reduces the available re-

sources of the individual and therefore those of the nation.

When you spend a dollar self-indulgently you weaken your own position and your individual ability to help win the war by just that much.

When you *save* a dollar and put it where it can be called upon for use in the nation's service you *add* to your own resources and to those of Canada.

That is why Canada

at this time asks each and every loyal Canadian to conserve and accumulate his and her cash resources, small however they may be, so that when they are called upon for the war they will be available.

Issued under the authority of the
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27

Newcastle Herd of Tamworths and Shorthorns Boars ready for service. Some bred and ready to breed; 2 splendid sows carrying their 2nd and 3rd litters. Boars and sows not akin, ready to wean. Mostly descendants of Colwill's Choice, 3-year champion at Toronto Industrial, and imp. Cholder-ton Golden Secret. A few nice Shorthorn heifers in calf, deep-milking strain. Young cows with calves at foot Long-distance phone.
A. A. COLWILL, Proprietor, R.R. No. 2, Newcastle, Ont.

MAPLEHURST TAMWORTHS
Exhibition and breeding stock—both sexes. We also have Standard-bred horses, Pekin ducks, Toulouse geese, S.-C. W. Leghorns and White Rocks at all times. Special present offering, one two-year-old prize-winning stallion.
D. Douglas & Sons, Mitchell, Ont.

Springbank, Ohio Improved Chesters
Young sows, bred to Sunny Mike = 15917 =, first at Toronto in 1917. All ages, both sexes, at all times. Satisfaction guaranteed. Inspection invited.
Wm. Stevenson & Son, Science Hill, Ont.

CHESTER WHITES
Now offering an improved litter, sired by Schoolboy 17, junior champion Michigan, Ohio, an I.H. Dam sired by the Grand Champion of Missouri, Ohio and Michigan State fairs.
John G. Annesser, Tilbury, Ont.

I am offering **BERKSHIRES OF SPRING FARROW** Just what you need to win at the fall shows. One 4½ months red bull calf of good quality, from R. O. P. dam.
FRANK TEASDALE, Concord, Ont. (Concord G. T. R. station, 100 yards)

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

Berkshire Pigs Large size, choicely-bred sows in pig; boars and gilts. Can supply pairs not akin; also dual-purpose Shorthorn cattle. Young bulls for sale.
Credit Grange Farm, Meadowvale, Ont., - - J. B. PEARSON, Mgr.

Meadow Brook Yorkshires **Yorkshire Hogs** of best winning strains. Choice stock for sale, all ages. Sows bred and ready to breed. Younger stock, both sexes, from suckers up. Nearly all varieties of Turkeys, Ducks, Geese and Chickens.
G. W. MINERS, R. R. No. 3, EXETER, ONT. T. A. KING, Milton, Ont.

YORKSHIRES
We are now booking orders for fall pigs. Six litters of excellent bacon type to choose from.
WELLDWOOD FARM FARMER'S ADVOCATE, London, Ont.

Then the horsey man deftly lifted the screaming child from its uneasy perch on Mr. Ponsonby's knee, straightened its tangled garments, and resumed his seat, the child held capably in one arm. Mr. Ponsonby exhaled a puff of relief, and sought the solace of his handkerchief. He was forgotten. Public interest centred on the man in the corner. His performance lacked the spectacular. No incantations, no waving of hands. He just sat there quietly, holding the child. But the baby's cries grew fainter, then gradually ceased, and within the five minutes the staring onlookers, watches in hand, saw the infant quietly sinking into slumber, its head against the spell-worker's shoulder.

Marvelling, grumbling slightly, the bets were paid. The train pulled up at the station. Mr. Ponsonby hurriedly grabbed bag, stick, and paper, and stumbled out, followed by the horsey man.

"Was he going to foist the child on him again?" thought Mr. Ponsonby, horror-struck.

"Goin' to find the woman 'e belongs to," he remarked airily.

They saw her running up the platform towards him.

"Say, mate, tell us yer secret! We've earned it," shouted one of his fellow-passengers.

A cluster of heads appeared at the carriage window. The horsey man, the baby on his shoulder, surveyed them with a grin.

"Simple as you, my son. I'm 'is father," he said, walking off with a wink at Mr. Ponsonby, scarlet with indignation.

"Had a hot journey, sir?" said the station-master respectfully saluting Mr. Ponsonby.

"Yes, very—very hot indeed," said that gentleman.—C. Martin, in the Westminster Gazette.

The Road-Crossing Cow.

