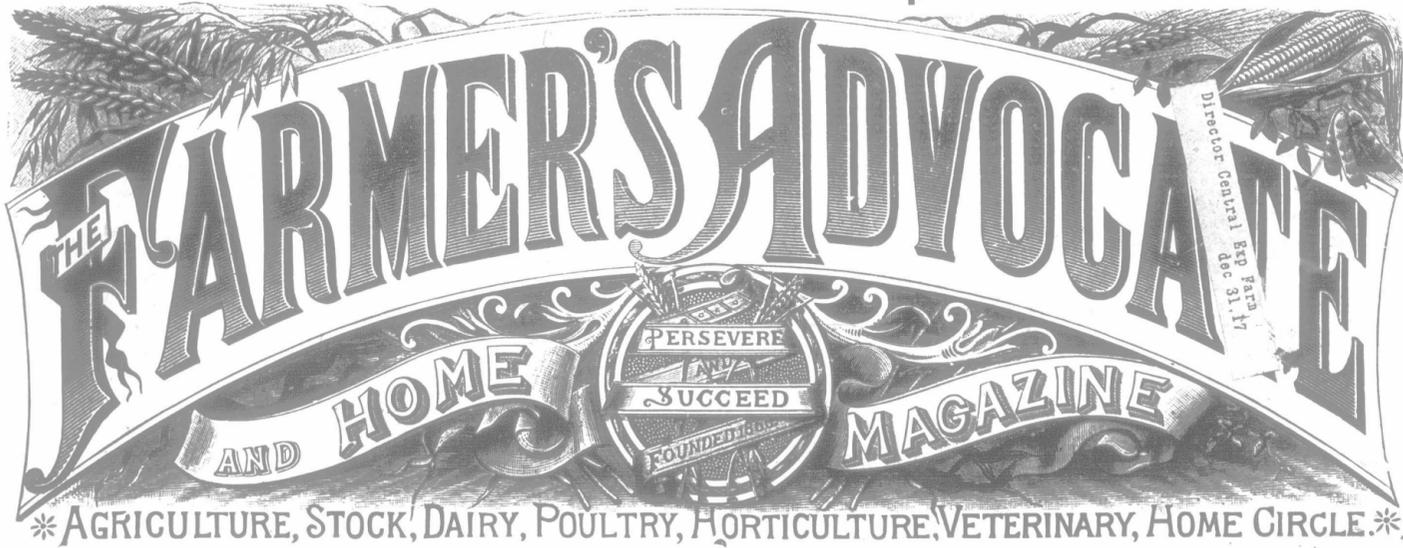


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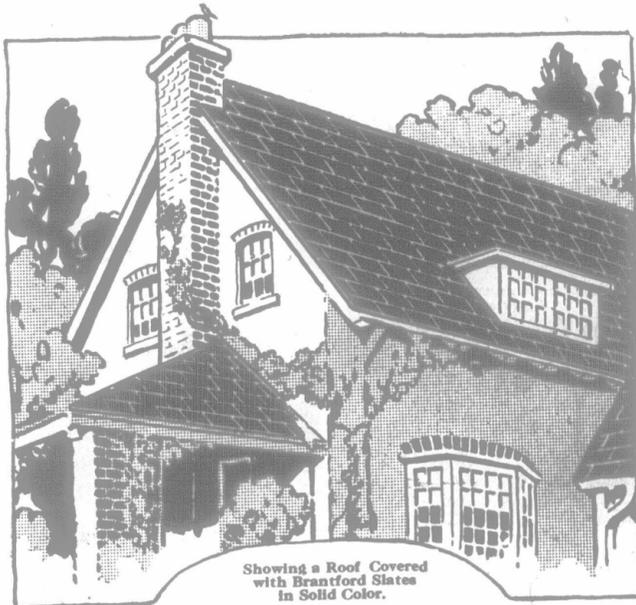
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Vol. LII.

LONDON, ONTARIO, JUNE 14, 1917.

No. 1290

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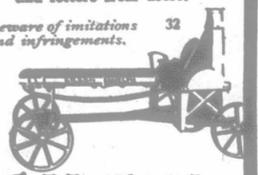
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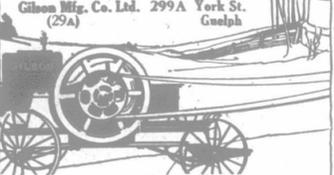
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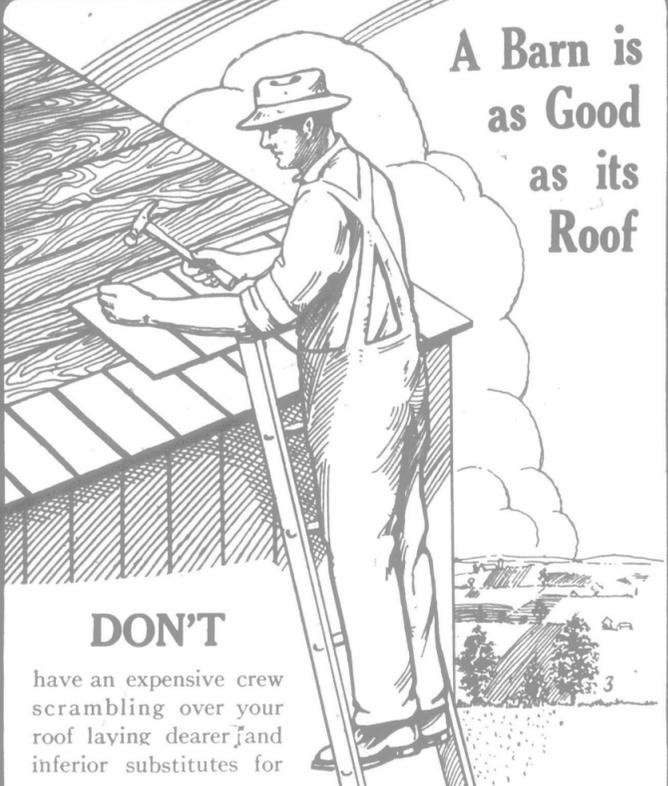
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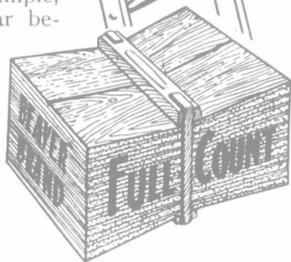
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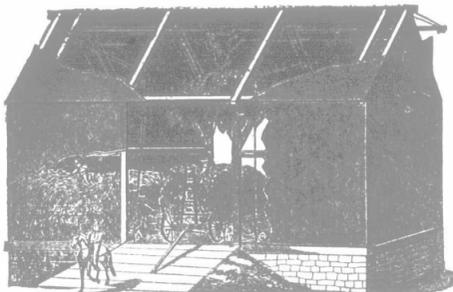
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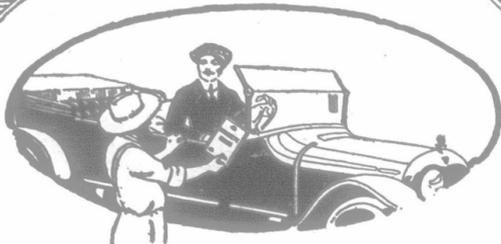
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Permanent Highways of Concrete

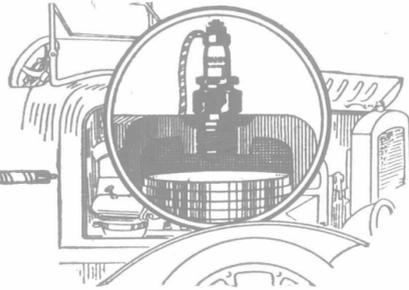
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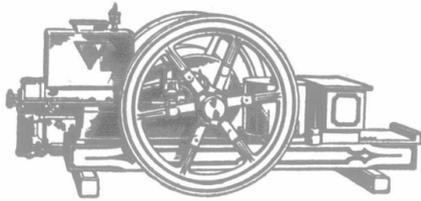
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The Farmer's Advocate and Home Magazine

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1886

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LII.

LONDON, ONTARIO, JUNE 14, 1917.

1290

EDITORIAL.

Salt satisfies stock.

The hired man is human.

Cultivation makes the corn crop.

Make a pot-pie of your roosters.

Machinery is the farmer's friend.

Breed that heavy mare this month.

Carry on the great offensive against weeds.

Apples will be a light crop in Ontario; make them clean.

A question bothering politicians—Can Canada conscript?

Tubers and beetles (bugs) will not grow on the same potato stalk.

Socialist Peace Conferences savor of the Central Europe espionage system.

A wider use of the tractor does not mean that the draft horse is to be driven out of business.

The farmer in these days who would eat only that which he could not sell would surely starve.

Have you running water in your home or is your wife always running to the well or spring for it?

A campaign to increase facilities for transportation may be more necessary than that for production.

An American paper was right when it said: "You may be too old to go, but you're not too old to hoe."

The Germans still claim a victory in the Jutland fight, but where have they kept their fleet since?

Conscription seems to have troubled the politicians in Canada as much as it has the so-called slackers.

The new crop of Canadian Knights did not include any farmers, notwithstanding their efforts to increase production.

If grain is needed for food why use it up in manufacturing drink? They say food is scarce. There is no scarcity of water.

As a machine for speeding up production the farmer is of the self-starter type and does not require cranking at any season of the year.

Two things are necessary to make tractors popular in Ontario. First, they must be light and handy; second, the price must also be light.

Judging from some of the material published re farm help, the Ontario Government might get out a bulletin on the uses and abuses of high school boys and city help on the farms.

There are a few rare birds in Ontario. The other day we met a farmer who had no complaints about crops or weather and the same day we talked with a consumer who did not believe farmers were getting too much for their produce. Extremely rare!

Developing a Sympathetic Spirit.

We have time and again pointed through these columns that all the campaigns for increased production, thrift and prevention of waste should not be directed specially at the farmer, because it is liable to leave a bad taste in the mouth of the man on the land. We are told that one of the foremost aims of the Organization of Resources Committee in Ontario is to promote a sympathetic feeling between the farm and the city, or between city people and farmers. This is right and proper. As the Farmer's Advocate has time and again stated, the problem of the producer on the farm is not so different after all from that of the consumer in the city, but there is a certain something in between which gets too large a percentage of the profit from both. When it comes to promoting a sympathetic spirit there is a chance for the Resources Committee, through the press which circulates in the city, to do a great work. Of the 5,000 boys sent out by this Committee this year from the towns and cities to the farm, we understand that nearly all are making good, are satisfied with their places, are getting good wages—running from \$18 to \$30 per month with board and washing—and that their employers are well pleased with the boys. Some of the letters from these boys and from their employers would make just as good reading as those few which are published from time to time, and which emphasize the fact that some one farmer has overworked and abused a certain boy. This is just an indication of what might be done. It might be just as well to point out once in a while that the farmer has a few troubles and no end of difficulties in his work of production; that it costs something to start on a farm and to operate it successfully; that eggs do not just happen in nests but that hens must be fed to produce them; that it takes more than wind and water to produce breakfast bacon; and that expensive feed is necessary, coupled with considerable labor, to grow nice, juicy steaks. This might be better than to lay all the stress upon the high prices which the farmer demands or gets when he comes to market and forget about the high prices which he must pay when he buys the necessary machinery, implements, feed, etc., to keep his farm going. Yes, there is room for a more sympathetic feeling between rural and urban people. Both are good and necessary to the welfare of the country, and it is just as necessary for urban dwellers to begin showing some of this sympathetic feeling as it is for rural people. All are working with the same end in view, an honest, respectable, decent living with reasonable profits for everybody. There are a few, however, and they are not found on the farms, who exact unreasonable profits from both the farmer and the average citizen of our towns and cities, and it is these who have been responsible for what lack of sympathy may exist between the two classes of our best citizens.

Political Muddling.

The political muddle which recently developed in Ottawa revealed the fact, if we are to believe despatches from the Capital, that certain party politicians even at this stage of world crisis would play politics rather than act statesmanship. Selfishness for party or personal gains should have no place in the public life of Canada at this time. There has been altogether too much petty party fiddling while Rome burned. The Canadian public will back up a straightforward, active, national policy to carry on the war to best advantage and it ill behooves either party or individuals in their party to put their own ends ahead of the country's needs at this time. It is just as ridiculous also for one party to be forever blaming the other when members of both are in reality to blame. If it was ever necessary for Canada to forget politics and replace it with statesmanship which will carry the country through honorably and efficiently it is now.

The Power Machinery Era.

A new era in agriculture in Ontario is dawning. Rapid strides have been made in the development of power machinery for the farm and this machinery has been applied successfully on a number of even the smaller farms in this Province. But we are only at the beginning. Water-pressure systems have been installed in a number of homes and out-buildings but the percentage having this facility is still small. In the very near future we are to see wonderful development in this regard. The farm home will very shortly be as well supplied with modern conveniences as is the city home, and no one is more deserving of these than the farmer, his wife and family. The scarcity of labor is making it necessary also to do more of the work of the farm and stable with modern machinery and appliances. Feed and litter carriers are becoming more common each year. Gasoline or other types of engine are used on many farms. Wide implements are replacing the narrow as time goes on. Hay loaders, hay forks, and such machinery for taking the heavy work off the shoulders of the man on the land are coming into more general use. Milking machines, cream separators, automobiles and all other forms of accessories to lighten labor are rapidly coming into use as labor grows scarcer. The farm tractor is getting a boost in Ontario this spring and the attention of many farmers is drawn in that direction. Machinery is beginning to do for agriculture what it has done for other industries. We are living in a time when it is necessary that the output of all our agricultural land be as large as it is possible for those on the land to make it. Agriculture must not be handicapped in any way. It is incumbent, then, upon those in authority that they give all encouragement possible to the farmer in his work. Machinery and modern implements are necessary to greatest production. They should be made available to the man on the land at the lowest possible figures, leaving a fair and reasonable margin of profit for the manufacturer and those necessary to place this machinery and implements at the farmer's disposal.

Drainage Interest.

After the wet season of 1915 and the extremely wet spring of 1916, followed by intense heat and drought and this followed by a somewhat late, and in some parts of Ontario rather wet, period this year, little further evidence is necessary to show that underdrainage pays on any land not naturally drained well or land inclined to be wet, and consequently cold and backward. Following the recent heavy rains in Western Ontario, we took a trip through parts of the country most affected and it was not difficult to see the difference in the grain and grass on land which was well drained. Spring grains got in earlier in the season and were making a more rapid and vigorous growth, very little water being noticed on the drained fields, whereas land adjacent and which was not underdrained was showing the effects of too much water being retained therein and thereon. Through correspondence with a number of tile manufacturers we learn that the only reason for a slackening up in the demand for tile in certain districts is the shortage of labor both at the yards and on the farms. A number reported the demand better this year than ever before, but in each case these yards were located in a district where ditching machines for farm drainage purposes are in operation and where the farmers have been convinced that the ditcher does good work and that tile drainage pays through seeing the result in their own neighborhood. In other districts where no ditching machine has yet been used this, of course, is a bad season to get tiling done. Labor is scarce and all the available supply has been used up in getting the crops in and properly attended to. There is however, a growing interest in underdrainage, particularly as its value has now been

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

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 2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s., in advance.
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demonstrated beyond a doubt. Many farmers if they could get the help would be doing this summer much more drainage work than they can otherwise accomplish. There is room for more ditching machines in some sections of this Province, and certainly a large acreage is in need of tile. A very good system could be put in on most farms for around twenty dollars per acre. This is taking into consideration the fact that not all the land will likely need draining, but that a system sufficient to meet the needs of the farm might be put down for \$1,800 to \$2,000 per hundred acres. It was formerly estimated that \$20 per acre was a fair estimate for the land actually needing drainage. Of course this price has advanced somewhat. It would probably cost \$25 per acre now to do the work, but as all the acres in the farm would not need a complete system, the lower estimate might cover the cost very well indeed. On the face of it it looks like a lot of money, but we have heard of cases where one crop on drained fields would show a difference large enough to pay for putting in the tile. In fact we had a very good instance of this on the Farmer's Advocate farm, Weldwood, last year where a crop of corn, which without drains would have come to very little, ran a heavy yield. We must not lose interest in drainage even though labor is scarce. Plans must be laid to do the work with machinery and to increase the amount of drained land as soon as possible.

Those in charge of the campaign to increase the consumption of fish in Canada, claim that if the people would use more fish it would bring fish prices down. Increased demand does not generally work that way. However, fish dealers claim that they would sell cheaper if they handled more. Up to the present the price of fish has been advancing with other things even though it doesn't cost any more to feed the fishes. In any event Canadians should eat more fish because of its value as a food and because it is plentiful here, it being estimated that only ten per cent. of the fish caught in our waters is consumed at home. Coupled with the campaign to induce people to eat fish should be an extra effort to get the fish to the people at a reasonable price.

Cultivate.

The middle of June marks the beginning of several weeks of cultivating of corn and root crops on the farm. The corn crop and also the roots depend largely on the degree of cultivation given and the scarcity of labor this season will make it more imperative than ever that horse cultivation be more frequent and less hoeing done. For best results roots and corn should at least be cultivated after every rain, or in other words at periods ranging from five to seven days. It pays to start early. As soon as the rows can be followed get the horse cultivators to work and arrange the implements to work as close to the young plants as possible without injury. It is generally better to have the corn, mangels, or turnips put in a little thick so that if a few plants are taken out or covered in the cultivating enough remain to make a good crop. The work must be planned so that the amount of actual hand-hoeing will be at a minimum this year. The check-row system of planting corn, of course, lends itself well to these conditions as the crop may be worked with the horses both ways, and unless the field is very dirty little hoeing is necessary. We have found the crop of corn sown thickly (50 pounds per acre) in rows at Weldwood, and cultivated very close to the rows required very little hoeing, but to get the growth it is necessary to cultivate well and often, first pulling the earth away from the plants a little. A few extra trips through the corn and roots may mean the difference between an abundance of feed and a shortage this fall and next winter, and it is well to start early and thus head off the weeds.

Keep the Boys in September.

It is said that there are 5,000 High School boys and 3,000 girls now at work on the farms of Ontario, each hired for a period of three or four months to help in increasing production. A suggestion has been made by someone that these be allowed to remain with their employers through the month of September, and, on the face of it, this would seem like a very sensible suggestion. If this form of help has made good and the boys and girls have been of value, doubtless employers could use them to good advantage in September, one of the busiest months in the farmer's year, and it might be well for those in authority to consider the proposition of leaving the boys with the farmers as late this fall as possible. Some, however, have suggested that the time lost from school should be made up by teaching on Saturdays and through the Christmas holidays. We would not favor this latter suggestion. If the boys work faithfully during the summer they should be allowed their regular Saturday and Christmas holidays. It would not be wise to owe do the amount of work imposed upon willing shoulders.

Nature's Diary.

A. B. KLUGH, M. A.

The American Sparrow Hawk (*Falco sparverius*), breeds from Newfoundland and Labrador to the Pacific Coast. It is one of the commonest hawks and is the most easily identified of all our species because it is far less wary than other hawks and permits a close approach when perching. It is very frequently seen along roads,



Fig. 11—American Sparrow Hawk—Male.

where it perches on the telegraph wires. When seen flying overhead this species may be recognized by its small size, (its length being about thirteen inches), the long pointed wings and long tail, the under surface of the latter having in the male a broad bar near the end and two broken bars further up, and in the female numerous narrow bars.



Fig. 12—American Osprey.

The sexes are quite different in coloration in this species. In the male the crown is ashy-blue with a chestnut patch in the centre, the back is chestnut, the tail bright chestnut above with a white tip and a broad subterminal bar of black, a narrow black patch runs from the eye down to the upper part of the throat,

and another narrow black patch from behind the eye down to the neck, the underparts are white, tinged with buff and sometimes with black spots. In the female the crown is much as in the male, the back is chestnut with numerous, fine, black bars, the tail is chestnut with many blackish bars, the face-patches are less distinct than in the male and the underparts are white, tinged with buff, and with many dark-brown streaks.

The Sparrow Hawk nests in a hole in a tree, often in a deserted Flicker's hole. The eggs are from four to five in number and are yellowish-brown blotched with brown of a darker shade. The main food of this species consists of insects, grasshoppers and crickets being the kinds most frequently taken, though caterpillars and beetles are also eaten in large numbers. Another important item on its bill of fare is mice, upon which it not only feeds during spring and fall, before and after the hey-day of insect-life, but also feeds to its young. One observer records the fact that a family of five Sparrow Hawks were fed four hundred and twenty mice and rats in a month by the parents. Occasionally, but so very rarely as to have little effect in altering its status as a highly beneficial species, the Sparrow Hawk takes small birds and young poultry.

The American Sparrow Hawk arrives in Ontario early in April and leaves early in October.

The American Osprey, more often termed the Fish Hawk, is found about bodies of water from the Atlantic to the Pacific, and as far north as the Arctic Circle. Though thus very generally distributed it is not common in most localities. The Osprey may be recognized when flying overhead by the long wings, short tail, pure white of the underparts and the numerous narrow bars on the tail.

The nest of this species is usually placed in a tree, very frequently in the broken top of a tall, dead tree. Sometimes, however, it is placed in a bush or even on rocks or on the ground. It is composed mainly of sticks, and as it is used year after year, and is added to each season, it often assumes gigantic proportions, sometimes being eight feet in diameter and eight feet deep. Quite frequently small birds, such as Grackles, nest among the sticks which form the foundation of these large nests. The eggs, which are laid in the latter part of May, are from two to four in number. They are very variable in color, ranging from white, through cream to reddish in ground color with markings of brown of different shades. The period of incubation is from twenty-seven to twenty-eight days.

This species feeds exclusively on fish. Its method of fishing is to sail over the water at some height, and when it perceives a fish near the surface to drop down and seize it in its talons. It then flies away with its prey to a tree and devours it. Since it feeds entirely on fish it cannot be considered economically beneficial and might be classed as harmful, but as a matter of fact it is not usually abundant enough in any locality to make much difference in the fish supply.

Why Some Petitions are not Granted.

BY ALLAN McDAIRMID.

A friend of mine asked me recently why it was that these formal petitions sent in to governments, signed sometimes by thousands of individuals, were so seldom granted. It was only after thinking the matter over for some time that I was able to come to any sort of a reasonable answer to the query, for the fact that these petitions go unheeded for the most part, had made no great impression on my mind. It was something that I must have been taking for granted, apparently.

On looking over a copy of a petition that was presented to Parliament some time ago, I find one thing in it that might account for its failure to get a favorable answer. From its tone it must have been written and signed by some of the most humble, self-effacing and altogether unworthy human beings that ever were permitted to take up room on this earth. The "Honorable Body" addressed, were apparently creatures from some other world who had condescended to come down and straighten out our little tangles for us. The document starts out with, "This petition humbly sheweth"—and ends up with, "And your petitioners, as in duty bound, will ever pray." Now I think that this attitude of one body of men towards another body, or of one individual towards another, is altogether wrong. If all men were not born equal they have the right to become equal; that is, birth or position are no guarantee of character, and that is the final standard of manhood. So, why should anyone say, in effect, to his fellowman, "You are great and powerful. I am mean and unworthy. But grant me this request and I will be your servant forever." It's a relic of barbarism, and no thinking, self-respecting man should be expected to put his name to a document that is worded in this way. But the point is that right here is to be found one of the reasons for the lack of consideration usually given to petitions and requests of this kind. The average man will kick the dog that licks his boots, and the same feeling is inspired in the person before whom we humble ourselves. The inclination is to deny the petition, with little consideration for the feelings of the petitioner. Another reason for the ineffectiveness of this sort of prayers is that they have actually very little solid backing. They do not represent real effort, except perhaps on the part of a very few individuals. It is easier to sign a petition than to refuse to sign it, consequently the majority of names do not stand for any real convictions, or indicate that any of the signers will back up their request by action. Governments know this, and accordingly give the matter little consideration.

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Getting up a petition is too often an excuse for not getting down to work. Men will sign a petition for the passing of a certain law that would not bother going to the polls to vote for that law, much less make the effort necessary to get others to go. A cross on a ballot paper counts for more with our governing bodies than a yard of signatures to a petition. The first is an order from the actual master to his servant. The second is a prayer that seems to depend on the humility of its wording for its success, and which puts man in a wrong attitude towards his fellowman.

The same idea seems to have been in the world thousands of years ago, when mankind first began to worship a Creator. The beginning of prayer seems to have been in the nature of a supplication of man for protection from the lightning and storms and wild animals that he was continually in danger of. If his prayers were answered it was through his being led to protect himself by building shelters against the storms and providing weapons for his defence against the animals that threatened him. He found out that if he was going to be helped he had to help himself, and it was because of this fact that he ever got out of the half-animal condition in which he was at that period of his history.

But, as we have noticed, there is that same tendency among us yet; to ask for things as a gift, instead of putting forth the necessary effort to acquire them. In other words, we would like to get something for nothing, and that is the reason there are so many unanswered prayers, as well as neglected government petitions, in the world to-day. The Creator of the Universe is not going to make us a present of what He intended us to get through the exercise of our brains and muscle. Such an idea of the value of prayer is an unworthy one, as well as one impossible of fulfillment. For the individual, the real purpose of prayer is the leading of his thought into channels that bring him into communication with the Higher Power, as it were. One of the results of this is the development of the ability to choose the right line of action, when we are confronted with the necessity of taking one of two courses. In this way prayer becomes of real value in the development of our character, and is not the selfish act that so many people make it. Meditation, which is often spoken of in connection with prayer, may become real prayer, and serve the same purpose of bringing us into the right relationship with God. The attitude of mind that is most likely to bring about this right relationship is one of gratitude. It is altogether opposed to the selfish idea of getting, and leads the individual into contentment and happiness. It puts him in harmony with the law of Nature and so brings into his life all that is really worth having. Gratitude is real prayer. It expresses itself in work for humanity, but the ungrateful mind thinks of, and prays only for self. These are some of the petitions that go into the class of the "not granted."

As farmers we have the reputation of being ungrateful. Or, as it is generally put, we are a "lot of grumblers." We all know that there is some truth in the charge, and as nothing is gained by the habit it would be to our advantage in every way if we "cut it out." With some men I know, the weather is never just what it should be, and prices for what they have to sell are always too low, "considering the price of feed and everything." This way of thinking and talking brings us nothing but discontent and unhappiness, when it would be just as easy to assume the grateful condition of mind, and the result in our lives would be altogether more satisfactory. By our attitude we cut the wires that connect us with the Power that would carry us on to real success in our calling. Ingratitude is selfishness, and selfishness always defeats its own purpose. And just as a petition to the Government will go unanswered if its object is a selfish one, so will our selfish prayers meet a similar fate in another sphere of life. It's hard to retain our manhood if we get into the habit of asking and expecting favors. Independence and self-respect characterize the man who has worked for and earned everything he possesses. Petitions have no place in his life; only true prayer has.

THE HORSE.

Congenital Scrotal Hernia in Colts.

Congenital scrotal hernia is quite a common, and, fortunately, not often a serious condition in foals. At the posterior portion of the floor of the abdominal cavity, or, more correctly speaking, on the floor of the pelvic cavity, there are two openings, one on each side, passing through the tissues that form the floor. The superior orifice of each opening is called the *internal inguinal ring*; the inferior, the *external inguinal ring*, and the canal between the two openings is called the *inguinal canal*. In the female, the mammary vessels pass through these canals to reach the mamma, and in the male the testicles pass through to reach the scrotum, and in the entire animal the spermatic cords continue to occupy them, hence the canals remain potent until the animal is castrated. Then, in most cases, they become partially obliterated, and while scrotal hernia may occur at any time, even in a gelding, it is not often seen, except in stallions. However, it is of the congenital form we wish to speak at present. By congenital we mean present at birth or very shortly after. It is not uncommon for this form of hernia to exist at birth, or to appear within a few days. The scrotum will be noticed larger and fuller than normal, usually the abnormal size is on one side only, but in some cases both sides. The tumor is soft to the touch and not inflamed or sore. It can be pushed back into the pelvic cavity, or, if the foal be held on his back it can very

readily be returned, but in most cases quickly returns to the scrotum when he regains his feet. If the tumor be not quite large, there is no occasion for alarm. It does not interfere with the health of the animal, and if closely watched will, in most cases, be noticed to vary in size. This is accounted for by the spontaneous return to the cavity of a portion or the whole of the escaped intestine for a time. As in umbilical hernia, the mesentery which suspends this intestine is proportionately longer and looser in the foal than in the animal of a few months or even a few weeks old, and, as age advances it gradually contracts, and thereby draws the intestine up into the proper cavity, hence a spontaneous cure results. In most cases this cure results by the time the colt is weaned, but in others not until one or even two years old. The application of bandages, trusses or liniments should not be resorted to, as the anatomy of the parts is such that they can do no good, and, if persisted in do harm, by causing irritation. Extraneous interference is seldom necessary. Nature should be allowed to have its course, and will generally succeed in effecting a cure. However, there are cases in which treatment is necessary. All cases should be carefully watched, and if the tumor be not growing larger, even



A Team of Mares and Their Successors.

though it may not be noticeably decreasing in size, or even be less noticeable at times, it should be left alone, but if a gradual or sudden increase in volume be noticed, an operation is necessary. In some cases the sac becomes so distended as to interfere materially with the action of the animal, causing him to walk with a straddling gait, which becomes more marked, more or less quickly, according to the rapidity with which fresh quantities of the intestine pass into the scrotum. In such cases the services of a veterinarian should be procured without delay, as an operation is necessary. It requires a veterinarian to operate, as the patient must be placed upon his back and held there; the scrotum and surrounding parts must be thoroughly disinfected with a 5 per cent. solution of carbolic acid or other disinfectant; the hands of the operator and his assistants and all instruments must also be disinfected. Then the scrotum is carefully cut through, and the intestine exposed and carefully returned through the canal into the pelvic cavity. If the testicle be present it should be removed (and, of course, its fellow also) and a clam, enclosing the abdominal coverings, along with the spermatic cord, applied, the animal allowed to rise, and the clam left on until it sloughs off, which is usually in 8 to 10 days. In some cases the testicle has not yet passed through the canal, hence cannot be found. Where this condition exists, after the intestine has been returned, the edges of the external ring must be drawn together with carbolyzed catgut or silk sutures, which will become absorbed, and in the meantime the opening will contract to such a degree that a recurrence of the hernia is not probable, although the testicle will, in most cases descend into the scrotum. This, of course, is an operation that should not be attempted by any except an expert, where the services of such can be secured. W.H.P.

LIVE STOCK.

Swat the scrub sire.

Keep the calf pails clean.

A good rule to follow is not to breed young sows under 8 months of age.

If you have a crop suitable to be ensiled you will make no mistake in erecting a silo this summer.

At the twenty-second Lincoln (England) Shorthorn bull sale recently held, 321 animals averaged \$235 each.

Let the hogs have access to the ground, particularly the breeding stock which should also have plenty of exercise.

B. C. Dove, Shell Rock, Ia., sold 53 head of Aberdeen-Angus cattle on May 24 at the average price of \$442. The top was \$1,400, which was paid for Shady Glen Heatherbloom 2nd.

It is reported that the swine population of Denmark has decreased by 20 per cent. since the war commenced. This has a direct bearing on the Canadian bacon industry and the trade with Britain.

The lamb crop in the United States was a small one and reports in this country indicate a heavy percentage of single lambs. It will not be long before lambs will class as a luxury rather than an ordinary article of diet.

There is yet plenty of time to sow rape on which to turn cattle, sheep or hogs later in the season. The common practice is to sow 2½ pounds per acre in drills 28 inches apart. It is sown about the first week in July and is fit to turn on early in September.

During the month of May the top prices at the Chicago Stock Yards which were also tops for the first five months of the year ran as follows: Native beef steers, \$13.70; fat cows and heifers, \$12.10; canner and cutter cows, \$8.10; hogs, \$16.65; sheep, \$17; lambs, \$20.60.

J. Tudor & Son, Iowa City, Ia., made an average of \$683 on 51 Aberdeen-Angus cattle which they sent through the auction ring on May 23. Elba of Glyn Mawr 2nd topped the sale at \$2,425. The yearling bull, Eltro, was a feature of the sale and went to W. H. Cooper at \$2,400.

If you have a small field or patch of land yet unplanted that will grow Swede turnips it will pay to produce some at least for young calves or poor-doing cattle next winter. In some districts they can be sown as late as the first of July, when climatic conditions are favorable for a good stand.

Authorities in the Ontario Department of Agriculture tell us that in this Province in the last four years pasture land has increased at the rate of 100,000 acres per year without any appreciable increase in numbers of live stock. At that there wasn't too much pasture for live stock last fall.



Rural Scenery with Sheep in the Foreground.

Suggestions Anent the Control of Tuberculosis.

EDITOR "THE FARMER'S ADVOCATE"

The problem of tuberculosis control affords two chief fields for operation. The first is one of dissemination, the prevention of disease communication from herd to herd, from community to community, it may be from province to province or from country to country. The second is eradication within the herd. The adoption and application of effective measures in these two fields depends upon two agencies, education and legislation. Both of these agencies have been at work in Canada for some years and there could be no more opportune time than this critical period in the country's live stock development to reconsider our methods and analyze our results.

Nothing man who is at all familiar with the situation will deny that a complete solution of the problem in either field is not an easy matter. It is doubtful, however, if any such man would care to admit that much cannot be done. The question of the moment I take it is, what progress is being made and can anything practicable be suggested to accelerate it? Destructive criticism is not called for, but a frank discussion by those who are trying to follow the situation, from certain angles at any rate, may prove at least suggestive for further work.

In my opinion something is being accomplished through the above two agencies, but as operated thus far they have not proved adequate to cope with the disease. I regard the present time as especially critical because of the unprecedented possibility for Canadian live stock development, the consequent demand, and the fact that, with dairy cattle especially, changing conditions to closer housing, heavier feeding, and harder work tend to increase the ravages of the disease. No statistics are available which definitely state the case, but information very indicative of its seriousness is available.

Education is urgently needed if for no other purpose than to pave the way for legislative measures. Ignorance explains the present dread and suspicion of tuberculin testing. It is a fact that comparatively few realize how their whole business and even family health may be undermined by diseased cattle. It is also a fact that not one per cent. of the cattle offered for public or private sale are tested. Man after man will buy, breeder after breeder will buy, pay high prices and never ask about test, much less exact it. If any further proof of the apathy toward tuberculosis and the ineffectiveness of education thus far be required, numerous illustrations can be given. Suffice it to mention one more. Very few farmers and certainly not all breeders ever notice the Government punch in a cow's ear or know what it means when they do see it.

For years we have heard people say "educate". At best it may be a slow process but it may well be asked if something more aggressive cannot be instituted. Would it not be possible to initiate a special movement in which federal authorities, provincial authorities college authorities, and the agricultural press, through their veterinary and live stock representatives, might all share with some activity? Various steps in connection with any such educational propaganda would suggest themselves.

In literature alone, there would seem possibility. Special material, not in bulletin form, including simple, practicable, effective methods for dealing with a given infection should be carefully prepared by live stock and veterinary authorities conjointly and distributed periodically and on special occasions. Co-operation and agreement may well be expected from those who count on it from others.

Legislation for some time to come cannot be drastic. Nevertheless it is necessary in more effective form than we have it at present, and it would seem that it might gradually increase its footholds. Undoubtedly those in whose immediate hands it rests are in the best position to judge and have found themselves compelled to go slowly. At long range, however, possibility of and need for certain measures would seem apparent.

It seems regrettable that one source of not only disease dissemination but actual introduction has been through imported stock. There are, no doubt, difficulties in the way of preventing this but the matter is too serious to be dismissed for all time to come as an in-urmountable obstacle. The possibilities of this source as a fountain head need not be discussed. The moral effect alone in officially sanctioning the distribution of infected stock does not help matters educational. This is a phase of the problem on which the most careful thought should be centred until some improvement on the present system can be worked out.

By-products afford an open channel for disease. I believe education has already gone far enough to allow legislation to show itself here in compelling pasteurization of all skim milk and whey from creameries and factories. The practicability of such a measure is already a settled thing.

Milk supply of towns and cities is another point of attack in which regulation and assistance should do much directly and indirectly to bring home to the individual the importance of, and procedure in dealing with tuberculosis.

Given lines of action cannot be dogmatically stated for the above and other matters such as official testing, compensation for losses, tuberculin standardization and control. Effort has already been made in many of these channels to some good purpose, but from the standpoint of one somewhat in touch with the live stock situation I take this opportunity of emphasizing need for more aggressive education and further legislation, and I would like to see the whole subject gone into

again more thoroughly than ever by our live stock and veterinary authorities with the object of designing added measures and arranging for their prosecution. Macdonald College, Que. H. BARTON.

Experiments With Vaccine and Serums in Contagious Abortion.

EDITOR "THE FARMER'S ADVOCATE":

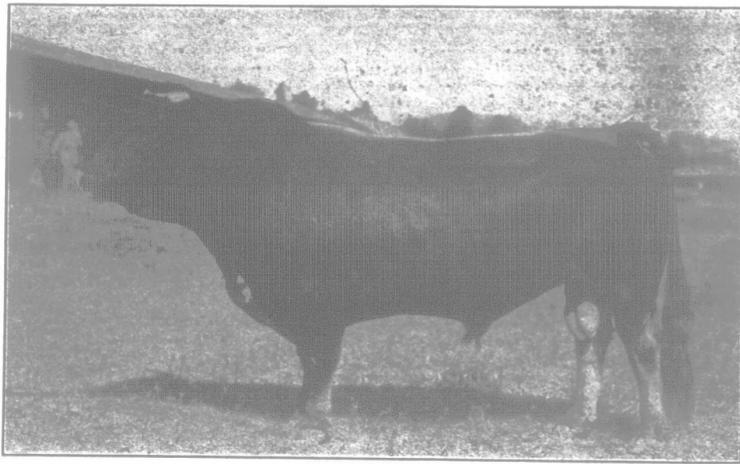
The experiments which we have been making in the Health of Animals Branch of the Department of Agriculture, with the object of finding a means of controlling contagious abortion in cattle, have resulted hitherto successfully, and I am permitted by the Minister, the Honorable Martin Burrell, to make them public.

EXPERIMENT I.—Four heifers, aged 1 year, were inoculated with our protective vaccine January 26, 1915. The test of the blood of these heifers showed that one of them was already infected with the bacillus of contagious abortion, and all four were living in a herd in which the disease was known to exist.

The four heifers were bred on the following dates: April 21, April 23, April 23, and December 18, 1915. They all calved, the dates being respectively January 26, January 26, January 12 and September 11, 1916.

EXPERIMENT II.—Ten yearling heifers were inoculated March 20, 1915, four of which reacted to the test for contagious abortion. They were bred after an interval of about three months. (Accurate dates cannot be given in this case, as the herd records were destroyed by fire). All became pregnant; eight carried their calves to full term and produced living offspring; two aborted.

EXPERIMENT III.—Four heifers, yearlings, were employed to test a method of employing a serum as well as a vaccine. With the first two, the serum and vaccine were used simultaneously; with the second two, the serum was given ten days prior to the vaccine. When tested the first two had reacted to the test; the second two did not react. The first two were bred December 16, 1915, and August 25, 1915, and both aborted July 12, 1916 and April 16, 1916. The second two were



Tom Phylis.

Celebrated Brown Swiss bull, calved Sept. 10, 1903. Despite his years he is still active and vigorous.

bred December 23, 1915 and November 9, 1915, and produced living calves September 20, 1916 and August 5, 1916. This experiment was unsatisfactory and gave conflicting results, but shows that the simultaneous method of giving serum and vaccine did not prevent infected heifers from aborting.

EXPERIMENT IV.—In this experiment an effort was made to find out how far the vaccine treatment would prevent abortion in cows which had previously aborted.

Eight cows were selected, ranging from two to seven years in age. All had previously aborted, one of them three times, the others once. All but one reacted to the test for contagious abortion. None were pregnant when inoculated nor bred afterwards until some weeks had elapsed. The result showed six cows produced living calves at full term; one cow proved to be barren and was slaughtered; and one cow reacted when the herd was tested with tuberculin and was slaughtered, having previously aborted.

The method used in this experiment was a double inoculation with a mild vaccine first, followed by a strong vaccine several days later.

EXPERIMENT V.—Four cows, aged two to seven years, and four yearling heifers were used. The cows had all aborted previously, one of them twice, the others once. Three of them reacted to the test for contagious abortion. All were treated by the double method, and were bred after a suitable interval with the following result: one of the cows, the one that had aborted twice previously, aborted again. All the others produced living calves.

These experiments have resulted in obtaining 27 living calves from 34 cows and heifers in badly infected herds. This encourages us to hope that we have a really useful method of producing immunity to the disease, and we are anxious to enlarge our experience by extending our work to other herds.

With this object, we now offer to treat free of charge a limited number of herds in which contagious abortion is present. Owners are requested to make application in writing to the Veterinary Director General, Ottawa, stating the number of breeding females in the herd. Applications will be dealt with in the order of their receipt.

F. TORRANCE, Veterinary Director General.

THE FARM.

A Summer Snow-Storm.

EDITOR "THE FARMER'S ADVOCATE":

Eight inches of snow in the middle of May! Wag your heads, ye wiseacres. Shiver and sermonize on the limitations of latitude beyond the balmy forty-fifth, forty-eighth, or fiftieth parallel beneath which ye respectively happen to abide. Let Old Mr. "I-Told-You-So" have full satisfaction before he finishes this paragraph and runs into the next.

But hold! Let us prolong his pleasure and augment it with a few further bald statements. Let us gratify his pessimistic pride of opinion with some icy facts. Listen. Not only was there eight inches of snow on the ground but much more than that total fell in the twenty-four hours during which it occurred. Moreover, the snow was so soft and soggy that a canful of it melted into a good half can of water. Also it froze a skim of ice on two successive nights after the storm; and, worse yet, the soft, white mantle covered the fields in some localities for two full days and stray remnants of drifts could be seen in sheltered nooks and on the mountain tops for several days longer. And still we are not ashamed to publish the truth. Nay, verily, we proclaim it with joy and pleasure. For by all precedent that mid-May snow should be worth hundreds of thousands of dollars to the country. Jim Cornwall was right when he remarked that there is nothing more welcome to an Alberta farmer than a May snow-storm.

On the Eastern slope of the Rockies, spring is inclined to be dry until the season of the June rains. Given the moisture there is no difficulty in producing heavy crops of grain especially oats, and there is no more acceptable form in which this moisture can come than a nice soft snow after the grain is in the ground. Its melting saturates the soil and subsoil better, we think, than an equal precipitation of rain, thus going far to ensure good crops of grain and hay, not to mention pasture.

Even garden stuff withstands a good deal of such weather and while I shuddered to think what would happen to an apple orchard in bloom at that season it was reassuring to find that the half hundred or so of young apple trees set out in the experimental plantation a year ago sustained no perceptible injury. By the way, it is gratifying to note that almost every one survived the exceptionally hard winter just passed with nothing worse than a little tip injury. To be sure, they were protected by snow banks and building paper wrapped around them in the autumn, but even so, their present promise would give Mr. Wiseacre a rather rude jolt. Currants were injured scarcely at all, while among ornamentals, the spiraeas and lilacs of various species are coming on nicely. So much to get even with the pessimists.

It was quite a surprise the way that snow overwhelmed us. Changing at mid-day from a two-hours' drizzle, it fell in thick watery flakes until a little past the next noon, when it reverted to rain for a few hours. Still more remarkable was the way it lingered under the high May sun of this North-Temperate zone. Stockmen with calves and foals on the range and with no feed to give them—for supplies were scant last winter—felt a little apprehensive but it was almost impossible to find the animals in the storm. Some of ours came home and stood on the road in front of the buildings, whither I "packed" feed to them, tramping through the soggiest mass of snow I ever tried to wade. A few miles of it would tire a man out. The poor brutes looked gaunt enough though it was remarkable how well the calves stood it—better than the mothers which suckled them, by far. So far I have heard of no losses.

Reminiscences of other years were prompted. I am not sure of dates but think it was about nine years ago that a more severe storm than this one visited the ranching districts of Southern Alberta on about the same day of the month. A great many Southern or Eastern cattle had been brought in and got scattered before they could be branded. Unaccustomed as they were to rustle, terrible suffering was sustained and losses

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of seed potatoes and the impossibility of securing seed in many cases will deter most farmers from planting more than enough for home use.

The potatoes grown in New Ontario on suitable soil are smooth, clean and of good quality. There should in the future be a good market in Old Ontario for northern grown potatoes for seed, as it would not only mean earliness but larger yields. More especially would this be true of Southwestern Ontario conditions.

Seeding was well under way by the middle of May, except in the Temiskaming District, where the heavy fall of snow about Easter remained on the ground until the first of May. Even as late as May 24th there were still considerable quantities of snow where it was protected by the bush. Some of the northern lakes also had a quantity of ice in them, all of which was adding to the lateness of the season. In the other districts the land was working up fine, and the seed was going in the soil in ideal condition. The cool weather was favorable to getting a lot of work done in a day. The farmers were anxious to do their very best. They were generally hopeful and were adjusting themselves to the high prices for everything they had to buy. On the other hand, if they had anything to sell they got good prices.

The need of good seed oats was felt in some localities. Farmers felt they were unable to pay the high prices, and the dealers didn't know how far it might be safe to carry the farmers. In all probability instead of good seed oats being used, inferior feed oats will take their place, and this will mean disappointment in the crop.

Judging from the amount of pulp wood, railway ties and telephone poles along the lines of railway in places, the farmers have had a fairly good season, which means a good deal to the settlers in these new districts. Most of the settlers taking up the bush lands are French Canadians. In some of these settlements one couldn't help but notice that the children were less efficient in speaking and understanding English than were their parents. Their children are entitled to at least a good English education, which would be in the interest of our Canadian citizenship.

Along the National Transcontinental line of railway at MacPherson, one couldn't help but notice the large amount of clearing that had been done by the men in the internment camps during the last two winters. There seems to be very good farming lands running from Cochrane to Hearst and then in patches as far as Grant. Beyond that there doesn't appear to be very much until, I am told, the Manitoba boundary is reached. Of course, here and there, there may be small areas. My observation extended as far West as Graham, Ont.

The possibilities of stock raising seem to be considerable in this north country. The winters are steady, and cattle come through in good condition where properly housed and cared for. The high price of hay and no fodder to really take its place has been a deterrent in the past to carrying much stock through the winter. While plenty of hay is grown and of good quality, it was ready money to bale and market the hay rather than invest in buildings to house more stock and feed them for flesh or milk. The prices of cattle now ruling higher will induce more to carry more stock. There is such abundance of summer pasture going to waste it seems a pity. Northern Ontario is on the up grade.

T. G. RAYNOR.

Three Crops that may be Sown Late in June.

On some farms there are very often a few acres of land that could not be gotten ready for early spring crops, owing to excessive wet, shortage of labor, etc., or possibly a piece of grain is killed out, or part of a meadow field failed to make satisfactory growth. Such places can very often be profitably sown to one of the crops

which do best when sown the latter part of June or fore part of July. After the corn and roots have been planted there is often time to prepare a few acres for buckwheat, millet or rape, three crops which can be sown quite late in the season and which furnish a considerable quantity of feed. Instead of giving a certain weedy piece of land a complete summer-fallow, a good many weeds can be killed by thorough cultivation up to the first of July, when any of the crops mentioned will tend to smother out any weeds which might happen to grow late in the season.

The acreage devoted to buckwheat varies considerably, depending on weather conditions. A wet spring very often leads to an increased acreage of buckwheat. The crop is best adapted to a cool, moist climate. While it will grow in a great variety of soils it is especially well adapted to light, comparatively poor land. It very often gives a fair yield on soils so lacking in fertility that they will not produce a good cereal crop. Hot weather and excessive rain during the later period of growth greatly injures the yield, as these conditions appear to blast the flowers. Naturally the richer the soil and the better the cultivation, the larger the yield. A firm, well-pulverized seed-bed is desirable. As seeding is not done until the latter part of June, it gives an opportunity of frequent cultivation to destroy weeds. The grain may be sown broadcast or drilled, the latter is recommended as it gives a more uniform stand. From three to five pecks, depending on the size of the seed, is a fair rate of seeding. With favorable weather the crop is ready to harvest about ten weeks after seeding. It should be cut before the first heavy frost. A binder is usually used for harvesting, although if the crop is bound in large sheaves it takes considerable time to dry, as the weather is oftentimes unfavorable in the fall. The ordinary grain thresher is used. Japanese and Silver Hull are two varieties commonly grown.

Buckwheat is frequently grown for the purpose of smothering out weeds and improving run-down soils. It is plowed under as a green manure and leaves the soil in a remarkably mellow condition. It decays rather quickly when plowed under. On certain soils buckwheat plowed while green does not appear to give the desired results. We have seen a luxuriant stand evidently injure the field, as a profitable cereal crop could not be grown the following year. The theory advanced was that so much green material in the soil caused a slight acid condition, as the field in question contained no limestone.

While a considerable portion of the buckwheat is used for animal food, there is a demand for buckwheat flour in some districts. The yield of flour per bushel is around twenty-five pounds. Middlings, a by-product of the milling process, is in demand for feeding dairy cows, as it contains a fairly high protein content. The hulls contain a large percentage of fibre, and consequently have little feeding value. At the Pennsylvania Experiment Station, buckwheat middlings and dried brewers' grains were found equally valuable for dairy cows when judiciously fed as part of a balanced ration. At the Vermont Experiment Station the middlings produced more milk than an equal weight of a mixture of corn and wheat bran. Buckwheat is frequently mixed with oats and barley and ground for hogs and cattle. Poultry relish this grain, and it has the reputation of being of special value in egg production. Thus, while the crop has not a place in the general crop rotation, it can oftentimes be grown to advantage either for grain, as a cleaning crop, or to be plowed under as green manure.

Millet is a hot-weather crop and does not do well if sown in cold soil. Consequently it is largely a supplementary or catch crop, and, with a well-prepared seed-bed, it may be sown as late as the middle of July, although from June 10 to 20 is generally considered about the best time. Seldom is a field specially set aside for a crop of millet; it is grown on a field that could not be seeded early in the spring or where clover has killed.

Naturally warm, loose soils, which are fairly fertile, are best adapted to the growing of this crop. Unlike buckwheat, it does not do well on light, hungry, sandy soils. As with the crop previously mentioned, the soil is given a partial summer-fallow when preparing the seed-bed. Some have secured a fair crop of millet by sowing it after red clover has been harvested. Others have sown millet earlier and harvested it in time to sow fall wheat. The seed loses its vitality very quickly in the ground, consequently conditions should be favorable for quick germination. For early seedings Japanese Panic and Japanese Barnyard are varieties which are found to be suitable. Hungarian grass, which belongs to the same family of plants, is preferred for late seeding. From 25 to 30 pounds per acre is the usual seeding, and drilling the seed is preferred to broadcasting.

If the crop is grown for green feed, cutting should commence at the first appearance of heads, and may continue until the crop is ready to cut for hay. When the heads are fully out the crop is sufficiently advanced to be cut and cured for hay. If left too long the stems become woody and are not palatable. As a green fodder millet ranks fairly favorably with red clover according to the chemical analysis, but, as hay, clover is much superior in protein content. Thickly-seeded, early-cured millet hay is useful for feeding cattle, but care must be taken when feeding it to horses. In fact, more or less care must be exercised when feeding millet hay to any class of stock, although as a green feed its reputation is more favorable. Care must be taken when storing the crop, as it readily heats in the mow.