Why does a cow run across the road in front of a moving vehicle? H. L. Whited writes to The Scientific American (New York, August 17) that he has unraveled this mystery. Both the cow and the fowl, which exhibits the same peculiarity, have eyes so disposed on the sides of the head that they can be used separately. This, according to Mr. Whited, is the root of the trouble. He writes:

"When a cow faces an object both eyes may with ease be focused on it. When the object is at the side or rear one eye may be focused on it, while the other is viewing objects in quite a different direction. Evidently the animal may direct attention to one object with both eyes, or to two objects with different eyes, or it may inhibit one eye and direct and concentrate attention with the other toward some object of fear or fancy. In advancing in a car toward cows standing in the roadway it will be noticed that those facing the car usually turn to one side and let the car pass; those with side toward car will, if on, say, the right side of the road, run and attempt to cross to the left side; those with head away from the car will usually run down the roadway ahead, turning off at one side or the other. The reason why the cow or chicken on the right side of the road turns to cross over to the left, and *vice versa*, is, I suggest, because the eye of the animal, which sees and appreciates the danger of the advancing car, is by instinct kept on the dangerous object. To turn to the right and escape would blind the animal during the period of turning, and this she will not willingly do. But if she runs across the road in front of the car, the eye with which she first observed it will keep it clearly and continuously in view, and, she thinks, allow her to escape the impending danger. Even when safely across, if turned around, by encountering a fence or by chance, so as to perceive the enemy with the other eye, I have seen her run for dear life to recross the road to the side whence she is just come. The instinctive action, originally protective, is thus made a source of danger to the animal. The chicken, with monocular vision, labors under the same hallucination; it, too, thinks that the danger may be avoided by running with all its might, keeping the enemy all the time in view with the eye that was originally turned toward it. Thus, truly, the cow crosses the road because she crossed the road."—From Literary Digest.

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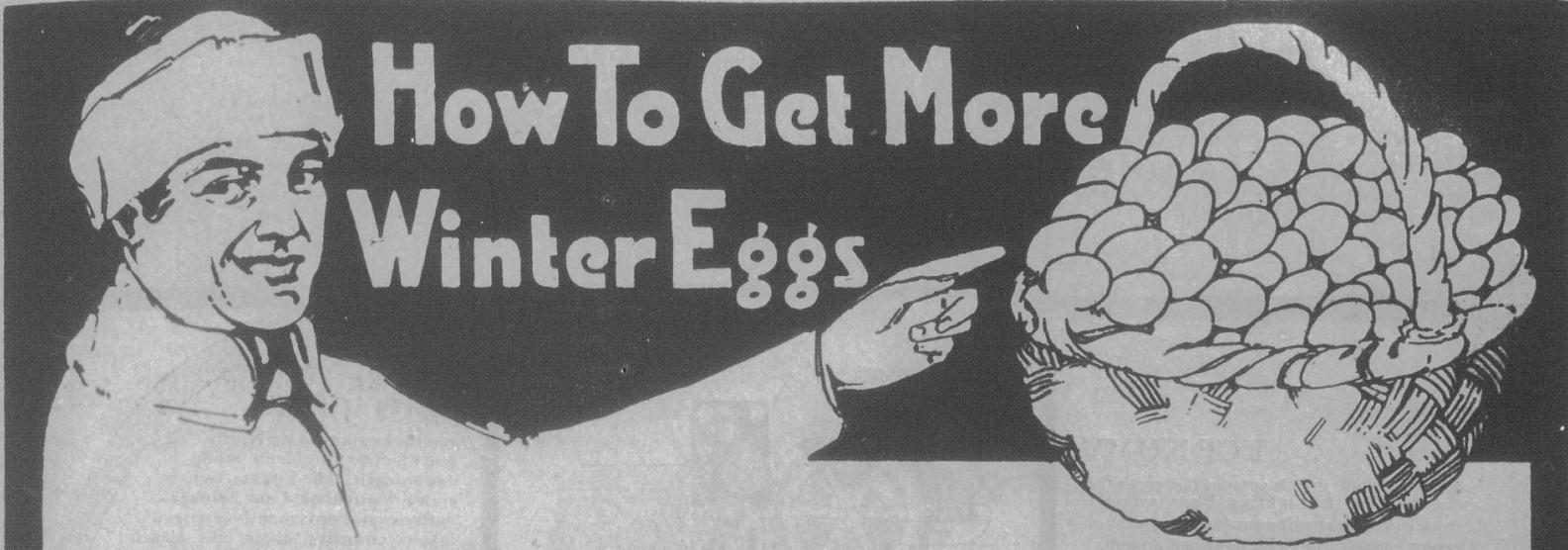
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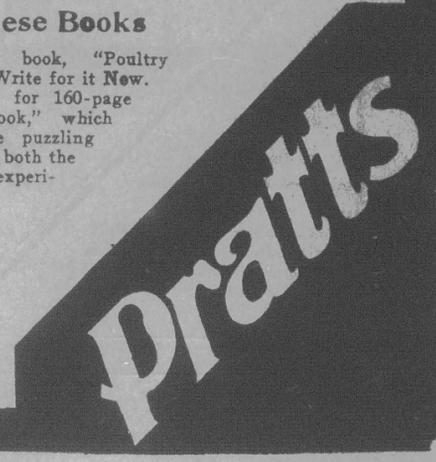
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