Rape is a crop quite extensively grown by stockmen, as it is recognized as a profitable crop to tide cattle over a period of short pastures in late summer and early fall. It is grown principally as a pasture crop, and furnishes feed when other pastures are not productive. It is sometimes grown near the buildings and cut and fed to stock in the stable. The last week in June or the first week in July is a good time for sowing rape. This gives an opportunity of cultivating the soil during the time when weeds are most easily destroyed. The hot sun soon kills the roots of noxious weeds exposed. Fields infested with couch grass and sow thistle have been practically cleaned by the preparation for and the growing of a crop of rape. It does best on moist, fertile soils which are rich in organic matter, consequently on clay soils a coating of manure is generally applied before sowing the seed. Rape may be sown broadcast at the rate of five or six pounds per acre, but a better opportunity is afforded for cleaning the land if it is sown in drills which permits of one or more cultivations during the growing period. If sown in drills 28 inches apart, about two and one-half pounds of seed is sufficient for an acre. When drilled there is usually less waste in pasturing, as the stock follow the rows and are not likely to tramp down as much as when the crop is sown broadcast.

When the land is well prepared, the seed may be sown from the grass-seed box of the ordinary grain drill. It may be necessary to wire two tubes together to convey the seed from the grass-seed box to the ground. The seed should not be sown too deeply. When it is three or four inches high, a horse cultivator may be run through it which will stimulate growth and destroy any weeds which have started to grow. Later in the season a second cultivation may be given, but if not, the luxuriant growth soon covers the rows and prevents weeds from growing. As a rule the crop is ready for pasture early in September and will furnish feed until the snow flies. If there is any likelihood of pasture being short in the fall, it will pay the stock feeder to sow a few acres to rape.

The three crops mentioned are sown late in the season, and usually leave the soil in good condition for succeeding crops. All tend to smother out weeds, and all permit of a partial summer-fallow before seeding. Buckwheat furnishes grain; millet, green feed or hay, and rape supplies pasture.

Canada's Young Farmers and Future Leaders.

Choosing an Occupation.

To every young man comes a time when he must decide on a life-work. It is a trying moment. He has certain inclinations, he knows what his parents would have him do, his uncles and cousins have tendered their advice, and possibly his city friends have offered suggestions. It is but natural that the boy should follow in his father's footsteps, because during boyhood he has become more or less familiar with his father's business, trade or profession. However, all are not built alike, consequently some boys see greater opportunities or feel called upon to follow work other than that in which their fathers are engaged. It is a mistake for parents to strongly influence the boy against his inclination regarding an occupation. At one job he may be a partial failure, while at another he may make a huge success. The question should be viewed from every angle, ever remembering that all is not gold that glitters. The country boy, while receiving much the same public school education as the city boy, receives a training which fits him for various lines of work. Thus, with the many branches of industry calling for men it is harder for him to make up his mind than it is for the city boy. He sees the hard work on the farm, he hears of the short hours, regular pay and holidays in the city, and, if he gives the matter a thought he knows that the average farm does not yield as large returns for the investment, as does the city man's business. The country boy has the physical strength and skill neces-

sary to make a success of tilling the soil. From the time he is able to toddle around, he is in close touch with the life of the farm, and as soon as he is strong enough he uses pitchfork and hoe, saws wood, milks cows, and the thousand and one other jobs which gradually train the muscles and make the work seem like second nature. Naturally such boys are fitted for doing farm work, but their training also fits them physically and intellectually for professional duties.

There are specialized and general lines of farming, and whichever is followed experience is essential to success. When considering farming as an occupation, remember that the farm calls for a man who is a skilled laborer, and a mechanic who understands the many lines of machinery employed on the farm. He must be in sympathy with Nature, or, in other words, be a naturalist, and last but not least, he must be a business man. In "Farm Management," Prof. G. F. Warren says: "The kind of business ability needed is not so much that of the trader as of the executive, who can organize a farm into a successful business enterprise. The idle horse in the barn is a more frequent source of loss than is the bad bargain in buying a horse. More farmers fail because of poor farm management than because of poor production. This is to be expected since the principles of crop growth are much the same as they always were, while the proper organization of the farm changes with every new invention. More farmers fail because the size of farm or kind of farming does not keep men, horses and machinery properly

employed, than fail because of poor crops. The successful farmer must plan his work ahead of time; it is not enough that he have a plan for field work, he should always have a plan of what to do if it storms. He must foresee most things that are about to go wrong and prevent them from going wrong."

To be a skilled laborer and a mechanic without being a good manager, or vice versa, handicaps the man on the farm. If a start is made in time, however, it is possible for the average youth to become proficient in all. By failing to grasp the importance of farming and to realize the need for training along the lines mentioned, many remain average farmers. In farming, as in every other profession, there is room at the top and ample opportunity to use gray matter. All this requires training and study. A successful business man does not become such all at once. It comes by years of experience. Now the point is this, the sooner a boy decides on what line of work he purposes following, the greater the opportunity of becoming proficient in that particular work. The mind of youth is receptive, but the older we get the harder it is to grasp things and put them into effect.

Unconsciously the boy on the farm becomes trained in certain lines, but many fail to put forth an effort to become proficient in some of the essential things. Parents are oftentimes to blame for the boys being unfamiliar with business methods, as they take complete control of the management and finances instead of giving their sons a chance to learn. Consequently, when the boy

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starts for himself he is not prepared for those duties which must of necessity be performed. This leads to embarrassment, and, in many instances, financial loss which might have been avoided by a knowledge of business methods. The solution is to decide early in life on an occupation and then utilize available time in becoming proficient in every phase of that business.

If farming is decided upon, then commence now to master the job. Keep in touch with the different branches of farming and find out where improvements can be made in the crops grown, the class of stock kept, the disposition of the crops and stock, and in the arrangement of the work. If there are leaks, study how to stop them most effectively. Mismanagement, poor implements, loafing stock, and unsuitable crops might be mentioned as some of the sources of leakage, all of

which may be overcome. A farmer cannot get ahead very fast no matter how efficient one branch of the farm may be if there is a leak in another branch. Therefore, commence now on father's farm to search out the weak points in the business and prepare to avoid or repair them. It may take several years to lay your hand on the thief, but by adopting system and good management and being a close observer of things in connection with the business, it will be caught.

When comparing city and farm life don't forget to take into account the cost of living, including table supplies, fuel, rent or interest and taxes, clothes, etc. The city dweller pays the price the farmer gets for products, plus transportation, dealers' and retailers' commission. By that time it is only second-class stuff. Clothes and groceries cost about the same. Taxes on a

city house and lot are as much as on many two-hundred-acre farms. Rent for an ordinary house is as much as for a hundred-acre farm. Consequently the city man's income must be practically double that of the farmer in order to put them on an equal basis. The city has its advantages, but so has the country.

Everyone is fitted for a certain kind of work. To work at that which does not appeal is to court failure. In order to make the greatest success a man must love his work. If you do not take an interest in growing crops or in tending stock, and if all work about the farm is drudgery to you, it may be a mistake to choose farming as an occupation. You may have been predestined to fill some other niche in life. However, don't waste too much time in indecision. Make a choice and then aim and work for the top of that profession or business.

Automobiles, Farm Machinery and Farm Motors.

Battery and Magneto Queries.

1. Can a battery be charged with a magneto?
2. How large a battery would be necessary to run ten, ten-candle power lights?
3. How long will a four-candle power light burn with a battery of 18.75 amperes?

N. S.

Ans.—1. No, because magnetos generate alternating current, while it requires direct current for charging batteries.

2. Any size at all. This is the only answer possible to your question as stated because you do not give specifications. You do not say what voltage the lamps are to have, nor how long they are to be run without recharging the batteries nor whether they are carbon or tungsten lamps. It will not take any larger battery to run ten lamps than one, if the lamps are connected in parallel, as is the usual custom, but with ten lamps the battery will need recharging ten times as often as with one. One cell will run the ten lamps if they are 2 volt lamps. How long it will run them depends upon the size of the cell and the quantity of acid in it. If they are 8 volt lamps then they will require four cells, and if 32 volts 16 cells and so on, and the larger the cells are the longer a charge will last. Moreover with a tungsten lamp the battery will last about three times as long as with a carbon lamp of the same candle power, both being vacuum lamps. And with the tungsten bulb filled with nitrogen the batteries will last about twice as long as with vacuum tungsten lamps, or about six times as long as with the vacuum carbon lamps, the candle power remaining equal in all cases.

3. This question is no better than No. 2, because you do not give the kind of lamp nor the voltage of either the lamp or the battery. Let us suppose it is an automobile you are thinking of, then your battery will probably be composed of three cells, hence having a pressure of 6 volts. The lamp must therefore be a 6-volt lamp. Let us also suppose it is a vacuum tungsten lamp. A lamp of this construction requires about 1 1/9 watts per candle power. Hence for four c. p. the wattage would be 1 1/9 x 4 = 4 4/9 or 4.44 watts. Now a watt is the power given by 1 volt producing 1 ampere of current, and hence to determine the watts we have only to multiply the volts and amperes together. Conversely if we know the volts and watts we can determine the amperes by division. Hence for the lamp in question the amperes would be 4.44 ÷ 6 = .74 amperes or practically 3/4 of an ampere. Your question specifies

that the battery has 18.75 amperes, but for how long? To make this specification of any value we must introduce a time factor. I presume you mean 18.75 ampere hours. If so, this battery is capable of producing 18.75 amperes for a whole hour, or 1 ampere for 18 3/4 hours. Hence it could produce 3/4 amperes or run a 4 c. p. vacuum tungsten lamp for 18 3/4 hours x 4/3 = 25 hours.

W. H. D.

Handling The New Car.

Owners who took delivery of automobiles this year and who scorned our advice, regarding the initial handling of a power plant, are now in trouble. Doubtless they were told, not only through the columns of this paper, but in other ways, that a motor should not be driven at a greater speed than fifteen miles an hour for the first five hundred miles, but they pooh-poohed this sterling counsel and so they have been frequently running to garages for adjustments. Perhaps, too, they have ruined the ball races of the front wheels, because the hurried speeding up did not allow the lubricant to properly work in. There are going to be a great many other cars delivered this summer, and we will give you a final injunction. You should remember that the pistons in all automobiles are installed to a few thousandths of an inch. If you can get this idea imbedded in your brain you will understand why the rapid heating of a power plant is bound to cause trouble, and why it is essential in an automobile as in any other piece of machinery, to go slowly until the mechanism finds itself. You should be more particular about the tuning up process than about anything else in the handling of a machine.

Let us advise you again that cars which have remained for any length of time in storage or in transit, should have the spark plugs removed and about a teaspoonful of oil thrown over the top of the pistons. If an automobile has been idle for some time the oil naturally runs down from the walls of the cylinders. It should be replaced before the power plant is started, because without sufficient lubrication metals cannot come in contact with each other without creating considerable damage.

In not a few instances, we have heard of owners and drivers who speeded up new machines and who suddenly found that their motors lost power, became loggy and eventually seized up. There was only one reason for this—the unnecessary and very excessive speed to which

the engine was forced before complete lubrication and adjustment had taken place. The seizing up of a motor can be remedied, but one naturally loses confidence in the machine.

The warning we give you is all the more timely, because owing to embargoes and shortage of freight cars, a great many automobiles cannot be delivered by freight, as has been the custom. Conditions are such that owners have been asked by agents to drive their cars from the factory. It is this initial run that frequently starts all the minor troubles that occur in the first season's operation. We know of a great many instances where guests have been taken on these initial trips and where they have boasted of terrific speed upon their return journey. To urge a new motor along a country road at forty or fifty miles an hour is to damage your investment more than words can possibly tell. If you wish a company to stand by its guarantee you must realize that use and not abuse is covered by their warranty. The satisfaction that will come to you from having a well-cared-for car is going to be greater than any little fleeting pleasure you may get from attaining a high speed upon the first running of your machine. If lubricants are forced unnaturally into the working parts of any mechanism, they do not achieve the same results as if they were allowed to gradually work themselves to those points where they are most needed. Small adjustments and lots of them give a well-tuned-up motor, but drastic adjustments are sometimes disadvantageous. Learn by easy steps the individuality of your car and you will forever be pleased, but do not bring upon it severe strains that will make repair shop work necessary from the very outset.

It is not maligning manufacturers of automobiles, to state that most new cars develop a certain number of squeaks which must sooner or later be remedied. If you are driving easily, these strange noises can be located and immediately remedied with the use of oil, grease or felt, but if you are constantly running at a high speed, the different squeaks develop into one sound and cannot possibly be determined as to location.

Perhaps the greatest pleasure that comes from an automobile is to have a smooth motor upon a smooth chassis upon which in turn is a noiseless body. If you cure the squeaks at the outset, you are going to be forever free of them, unless unusual conditions develop. If, on the other hand, you allow them to go on, they are going to get to a stage where an expense must be incurred and great inconvenience endured in order that they may be removed. AUTO.

THE DAIRY.

Construction of Milk-Houses for Dairy Farm.

Milk and cream require to be kept in a clean, cool well-ventilated place where there is freedom from objectionable odors. Failure to keep the milk under such conditions frequently results in poor flavor of the product. A hot, oppressive atmosphere may cause souring

of milk which is held over night, thus resulting in a considerable loss. Sour milk cannot be retailed, it is useless for cheese-making purposes, and it is impossible to recover all the cream after the milk has once soured. Cream is ripened before it is churned, but there is a possibility of getting it too ripe. Some of the objectionable flavors in butter are due to improper ripening of the cream. Thus if the highest quality product is to be placed in the hands of the consumer, it is necessary to take precautions in the handling of milk and cream. Comparatively few dairymen have a separate building for their milk, cream and dairy utensils. The big out-

doors is the summer milk-house on the majority of farms, and a corner of the stable the winter milk-house on some farms. Such conditions prove fairly satisfactory where the products of the dairy are marketed every morning. The cool night air keeps the temperature of the milk low and the sun's rays during the day sweeten the utensils. Naturally the low temperature of winter prevents considerable loss, even when the milk is not kept under the most approved methods. However, there should be some means to protect milk and cream from dust and dirt. Where dairying is specialized in a convenient milk-house is an asset to



Fig. 1—A Concrete Milk-house.



Fig. 2—A Frame Milk-house Close to Barn.

the business. It need not be an elaborate structure so long as it has the essential features. The building should be located on the opposite side of the barn from the yard, preferably the north. The windows and doors should be screened and running water provided. While the milk-house should be a reasonable distance from the barn, it is possible to have it so far away that it loses part of its usefulness. Milk will become contaminated if left in the stable during milking. Where possible it is advisable to remove it to a clean room or building as soon as it is drawn. This is not always practicable, although where certified milk is being sold it is essential. Where it can be arranged to run the water for the stock through the cooling tank in the milk-house there is always a supply of cold water with the minimum of expense and effort. At the present time building material and labor are rather high. However, it does not take much material to construct a small milk-house and the work can very often be done by the dairyman himself.

Figure 1, shows a building that is 24 feet long, 18 feet wide and 8 feet high, with a gable roof. The walls are solid concrete, blocked off on the outside so that it has rather an attractive appearance. Only 13 feet of the building is used for keeping the milk; the remainder being a drive way so that loading can take place under cover. The milk-house proper and the driveway are separated by a tight partition. The interior of the building is arranged so as to give the greatest convenience. A table 6 feet long and 2½ feet wide is built along the north-east corner, to be used for washing cans, pails and other utensils. The top is of cement and is slightly sloped to permit water draining off readily. A concrete water tank is constructed on the south side. It is 6 feet long, 2½ feet wide and 2½ feet deep, and is sunk one foot below the floor surface. As this house is located between the well and the watering trough, the water passes through the tank in the milk-house and ensures a constant supply of cold water. In this way a low temperature is secured without the use of ice. The cold water and the circulation of fresh air are conducive to keeping milk and cream in good condition. On many farms a milk-house could be similarly located without any inconvenience, and it would go a long way towards making possible the marketing of high-quality dairy products.

Large windows are installed in this milk-house and are left open at night to allow the cool air to circulate through the building. The milk is usually marketed in the morning and the building is thrown open during the day, so as to give the sun's rays an opportunity to disinfect and sweeten it.

Lifting large cans of milk into a wagon is no light task. However, by use of a hoist and a track from the cooling tank to the wagon this heavy work is eliminated. Neither are hard to instal and it is a wonder more dairymen have not constructed some mechanical device to do the heavy lifting and so save their backs. In the structure herewith illustrated, the loading is all done under cover, but an over-head track may be built to run outside of the building. Not only about the milk-house but around the dairy barn there are several conveniences that might be installed to lighten the work. A track could be built to carry the milk from the stable to the milk-house at very little expense. In cheese-factory sections we have seen both over-head and ground tracks used for carrying the milk to the road, where it is collected by the milk drawer.

Figure 2, is a frame structure 18 by 12 by 8 feet in dimensions and gives ample room for handling the milk from a large herd. The building rests on a concrete foundation and the floor is of concrete. Two by four-inch studding was used in constructing the framework. The walls inside and out, together with the ceiling, were covered with tongued-and-grooved lumber. Metal roofing material was used and a window in each end of the gable gives a circulation of air which aids in keeping the building cool in hot weather. There are two doors and five windows which permit the sun striking every part, thus helping to keep the interior in a sweet, clean, sanitary condition. During the summer, screens are put on the windows and spring hinges are used on the doors so that there is little opportunity of the building becoming infested with flies. If milk is to be kept in the house during the day, the windows on the sunny side are shaded. The windows are left open at night and consequently there is usually a circulation of air, and milk keeps in a splendid condition.

The interior is arranged for convenience and efficiency. A cement cooling tank is built on one side and water is supplied from the main tank in the barn. The water drains away through a tile in the floor. This method is not so economical of water as the system previously described. Racks are built for cans, pails and other necessary dairy utensils. A milk cooler and cream separator have been installed so that when whole milk is not being sold it may be separated. The inside of the building is whitewashed occasionally so as to give a light, clean appearance. When this house was built, W. E. Phoenix, the owner, purposed putting up certified milk, but conditions have changed and with the scarcity of efficient help the idea has been abandoned for the present and milk is sold to the cheese factory.

This building was erected seven years ago and, counting material and labor, cost \$175. With the increased price of everything the cost would be greater to-day. However, a smaller milk-house would do on the average farm. The house illustrated is built within six feet of the barn. Many will object to the location, but as it is on the north side of the barn there is seldom any stable or barnyard odor noticeable. There is usually a draft between the buildings, even on calm days. During the winter the passage is covered to prevent snow blocking the way. With the house so

close, milk can be removed from the stable as soon as it is drawn. When it has to be carried one hundred or more feet, the average person will not take the time to travel that distance with each cow's milk. Consequently, the warm milk stands in the passage behind the cows until the entire herd is milked. If the stable is clean and well ventilated the milk may be little harmed, but if the air is stagnant, and hay is being fed or the stock bedded, the quality cannot help but be lowered.

On some dairy farms the milk-house and ice-house are together. This is a splendid arrangement when ice is used in cooling. Milk is readily kept when there is a liberal supply of ice and it would pay most dairymen to have ice for use during the heat of summer. The milk souring on two or three different nights during the summer would cause a loss which would have covered the expense of storing ice in the winter. Milk is too high in price to run the risk of it souring before it is marketed. It should always be remembered that factors which tend to spoil or deteriorate the quality of milk are practically inactive if the temperature is kept around fifty degrees. About this temperature is possible by using deep-well water for cooling purposes.

The creamery patron requires a special place for milk and cream even more so than does the cheese-factory patron. Unless he has a large herd the cream must be held several days. There are also more utensils brought into use when selling cream than when marketing whole milk at the factory, and it is desirable to have a satisfactory place where they may be kept clean when not in use. Separating milk in the open stable is not conducive to making first-grade cream. A convenient, well-kept milk-house is useful on every dairy farm, but when a separate building is not feasible a room should be closed off from the main stable by a tight partition. This place can be kept free from dust, and by the use of a couple of windows the air can be kept fairly pure. Improved quality of dairy products will come through increased care in handling the raw material.

Price of Cheese Fixed.

The uncertainty of the cheese market which has prevailed for the past few weeks has to a great extent been relieved by the announcement that the Imperial authorities have authorized the cheese commission in Canada to buy cheese at a fixed price of 21¼c. for finest grade, f. o. b., steamer, Montreal. This will permit of the factories receiving a little higher price than at this time last year. However, it is a considerable drop from the prevailing winter and early spring prices. Shortage of shipping facilities and the uncertainty of Old Country markets were largely responsible for Canadian commission men ceasing buying this past month. The inactivity of the market resulted in many cheese-factory curing rooms and storages becoming filled to capacity and this at the beginning of the big flow of milk and the season for hot weather, which causes considerable loss with cheese unless kept at a low temperature. Few factories are equipped to hold cheese, as the custom of recent years has been to ship almost as fast as the cheese was made. The fixed price while not as high as some dairymen would like, will clear the air and permit patrons and cheese makers to know where they are at. The British authorities have decided to commandeer all cheese arriving in Great Britain and the price is fixed so as to permit of retailing it at thirty-two cents per pound.

HORTICULTURE.

The Fruit Situation in British Columbia.

EDITOR "THE FARMER'S ADVOCATE":

Anything that will throw light on the coming fruit crop and the marketing of it is likely to be of interest to fruit growers. The Western growers are being watched closely, and the larger exporters are in turn receiving from these growers no unusual consideration.

Early in May the firm of Dennis, Kimball & Pope, of New York, had a representative in the West. He anticipated then a good crop and so reported, and along with that he also stated that he was convinced that the British embargo would be removed. He furthermore claimed that as large a market would be available in Europe in 1917 and 1918 as the past season. The car shortage he did not think was a cause for undue worry; neither should the shipping be a cause of concern, for in 1916, one way and another, there was a lot of fruit gotten on to Europe. At the time of his visit the Western season was some three weeks behind its usual schedule, but the canneries were then in the market offering contracts at \$45 and \$25 for peaches, free and cling stone, and this unusual high price is an indication of what will likely prevail in the West this year. This particular firm handled 1,200 cars and over in 1917; it was one of the members high up in the firm that made the survey for them.

The head of the Horticultural Department of Washington State College, Prof. Morris, thinks that the fruit growers on the Pacific coast have nothing to fear from low market, because there will be such a shortage of labor that the proper care of the growing fruit will be impossible, and the proportion that will be marketable will be much less than in former years. This, he thinks, will work in the interest of Western growers, because they will not have the shortage that the Middle West will feel in the labor situation where so many men have been drawn into munition manufacturing. He is con-

vinced that the high price of grains will cause a decrease in the attention of fruit growers who will go into the growing of grain to quite an extent, which will cause a sharpening of prices in the specialized fruit. He is more pessimistic on the vegetable situation for he fears a considerable over production of onions, cabbage and other perishable foods that will not have ample storage provided to meet the increase in these above the normal crops.

In the Canadian West there is not much stir as yet, still the canneries were sending their representatives down through the Okanagan lately to make contracts for apricots, and they offered \$25 a ton and were straight-way turned down. They then came back with an offer of \$55 for No. 1's, but did not receive a very great number of applications even at that figure. In tomatoes there has been a prevailing price of \$10 per ton, and this year indications point to \$15 being offered by the canneries. No one seems to have made any contract as yet in this, for the reason that last season the evaporators held the onion growers to their contracts of small prices even after the onion market went so high. This season none of the growers will sign a contract at all, and are simply holding off till they find out what is what in the way of production.

Lately a report has come up from Spokane that the Southern orchards have suffered quite a serious loss from late frosts that will mean something like \$5,000,000 to the growers, California losing extensively. In the Sacramento the frost has done the worst damage in 25 years. Estimates vary to from 40 to 50 per cent. of California apricots having been destroyed. Prunes in some sections are a total loss, and grapes have suffered very heavily. Before the frost, peach contracts in the frozen districts were being asked for at \$45 and upwards, and box prices were being looked for at 45 to 55 cents.

In the Okanagan Valley the season is later than usual by about three weeks but is coming on rapidly and so far (May 22) has escaped frost, and the growers are setting out tomatoes, peppers, etc. The peach, apricot and plum blossoms are set and blown off without any damage. Good winds have prevailed, and there is every indication of a good setting of the bloom and the promise of a tremendous crop of soft fruit, with a great shortage of labor to handle it. Mr. Winslow, Prov. Horticulturist, says that pruning has been very much neglected which would show that unless the thinning can be arranged for there will be much of the season's crop worthless, for such is the effect of the labor situation on the tree fruits here. In order to relieve the packing situation most of the Okanagan packers are now sending out their representatives to look into the working of apple-grading machines in order that the small staffs can pack even a greater number of apples this fall.

B. C.

WALTER M. WRIGHT.

POULTRY.

Poultry House Construction.

The housing of the farm flock is being given more consideration each year. Few farmers care to have the birds running in the stable, and the box stall, or corner of the shed, does not always meet the requirements of the birds nor prove conducive to egg production. There are many types of poultry houses which give apparent satisfaction. The open-front house gives good results and many prefer it to any other type. The shed-roof type of house, with the front of the pen about seven feet high, one-third of which is glass, one-third cotton and the remainder solid, is recommended by some poultrymen. Others prefer the gable-roof, which permits of having a straw loft. If contemplating building a poultry house this summer, bulletin No. 87 on "Poultry House Construction," written by F. C. Elford, Dominion Poultry Husbandman, contains much information regarding construction of different types of houses.

Poultry should be housed separately from the other farm stock. The pens need not be elaborate, but they should be constructed so that the birds may be kept reasonably comfortable during the entire year. The essentials of a poultry house are: dryness, freedom from draft, good ventilation, light, comfort, sanitation, convenience and low cost. It is not necessary that the house be particularly warm, but it should be constructed so that it will be dry and moisture will not adhere to the walls. Lack of ventilation and over-crowding are causes of dampness showing on the walls. If the air is dry there is little danger of the birds freezing, no matter how cold it becomes. The cotton front aids in giving the required ventilation without necessitating a draft. The pen should be located on land that is well drained so that no water will lie in the vicinity of the house. Light land or good loam is preferable to a heavy clay. If the location is a trifle low and there is danger of water getting into the pen, the foundation could be built twelve to eighteen inches above the ground level and filled with earth or gravel. Some put down a cement floor, but this while an advantage in keeping the pens clean is not an absolute necessity. The front of the house should face south or southeast and the windows be placed so as to allow a maximum amount of sunlight in the pen. Not only does sunlight make the house brighter, which will tend to encourage the birds to exercise freely, but it is the cheapest disinfectant. When constructing permanent buildings, it is advisable to look ahead and plan so that if need be the building may be enlarged and the yards extended. Locating the first pen in a cramped corner where there is little opportunity to expand may lead to considerable inconvenience and added expense in the future. When speaking of the points to be remembered when construct-

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ing a poultry house, the author of the bulletin points out that efficiency and cost are two important things to be considered. The question of appearance carries some weight, but usually it is possible to combine attractiveness, low cost and maximum efficiency. Wooden houses, as a rule, have given the best results. Lumber is drier than cement or stone. Nooks and corners should be avoided, as the poultry house is difficult enough to keep clean without having places of little use except to collect dust and serve as a breeding place for vermin. Aim at having as few furnishings as possible on the inside of the building. Regarding the height, it is only necessary to have the pen sufficiently high to allow the attendants to move around and to permit of sufficient ventilation. The shed-roof type is easily constructed and allows a fairly high space for installing the windows, with a low ceiling at the back where the roosts are placed. The gable-roof is favored by many. It has an attractive appearance and the attic can be used for straw, which will absorb moisture and keep the house dry. There are several modifications of both the shed and gable-roof style of houses illustrated in the bulletin. Plans and specifications of what is known as a "farmer's poultry house" are given. The pens are 16 by 32 feet in size, divided into two parts each 16 feet square. Illustrations showing the laying out of the foundation, erecting the framework and installing the

essential fixtures are found in the bulletin. The method of construction is so plain and easily followed that any handy man could erect the pen. The bill of material for both the shed-roof and straw-loft type is also included, so that the exact amount of material for the size of pens mentioned may be purchased and placed on the ground before commencing the structure. Methods of remodeling old pens, arrangement of yards and the building of poultry-house fixtures are also discussed and illustrated. Anyone contemplating building a poultry house or remodeling the old one will find much useful information in bulletin No. 87 of the Dominion Experimental Farms.

FARM BULLETIN.

Cut The Fetters.

EDITOR "THE FARMER'S ADVOCATE":

It gives me pleasure to once more renew my subscription to "The Farmer's Advocate." It is easily the best farm paper printed in Canada to-day. Through thick and thin it has been the farmers' champion. That the farmer to-day is being recognized, as never

before, is in no small degree due to the persevering efforts of the Advocate in showing that farming is the noblest of all professions.

To-day, with the world facing a food shortage, men in every walk of life bend the knee to the farmer. He is known to be the most essential factor in a nation's existence, and it is high time that every citizen woke up to this reality.

Knowing then that agriculture is the backbone of Canada, why does our government grant such protection to a few manufacturing concerns, thereby enriching the few while it hinders the many from producing more when more food may mean the life of an empire? I have in mind the duty that is placed on farm tractors. Many of these could be used to advantage in Canada this year, but farmers in many cases find the cost of a tractor, plus the duty, prohibitive. But why the duty? Well, merely to enrich a half dozen Canadian manufacturers, even though fields lie idle and our Empire faces food famine. Is this British fair play? And it is only one concrete example of many which so sadly need straightening out in Canada before the farmer can, unhampered, do more and more for his country. Let us petition our government to cut the fetters which bind our farmers.

Kent Co., Ont.

F. B. GOSNELL.

Romance and Reality in Ontario Good Roads Enterprise.

One of the biggest problems affecting agriculture, and in fact the country as a whole, is that of transportation and facilities for the same. While railroads operated by steam are extremely important and electric radials are growing in favor for certain localities not served by other railroads, the fundamental basis of all is a system of first-class public highways leading from market center to farm gate and from farm gate to market center, no matter where the farm is situated, or whether the produce is marketed at the gate, at the local railway station, or in the larger town or city. Good roads are essential to the proper development of a country and right here in Old Ontario we have the finest agricultural section on the North American Continent—a country which has been greatly improved by a considerable mileage of good roads and which is destined to become greater and more appreciated as the good-road system is extended, giving a suitable and satisfactory means of ingress and outlet everywhere, and every farm, shipping center, town and city will eventually benefit thereby. Ontario deserves and can support good roads which are a benefit rather than a burden wherever judiciously built and properly maintained.

Ontario has at the present time approximately 55,000 miles of roads. Just what proportion of this mileage is good road and what bad we are not in a position to say, but there are in the neighborhood of 5,000 miles of "County" roads in the Province, and these are considered reasonably good roads, in fact, they are excellent where it is possible to properly patrol and maintain them. The problem of good roads is one of maintenance.

An Extended Trip.

To get an idea of what is being done on some of these roads and to study their construction, maintenance and cost, a trip was made with Hon. F. G. Macdormid, Minister of Public Works and Public Highways, and W. A. McLean, deputy in charge of highway improvement in this Province, over some 300 miles mostly of county roads. A few facts gleaned may interest readers. The trip was from Toronto, up Yonge Street, past Newmarket, on to Holland Landing, thence to Bradford, on to Allandale, over to Cookstown to Alliston and Primrose, across to Orangeville, down to Caledon, thence to Guelph, from Guelph to Freelon, then west to Galt and up through Preston and on to Kitchener, from Kitchener through Baden, New Hamburg and Shakespeare, then south to Tavistock and Woodstock, and then east to Burford, Brantford, Hamilton and Toronto. It was practically all good road and we might say with the poet:

"O'er hill, dale and woodland with rapture we roamed." Contributing causes of our ecstasy were good roads, gorgeous landscape, green in blade and leaf, well-kept farmsteads and prospects of bounteous crops.

"A fresher green the swelling leaves display,
And glittering as they tremble cheer the day."

There was nothing wearying about our way and a glance at the map of the Province would reveal the fact that time and again the long way round was chosen as the pleasantest way home. After seeing the methods of construction, learning more of the cost of building and upkeep, observing more closely the real benefit of good roads, one sometimes wonders that the system is not extended more rapidly. And yet Ontario has done and is doing well. Ontario people are learning the value of good roads quickly and while new opinions are always suspected, the good-roads idea is fast permeating every county and township in the Province. As with all measures for the public weal, legislation favoring the construction of good roads cannot advance beyond the point where that tyrant of parliament and people, viz., Public Opinion, will support the idea and the work. It is first necessary to create and build up public opinion in favor of good roads and nothing succeeds in this regard like the roads themselves where economically constructed and judiciously maintained.

What Constitutes A County Road?

Under the Highway Improvement Act a county

council may by by-law assume a system of roads for construction and maintenance. On such roads the Provincial Government contributes 40 per cent. of the total cost of construction and pays this to the county annually at the close of the season's work. For every 60 cents raised by the county, the Provincial Government gives 40 cents. As a rule, counties coming into the system assume from 12 to 18 per cent. of the total road mileage in the county, and the average county in Ontario has 200 miles of county roads. Simcoe County, one of the pioneers in the system, has 500 miles. A superintendent is appointed by the county council and the Government pays 40 per cent. of his salary, which averages around \$1,500 per year. The standard type of road is graded 24 feet wide between ditches, with a stone or gravel center 10 feet wide. Under special conditions near centers where there is very heavy traffic, the metal portion may be 18 feet wide and special construction is advised under such conditions. The cost varies with conditions and material. Where the latter is readily available and a reasonable bottom already exists, \$2,500 to \$3,500 per mile is an ordinary expenditure. In other circumstances costs run up to \$4,000 to \$8,000 per mile. The point is that for the great bulk of roads now in the county good-roads system, or which would come under it, around \$2,500 to \$3,000 per mile would be the average cost of draining, grading, applying and rolling in broken stone. A tar macadam, necessary near large cities, would cost between \$6,000

All will agree with Mr. McLean that the only permanent thing about any road is the need for maintenance. It seems true that the greatest economy in the good-road work results from spending considerable money on a comparatively short distance, rather than doing a poor job on a greater mileage. Work well begun is half done. Maintenance is a serious problem where roads are not well built.

As more good roads are built, opposition on the grounds of cost and living remote from the roads built, gradually disappears. Wardens and councillors of several counties visited vouched for the growing feeling of confidence in the system. These roads are built in the main and primarily for the farmer. They are designed to give a good highway to market. A case in point is Wellington County, which originally had 170 miles of toll roads leading to large market centers and which now has in addition 170 miles of county roads leading to local marketing points, making 340 miles of county roads all told.

Maintenance Essential.

Repeating Mr. McLean's remark: "The only permanent thing about roads is the need for maintenance," we might dilate a little on this feature. First, the road should be well built, but even a perfect structure when completed cannot stand up under the heavy traffic which is ever causing wear and tear. Roads should be patrolled, and expert evidence of county superintendents and other officials recommends one man to each ten miles to look after repairs and keep the roads smooth. Our trip impressed us all with the importance of promptly repairing defects as they appear.

In every county officials emphasized the fact that while opposition to the good-roads system was strong at first, it is now being rapidly changed to support as the benefit becomes more evident daily. Some mentioned the fact that expenditure should not be too high, claiming that for the most part satisfactory roads could be built for \$2,500 to \$3,000 per mile rather than \$6,000 to \$7,000 per mile. The point is that roads should be built sufficiently strong to support the traffic which they are called upon to

bear, and in this connection it might be stated that the Government is making provision to pay 60 per cent. of the cost of building and maintenance on certain heavily travelled roads, which will be designated Provincial County Roads. Build well, then maintain.

To Meet After-the-War Conditions.

Hon. Mr. Macdormid pointed out the growing need for more good roads. After the war, conditions would be abnormal. The country would be passing through a trying time. Good roads would be more important than ever, and in his opinion a number of the returned soldiers might be employed in road construction and maintenance. This looks like a first-class idea and should meet with support. The need now is for men to do the work of construction and maintenance. These men will be available after the war.

Noticeable indeed was the difference in the farms on the good roads and on the few stretches of poorer highway traversed. Good roads add to the value of farms, some say 25 per cent., others 10 per cent. The latter figure may be more nearly correct, but pro-



Rolling in Broken Stone on a County Road.

and \$7,000 per mile. On the other hand, where gravel is plentiful and roads have already been well gravelled the improvement can often be made at from \$1,000 to \$2,000 per mile, and surfacing is sometimes accomplished at \$600 per mile. The annual cost is not burdensome; an annual rate of from one mill to one mill and a half on the dollar assessment will finance construction in most counties. This may be supplemented by a small debenture issue to meet cost of bridges and special work. Mr. McLean favors raising the necessary money about half by debentures and the rest pay as built. County roads release the statute labor otherwise due on them for other roads in the townships through which they pass. A steam roller is necessary and costs about \$2,800, the total machinery and plant costing the average county about \$20,000, 40 per cent. of which is paid by the Province. It generally requires ten or fifteen years to complete a county road system.

On some of the roads travelled over in the trip outlined, about \$100 per mile is required annually in maintenance. In other sections which have been built several years, too little, is being spent on maintenance.

gress in farming seems to be rapid where progress in road construction is going ahead.

An Idea for Townships.

There is nothing to hinder townships from having better roads. The Department of Public Highways recommends that each such municipality employ a competent salaried man permanently in charge of roads and bridges under the township council. This would make it possible to work out a system which is impossible with the changing control and ideas of councils which change yearly. A road superintendent in each township would be a great help, and where such is appointed the Department pays 25 per cent. of his salary.

Crops Looked Well.

On the extended trip which took in the Counties of York, Simcoe, Dufferin, Peel, Wellington, Wentworth, Waterloo, Oxford, Perth, Brant and Halton, crops were found to be progressing fine. Spring grain, though late, was sending up broad, dark-green blades and growing rapidly. Fall wheat in the northern parts was very promising, but patchy in the south. Hay is likely to be short but is thickening up in the bottom. Corn and roots are going in late but in well-prepared ground. The show for small fruit is fine but apple bloom is very scattered. On the whole, farmers have done well with their work. There were no signs of lack of effort. Farms on the whole appeared to be well looked after and revealed the fact that rural Canada is doing its utmost toward a large crop this year.

The Value of Roads.

Good roads are here. The country needs more of them. They are being built primarily for the farmer's use. The automobile is revolutionizing things. In the near future a large majority of farmers will drive cars. Good roads will soon increase. This year 55,000 motor licenses were granted in Ontario, and the revenue from same was \$700,000. The Department of Public Highways plans to spend money so collected on the roads. Business and pleasure demand good roads and the farmer's business and his family's pleasure are of first consideration. Soon the benefit of good roads will spread until no one can answer where any road leads to. Remember again that public opinion determines progress in road making, not the proximity of stone and gravel. If the people want good roads all that is necessary is for them to make their desires known. The roads will ever follow the demand. And let it be understood that good roads, county roads and township roads, are being built to benefit the farmer and rural districts. Good roads help everyone to get a proper appreciation of the grand country in which we in Ontario reside. For business and pleasure they are a necessity.

Quebec's Greatest Live Stock Exhibition.

The eighth annual Live Stock Exhibition held at Ormstown, Quebec, from June 6th to 8th, under the auspices of the Live Stock Breeders' Association of the District of Beauharnois, closed its gates for 1917 on one of the most successful shows ever held in Quebec. Light horses were the heaviest, 165 entries. Heavy horses including both the grades and the pure-breds, were 110 in number. Of the dairy cattle sections, Ayrshires were in the lead with 150 entries, Holsteins were only 15 below; Jerseys came out 55 strong, and the dairy grades ran around 75 head. The horses, both light and heavy, totaled 315, pigs 60, sheep 50, and poultry 200. There were no beef cattle shown.

Clydesdales.

The exhibitors of both the imported and Canadian-bred were: R. Ness & Sons, Howick; Steel Bros., Howick; W. Nussey, Howick Sta.; S. McGerrigle, Tatehurst; D. A. McCormick, Brysonville; W. Cullan, Brysonville; Kerr Bros., Howick; David Greig, Brysonville; Monette Bros., St. Thionthee; F. Beaulieu, Ormstown; R. T. Brownlee, Hemmingford; Arthur Mirro, Valleyfield; A. Hunter, Brysonville; W. J. McGerrigle, Tatehurst; A. Nussey, Brysonville; David Cavers, Ormstown; J. H. Nussey, St. Louis, and Taylor Bros., Ormstown (all of Quebec). Judge, Jno. Gardhouse, Weston, Ont.

IMPORTED CLASSES.—In the imported classes the aged stallions were the first to come before Judge Gardhouse. The other imported stallions, in fact, gave Mr. Gardhouse very little trouble; a situation most of the shows will be finding exists this summer owing to the falling off of importations. The aged stallions were, however, a worthy lot all down the line. Ness' Baron Stanley by Baron's Pride was left above Taylor Bros.' slightly smaller sire, Baron Stockwell, also by Baron's Pride. Baron Stanley later received the championship ribbon. Third went to Caver's Lanark Lad, a good kind of sire by Scotland's Splendor, and fourth to S. McGerrigle's Baron Archie.

The winners of the third ribbon for pure-bred teams in harness, Cynthia and Gypsy, won first and second for Steel Bros. in imported yield mares, and Ness' Tyholme Viola, third.

Ruby Jen, Ness' grand champion of this and many other shows, took the first from S. McGerrigle's Conore in the brood mares, with Steel Bros.' Dunure Ruby and Torr's Countess third and fourth. They were as strong a quality lot of mares as any show-ring has seen for some time, Ness' winner, Ruby Jen, along with Woodside Rosebud won the pure-bred teams, and S. McGerrigle came in between with the two Canadian-bred mares Conore and Maple Leaf.

CANADIAN-BRED CLASSES.—The home-bred Clydesdales furnished the real competition of the Clydesdale

show. There is probably no other district in Canada where the falling off in importations is felt so little as in these three counties that make up the district of Beauharnois. Three-year-old stallions went to A. A. Nussey with Dan Spencer; second to Brownlee with Oakhurst Sir Spencer; third to Mirro and fourth to Steel Bros.

S. McGerrigle came first in one-year stallions on a get of Orphan's Fashion, one of the most noted sires of the district; W. Nussey second on a Baron Silloth's Heir colt, and A. Steel third.

Yield mares, in a good class of seven, were headed by S. McGerrigle's good Fyvie Gold mare, Flossie Fyvie; Steel Bros.' Flora Craigie second, and McCormick's Floss third. S. McGerrigle was first again in brood mares with Maple Leaf, another Orphan Fashion get; A. Nussey second with Maud Spencer; McGerrigle third; and W. Nussey fourth.

Three-year-old mares were headed by Ness' Woodside, the Canadian-bred champion of the show, with J. H. Nussey's Baron Bell second; Ness' Queenie third, and A. Nussey's Rose Spencer fourth.

In one of the best classes of the show Ness & Son were first in a class of twelve yearling fillies, Steel Bros. second, Hunter third, and McCormick fourth.

Canadian-bred sires are seen every day that compare favorably with some of the best that have ever left Scotland. Baron Silloth's Heir, an old-time champion and third in the aged-stallion class, scored a triumph over all competitors when five of his get won this special which has become a feature of the show. Another section which always fills the ringside at Ormstown is the grade draft teams, which are always chiefly made up of well-bred Clydesdales. The entries dropped to six this year, but these fully made up for the falling off in numbers by quality throughout. The standing in these was: Kerr, McCormick, Cullan and Greig.

The aged stallions were headed by Spencer of the Briars by Sir Spencer and champion of the Canadian classes. He was exhibited by Ness & Son. Second was Viscount of the Briars, shown by Monette Bros. and third, Baron Silloth's Heir, shown by W. Nussey; and fourth Beaulieu.

Hackneys.—The Hackney show was made up pretty much of the exhibit of T. B. Macaulay, Mt. Victoria Stock Farm, Hudson Heights, Que. They included most of his well-known string of championship winners.

Cattle.

Holsteins.—Holsteins, in this particular part of the province of Quebec, have gained in popularity considerably since the inauguration of this event in 1910. The upwards of 100 entries mentioned were almost 70 head in excess of the number of animals exhibited at Ormstown's first show. In comparison with the record show of 1916, the numbers were not in excess, but the quality of the entire exhibit this year was quite equal to numerous shows in many of Canada's largest Holstein centers. Awards were made by Fred. Mallory, of Frankford, Ont., who also filled the position in 1916.

The exhibitors were: Donat Raymond, Vaudreuil; J. J. Alexander, St. Louis; Alex. Younie, Huntingdon; Thos. Moore, Ormstown; Angus McNaughton, Huntingdon; David Cavers, Ormstown; W. J. Scott, Tatehurst; J. Graham, Brysonville; Jas. Rutherford, Ormstown; Neil Sangster, Ormstown; H. H. Craig, Howick; J. Helm & Son, Huntingdon, and Archie McNeil, Ormstown.

The lion's share of the awards went to Raymonds' entries, which were an exceptionally creditable lot in all sections and all brought out in the best of finish. His aged bull, Pontiac Korndyke of Het Loo, which, by the way, is the sire of the new world's champion junior two-year-old, was an easy first over a class of seven. He afterwards annexed the championship ribbon. Younie's Prince Ormsby 2nd, a good type of sire, stood second; Alexander's King Segis Ruby Walker third, and Moore's Lyndenwood Gano fourth.

The two-year-old bulls were a fair lot, with McNaughton's Gano Favorit Brave Boy first, Sangster's Hillside Sam Bonerges second, Winter's entry third, and Caver's fourth.

Scott and Dixon each had a lone entry in the yearling bulls, and won in the order named. In senior calves Raymond's entries were first and second, and Graham's third. The winner was got by the senior champion winner, and later took the junior champion ribbon. Scott was first in junior yearlings and Alexander second, while the junior calves went Winter, Rutherford, Moore and McNeil.

The dry cows four years old and over were the first of the female classes. They were a good, even lot, with Sangster's Lena of Pleasant Valley at the top, Helm's Artis Queen second; Craig third, and Younie fourth.

In dry two year olds, Raymond was first and third with Raymondale Pietje and Raymondale De Kol, and Sangster second and fourth with Lady Rhoda and Wilma of Pleasant Valley. Raymond was again first in senior yearlings, Craig second, Alexander third, and Helm & Son fourth. The junior yearlings went first and second Raymond, third Craig, and Sangster fourth. Senior calf: 1 and 2, Raymond; 3, Alexander, and 4, Helm. Heifer calf: 1, Alexander; 2 and 3, Raymond, and 4, Craig.

Cows in milk four years old and over made up the strongest of the female classes. Raymond's Franey Belle Wayne, champion female of the show, won over the same breeder's Korndyke Queen De Kol 6th, and both are capable of winning in the strongest competition. The former is an exceptionally sweet type of show cow, while the latter, although not quite so smooth, has considerably more size, and was showing after having just completed a 35-lb. official 7-day butter record. Third place went to a good commercial cow exhibited by W. J. Scott, and fourth to Alexander's Dairy Bess De Kol.

Raymond came in first again for three-year cow in

milk, with De Kol Plus Segis Dixie; Winter was second with Princess Eva of Pindale, and Alexander third with Lady Betty Minto.

Raymondale Geisk took first for Raymond in the two-year-olds in milk; Sitjke Manor Beet second for Craig, with Helm third and Alexander fourth.

Graded herds went first, Raymond; second, Alexander. Junior herds, same placing. For the get of sire, Raymond was first, Sangster second, Helm third, and Craig fourth. Progeny of cow, Younie was first; Sangster second, and Raymond third.

Jerseys.—B. H. Bull & Son, Brampton, Ontario, and Ruiter Bros., Cowansville, from the home province, were left alone to make up the exhibit of the Island breed. Bull & Son, as usual, had a string of carefully selected types of the breed, but Ruiter Bros. furnished fair competition in most of the classes, and carried away first for aged bull, first on dry two-year heifers, and also first on junior herd, bred by exhibitor. The red ribbon in all of the other classes went to the Brampton herd, with Ruiter coming in every now and again for a second or third ribbon. The two-year-old bull, Brampton Radiator, received the championship ribbon for males, and the three-year dry cow, Brampton Maitland B, the ribbon for females.

Ayrshires.—With the exception of the herd of J. & C. C. Ballantyne, Chesterville, Ontario, Quebec made up the entire showing in Ayrshires. In fact, the Ormstown district which, of course, includes Howick, furnished all the other entries, making in all eight full herds, a showing that is not often surpassed at any of Canada's largest exhibitions. R. R. Ness, of Burnside, has just strengthened his herd by an importation that landed at the show direct from the quarantine, and among this lot Judge W. W. Ballantyne, of Stratford, found the champion of the show.

The full list of exhibitors were: Jno. W. Logan, Howick Sta.; Hector Gordon, Howick; Gilbert McMillan, White's Station; J. P. Cavers, Ormstown; D. T. Ness, Howick; P. D. McArthur, Howick; Peter Dixon, Ormstown; R. R. Ness, Howick; Geo. Hope, Allan's Corners, and J. & C. C. Ballantyne, from Ontario.

The aged bulls, six in number, were a good lot of sires, each doing good work in their respective herds, but could not be said to be an even enough lot to make the usual strong showing seen in other years. Glenhurst Mayor, a stylish bull shown in good form, won for McMillan, and R. R. Ness' Burnside Fanny's Sensier by Morton Mains Sensier came in second; Crothead Lord Colwill won third for Gordon, and Hillside Perfection fourth for D. T. Ness.

Hobsland Record Piece, a newly imported bull by Perfect Piece, won the red in the two-year bulls for R. R. Ness, and Sunnyside Masterpiece, a nicely turned son of Masterpiece went in second for Logan. Cavers came third with a get also of Masterpiece, and Hillhurst Eloquence took fourth for Dixon. In senior yearling bulls R. R. Ness took the first, D. T. Ness second, and Hope third.

Eleven youngsters came out in the junior yearlings, and each and every one looked the part of a coming herd sire. Three youngsters from the new importations with Auchenvay Sir Andrew, in whom Judge Ballantyne found the champion of the show, went to the top for R. R. Ness. McArthur got in fourth and McMillan fifth. A grand, good lot of calves were still further down the line.

Senior calf went to McMillan, R. R. Ness second, D. T. Ness third, and Logan fourth.

Cows in milk, four years old and over, brought sixteen entries into the ring, and when they were finally lined up, so evenly were they graded, that a number of ring-side spectators were heard speculating as to the end the ribbons were to be awarded from. R. R. Ness' Chapmanto Henny, a good-sized, imported cow of sweet Ayrshire type, was left at the top and later, in a closely contested battle, took the championship from Gordon's dry matron Lockfergus Cherry (imported) and champion of 1916 exhibit. In his class, next to Chapmanto Henny came Gordon's imported Hobsland Pansy, a good prospect for class competition had she not been quite so long in milk. D. T. Ness' Flora was third, and Balmangan Vera (imp.), a breezy little cow just too old for the three-year-old class, came in fourth for Ballantyne.

Lockfergus Catharine, imported, went second to Lockfergus Cherry in the mature dry class; R. R. Ness' Catalino Belle third, and Cavin's May Blossom and Ryanoak Genevieve fourth and fifth.

Caver's came in again at the top of the class for three-year-olds, with R. Pringle second, R. R. Ness third and D. T. Ness fourth.

Cavers and D. T. Ness, who won in the order named had the only two entries for two-year-old heifers in milk, but the dry two-year-olds were out in force, making up one of the best classes of the show. First went to R. R. Ness' Burnside Baroness 2nd; second to Stonehouse Meg, shown by Gordon; third to Violet, shown by Cavers; fourth to Sunnyside Snowflake, a Logan entry, and Gordon was fifth.

The standing in a good class of senior yearlings was Gordon, D. T. Ness, R. R. Ness, P. D. McArthur. In junior yearlings R. R. Ness received first, second and third, and was also first and second for senior calf, third and fourth in the latter went to D. T. Ness, and fifth to P. D. McArthur. McArthur came in again for first and fourth in junior calves, with Logan second and D. T. Ness third.

Junior herds were: First, R. R. Ness; second, D. T. Ness; third, Gordon; fourth, Cavers, and fifth, Logan. R. R. Ness won for the graded herd, with Gordon second and Cavers third. Get of sire, R. R. Ness, Gordon, D. T. Ness, Cavers and Logan. Produce of cow, Gordon, Cavers and R. R. Ness.

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Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending June 7

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	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	3,640	4,408	4,076	\$12.10	\$ 9.85	\$12.35	901	1,176	1,189	\$14.50	\$12.25	\$15.00
Montreal (Pt. St. Charles)	631	493	700	12.00	9.50	12.60	1,342	1,377	2,269	13.25	10.00	13.00
Montreal (East End)	677	456	1,011	12.00	9.50	12.50	1,772	1,386	1,973	13.25	10.00	13.00
Winnipeg	—	1,276	2,004	12.50	9.50	12.00	—	186	113	13.00	10.50	13.50
Calgary	—	1,009	1,051	—	8.25	9.75	—	25	—	—	8.00	9.25

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (Union Stock Yards)	6,557	7,801	6,930	\$16.50	\$10.85	\$17.00	367	778	452	\$16.00	\$13.50	\$16.00
Montreal (Pt. St. Charles)	1,303	1,055	1,673	16.50	11.50	18.00	326	561	201	*10.00	—	*10.00
Montreal (East End)	856	741	1,272	16.50	11.50	18.00	275	372	231	*10.00	—	*10.00
Winnipeg	—	6,230	6,213	15.15	10.20	15.85	—	35	12	—	—	—
Calgary	—	2,620	1,879	—	9.40	15.00	—	22	95	—	10.00	13.50

*Quotations per head.

Market Comments.

Toronto (Union Stock Yards).

Including the two hundred head of cattle left over from the previous week's market, only twenty-nine hundred head were offered for sale on Monday, but the demand was limited; consequently, trading was very slow and prices declined on all grades of butcher cattle. Heavy steers were most affected and prices dropped fully 50 cents per hundred, and in some cases were 75 cents per hundred lower than last week's figures. Loads of this class offered on Monday, remained unsold until Wednesday and Thursday, when drovers were forced to accept the lower prices. Various reasons were given for this decline, but no doubt the liberal shipments of heavy steers over the week end, direct from the distillery stables to the abattoirs, resulted in a temporary glut of the market, and was responsible to some extent for the decline. The cut on light butcher steers and heifers did not exceed 35 cents, while choice bulls and cows suffered only slight losses. The receipts during the remainder of the week were limited to nine hundred head, but prices did not recover any until Thursday when the undertone was a trifle better.

On Monday, an extra good, heavy steer sold for \$12.50 per hundred with a few baby beef being weighed up at the same price and others at \$12.00. The top price recorded during the week for a straight load was \$12.35 per hundred for choice steers of 1,300 pounds, with the bulk of this class selling from \$11.50 to \$12.00. Heavy butcher steers sold from \$11.25 to \$11.75 per hundred for the best lots, and light handy butcher steers and heifers for \$10.75 to \$11.50. Choice bulls held fairly steady with \$11.35 per hundred being the top price of an extra fine bull. Other sales were made as high as \$11.00, with the bulk selling from \$9.75 to \$10.75. Choice cows reached \$11.00 per hundred, but the bulk sold at \$10.65 and under. Trade in stockers and feeders was slow, and prices were easier in sympathy with other grades of cattle.

Calf receipts were lighter with a good demand prevailing, at prices about steady with those of the previous week. The best veal sold at \$13.00 to \$14.50 per hundred and a few lots at \$15.00, with common veal at \$10.00 to \$12.00.

Sheep and lambs were easier on Monday with \$14.50 to \$15.50 per hundred being paid for unclipped yearlings and \$11.50 to \$13.00 for clipped. Light sheep were \$3.00 to \$3.50 per hundred, and heavy sheep \$5.00 per hundred, below these figures. A few spring lambs were on sale and sold from \$8.00 to \$12.00 each.

Select hogs sold on Monday's market at last week's quotations of \$6.50 per hundred, fed and watered, but were 50 cents lower on Tuesday with selects selling at \$16.00 per hundred. All sales were made at this level during the week but the feeling is easier, following the lower quotations on Liverpool bacon.

Of the disposition of the live stock from the Union Stock Yards, for the week ending May 31st, Canadian packing houses purchased: 722 calves, 158 bulls, 187 steers, 2,956 butcher cattle, 7,996 hogs, and 325 sheep. Local butchers took 398 calves, 414 butcher cattle, 81 hogs, and 143 sheep. Shipments to

CLASSIFICATION	No.	TORONTO (Union Stock Yards)			MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price
STEERS heavy finished	232	\$12.00	\$11.50-\$12.25	\$12.25	2	\$12.50	\$12.50	\$12.50
STEERS good	711	11.64	11.25-11.90	12.10	73	11.00	10.75-11.25	12.00
STEERS 1,000-1,200 common	78	10.71	10.25-11.00	11.25	20	10.00	9.75-10.25	10.40
STEERS good	573	11.36	11.00-11.65	11.75	31	10.75	10.50-11.00	11.50
STEERS 700-1,000 common	229	10.08	9.75-10.40	10.75	100	9.78	9.50-10.00	10.20
HEIFERS good	489	11.48	11.10-11.75	12.00	30	10.75	10.50-11.00	11.50
HEIFERS fair	135	10.45	10.00-10.75	10.75	22	9.50	9.40-9.75	9.90
HEIFERS common	52	9.54	8.75-9.75	9.75	33	8.85	8.50-9.00	9.25
COWS good	261	10.00	9.50-10.75	11.00	23	10.00	9.75-10.25	10.50
COWS fair	388	8.13	7.50-8.50	9.25	138	8.46	7.50-9.25	9.25
BULLS good	85	10.25	9.75-10.60	11.25	8	10.50	10.00-11.25	11.25
BULLS common	40	8.82	8.25-9.50	10.25	41	8.61	6.25-9.75	9.75
CANNERS & CUTTERS	53	6.00	5.75-6.25	6.25	66	6.23	5.25-7.25	7.50
OXEN	—	—	—	—	6	8.75	8.75	8.75
CALVES	901	12.88	12.00-14.00	14.50	1,342	8.06	7.00-13.25	13.25
STOCKERS good	160	9.25	8.75-9.50	9.50	—	—	—	—
STOCKERS 450-800 fair	67	8.42	8.00-8.75	9.00	—	—	—	—
FEEDERS good	75	10.18	9.75-10.50	10.50	—	—	—	—
FEEDERS 800-1,100 fair	12	9.50	9.25-9.90	10.00	—	—	—	—
HOGS selects	5,983	16.16	16.00-16.50	16.50	1,045	16.37	16.15-16.50	16.50
HOGS heavies	51	16.21	16.00-16.50	16.50	45	15.96	15.75-16.25	16.25
HOGS lights	256	15.22	15.00-15.50	15.50	102	15.99	15.50-16.25	16.25
HOGS stags	12	11.13	11.00-11.50	11.50	3	11.75	11.75-12.00	12.00
HOGS sows	255	13.46	13.00-14.00	14.00	108	14.30	14.00-14.50	14.50
SHEEP heavy	21	9.79	8.50-10.50	11.00	57	10.95	10.50-11.50	11.50
SHEEP light	233	11.97	11.00-13.00	13.00	43	11.75	11.25-12.00	12.00
SHEEP common	68	7.08	6.50-8.00	8.00	128	10.23	9.50-10.50	10.50
LAMBS good	40	14.97	14.00-16.00	16.00	20	8.82	8.00-10.00	*10.00
LAMBS common	5	11.50	11.00-13.00	13.00	78	7.00	6.00-8.00	*8.00

*Quotations per head.

country points were: 33 stocker calves, 46 dairy cows, 205 stockers, 141 feeders, and 124 hogs. There were no shipments to the United States.

The total receipts at the Union Stock Yards from January 1st to May 31st inclusive, were: 94,966 cattle, 23,086 calves, 12,589 sheep, and 216,815 hogs, compared with: 104,823 cattle, 20,480 calves, 14,025 sheep, and 206,958 hogs received during the corresponding period of 1916.

Montreal.

Prices on practically all of the live stock took another drop during the week. This condition of the market has not been caused by heavy receipts, as the run of stock has been lighter than usual. The demand has been very limited all week as the packers seem to be fairly well supplied, and retail butchers complain that there has been a decided falling off in meat consumption. A couple of heavy steers sold on Monday at \$12.50 per hundred but very few butcher cattle brought \$12.00. Loads of good cattle sold mostly at from \$11.00 to \$11.75. Cows dropped in price about 50 cents per hundred and bulls declined in about the same degree. Calves held reasonably steady with a fairly good demand. Sheep and lambs are coming in more freely and prices are easier.

Hogs opened the week at \$16.50 to

\$16.75 per hundred for selects, but later dropped 25 cents per hundred. The market was decidedly weak at the close.

PT. ST. CHARLES.—Of the disposition of the live stock from the Pt. St. Charles' market for the week ending May 31st, Canadian packers and local butchers, together purchased, 1,848 calves, 62 canners and cutters, 75 bulls, 10 heavy steers, 635 butcher cattle, 1,673 hogs, 149 sheep and 52 lambs. Shipments to United States' points were 414. The total receipts at the Pt. St. Charles Yards from January 1st to May 31st inclusive, were: 15,266 cattle, 30,046 calves, 5,360 sheep, and 29,039 hogs, compared with: 16,517 cattle, 15,929 calves, 5,577 sheep, and 47,502 hogs, received during the corresponding period of 1916.

EAST END.—Of the sales of live stock at the East End Yards for the week ending May 31st, Canadian packers and local butchers purchased, 1,393 calves, 967 butcher cattle, 1,272 hogs, and 295 sheep; Canadian shipments were 44 cattle; shipments to the United States consisted of 580 calves and 36 sheep.

The total receipts at the East End Yards from January 1st to May 31st inclusive, were: 14,760 cattle, 24,016 calves, 5,480 sheep, and 18,846 hogs compared with: 12,748 cattle, 21,426

calves, 6,560 sheep and 25,048 hogs, received during the similar period of 1916.

Winnipeg.

The market for butcher cattle was steady on Friday at the previous week's close, but with heavy receipts totalling around one thousand head on Monday, prices on that day declined 25 to 50 cents per hundred for medium and common cattle. Choice steers were scarce and as a consequence held steady. The receipts of veal calves were also lighter and these had the same steadiness as choice steers. On Tuesday and Wednesday the market was weak, followed by a slower and lower market on Thursday. Twenty steers averaging 1,400 pounds sold at \$12.50 but these were of extra choice quality. At the close of the week, the majority of the butcher steers were selling at from \$9.50 to \$10.50 per hundred, with very few bringing above \$11.00. Sales of butcher heifers were light throughout the week, as were also the receipts. The best cows sold from \$8.00 to \$9.50 per hundred during the period, while bulls and oxen met with a good demand at the reduced prices. The receipts of stockers and feeders were heavy during the week and prices declined 50 cents per hundred on a slow demand. Dealers are looking for a lower market in sympathy with the weakness in the

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East. Lack of rain and consequently poor pasture is causing the liquidation of many unfinished cattle, the large number of which is noticeable among the receipts.

Hogs were weak on Friday, selects selling at \$15.15 per hundred. On Monday the greater part of the offerings sold at \$14.90 per hundred, but two loads brought \$15.15. On Tuesday and Wednesday the market was 25 cents lower, followed by a further decline amounting to 15 cents on Thursday, closing the week at \$14.50 per hundred for selects, \$14.00 for lights with other grades steady. Receipts during the week showed an increase of seven hundred over the week previous.

Of the disposition of the live stock from St. Boniface Yards for the week ending May 31st, Canadian packing houses purchased, 14 calves, 734 butcher cattle, and 5,329 hogs; local butchers took 6 calves, 403 butcher cattle, 227 hogs and 7 sheep. Canadian shipments were: 8 stocker calves, 183 stockers, 91 feeders, and 709 hogs. Shipments to United States points were made up of 116 butcher cattle, 8 stockers, 26 feeders, and 56 hogs.

The total receipts at the St. Boniface Yards from January 1st to May 31st inclusive, were: 40,891 cattle, 2,243 calves, 622 sheep, and 117,829 hogs, compared with 20,928 cattle, 2,982 calves, 1,070 sheep, and 151,062 hogs, received during the same period of 1916.

Buffalo.

Cattle prices were generally advanced at Buffalo last week, the result of the strong demand all round, shipping steers running from 15 to 25 cents higher than the week before, while the better classes of butchering cattle sold a full dime above the previous week. Some few scattering loads of Canadians were included, the weightier steers out of the Dominion being on the fair order only and selling from \$11.90 to \$12.15. A load of handy steers and heifers mixed brought \$11.65, considered a good price. Buyers take the Canadians to show a smaller killing percentage than the states cattle, for the reason that the Canadians are heavy fillers here, eating and drinking freely.

Best shipping steers the past week sold from \$13.25 to \$13.50, quite a string of shipping steers running from \$12.50 to \$13.00. Best handy steers sold up to \$12.70, with yearlings from \$12.00 to \$13.00. Bulls sold up to \$11.00, best fat cows up to \$11.00, one extra fancy one bringing the record price of \$11.50, with best heifers up to \$12.00 and better. Very few stockers and feeders are moving to market and this end of the trade is very quiet. Milk cows and springers are selling higher, top last week for springers being \$140.00. Sellers are expecting some record prices during this month, as the strictly prime dry-fed steers are getting scarce and are wanted. Offerings for the week totalled 3,700 head, as against 3,900 for the previous week and 4,575 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$12.75 to \$13.50; fair to good, \$12.25 to \$12.60; plain, \$11.00 to \$11.75; very coarse and common, \$10.25 to \$10.75; best heavy Canadians, \$12.00 to \$12.50; fair to good, \$11.25 to \$11.75; common and plain, \$10.00 to \$10.50.

Butchering Steers.—Choice heavy,

\$11.25 to \$12.00; fair to good \$10.00 to \$10.50; best handy, \$11.00 to \$11.75; fair to good, \$9.75 to \$11.00; light and common, \$9.25 to \$9.50; yearlings, prime, \$12.00 to \$12.75; fair to good, \$10.25 to \$11.00.

Cows and Heifers.—Best heavy heifers, \$11.00 to \$11.50; best butchering heifers, \$10.00 to \$10.50; fair butchering heifers, \$8.25 to \$9.75; light and common, \$7.50 to \$8.00; very fancy fat cows, \$10.25 to \$11.00; best heavy fat cows, \$9.50 to \$9.75; good butchering cows, \$8.50 to \$9.00; medium to fair, \$7.75 to \$8.25; cutters, \$6.75 to \$7.25; canners, \$6.00 to \$6.50.

Bulls.—Best heavy, \$10.25 to \$11.00; good butchering, \$9.50 to \$10.00.

Stockers and Feeders.—Best feeders, \$8.50 to \$9.25; common to fair, \$7.75 to \$8.25; best stockers, \$8.00 to \$8.75; common to good, \$6.00 to \$7.75.

Milchers and Springers.—Good to best, in small lots, \$90.00 to \$115.00; in car loads, \$75.00 to \$85.00.

Hogs.—Last week started with a steady to strong trade and while prices showed little change the next two days, Thursday and Friday values were on the decline. A \$16.55 top was made on the opening day but sales above \$16.40 were scarce and buyers got the bulk at \$16.35. Tuesday and Wednesday the trade, on the kind here, which were mostly yorkers and mixed grades, was about steady, Thursday a drop of ten to fifteen cents was noted from Wednesday and a further decline of five to ten cents was had on Friday, when top was \$16.40 and bulk sold at \$16.15, with other sales ranging on down to \$16.00. Pigs were steady all week, ranging from \$14.50 to \$14.75, roughs showed a spread of from \$14.00 to \$14.50 and stags went from \$13.00 down. For the past week receipts were 17,800 head, as against 22,394 head for the week before and 28,200 head for the same week a year ago.

Sheep and Lambs.—A heavy decline was noted in value last week. Only a few spring lambs were here and the best in this line brought from \$17.00 to \$18.00, with one small bunch on the opening day at \$19.00. Yearling lambs showed a \$15.50 top but only two loads sold during the entire week above \$15.00, buyers getting some at the latter figure on Friday that were as good as the ones that sold on the opening day at \$15.50. Cull yearling lambs ranged from \$12.00 down. Wether sheep the fore part of the week were quoted up to \$12.00, with ewes \$10.50 down and before the week was out wether sheep dropped to \$11.00 and ewes from \$10.00 down. Receipts last week totaled only 5,200 head, as against 10,056 head for the week previous and 6,400 head for the same week a year ago.

Calves.—Last week started with top veals selling at \$15.25 and \$15.50, Tuesday few sales were made above \$15.00, Wednesday's top was \$15.25, Thursday the market for best lots was \$15.00 and \$15.25, few \$15.50 and Friday the bulk sold at \$15.50 and \$15.75. Cull grades sold exceptionally high compared with the choice lots, best desirable throwouts bringing within \$1.00 per cwt., of the top quotations. Receipts last week were 4,000 head, as against 4,593 head for the week before and 3,525 head for the same week a year ago.

Toronto Produce.

Receipts of live stock Union Stock Yards, West Toronto, Monday, June 11, were 159 cars, 2,890 cattle, 146 calves, 1,447 hogs, and 71 sheep and lambs. Less than 800 cattle sold by noon. Butchers' cattle, cows, bulls and stockers and feeders, 50 cents lower. Milkers and springers, five to ten dollars lower. Sheep and lambs steady. Calves firm. Hogs not contracted for, \$15.50 fed and watered.

Breadstuffs.

Wheat.—Ontario, according to freights, No. 2 winter, per car lot, \$2.50 to \$2.55; No. 3 winter, per lot, \$2.48 to \$2.53. Manitoba wheat (track, bay ports)—No official quotations.

Oats.—Manitoba, (track, bay ports), no official quotations. Ontario oats, according to freights outside, no official quotations.

Peas, according to freights outside, No. 2, nominal.

Barley, according to freights outside, nominal.

Rye, according to freights outside, No. 2, \$2, nominal.

American corn (track, Toronto), No.

3 yellow, \$1.83, nominal, subject to embargo.

Flour.—Ontario, winter, \$11 to \$11.10, in bags, track, Toronto. Manitoba flour, first patents, in jute bags, \$13; second patents, \$12.50; strong bakers', \$12.10.

Hay and Millfeed.

Hay, extra No. 2, per ton \$13 to \$14; mixed, per ton, \$9 to \$11.50.

Straw.—Car lots, per ton, \$9.

Bran.—Per ton, \$35; shorts, \$41; middlings, per ton, \$45; feed flour, per bag, \$2.80 to \$2.90.

Hides and Skins.

City hides, flat, 22c.; country hides, cured, 22c.; country hides, part cured, 18c.; country hides, green, 17½c.; galf skins, 30c. to 35c.; kip skins, 25c. to 30c.; sheep skins, city, \$2.50 to \$4.50; sheep skins, country, \$2 to \$4; lamb skins, spring, per lb., 60c. to 90c. Horse hair, per lb., 42c.; horse hides, No. 1, \$7.50 to \$8.50; No. 2, \$6.50 to \$7.50. Wool, washed, 48c. to 52c.; wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 37c. to 40c. per lb. Tallow, No. 1 cake, per lb., 15c. to 17c.; tallow, solids, 13c. to 16c.

Country Produce.

Butter.—Butter at last declined on the wholesales during the past week, selling as follows: Creamery, fresh-made pound squares, 41c. to 42c. per lb.; creamery, solid, 38c. to 39c. per lb.; dairy, 34c. to 35c. per lb.; separator dairy, 37c. to 38c. per lb.

Eggs.—Eggs also became slightly lower priced, selling at 40c. to 42c. wholesale.

Beans.—The dried bean market is extremely high, prime whites now selling at \$8.75 per bushel, while hand-picked bring \$9.50 per bushel. Lima beans having advanced to 17c. and 18c. per lb.

Poultry.—Live-weight prices: spring chickens, 45c. per lb.; roosters, 16c. per lb.; fowl under 4 lbs., 18c.; fowl 4 to 5 lbs., 23c. per lb.; fowl 5 lbs. and over, 25c. per lb.; turkeys, 18c. per lb.; squabs, dressed, \$3.50 to \$4 per dozen.

Cheese.—Old, 30c. per lb.; new, 23c. to 24c. per lb.; new twins, 24c. per lb.

Honey.—Six-lb. tins selling at 12c. per lb.; glass jars, \$1 to \$2 per dozen; combs, \$2.50 to \$3 per dozen.

Wholesale Fruits and Vegetables.

Even the boxed varieties of apples have almost disappeared from the market; the few offered being quickly disposed of at \$3 to \$3.25 per case.

Bananas have kept firm, selling at \$2.25 to \$2.75 per bunch.

California cherries continued to come in in small lots, bringing \$3 to \$3.25 per case.

Grapefruit still came in in small quantities; Cuban selling at \$3 to \$4 per case, and Florida at \$5.50 to \$6 per case.

Lemons have been quite scarce, the new arrivals from California selling at \$3.50 per case.

Oranges.—The late Valencia began to arrive during the week, but were not as good color as they should be, selling at \$4 per case; Navels bringing \$3.50 to \$4 per case.

Pineapples kept firm, and were mostly from Cuba; selling at \$3.25 to \$4 per case.

Rhubarb was a very slow sale as the supply was greater than the demand. It declined to 20c. to 25c. per dozen bunches.

Strawberries arrived quite freely and were generally of good quality; selling at 16c. to 20c. per box.

Tomatoes.—The demand for tomatoes was quite heavy, and as there were very few of good quality offered the price firmed slightly. Home-grown, hot-house selling at 22½c. to 25c. per lb. for No. 1's, and 20c. per lb. for No. 2's; Florida outside grown bringing from \$3 to \$4.50 per six-basket crate.

Watermelons came in freely and are now selling at 50c. to 85c. each.

Asparagus after advancing in price the end of last week, came in in larger quantities this week and declined in price; the 11-qt. basket selling at \$1 to \$1.50, with some extra choice bringing \$1.75.

Beets continued to be scarce and remained stationary in price at \$2.25 per hamper.

Beans.—Green and wax declined slightly, selling at \$3 to \$3.25 and \$3.25 to \$3.50 per hamper respectively.

Cabbage is gradually becoming cheaper, and now sells at \$5 to \$5.25 per crate (100 lbs.).

Carrots continued about stationary in price at \$1.75 to \$2 and \$2.25 per hamper.

Leamington hot-house cucumbers have commanded very good prices this past week; \$2 to \$2.25 per 11-qt. basket for No. 1's, and \$1.25 to \$1.75 for No. 2's.

Lettuce arrived in increasing quantities

and was divided into four classes. Leaf selling at 20c. to 25c. per dozen; Canadian Head at 40c. to 60c. per dozen; Hamilton Head, 75c. to \$1 per dozen; Canadian Boston Head, at 75c. to \$1.25 per dozen.

Onions declined a little; the Texas Bermudas selling at \$2.40 to \$2.75 per crate (50 lbs.); Bermudas at \$2.50 per crate, and Australians at \$4.50 per 75-lb. bag.

Potatoes remained unchanged, selling as follows: N. B. Delawares at \$1.75 per bag; Ontarios, \$4.25 to \$4.50 per bag; Westerns at \$4 to \$4.25 per bag.

New potatoes have not been offered the past few days.

Radishes have been shipped in so heavily they have glutted the market and are almost unsalable even at 8c., 10c. and 12½c. per dozen bunches.

Spinach came in so freely it too declined and sold at 50c. to 75c. per bushel.

Montreal Produce.

Horses.—The market for horses was very dull and there was almost no enquiry last week. Prices were: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing from 1,400 to 1,500 each, \$150 to \$200 each; small horses \$100 to \$125 each; culls \$50 to \$55 and choice saddle and carriage horses \$200 to \$225 each.

Poultry.—Cold storage stock was quoted unchanged and in poor demand at 26c. to 30c. per lb. for turkeys; 19c. to 25c. for chickens; and 18c. to 23c. per lb. for fowl and geese.

Dressed Hogs.—Declines which have been taking place in live hogs recently, finally had their effect on the market for dressed hogs, and prices of the latter were reduced somewhat during last week. Demand was not particularly active and as a consequence sellers were unable to obtain more than 24c. per lb. for abattoir, fresh-killed stock, in a wholesale way, and prices ranged from this down to 23½c., according to quality.

Potatoes.—Prices of potatoes were about the highest of the season and it was very difficult to obtain supplies at all. In many of the restaurants potatoes were unobtainable, while in all they were served as extras. P. E. I. potatoes were quoted at \$4.50 per 80 lbs., Quebec whites at \$4.25 and reds at \$4.00 to \$4.10 ex-store.

Maple Syrup and Honey.—The market for honey was steady and the new crop is still some distance away. White clover comb was quoted at 16c. per lb., white extracted and brown comb sold around 13½c.; brown extracted 12½c. and buck-wheat honey 11c. per lb. Demand for maple syrup was fairly good. Choicest sold at \$2 per gallon of 13 lbs., while choice could be had at \$1.85 and lower grades down to \$1.50. Sugar was 15c. per lb.

Eggs.—Most of the retail stores advertised eggs at lower prices last week, although the actual quotation in a wholesale way was not much different from that of the previous week. Demand continued active and the price was 42c. to 43c.

Butter.—The market for creamery was slightly lower again last week and the quality offered was the finest of the season. The make showed some increase. Prices were 39c. for choicest to a fraction less, while fine was quoted at 37½c. to 38. Dairies ranged from 33c. to 36c., according to quality, with Manitoba dairy selling at 30c. to 31c.

Cheese.—The price on country boards was only the smallest fraction under 21c., and quotations here may be said to range around 21½c.

Grain.—The market for wheat was much the same as the previous week having fluctuated in the interval. Manitoba feed wheat was quoted in car lots at \$1.42½c., with barley at \$1.27 for Manitoba No. 3 tough, \$1.22 for No. 4 and \$1.20 for feed. Oats were steady at 79½c. for No. 2 Canadian Western; 77½c. for No. 3 and No. 1 extra feed; 75½c. for No. 1 feed and 74½c. for No. 2 feed, ex-store.

Flour.—Prices were steady at \$3.10 per barrel, in bags for Manitoba spring wheat first patents; \$12.60 for seconds and \$12.40 for strong bakers. Ontario 90 per cent. patents were easier, at \$13 to \$13.30 per barrel, in wood, and \$6.25 to \$6.40 per bag.

Millfeed.—Millfeed was about steady, save for a cut in the price of bran to as low as \$32 per ton. Shorts were \$44; Continued on page 989.

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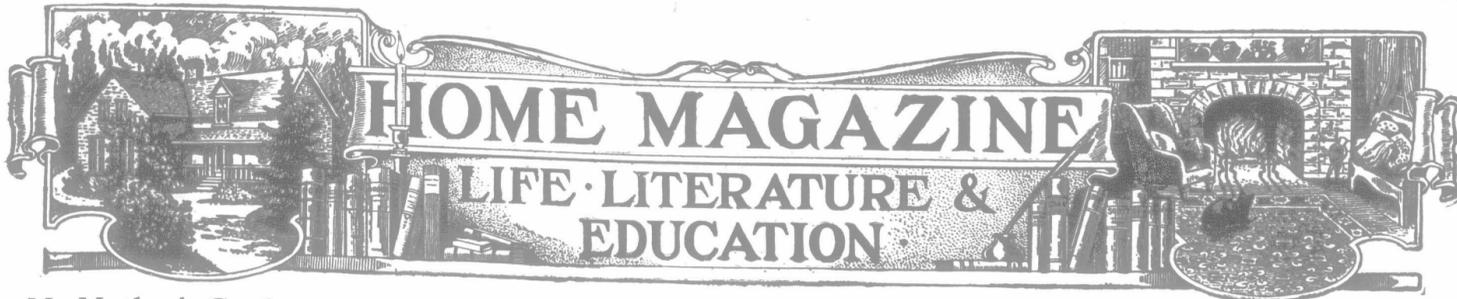
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My Mother's Garden.

Sweet alyssum, mignonette,
Phlox and lavender,
Baby pansies happy yet
With the thought of her;

White petunias, asters tall,
Hollyhocks a-row
Sunning by the garden wall,
Pinks and morning-glow;

Purple Canterbury bells
Stiff with pomp and pride,
Love-lies-bleeding, marigold,
Rose and morning-rose;

Fragrant honey-suckle vines
Flowering where they stand
Tendrils trembling as if still
Swaying from her hand;

Lovingly they look for her,
Wistfully they wait;
But the grass is overgrown
At the garden gate—
Mary Carolyn Davies, in "Craftsman."

Travel Notes.

Vevey, Switzerland, March 20, 1917.
Think of all the bells in Switzerland ringing at the same time!—ringing on the heights, ringing in the valleys; ringing in all the cities and towns and villages and hamlets, bells of Catholic and Protestant churches alike joining in one universal jubilation.
That is what happened last night. From eight o'clock till eight-fifteen the bells of all Switzerland were united in one grand paean in honor of *Nicolas de Flue*, a Swiss hermit who lived and died before Columbus set sail from Spain in search of the new world.

This *Nicolas de Flue* (Nicolaus of the Ravine) is the same *Bruder Claus*, the same St. Nicolaus (he was canonized after his death) whose pictures and statues confronted us at every turn when we were staying at Sackeln, just before the war broke out. But I didn't know so much about *Nicolas de Flue* then as I do now, for the newspapers have been devoting columns to his history for several days, and this, the 500th anniversary of his birth, is being made an event of national importance. Switzerland is grateful to *Nicolas* for having saved the country from disruption. At a critical period in Swiss history, when the cantons were on the verge of civil war, *Nicolas de Flue* acted as peacemaker, and by his wise counsel induced them to compromise their differences and unite for the common good and mutual defence. For this he has been called the "Apostle of Peace." For this, he is being honored to-day. And this man whose sage advice saved Switzerland was a peasant farmer who could neither read nor write. He lived his seventy years in sight of his birthplace—a little hamlet in the mountains near Lucerne.

During his youth he served as a soldier for his country, and reached the rank of Captain, but he abhorred the brutality of war. Here are some directions he gave to his soldiers:

"Pity the vanquished. Have consideration for the villages occupied. Divide your bread with the widows. Cover the orphan with your mantle. Do not steal a grain of wheat. Spare above all things the house of God, and God will give you the victory."

These are some commandments that certain belligerents called "Christians" have lamentably transgressed during the present war.

When *Nicolas de Flue* was thirty he married. When he was fifty he decided to abandon the world and live a life of solitude and prayer. So forthwith he assumed the garb of a monk, bade farewell to his wife and ten children, and retired to a deep, gloomy ravine in the neighborhood. There he built himself a rude hut

and remained for 20 years. According to the legend, his only food during this period was the sacramental bread and wine of which he partook once a month. After he had been there for some time the natives built a little chapel for him, which still stands and is much visited by pilgrims.

As the years went by his reputation for sanity and wisdom became so great that his advice was eagerly sought by the public men of the day, not only of his own country but also by those from powerful foreign cities, including Venice and Milan.

The log house in which he first saw the day still stands and is in an excellent state

There are 12,000 French and Belgian soldiers in Switzerland, most of them in this district. Many of them are too ill to work, but others have quite regained their health or, at least, to such an extent that they are eager to turn their enforced vacation to advantage.

When they first arrived here they were in a most pitiable state—weak, sick, crippled and half starved. The people went crazy over them, in fact, they adored to such an extreme, that a goodly number of the interns completely lost their heads. The change from starvation and bad treatment and German prisons to liberty and adulation and Switzerland was more than some of them could stand. They

Now, conditions are very different. The rules and regulations are much stricter than at first, and the men are obliged to work if they are well enough. Opportunities are given them to go on with their regular trades or professions or studies. But in countless cases this is impossible, owing to the injuries they have received. These unfortunates have to be re-educated so that when they get back to their native country they will be able to support themselves. For this reason, and also to provide work for the able-bodied, a number of *ateliers* have been opened in Vevey and in other places in this section. We have visited several of them to see what is being done. In Montreux there is a flourishing *atelier* under the supervision of Lieutenant Vouaux, a French intern whose marvellous wood-work display attracted so much attention in Geneva last year at the Exposition of the Soldiers' Work. He is the man who constructed the miniature houses and churches out of cigar boxes, during his confinement in a German fortress. He has about fifty men working under him at Montreux. Originally they made toys and reproductions of historical monuments and buildings, all of which were sent to France to be sold, as the work of the interned soldiers must not compete with Swiss industries. But toy-making has been abandoned now, and the *atelier* has been turned into a furniture factory. The furniture is destined for the invaded regions of France. An American lady donated a large sum of money to the work, and this is the reason of the change from toys to furniture. We saw the miniature models of the furniture and the drawings, all of which came from the United States.

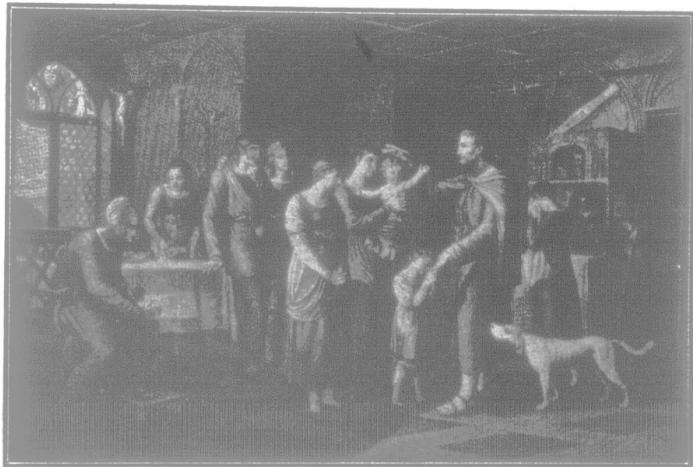
In Vevey there are several *ateliers*. We visited one of the largest the other day. It occupies two floors of one of the buildings of Peter's Chocolate Company. The firm generously donated the space. The rooms are large and bright and airy. On the upper floors they make toys and small articles of various kinds; on the lower floor, which is as noisy and dusty as a sawmill, they make wooden shoes. We saw the entire process from the Swiss log to the finished sole. Seemed to me there were enough shoes in that room to supply all the peasants in France.

The first thing we noticed when we went into this *atelier* was a gorgeous display of flags on the wall—the flags of France, Belgium, England, Switzerland and—the Stars and Stripes of the U. S.

"Why the Stars and Stripes?" we asked. The French Captain who was personally conducting us around the place, smiled engagingly (these French officers are certainly fascinating) and explained that an American lady was defraying all their expenses, and the American flag was there in recognition of her generosity.

This month two schools of commerce are to be opened here for the benefit of the internes. In all the centres of internment activities of various kinds are going on. At one of the centres in the high Alps the internes are constructing a road. A few miles from Vevey there is a colony of musicians where students can continue their studies under the best French and Belgian teachers. They have an orchestra of 65, all professionals. This orchestra is just about to make a tour of Switzerland, so we will have a chance of hearing it.

But the most ambitious plan yet broached for providing employment for the internes is the erection of a huge military hospital for tuberculosis. All the work in connection with it to be done by French and Belgian internes. This hospital is to be called *Le Sanatorium des Allies*. It will accommodate about a thousand patients, and cost two million dollars. The money will be furnished by the governments of the Allies, and by individual subscription. The hospital will be built on the slope of the mountain at



Nicolas de Flue Bidding Farewell to his Family.

of preservation. When we were in that district we made a little pilgrimage to see it. It looked just about the same as the other houses in that part. Architecture was just the same. It was hard to believe it had been built before America was discovered.

Among the numerous descendants of *Nicolas* are many names of local note and some of national importance. One of his present-day descendants is a superior court judge in the Canton of Oberwald, where *Nicolas* lived and died. Another direct descendant is a French war prisoner in Switzerland.

Nicolas was buried in the church at Sackeln, where his skull with the glaring glass eye is still an object of reverence, and exhibited on great occasions.

It was at Sackeln that the two days' festivities in his honor are taking place. The President, representatives from all the cantons and other high dignitaries are taking part. Also a detachment of Swiss soldiers. There are to be speeches, processions, music, services in the church, fireworks, cannons and bells.

Seems a pity *Nicolas* couldn't know about it!

got into all sorts of trouble as a result of idleness and freedom. They frequented the cafes, drank too much, and made themselves obnoxious to a good many people. There were numerous cases of insubordination. Some of them even tried to escape, and some really got across



Easter Sunday on the Lake Promenade.



Easter Sunday Parade.

How pompous he,
How submissive she,
How obedient the little three.

April 20, 1917.

The continuance of the war has caused endless complications and troublesome problems in Switzerland. One of the problems which is agitating a good many minds in this section is what to do with the interned prisoners of war who are well enough to work, who want to work, and who cannot get work to do.

This happens to be a Swiss soldier, but one is quite likely to see a "Tommy" or a "poulu" doing the same thing. It is one of the popular pastimes of the internes.

to France—a very easy thing to do from Vevey, all that is necessary is to hire a boat and row across the lake, a distance of six miles or so. But those who managed to get to France were promptly sent back by the French Government, so the craze died out.

Montana (near Leysin), said to be the sunniest spot in all Switzerland.

This plan, which is the idea of a group of French and Belgian officers at Montreux, has a great many advantages. It provides work for a large number of internes—masons, painters, carpenters, locksmiths, etc., and it does not interfere with the industries of the Swiss in any way. Switzerland, in fact, will benefit by it both now and later, as 40 beds are to be placed at the disposal of Swiss soldiers who have contracted tuberculosis while guarding the frontiers.

The *Sanatorium des Allies* is to be up-to-date in every particular, and also architecturally beautiful. There will be six large buildings and a number of smaller ones, all built on the slope of the mountain, and so arranged that each building gets the full sunlight and has an unobstructed view of the magnificent scenery.

One of the terrible effects of the war is the trail of tuberculosis it leaves behind it. This hospital will be open to the soldiers of the Allies and to the Swiss, but—no Germans need apply.

Among the Books.

The New Public Health.

BY H. W. HILL, M.B., M.D., D.P.H., DIRECTOR INSTITUTE OF PUBLIC HEALTH, LONDON, CAN., M.O.H. LONDON, D. A. D. M. S. I/c S., MIL. DIS. NO. 1.

Never before in the history of the world was "Public Health" a matter of so much moment, the fitness and well-being of the people who are still left, of so much importance not only to themselves but to the whole world.—"Who are still left"—yes, there is a burden of tragedy in that little phrase. There was a time when one heard frequently, in regard to a removal by death or incapacity, "There's always someone to take his place," but this can be said no longer. The Great War has changed all that. People for the various works of the world are actually becoming scarce, and so it is of vast importance that the health of those who are left be promoted and preserved.

In his book, "The New Public Health," (The Macmillan Co., Toronto—\$1.25), Dr. Hill has shown very clearly the steps that must be taken if disease is to be stamped out as effectively as it may be.

In the old days such public health officers as there were ramed against public filth. Dirty back-yards, etc., were blamed for epidemics, were even supposed to cause disease, and no account at all was taken of the fact that infection invaded the palaces as well as the slums.

Then, by and by, it dawned upon someone that additional precautions were necessary, and great stress was laid upon keeping up the general tone of the body. But it seemed a paradox that the very healthiest often became victims to infectious or contagious maladies.

Now the new Public Health movement, while advising cleanliness of back yards and homes for æsthetic and other reasons, and while also advising keeping up the health as necessary to personal well-being, puts the real emphasis in regard to epidemics of disease quite elsewhere. It points out that disease germs are very delicate organisms that cannot live long outside of the warm, fostering human body or some similar medium, and, therefore, it indicates as the most responsible agent the *infected person himself*. When a person has contracted a transmissible disease he becomes a source of danger to all within reach of him. He "gives" the disease to one or more others, who proceed to pass it on in the same way, and so the epidemic soon runs like a conflagration. All the excreta from his body become carrying agents—the particles ejected by coughing, spittle, the intestinal feces. Flies help on in the bad work by carrying germs on their feet; the water supply may become infected; the bacilli may be conveyed on the hands of careless or ignorant attendants or on dishes or linen used by the patient and unscientifically washed.

All this may go on, too, while everything has the appearance of being scrupulously clean. Indeed it seems one of the hardest things in the world to make people realize that the most dangerous germs are invisible to the naked eye, and that, therefore, it is necessary to be *scientifically*, not superficially, clean. In chapter IV Dr.

Hill, while evincing the greatest sympathy with over-worked mothers, points out that, in all too many cases, through this ignorance, they have been unwitting agents for the spread of disease.

For this reason he recognizes public education in regard to health as a great force, but he goes further. He recognizes that, while public health education may help greatly, it can never altogether stamp out disease. There are always people who are careless and people who will not hear. Therefore, as he well argues, every district should have its health experts, its trained epidemiologists whose business it is to act as detectives in tracing out disease and applying the agency of segregation as well as cure. The great routes by which diseases are carried—water, food, flies, milk and contact—must be assiduously watched and guarded. Evidently the public itself cannot do this; it has neither the time nor the skill. Therefore, the case seems clear that the only alternative is to place in each district competent men, armed with all necessary appliances, to safeguard public health.

In the long run such a procedure must pay a hundred times over. Perhaps it is

Trout streams coursed through every valley my boyhood knew. I crossed them, and was often lured and detained by them, on my way to and from school. We bathed in them during the long summer noons, and felt for the trout under their banks. A holiday was a holiday indeed that brought permission to go fishing over on Rose's Brook, or up Hardscrabble, or in Meeker's Hollow; all-day trips, from morning till night, through meadows and pastures and beechen woods wherever the shy, limpid stream led. What an appetite it developed! A hunger that was fierce and aboriginal, and that the wild strawberries we plucked as we crossed the hill teased rather than allayed.

In June, when my trout fever ran pretty high, and an auspicious day arrived, I would make a trip to a stream a couple of miles distant, that came out of a comparatively new settlement. It was a rapid mountain brook presenting many difficult problems to the young angler, but a very enticing stream for all that, with its two saw-mill dams, its pretty cascades, its high, shelving rocks sheltering the mossy nests of the phoebe bird, and its general wild and forbidding aspects.

the pasture oftener contains the shallow and monotonous places. In the small streams the cattle scare the fish, and soil their element and break down their retreats under the banks. Woodland alternates the best with meadow; the creek loves to burrow under the roots of a great tree, to scoop out a pool after leaping over the prostrate trunk of one, and to pause at the foot of a ledge of moss-covered rocks, with ice-cold water dripping down. How straight the current goes for the rock; note its corrugated, muscular appearance; it strikes and glances off, but accumulates, deepens with well-defined eddies above and to one side; on the edge of these the trout lurk and spring upon their prey.

The angler learns that it is generally some obstacle or hindrance that makes a deep place in the creek, as in a brave life, and his ideal brook is one that lies in deep, well-defined banks, yet makes many a shift from right to left, meets with many rebuffs and adventures, hurled back upon itself by rocks, waylaid by snags and trees, tripped up by precipices, but sooner or later reposing under meadow banks, deepening and eddying beneath bridges, or prosperous and strong in some level stretch of cultivated land with great elms shading it here and there.

But I early learned that from almost any stream in a trout country the true angler could take trout. Not only is the angler, like the poet, born and not made, as Walton says, but there is a deal of the poet in him, and he is to be judged no more harshly; he is the victim of his genius; those wild streams, how they haunt him; he will play truant to dull care, and flee to them; their waters impart somewhat of their own perpetual youth to him. My grandfather when he was eighty years old would take down his pole as eagerly as any boy, and step off with wonderful elasticity toward the beloved streams; it used to try my young legs a good deal to follow him, especially on the return trip. And no poet was ever more innocent of worldly success or ambition. He laid up treasures, but they were not in this world. In fact, though the kindest of husbands, I fear he was not what the country people call "a good provider" except in providing trout in their season. . . . He had the Walton requisite of loving quietness and contemplation, and was devout withal. Indeed, in many ways he was akin to those Galilee fishermen who were called to be fishers of men. How he read the Book and pored over it, even at times, I suspect, nodding over it, and laying it down only to take up his rod, over which, unless the trout were very dilatory and the journey very fatiguing, he never nodded.



"A holiday was a holiday indeed that brought permission to go fishing."

not too much to say that one of the changes of the not-far-away future will be that physicians will be valued as *pre-ventors* rather than *curers* of disease, and that the economics of the situation will be adjusted to permit of this, with satisfaction to the physicians themselves as well as to a grateful and happier public.

"Speckled Trout."

BY JOHN BURROUGHS.

[The following extract, "Speckled Trout," has been taken from "Locusts and Wild Honey," one of John Burroughs' delightful nature books, which should be in every farm library. It is a great pity that the clearing away of the woods along their banks is causing most of the trout streams of Canada to dry away. Even as watering-places for cattle these streams should be preserved. Systematic reforestation of the borders might do something to repair the damage.]

But a meadow brook was always a favorite. The trout like meadows; doubtless their food is more abundant there, and, usually, the good hiding-places are more numerous. As soon as you strike a meadow the character of the creek changes; it goes slower and lies deeper; it carries to enjoy the high, cool banks and to half hide beneath them; it loves the willows, or rather, the willows love it and shelter it from the sun; its spring-runs are kept cool by the overhanging grass, and the heavy turf that faces its open banks is not cut away by the sharp hoofs of the grazing cattle. Then there are the bobolinks and starlings and meadow larks, always interested spectators of the angler; there are also the marsh marigolds, the buttercups, or the spotted lilies, and the good angler is always an interested spectator of them. In fact, the patches of meadow land that lie in the angler's course are like the happy experiences in his own life, or like the fine passages in the poem he is reading;

Hope's Quiet Hour

The Blocked Way.

He placed at the east of the garden of Eden, cherubim, and a flaming sword which turned every way, to keep the way of the tree of life.—Gen. III: 24.

"God's fashion is another; day by day And year by year He tarrieth; little need The Lord should hasten; whom He loves the most

He seeks not oftenest, nor woos him long, But by denial quickens hid desire, And in forgetting best remembers him; Till that man's heart grows humble, and reaches out To the least glimmer of the feet of God."

Did you ever think wonderingly about that sternly guarded way which leads to the tree of life? The Lord God said that sinful man must be driven out of Eden, "lest he put forth his hand, and take also of the tree of life, and eat, and live forever." What a strange saying! Does not our Father want all His loved children to eat of the tree of life, and live forever? Why, then, does He Himself block the way with the terrible cherubim and sword of flame? Is this story in Genesis a contradiction to the rest of the Bible? Let us examine that great Book and see.

Last Sunday we were studying in my Bible Class, the parable of the Sower, as told in St. Mark's Gospel. One of the class drew attention to the strange saying of our Lord (IV: 11-13.) "Why did our Lord speak to the multitude in parables?" she asked. "Did He really

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I drew apostles a by their aside with explanatio vised her is always Truth"—myself. I the myste put it into

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mean—as He seemed to say—that He wanted them to hear, and not understand; least at any time they should be converted, and their sins should be forgiven them."

I drew her attention to the way the apostles acted when they were puzzled by their Master's parables. They went aside with him privately and asked for an explanation—and they got it. I advised her to take that course—as the way is always open to Him who is "The Truth"—and I took the same course myself. Light was instantly thrown on the mystery—but I hardly know how to put it into words.

One thing is plain—the strange text does not stand alone.

In St. Matt. VIII: 19, 20 we read of the Lover of men apparently trying to get away from those who were eager to follow Him. When He saw the multitudes He gave commandment to go away to the other side of the lake. Then a scribe offered to follow Him wherever He went. Instead of accepting this enthusiastic disciple, our Lord put difficulties in his way. Instead of a glad welcome into the ranks of the disciples, there was a chilling declaration of difficulties which blocked the way: "Jesus saith unto him, the foxes have holes, and the birds of the air have nests; but the Son of man hath not where to lay His head."

We are reminded of the way Joshua received—or repelled—the offered allegiance of Israel to Jehovah. The people eagerly declared that they intended to serve the Lord;— and Joshua sternly answered: "Ye cannot serve the Lord: for He is an holy God."

In these days we are living in a rush. We expect fruit and vegetables to be raised, in season and out of season. Let us remember that character cannot be made in a hurry. The good seed, which springs up before its time, soon withers away because it has no depth of root.

Billy Sunday may be delighted to announce to the world that a thousand souls "hit the trail" as the result of one of his meetings. Christ was content to spend His precious years in the careful culture of a few unlearned but seeking souls. "Many believed in His name, when they saw the miracles which He did. But Jesus did not commit Himself unto them, because He knew all men. He knew what was in man."

When Gideon was chosen to deliver his oppressed nation out of the hand of the Midianites, he had only to blow the trumpet and 32,000 men hurried to enlist in his army. Then the sifting process began. First the faint-hearted were sent home—22,000 volunteers gladly turned their backs on the mighty foe, as soon as they were given permission. Then the rash and over-confident were weeded out; and Gideon went forth, with only 300 men behind him, to face the huge army of Midian. And he came back victorious! One coward may start a panic which will infect a whole army; one foolhardy youth may do irreparable damage to the cause he intends to further. Gideon's 300 men probably were more valuable in the campaign than the 32,000 would have been. The Christian Church was able to go out on its tremendous mission—the winning of the world for Christ—because its first missionaries were trained apostles instead of being an emotional, fickle multitude. Probably many of the people who loudly shouted "Hosanna!" on Palm Sunday were just as loudly shouting "Crucify!" a few days later.

Now, why is the way to the tree of life made so difficult? Why is it very hard to be a real Christian? Why must the kingdom of heaven be violently taken by force? (S. Matt. XI: 12).

If we can get anything very easily we seldom prize it. The prodigal son did not value the peace and plenty of his father's house until he had been deprived of them. Even the treasure of his father's love was despised until he thought it was entirely forfeited.

A child who is so clever that he masters his lessons without trouble, is apt to forget those lessons just as easily. The man who "gets religion" without an effort may have no root in the depth of his nature, and so endure but for a time: afterward, when affliction, or persecution ariseth for Christ's sake, he may desert the cause as lightly as he joined it.

God takes time. He does not use hot-house methods to force the growth of the good seed in the hearts of His children. There is a saying that "the

longest way round is the shortest way home", and another bit of proverbial wisdom is "Hasten slowly." As an American mother said about her son—she was willing to have him enlist, but she did not want him (or any other soldier) to be "murdered" by being sent to the front without months of careful training. The eager recruits may fret at the long delay—but it is vitally necessary. So it was with the Israelites when they were marching to the Promised Land. God would not permit them to take the short road, lest their enemies might drive them back in terror to their old state of bondage in Egypt; but He led them about, through the way of the wilderness—a long and wearisome journey.

It is for the same reason that men, who very earnestly desire the lasting peace of the world, oppose with all their strength a hastily patched-up peace which would surely result in future disaster to the nations. Ezekiel declared God's indignation against the prophets who deceived the people, saying, "Peace!" when there was no peace. He says that one built up a wall, and others daubed it with "untempered mortar." This easily-built wall should fall in the first great storm, yes,—God Himself should break it down, because His people were (to their own ruin) putting their trust in it.—(Ezek. XIII.)

Men may drift easily along the broad way that leadeth to destruction; but the way of life is narrow and must be earnestly sought, as men dig for hid treasure. "Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you," is the encouraging message of Him who is "The Way and 'The True Vine'—'The Tree of Life.'"

The scribe who lightly offered his allegiance, was not rejected; but he was warned that those who set out to follow the Crucified must share His cross.

When great multitudes crowded after the Master, He turned and warned them that no one could be His disciple unless he were prepared to sacrifice all that was dearest to Him, if the cause demanded it.

A general in an earthly army demands that each soldier shall be ready to give up his nearest and dearest—yea, and his own life also—at any moment, and when the order is given, do brave and noble men hold back because of that?

God wants His soldiers to fight their way through all difficulties into the garden of Paradise, where they may eat of the Tree of life. Let us trust Him—for others as well as ourselves—when the difficulties in the way of Faith seem almost insurmountable.

When a soul is roused to real thirst after God a way will be forced through every difficulty. Until that time comes the pearl of great price cannot be safely trusted in the hands of a careless finder.

God loves your child far better than you do—therefore He does not hurry his development. Can you not trust His patient wisdom, and pray on, patiently and trustfully? Even if your own way into "the peace which passeth all understanding" seems blocked by apparently insurmountable difficulties, push forward bravely. When God places boulders in your path He does not want them to be stumbling-stones but stepping-stones. The sword of flame only bars out evil, for nothing that defileth may enter the Holy City; but the King's message to each aspiring soul is: "To him that overcometh will I give to eat of the tree of life, which is in the midst of the paradise of God."—Rev. II: 7. God takes time—with Him a thousand years are as one day.

"So I'll sit in the school of the patience of God"

And its time-laden lesson will learn,
For the centuries live in the bloom of the rose.

And the ages remember the fern.
The birds' marvel of grace, man's deep passion of prayer,

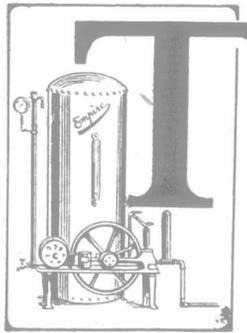
All the glory and strength of his life,
Have been fashioned and won in the sunshine and storm

Of God's aeons of testing and strife."
DORA FARNCOMB.

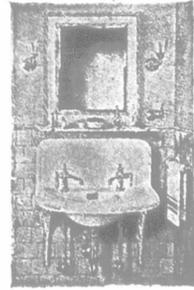
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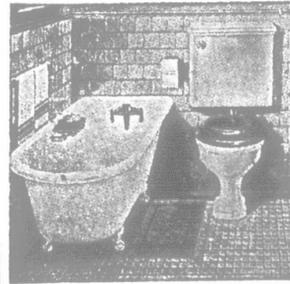
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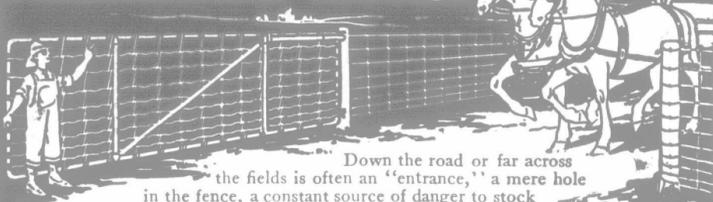
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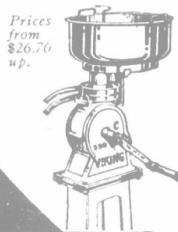
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VIKING CREAM SEPARATORS OF QUALITY (9)

woman who has been an invalid for four years.

Two dollars from Mr. W. A. B., also found their way into the Quiet Hour purse this week—and stayed there for a few hours. Many sick and discouraged people have good reason to thank their kindly friends among the Farmer's Advocate readers.

HOPE.

The Fashions.

How to Order Patterns.

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

See under illustrations for price of patterns shown in this week's issue.

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9414 Plain Blouse, 34 to 42 bust. Price 10 cts.



9424 Chemise Blouse, 34 to 44 bust. Price 15 cts.



9413 Girl's Coat Suit, 10 to 14 years. Price 15 cts.



9437 Girl's One-Piece Dress, 8 to 14 years. Price 15 cts.

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.]

Tanagers.

It would be interesting to know just why scarlet tanagers are so much more numerous this year than for many years past, whether it is because the laws concerning the killing of wild birds are beginning to take effect, or because Dame Fashion has decreed that bird bodies on hats are no longer in good taste, and public opinion has become so decided upon the matter that the woman who wears one is likely to be judged just a little cruel and lacking in fine feeling. Would that the same sentiment obtained in regard to "ospreys" and other things procured with not less cruelty.

I had not seen a tanager since my childhood,—the last time an event, for there were no less than six of them in a bit of woods, and the memory has clung down the years as so many glowing coals among the soft green leafage. But the other day (late in May) the vision was repeated: only one bird, this time, in scarlet and black, with his pretty greenish-yellow mate, but he was very friendly and hopped about without the slightest concern within a very few yards of us. He was very busy, apparently, about finding some dinner, and no doubt was much too hungry, after his long night journey, to waste any time in self-consciousness over his very handsome coat. We wondered very much how he was able to recognize his mate, and know that she was a tanager, too, in spite of the fact that she wore clothes so very different in color. And we did hope that he would condescend to sing a few notes for us. But he positively refused even to consider a song. On returning we looked in Neltje Blanchan's bird-book to find if anything were said about the bird's musical abilities, and this is what we found: "High in the tree-tops he perches, all unsuspected by the visitor passing through the woods below, until a burst of rich, sweet melody directs the opera-glasses suddenly upward. There we detect him carolling loud and cheerfully, like a robin." That only whetted our desire to hear him, but when we returned to the spot next day he was nowhere to be found, having gone on further, no doubt, in the night.

It was interesting to read on in the bird-book: "The gorgeous coloring of the scarlet tanager has been its snare and destruction. The densest evergreens could not altogether hide this blazing target from the sportsman's gun, too often fired at the instigation of city milliners. Thanks to cruel, silly women, this rarely beautiful tanager is now only an infrequent flash of beauty in our country roads. Instinct leads it to be chary of its charms; and whereas it used to be one of the commonest of bird neighbors, it is now shy and solitary. An ideal resort for it is a grove of oak or swamp maple near a stream or pond where it can bathe."

"Shy and solitary"—and yet this red-coat which we saw, with his green-gowned wife, were hopping about beside a city street; at the edge of the river, it is true, and yet within but a few yards of a busy sidewalk. Can it be that the tanager has

found out the fashion. During the people of ornithology many of him they School, st all males, modestly quite unne Evident tanagers. home I ho to protect the childr and keep Through o may hope again, bef tanagers, warblers a folk of bri sadly lack interesting add just ti of Nature out them. I should tell of any come to yo be very ir to-Help" Who will

Som

Dear Ju of robins b not far fr housekeepi son of the A day or and wind boy came on the g Tragedy I time in th beam in th under repa frame of h barn timb Here four week the birds and Friday heard a co which we l as we ha across the small swan and so did glancing ou to be a bl thought a house. Ne breakfast a big fuss a window r the robin's them away That day, my best to but before was left in each gable have no le

These bi robins whe the result t house, thou up" from t birds are st female carri the robin's our commo catbird, lon about as lat male is a g looks all bl decided dat cock blue duller and principal n ungreased a note very bird, but it tends body cream or y eye.

We woul are. Our them grac that they tainly are.

We hav birds, red etc., and a tanager.

This is wondered if people coul hastily thou Brant Co

found out that stuffed birds are no longer the fashion for hats?

During the week, so we heard, many people called up by telephone our London ornithologist, Mr. W. E. Saunders, whom many of you have heard lecture, to tell him they had seen tanagers, or to ask him what they were. One group of High School students had seen five in a flock, all males, red-coated—probably the more modestly gowned wives were near too, but quite unnoticed.

Evidently there has been a "run" of tanagers. If they have come near your home I hope you will do all in your power to protect and encourage them. Teach the children to love and respect bird-life, and keep an eye on the boys with guns. Through concerted action of this kind we may hope to have our groves peopled again, before many years, not only with tanagers, but with blue-birds, indigo warblers and all the other little feathered folk of brilliant hue "who" have been so sadly lacking of late years. They are interesting, and beautiful, and their songs add just the missing note to the harmony of Nature. We can't afford to do without them.

I should be much pleased to hear you tell of any other unusual birds that have come to your vicinity this year. It would be very interesting to us all. "Desire-to-Help" has anticipated the request. Who will be next? JUNIA.

Some More About Birds.

Dear Junia.—Early this spring a couple of robins built their nest in an apple tree not far from our kitchen door and set up housekeeping. Some days later the small son of the house reported—"four eggs." A day or so after one of our heavy rain and wind storms occurred and the small boy came in in great grief.—The nest was on the ground and the eggs broken. Tragedy No. 1. Again they built; this time in the niche made by a brace and beam in the frame of our house, which is under repair, and being an old-fashioned frame of heavy timbers braced much as barn timbers are, made a snug spot. Here four eggs were again laid, and last week the small boy reported four tiny birds and the parents busy feeding them.

Friday of last week about 7 p.m. I heard a commotion among the birds, of which we have a goodly number around, as we have lots of trees—an orchard across the entire front of our farm and a small swamp near the house. I was busy and so did not pay much attention, but glancing out saw on the lawn what I took to be a blackbird, and from the noise I thought a small flock had lighted on the house. Next morning, however, while at breakfast we heard the robins making a big fuss and the boy looking from the window reported the blackbirds at the robin's nest. I hurried out and drove them away, but one small bird was gone. That day, the children being away, I did my best to keep those birds at a distance, but before four o'clock not a small robin was left in the nest or two others, one in each gable among the vines, which as yet have no leaves. Tragedy No. 2.

These birds would even fly at the old robins when sitting in the trees near, with the result that not a robin comes near the house, though I hear them calling "cheer up" from the swamp near by. The blackbirds are still here, and to-day I saw the female carrying something up to one of the robin's nests. They are larger than our common blackbird, as trim as the catbird, longer than the robin and seemed about as large but with a longer tail. The male is a glossy black, and at a distance looks all black, but on nearer view has a decided dark blue head and neck, a peacock blue I would say. The female is duller and has slightly rusty wings. Their principal note is a noise like that of an ungreased wagon, although they also utter a note very much like our common blackbird, but in doing so with each note distends body and wings. They also have a cream or yellow rim or streak around the eye.

We would like to know just what they are. Our bird-book makes me think them grackles, but does not mention that they are cannibals, as these certainly are.

We have robins, wrens, orioles, catbirds, red wing birds, flickers, phoebes, etc., and a few days ago I saw a scarlet tanager.

This is rather a long letter, but we wondered if any of the Farmer's Advocate people could tell us what they were—hastily though.

Brant Co., Ont. DESIRE-TO-HELP.

Nordheimer's Used Piano Department

BETTER by far the superior musical qualities and sure durability of a reliable make used piano than the risk incurred in buying an inferior grade new piano.

The tone quality of the fine instrument cannot be imitated by a cheap one. Which, then, will you choose—one of the sure satisfaction list below or a cheap new piano—the very name of which would always indicate its real worth to all your friends?

The purchasing power of a dollar invested in one of these pianos goes as far as it did before the war. Music is a necessity in every home, and is always seasonable, therefore the purchase of a piano at the present time is even more than ever a sound investment.



Uprights

We vouch for the condition of every piano listed in this column.

Terms as low as ten dollars cash and six dollars a month.

NORDHEIMER—Studio Upright. A very attractive, small-sized, ebonized instrument; has been newly varnished in satin finish. Its chief characteristic, however, is its beautiful quality of tone and fine repeating action. This is a gem at..... **\$200**

NEW ENGLAND—Ebonized, satin finished, 3 panels and folding fall board. Full steel plate. Its tone is bright and powerful and has good appearance **\$185**

DOMINION—Cabinet Grand. A massively-designed upright in beautiful figured walnut. The upper panel is ornamented with dainty hand-carving. This instrument has been revarnished and polished, mirror finish. Bright in tone and light touch. A very handsome piano..... **\$225**

HEINTZMAN & CO.—Cabinet Grand Upright. Ebonized case, 3 plain panels; has been revarnished. Looks as fresh as a new instrument. Tone is mellow and good quality, with repeating action, all in first-class condition.... **\$225**

D. W. KARN & CO.—A very handsome upright in beautiful figured walnut. This instrument has been revarnished and polished, mirror finish; looks as fresh as new. One of the most expensive styles built by this manufacturer. Has been very little used. Very pleasing tone and light responsive action..... **\$225**

WEGMAN—Cabinet Grand. This is a high-grade instrument in all respects, by a reputable American maker. The case is beautiful figured walnut and serpentine gables. A very expensive design and an exceedingly handsome one. Clear singing tone and good timbre and fine action. This instrument would grace any room..... **\$225**

KRELL AUTO GRAND—Large size, modern design. Owing to this being a 65-note player we are offering it at very little above the value of the piano itself. Hand-some mahogany case..... **\$325**

NORDHEIMER—Apartment-size player in fumed oak. This is a "Human Touch" player of recent type, has been used for demonstrating purposes in Music Roll Dept. Has refinement and beauty of tone only found in Nordheimer instruments, and reproduces musical effects only noticeable in the "Human Touch" instruments..... **\$585**

Square Pianos

Good square pianos for practicing or for the summer home. Terms as low as \$10 cash and \$1 weekly.

PIRRSON & SON of New York—Rosewood case, carved legs, overstrung scale, bright tone **\$45**

JENNYS & CO.—Rosewood, carved legs. This instrument has a good tone and fine action.... **\$65**

HAINES—A very fine square piano. Good tone, fine action, carved legs, overstrung scale **\$85**

A STEINWAY—Rosewood, good solid tone, fine action. There are many people who have costly Steinways in city homes who would appreciate such an instrument as this for their summer home..... **\$115**

Player-Pianos

The Player-Piano has been claimed by many authorities as the most wonderful musical educator of the age.

AUTOTONE—Attractive mahogany case, 88-note player. This is one of the best known American player-pianos, manufactured by the Hardman Co. Has a very responsive action, in first-class playing order, and a very fine tone piano also..... **\$390**

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The above list represents only a few of the fine, used instruments now in our Toronto store.

More complete list will be sent you, if you will request it.

We realize that you would perhaps prefer to see the instruments before deciding. We, therefore, invite you to come to Toronto and make your selection right from our stock. But if that is impossible, let us have a man go to you. If you are interested, write us. We will send a representative who can describe more fully the character of each instrument in our "Used Piano" Department.

The war-like birds are cowbirds, against which relentless war should be waged. They are pirates and thieves of the bird-world.—You describe birds splendidly.

Not every one is so observant, or so particular to give details which may be helpful in identification.

So glad you saw a scarlet tanager, too.

Easter Lilies.

Dear Junia.—I have enjoyed reading "The Farmer's Advocate" and like so many others have come to the Ingle Nook

LISTER



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For full information as to terms, regulations and settlers' rates, write to:—

H. A. MACDONELL, Director of Colonization, Parliament Buildings, Toronto, Ont.
Hon. G. H. Ferguson, Minister of Lands, Forests and Mines

page for help. I have an Easter lily and would like if some one could tell me how to care for it after it stops blooming. Is the old bulb of any more use? If so, how and where should it be kept? There are small bulbs growing around the main plant. How are they to be cared for?
Wellington Co., Ont. A. T.

Bailey in his "Cyclopædia of Horticulture" says: "After flowering the bulbs are practically worthless (for house bloom). They may be planted in the border and may give a few flowers that season; and if well protected they may give some satisfaction for several seasons. If the bulbs are to be planted in the border, ripen them up in the pots by gradually withholding water. In rare cases they have been forced again the second winter, but the attempt is not to be advised except for experiment."

Substitute for Butter—Fruit Cake.

I am sending you a recipe for a substitute for butter; I have tried it and found it good. (See below) Also fruit cake without butter or eggs: Put into a saucepan cup brown sugar, one cup water, one-third cup lard or dripping, one cup raisins, some candied peel, ¼ grated nutmeg, 1 teaspoon cinnamon, ½ teaspoon cloves, pinch of salt. Boil together three minutes; let cool, then add one teaspoon soda dissolved in hot water, 2 cups flour in which 1 teaspoon baking powder has been sifted. Bake in moderate oven 1 hour. I always make my own candied peel. I wash the peel of oranges or lemons, run them through the food chopper, boil till tender in water, keeping covered with water till tender, then add enough white sugar that when it boils down it will be thick, and put it in jelly glasses. Nuts improve the cake, and, if you like figs they can also be run through food chopper and added and all boiled together. I am using oatmeal boiled in sweet milk; it does not take as much meal as when cooked in water. I put the meal in cold milk in a double boiler and cook 2 hours. I have also used cornmeal as a substitute for potatoes. When mush is cold I slice it and fry in dripping. From a reader of Ingle Nook.
Ethel, Ont. MARGARET CLOSE.

The recipe which our friend sends is called Mother's Club Butter:

One lb. beef fat (rendered) makes 2½ cups; ¾ cup sour cream, 1½ tablespoon salt, ¼ cup water, 20 drops butter coloring.

To Render the Fat.—Put it through the grinder or meat chopper. Then put over a slow heat, and let it slowly fry in its own fat till the cracklings are crisp and a light brown color. It takes two or three hours. Do not hurry it, or it may be scorched. When done remove from fire and put through strainer and a cheesecloth. This will keep for weeks.

Beat the cream a little to make it smooth. When the beef fat has cooled some, but before it begins to set, add the cream, salt and butter coloring, and beat it. An egg-beater may be used at first, but as soon as it begins to thicken use a spoon. After it has thickened some add the water, which should be slightly warmed. Beat till it is a light, thick, fluffy whipped cream. The secret is in the thorough beating while it is setting. Do not cool it to hurry it or it will be lumpy. Pour in a bowl to set.

If anything happens that it is lumpy set your bowl in a pan of hot water, and after the fat has dissolved; try again when cooled a little.

Butter coloring may be procured from a drug store, or you can make it yourself by grating a carrot and squeezing the juice out through cheesecloth. Beef fat is better than the suet theoretically, but sometimes has a strong beefy flavor.

This butter may be made in a bowl, or has been successfully made in an ice-cream freezer.

Care of Flour.

Now that people are getting in a big supply of flour in view of the probable advance in the now high price of it, it will be well to think of its care. When stored away in the attic or elsewhere in hundred-pound sacks it sometimes spoils before it is all used, and then the flour is blamed, when really it is not properly cared for. If each sack is stood on its end and frequently turned upside down so as to rest on the other end, it will keep longer.

When thinking of the hard work ahead of us this summer we should remember

that perspiring is excellent for the complexion and for the health, and that some people pay a dollar and a half for a good perspiration by means of the electric bath. Rather expensive isn't it? So while they are paying for their luxury we are being paid for ours. Perhaps we do not call it a luxury. Anyway it is something to be grateful for.

Woodstock.

EDITH B.

One might add that sacks of flour should never rest on the floor, but on a support, beneath which air may circulate freely.

The Cookery Column.

Canned Meat.—Sometimes it is very handy to have some fresh canned meat on hand, especially in those parts of the country rather remote from meat shops. The following method has been given by the Cornell Dept. of Agriculture: Sear the meat in a hot oven or in boiling water, then steam it or simmer it until it can be torn apart. Pack the meat tightly into sterilized jars, fill the space with stock, adding ½ teaspoon salt to each pint of meat. Sterilize the meat for 3 hours by boiling the jars on a rack in a boiler of water. Put on the rubbers and tops of jars, but do not screw down tightly until the boiling is completed. Always use good, new rubber rings. Keep the jars in a cool, dark place. Pepper and other seasoning may be added if liked. If necessary fill up the jars to overflowing from an extra jar, but do not add any water to the meat.

Compote of Rhubarb.—Wash, but do not peel, 5 lbs. rhubarb. Cut into small bits and let stand over night with 6 lbs. sugar. Put 4 lemons on to boil in a saucepan. When tender, cut open and remove the seeds, then chop fine. Also chop 1 lb. well-washed figs. Add the lemons and figs to the rhubarb and sugar, and cook. Be sure to do up some "plain" rhubarb to mix with other, more expensive fruits later in the season. If you pour on scalding water first, let cool, and pour off again, less sugar will be needed.

Strawberry Ice Cream (Nice for lawn parties).—Mix together 3 pints thin cream, 2 boxes strawberries, hulled and washed, which have stood in sugar 1 hour; 1¼ cups sugar, 2 cups milk, juice of 1 lemon. Strain carefully and freeze.

Strawberry Salad.—Arrange the heart leaves of lettuce, and arrange strawberries on top. Dust with powdered sugar and cover lightly with salad dressing. Arrange lemon eighthths around and serve with cold meat.

Meat Loaf.—Take 3 lbs. veal shank, 1 lb. sausage, 3 cups dry breadcrumbs, 1 cup sweet milk, salt and pepper, a pinch of sage. Boil the veal and chop fine. Mix with the other ingredients, form into a loaf and bake until brown. Serve hot or cold.

Graham Bread.—One cup flour, 2 cups Graham flour, ½ cup sugar, ½ teaspoon salt, 2 cups buttermilk, 1 rounded teaspoon soda. Sift the flour into a basin; add the Graham flour, sugar and salt. Stir the soda in the buttermilk until it foams, then pour among the dry ingredients. Beat well, pour into a greased pan about 7 x 9 inches or smaller, and bake 1 hour.

The Scrap Bag.

Saving Time.

Much time may be saved by keeping the dinner-table "set" with all the dishes, salt, pepper, etc., all the time, putting only the uncovered eatables away. As soon as the dishes and cutlery are washed put them in place again, and cover the whole table with a large cover, made of cheesecloth or factory cotton, to keep off the dust.

Cultivating the Garden.

Stir all the soil between the rows of plants, with a hoe, at least twice a week, cultivating as close as possible to the young vegetables without interfering with the roots. The cultivation need not be deep but should be persistent. If this is done very little watering will be necessary. Whenever it has to be done the soil should be stirred soon afterwards to make a dust mulch on top that will conserve the moisture.

Transplanting.

Make holes for the plants large enough so that the roots can be spread out easily, not cramped in a bunch. Pour in a little water, fill up with soil, and water again,

then drain soil should there should top, as th them may plant in t and, if nec a day or t

Cleanin

Now th here blank be cleaned ing blank feathers f rip the se foot and sewed in t openings old tick o so both t your hand tick towa minutes t tick.

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then draw a mulch of dust on top. The soil should reach up the stem a little, and there should not be too many leaves on top, as the excessive evaporation from them may wilt the plants. Always transplant in the evening, or on a rainy day, and, if necessary protect from the sun for a day or two.

Cleaning Feathers and Blankets.

Now that the warm, bright days are here blankets and feather pillows should be cleaned. Pearline is splendid for washing blankets. An easy way to change feathers from one tick to another is to rip the seam in the old tick for about a foot and leave the same size space unsewed in the new tick. Whip these two openings firmly together and hang the old tick on the clothes-line high enough so both ticks clear the ground. With your hands press downward on the old tick toward the opening and in a few minutes the feathers will all be in the new tick.

The Windrow

Miss Susanna Cocroft, health expert of Chicago, is starting a movement among the women of the country for Federal supervision of the health of the nation. The campaign with which she is identified was launched at the meeting of the National Conservation Congress.—Woman's Journal.

Recently a bill providing for the extension of the parliamentary franchise to 6,000,000 women was passed in the British House of Commons on its second reading by an astonishing majority of 329 to 40.

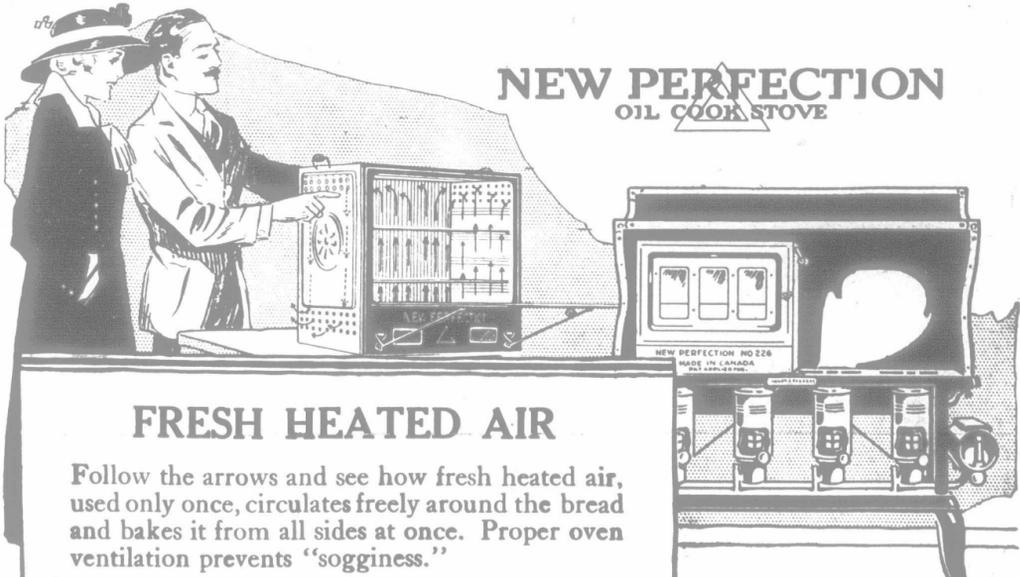
Aviator Lieutenant Fevre, flying over Saint Marie Aux Mines, in German Alsace, dropped a wreath and letter requesting the curate of the village to place the wreath on the tomb of his father, Colonel Fevre of the Two Hundred and Twenty-first Regiment of French infantry, who was killed in that locality during the French offensive of 1914. A German aviator, flying over the French lines, dropped the curate's answer, saying that the favor had been accomplished.

"The one constructive idea born out of the war's universal destruction is the proposal to establish at the close of the fighting a League of Nations, by which reason may be enthroned on earth, buttressed by every available sanction"—The Independent. This plan was first proposed at Independence Hall, Philadelphia, June 17, 1915, by a group of distinguished American citizens, headed by ex-President Taft. The other day in London, 1,200 Englishmen, headed by Lord Bryce endorsed the proposals made in Philadelphia and made some additions.

A Russian woman was graduated as architect from the Petrograd art academy this year. Before 1903, women were not admitted, and it is only this year that a woman architect has been graduated. The course is a difficult one and the examination strict. It was necessary to draw plans for a home for military invalids, housing 2,000 men and 300 officers, and a church with a capacity of 3,000 people. With twelve men, this one woman competed and succeeded.

Concluding a narrative (in the "Cornhill Magazine") of his escape from a prisoners' camp in Germany, Mr. Lewis R. Freeman makes some suggestive observations about the Belgian and Dutch frontiers. "Of how I got out of Belgium into Holland (he writes), and finally on to England, it would not do for me to write anything at all at this time, beyond saying that it was entirely due to aid that I had from the Belgians themselves. One of the most interesting chapters of the war will be the one—not to be published till all is over—telling how Belgian patriots in Belgium not only kept touch with each other during the German occupation, but also contrived to send news—and even go and come themselves—to the outer world. Even the 'electric fence' along the Holland boundary has no terrors for them, and I am giving away no secret when I say that there are more ways of getting safely under or over that fence than there are wires in it. It will probably do no harm for me to say that I crossed this barrier on a very

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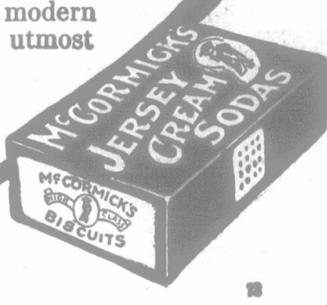
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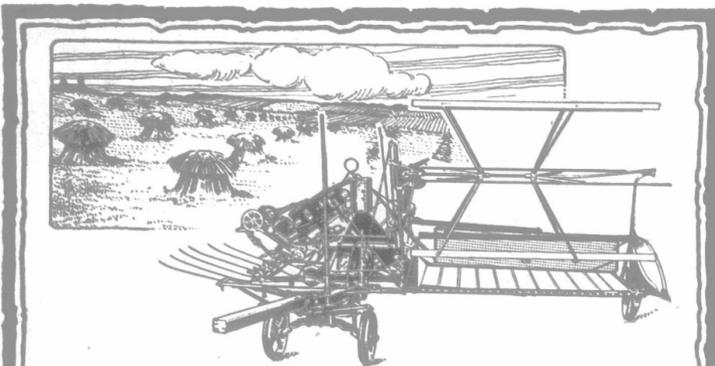
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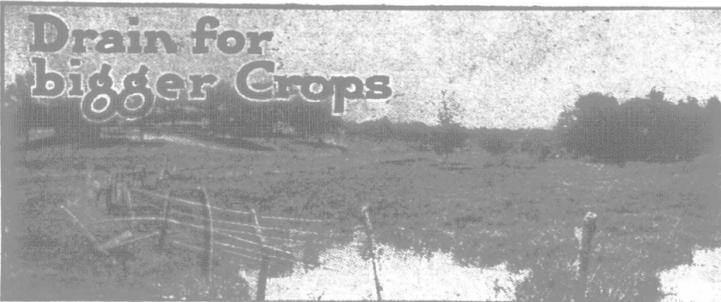
Buy good twine, and buy it now. This is no time to be thinking about saving a cent or two on twine, but to think of the dollars that good twine will save in the field. Our advice to every farmer is to buy at once the full amount he is going to need, and not alone to buy it, but to go to the dealer, get it, and take it home.

Deering binders now cost less in the amount of farm produce required to buy them than ever before. But prices of all manufactured goods are likely to go higher without much warning, while there is no chance at all for them to go lower this season. The safe thing to do, therefore, is to buy now, at present prices, for immediate delivery.

Your local dealer has done his share to insure the harvesting of your grain. See him as soon as you can and arrange for the repairs, twine, or new machines you are going to need this year.

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If you have a swampy land on your farm, drain it. As it is now, it just goes on costing you money. Every farmer knows that underdraining increases the value of the farm. Get more acreage planted—drain the spots you can't cultivate now, and grow bigger crops.

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Farmers Lose Money

and don't know it, by not keeping reliable records of their business. Not only would proper records show where losses occur, but also where better investments might be made along other lines. Every business concern keeps books so as to keep track of their financial conditions. What could be of more "business concern" than the operation of your farm this year? To meet the needs of the busy farmer we have a new system that is inexpensive and complete in every detail, but very simple to operate and requiring no special training. If interested, write for full particulars to

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"Eastlake" Metallic Shingles

Fire, Lightning, Rain and Storm Proof. Easily laid, and make a good-appearing permanent roof. A post card will bring you particulars.

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cleverly made little folding stairway, which, when not in use, was kept hidden under a square of sod but a few feet away from the fence itself. The genial old German sentry who spread it for me—he had, of course, been liberally bribed, and probably had some regular working arrangement with my Belgian friends—confided to me at parting that, when he had accumulated enough money to keep him comfortably the rest of his life in Holland, he intended to climb over that little stairway himself and never go back. I often wondered how many other Germans feel the same about leaving 'the sinking ship.' "

Current Events.

Nearly 10,000,000 United States citizens of military age registered on June 5th for service against the Germans.

The Japanese Government has warned Russia against making a separate peace.

Prohibition legislation in the United States has been approved by the Senate Finance Committee.

Gen. Brussiloff has been made Commander-in-Chief of the armies in Russia.

Eleven provinces in China are in revolt against the authority of the Government at Peking.

Commodore Tyrwhitt's squadron, in a running fight with six German destroyers, sank one and damaged another.

The Republic of Salvador was wrecked by an earthquake on June 8th.

Gen. Pershing, who will be the supreme command of American troops at the front, has arrived in England, with 57 officers of his staff. The party was received with full military honors, and the greatest enthusiasm.

Lord Northcliffe succeeds Hon. A. J. Balfour as head of the British war mission to the United States. Mr. Balfour has returned to his duties at the Foreign Office.

The great event of the week has been the victory of Gen. Haig's troops in Belgium on Thursday last, when they succeeded in taking the village of Oostaverne and also the fortified Messines Ridge, which the Germans have held for nearly 3 years, and which dominates a large stretch of country. During the fighting the famous Hill 60 was blown up by mines; also 20 German airplanes were winged; 6,400 prisoners were taken by the British. The result of this great battle will be to relieve the pressure on Ypres. . . . During the week the Canadians again took the power station near Lens, which they won and lost on July 3rd. . . . At present the French are under heavy artillery bombardment southeast of St. Quentin, and are expecting a heavy offensive in that region.

The Dollar Chain

Contributions to the Dollar Chain from June 1st to June 8th.

A Friend, Langton, Ont., \$2.00; J. Milroy, Branchton, Ont., \$1.75; A Subscriber, Granton, Ont., \$1.00; Spencer Merritt, Grassie, Ont., \$2.00; A Sympathizer, \$3.00; "P.", \$5.00

For Byron Hospital for Tubercular Soldiers—A Friend, Langton, \$1.00; Readers at Sunnyside, Tyrconnell, Ont., \$1.00; J. Milroy, Branchton, \$1.75; Norman McCully, R. 2, St. Mary's, Ont., \$1.00; E. A. Smith, St. Thomas, 50 cents; K. McNaughton, Varna, Ont., \$1.00; P. A. Macdonald, Stratford, Ont., \$1.00; May Young, Thamesford, Ont., \$1.00; Mrs. Cooper, London, Ont., \$1.00; Lilian Parry and Jean McKay, Embro, 50 cents; H. J. Kuhn, Crediton E., Ont., \$3.50. Donations of 25 cents each were sent according to our appeal for this fund, by: "A Sympathizer", "Name Not Given", Miss Fisher, Mrs. W. Down, R. 1, Hilton; C. H. K., Dunnville, Ont. The total for Byron Hospital is now \$462.10, leaving \$37.90 still to be gathered.

Total amount previously acknowledged.....\$4,644.40
 Total to June 8th.....\$4,673.65
 Kindly address contributions to The

Farmer's Advocate and Home Magazine, London, Ont.

Points to Consider When Purchasing a Railway Ticket.

A Canadian Pacific Railway ticket does not represent merely a means of transportation between given points. It, in addition, provides the traveller with every comfort and convenience developed by modern railway science. "Safety First," with up-to-date equipment, unexcelled dining service, palatial sleeping cars, in a word, everything that a railway can provide for the comfortable transportation of its passengers, including courtesy.

A Chance for Those Going West.

Homeseekers' Excursions to Western Canada at low fares via Canadian Pacific each Tuesday until October 30th, inclusive. Particulars from any Canadian Pacific Agent, or W. B. Howard, District Passenger Agent, Toronto, Ont.—Advt.

Great Lakes Steamship Service.

The Canadian Pacific Railway will, commencing Friday, June 2nd, operate Great Lakes Steamship Express trains between Toronto and Port McNicoll on the following schedule, with first-class coach and parlor car running through without local stops.

Northbound

Leave Toronto 2.00 p.m., arrive Port McNicoll 5.15 p.m. each Wednesday and Saturday, connecting with the palatial C. P. R. Great Lake Steamships leaving Port McNicoll on above days at 5.45 p.m. for Sault Ste. Marie, Port Arthur and Fort William.

Southbound

Leave Port McNicoll Mondays and Fridays, 8.30 a.m., arriving Toronto 11.45 a.m.

Great Lakes Service via Owen Sound is now in operation. Steamship "Manitoba" leaving Owen Sound at midnight each Thursday for Sault Ste. Marie, Port Arthur and Fort William. Full particulars from any C. P. R. Agent, or W. B. Howard, District Passenger Agent, Toronto, Ont.—Advt.

Attractive Dining Car Service.

Probably nothing helps more to make a railway journey really enjoyable than a visit to the "Dining Car," especially if it be a Canadian Pacific Dining Car, where the passenger is assured of the highest form of efficiency in the culinary art, the choicest provisions that the market affords prepared on the scientific principle known as "Dietetic Blending."

Your favorite dish, as you like it, may be enjoyed at reasonable cost, amidst ideal surroundings, while travelling on the Canadian Pacific.

Your Chance—The West is Calling.

Homeseekers' Excursions to Western Canada at low fares via Canadian Pacific each Tuesday until October 30th, inclusive. Particulars from any Canadian Pacific Agent, or W. B. Howard, District Passenger Agent, Toronto, Ont.—Advt.

Smiles.

Wife.—"You know, Henry, I speak as I think."
 Husband.—"Yes, my love; only oftener."—Topeka Journal.

A Costly Example.—A school teacher received the following note: "Dear Madam—Please excuse my Tommy to-day. He won't come to skule, because he is acting as timekeeper for his father, and it is your fault. U gave him a ixample if a field is six miles around how long will it take a man walking 3 1/2 miles an hour to walk 2 1/4 times around it. Tommy ain't a man so we had to send his father. They went early this morning, and father will walk around the field and Tommy will time him, but pleas don't give my boy such ixamples agin, because my husband must go to work every day to support his family."

Last summer, says Tit-Bits, during a particularly nasty dust-storm at one of the camps, a recruit ventured to seek shelter in the sacred precincts of the cook's domain. After a time he broke an awkward silence by saying to the cook: "If you put the lid on that camp kettle you would not get so much of the dust in your soup."

The irate cook glared at the intruder, and then broke out: "See here, me lad, your business is to serve your country." "Yes," interrupted the recruit, "but not to eat it."

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 White Leghorns...
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Unusually Attractive Auction of HOLSTEINS

AT OAKVILLE

Wednesday, June 20th

This will be the most important Holstein sale of 1917. It is supplied by five of Ontario's foremost breeders, whose consignments are made, not because they wanted to sell these high-class animals, the demand being greater than their capacity to supply, but because each felt that a high-quality sale would prove of incalculable benefit to the breed and its breeders. The sale will be an educator, affording opportunity for comparison and exchange of views, and in teaching the value of merit to new breeders and beginners, embracing as it does

40 Strictly High-Class Animals

The quality is vouched for by the Consignors; Messrs. Gordon S. Gooderham of Oakville; R. M. Holtby, Port Perry; Anthony Gier, Waterloo; Major Osler, Bronte; and J. Alex. Wallace, Simcoe.

Among the four males to be sold is a 2-year-old son of King Segis Pontiac Koningen, the \$35,000 sire from Mr. Wallace's herd. Many of the cows will freshen near sale date, these being bred to famous herd sires.

Catalogues ready shortly. Send for one to-day. Study the merit and breeding, and plan to be with the best breeders and Holsteins at Oakville, June 20th,

Ontario Sale & Pedigree Co., 87 King St. E., Toronto, Ont.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for 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 advertisements inserted for less than 50 cents.

AT REDUCED PRICES—BABY CHICKS from pedigreed layers, money-making S.-C. White Leghorns, \$15 per hundred, or smaller lots. Eggs \$1 per setting. Bradley Linscott, Brantford, Ont.

RINGLET BARRED ROCKS—PUREBRED, trap-nested, heavy winter layers, beauty and utility combined; setting \$1.50; 100% fertility guaranteed. Book order now. Particulars, F. Coldham, Barriefield, Kingston, Ont.

"SNOWFLAKE" S.-C. WHITE LEGHORNS. Quality, quantity. Eggs, \$2.00 fifteen, \$6 per hundred. E. W. Burt, Paris, Ont.

SPECIAL LATE-SEASON SALE OF BREED- ing stock in White Leghorns, Brahmans, Indian Runners, Bourbon Red Turkeys. Two-choice litters of Fox Terrier puppies. John Annesser, Tibury, Ont.

Rose-Comb Rhode Island Reds

Eggs for hatching, \$1.25 per fifteen. Good winter layers and good color. Alex. McKinney, R.R. 1, Erin, Ontario.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—ONE OF THE CHOICEST FARMS in the county of Simcoe. One hundred and eighty acres, clay loam, all under cultivation, two acres of orchard, good water supply, good buildings, solid brick house, rural phone and mail delivery, one mile from Bradford, thirty-six miles from Toronto on macadamized road. Price sixteen thousand dollars. Apply Box 277, Barrie, Ontario.

AGENTS WANTED—EITHER GENTLEMAN or lady, returned soldier preferred, to handle one of the best selling articles on the market to-day. Big profits, enormous demand. Write to-day for full particulars. May Manufacturing Co., Elora, Ontario.

AGENTS WANTED. SOMETHING EVERY farmer needs—an inexpensive and complete system of Bookkeeping for the farmer or dairyman. Liberal commission. Write for particulars. H. S. Bates, 102 Bank St., Ottawa, Ont.

FARMERS REQUIRING MALE OR FEMALE help for outdoors or housework, willing pay good wages, advance fares, and requiring berry pickers send to Toronto Engineering Agency, 57 Queen W., Toronto.

WANTED—SITUATION BY PRACTICAL Canadian farmer, thoroughly experienced in general farming. Good stockman, good horseman; fruit farm preferred. Married, no children. Wife would assist in house. State wages. Box 6, Farmer's Advocate, London.

CLEARING AUCTION SALE OF STOCK

for C. F. JACKSON, on the Middlemarch Farm, two miles west of St. Thomas, on

Wed., June 27th, 1917

In the sale are 12 PURE-BRED SHORTHORN COWS, 10 PURE-BRED HOLSTEIN CATTLE, 40 GOOD HORSES from 3 to 5 years old, 20 GRADE COWS, new milkers, 50 YOUNG CATTLE, a full line of implements used on a 300-acre farm.

Sale commences at 12.30.

C. F. Jackson, Proprietor
Locke & McLachlin, Auctioneers.

Skilled musicians—men and women who know all about pianos—will tell you that the

Sherlock-Manning

20th Century Piano is undoubtedly

"Canada's Biggest Piano Value"

Write Dept. 18, for free Catalogue "T"

THE SHERLOCK-MANNING PIANO CO., LONDON, (No street address necessary) Canada

"1900" Gravity Washer

Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY
257 YONGE ST., TORONTO, ONT.
(Factory, 79-81 Portland St., Toronto)

BABCOCK & SONS

ESTAB. 1877. Formerly Patent Office Examiner. Master of Patent Laws. Book, full information, free. 99 St. James St., Montreal. Branches at Ottawa and Washington.

PATENTS AND LEGAL
PETHERSTONHAUGH & CO., PATENTS. Solicitors. The Old Established Firm. Head Office, Royal Bank Building, Toronto, and 5 Elgin Street, Ottawa, and other principal cities. Send for free booklet.

Markets

Continued from page 980.

middlings \$46 to \$50, mixed mouille \$50 to \$51 and pure grain mouille \$53 to \$55. Baled Hay.—The market held unchanged at \$13 to \$13.50 per ton for No. 2 fresh; \$11.50 to \$12 for No. 3 and \$10.50 to \$11 for clover mixed, ex-track. Hides.—The market was quite weak. Beef hides were 1c. down, at 23c., 24c. and 25c. per lb. Calf skins were also 1c. down, at 30c. for No. 2 and 32c. for No. 1, being 8c. above the recent record. Lamb skins advanced to 40c. and horse hides declined to \$7. Tallow was very strong at 3c. to 6c. per lb. for rough and 11c. to 12c. for rendered.

Cheese Markets

Belleville, 21c. and 20 3/4 c.; St. Hyacinthe, Que., 20 1/2 c.; London, bidding 19c. to 20 3/4 c.—no sales; Montreal, finest westerns, 20 1/2 c.; to 21c.; finest easterns, 20 3/4 c.; New York, specials, 24c. to 24 1/4 c.; average run, 23 3/4 c.

Chicago

Cattle.—Beeves, \$9.20 to \$13.75; stockers and feeders, \$7.40 to \$10.50; cows and heifers, \$6.25 to \$11.75; calves, \$9.75 to \$14.50.

Hogs.—Mostly 10c. to 15c. lower; light, \$14.50 to \$15.40; mixed, \$14.85 to \$15.70; heavy, \$14.90 to \$15.80; rough, \$14.90 to \$15.10; pigs, \$10.25 to \$14.25.

Sheep.—Lambs, native, \$9.50 to \$14.50.

Gossip.

Sale Dates.

June 20.—Ontario Sale and Pedigree Co., Oakville, Ont., Holsteins.

June 21.—John Thornton & Co., Wrest Park, Amptill, Bedfordshire, England, Shorthorns.

June 27.—C. F. Jackson, Middlemarch, Holsteins, Shorthorns and grades.

June 28.—J. M. Gardhouse and J. A. Watt, Elora, Ont., Shorthorns.

June 29.—Mitchell Bros., Burlington, Ont.; Shorthorns.

A Quality Consignment to the Oakville Sale.

One of the many attractions at the Oakville sale to be held June 20th, 1917, will be the outstanding qualities of the animals consigned by Gordon S. Gooderham, Manor Farm, Clarkson, Ont. Among these is the beautiful four-year-old heifer, Lady Mercena Schuiling, with a butter record of 26.44 lbs. from 524.3 lbs. of milk. She is a large, strong heifer, with lots of capacity, and with proper care should easily make the 30-lb. mark at next freshening. Another four-year-old that is a picture and has as well proved herself a producer is Manor P. H. De Kol. Butter 21.01 from 497 lbs. of milk in seven days. This heifer will speak for herself when she is led into the ring. Look her over carefully. Manor P. H. Canary is also a large, strong heifer, capable of increasing her record of 17.71 lbs. of butter in seven days, and 35.03 lbs. in fourteen days, this record was made with her first calf and is no indication of what she can do. Another one of the splendid females to be sold is Manor P. H. Gem, she has to her credit a record of 19.614 lbs. of butter and 417.90 lbs. of milk. This heifer is just fresh and will be tested again before sale if possible. The last three heifers mentioned are all granddaughters of King of the Pontiacs, the greatest sire in the world. He has 208 A. R. O. daughters. Amongst these are two with records better than 40 lbs, 18 better than 30 lbs., and 55 with better than 25 lbs. of butter in 7 days. In addition to those already mentioned will be sold a yearling daughter of Jewell Cornelia Posch, which has a yearly record of 23,963 lbs. milk and 940 lbs. butter. Besides the females there is consigned a four-months' son of King Segis Pontiac Posch. Anyone looking for good blood with plenty of A. R. O. backing will do well to send for a catalogue, and plan to attend this sale.

"Madam," said the tramp, "I was once a member of the legislature."
"And are you sure," she said, inclined to believe him, "that your reformation is complete?"

SEEDS

1866 1916

The supply of good seed is very limited this year, so order promptly and avoid being disappointed.

ALFALFA	Bus.
Montana Grown, No. 1	\$15.00
Ont. Variegated No. 2 (almost No. 1)	\$23.00 to \$25.00
Lyman's Grimm	80c. lb.
MILLET	
Hungarian Millet	\$4.00
Siberian Millet	3.25
German or Golden Millet	3.00
Common Millet	2.75
Buckwheat	2.15
Jap. Barnyard Millet	7c. lb.
Rape (Dwarf Essex)	13c. lb.
Amber Sugar Cane	9c. lb.
Hairy Vetch	18c. lb.
Thousand Headed Kale	25c. lb.
GARDEN CORN—Stowells' Evergreen, \$9.00 bus., 25c. lb.; Early White Corn, \$6.00 bus., 25c. lb.	

GEO. KEITH & SONS 100 KING ST. E. TORONTO

"GROCERIES WHOLESALE"

Club Your Neighbours Together and Save Money

We buy high-grade eggs from large producers. State how many you can ship tri-weekly, by express. Write for Price List, stating what lines you are interested in.

CANADA GROCERY CO.,
32 Front Street W., Toronto, Ontario

Pollock

A choice, clear, sound-producing machine, with a marked absence of all rasping and harshness. Priced from \$15 to \$250. Write for free illustrated catalogue and name of local dealer. Agents wanted.

The Pollock Mfg. Co., Ltd., Kitchener, Ont.

Gossip.

The Horkstow Lincoln Flock.

The result of the lambing season of 1917 in the Horkstow Lincoln Flock has been satisfactory, the losses have been normal, and the fall of lambs somewhat less than in 1916, the percentage of twins working out this year at 25 per cent, as against 60 per cent last year. As some recompense for the reduced number of lambs, those this year are most active, strong and healthy. That noted old stud ram, Riby Gordon 150 guineas, which was sire of a great many show-yard winners for Mr. Nicholson in 1915, when one of his sons won first and champion at the Royal Show and was afterwards sold in Buenos Ayres for 700 guineas, also sired no less than seven rams which were prize-winners at the 1916 Royal Show. There are also some capital lambs by Horkstow Manor Gordon and Horkstow Manor Champion, two other sons of "Riby" 150 guineas. It will be remembered that Mr. C. Nicholson purchased the top priced ram at the Lincoln Ram Sale this year, paying £273 for him. The produce of this ram has been most satisfactory, a considerable number of strong, upstanding lambs of true Lincoln type have been sired by him. The Lincoln rams that are being prepared for sale this year, together with the yearling ewes, are a particularly good lot, and they have come through the severe winter in capital condition.

Quebec's Greatest.

(Continued from page 978)

Sheep and Swine.—The sheep and swine end of the program at Ormstown has never played a very important role in the success of the show. For the second or third year Ayer & Son, from Bowmanville, Ont., have strengthened the Quebec exhibit in nearly all sections of the sheep division, and this year Mannock Bros., Havelock, Ont., turned out to save the day for the Berkshires in the swine sections. Other exhibitors in swine were: Jas. Hunter, Ormstown; Robert Ellis, Brysonville; Taylor Bros., Dewitsville, and Hooker Bros., Ormstown.

In sheep the other exhibitors were: David Pringle, Jno. Purcell, both of Huntingdon, and Robert Kerr, Riverfield. The sheep awards were made by Prof. Barton, Macdonald College, and the swine awards by Prof. Archibald, Exp. Farm, Ottawa.

MITCHELL BROS.

Shorthorn Dispersion Sale

at Escana Farm, June 29th, 1917

40 Head Show and Breeding Material

6 GOOD BULLS

34 CHOICE FEMALES

11 CALVES

TWO GREAT HERD SIRES SELL

Right Sort (Imp.) one of the greatest living sires.

10 head his get won 14 prizes at Toronto in 1914	
12 " " " 18 " " " 1915	
9 " " " 13 " " " 1916	

7 heifers his get averaged over \$1,100 in Thos. Stanton's sale, June, 1916.

Newton Grand Champion (Imp.) a junior yearling, a Marr Clara, by a great sire and out of one of the best producing cows in Scotland. This valuable yearling is the highest priced calf imported in recent years, his style, quality, breed and character stamp him as a coming sire.

The 34 attractive females include 12 choice imported cows and heifers, several have calves at foot, imp. in dam. The

Canadian-bred females cost as high prices and have produced several 1st prize and champion winners at Toronto.

The blood lines represented are of the most popular Scotch tribes such as Missie, Broadhooks, Maud, Orange Blossom, Mysie, Secret, Mayflower, Jilt, Roan Lady, Clara, Eliza, Lady Laura, and Kilblean Beauty. Not a single, doubtful female is offered for sale. All of breeding age are either safe in calf or have calves at foot, by the two great sires, Right Sort (Imp.), and Gainford Marquis (Imp.) The Imp. in dam calves are by leading sires in Scotland, several of the good heifers are safe in calf to Newton Grand Champion (Imp.). The herd has not been fitted for sale, but is in top breeding form, and an offering of exceptional merit. Catalogue on application to

Auctioneers: Col. Carey M. Jones, Col. Theo. Martin,
Capt. T. E. Robson.

Mitchell Bros., Burlington, Ont.

Parties attending Watt-Gardhouse sale on June 28th can make good train connection to Hamilton same evening

Great Shorthorn Sale

Comprising 70 head from the noted herds of J. A. WATT, Elora, Ont., and J. M. GARDHOUSE, Weston, Ont.

AT SALEM STOCK FARM, ELORA, ONTARIO

Thursday, June 28th, 1917

Some of the choicest Shorthorns in breeding and individuality ever offered in America.

45 Choice Cows and Heifers

20 Calves

5 Bulls

The best of Scotch breeding is represented in the following families included in the sale: Clipper, Missie, Lavender, Matchless, Mina, Kilblean Beauty, Clementina, Village Blossom, Duchess of Gloster, Claret, Jilt, Mayflower, Crimson Flower and others. These include

Show Stock of Both Sexes

First prize junior and senior calves at the Canadian National, 1916; first prize senior yearling, the

J. A. WATT, Elora, Ont.

OR

J. M. GARDHOUSE, Weston, Ont.

undefeated Escana Beauty 2nd, by Right Sort; Britannia, by Bandsman's Commander, first wherever shown last year, including Chicago International. Two bulls by Gainford Marquis are in the lot. The Count of Selma, out of the great cow, Countess Selma, and by Oakland Star, will also be sold.

Don't Forget the Cows Bred to Gainford Marquis

Write immediately for catalogue, mentioning "The Farmer's Advocate," to

MEDICAL
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Mining, Chem
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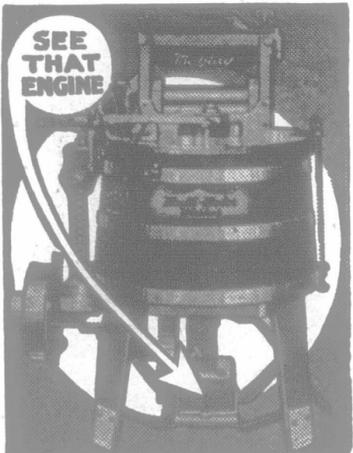
The Maytag Company Limited
WINNIPEG, MAN.

Urgently request that every reader of this publication write at once to

WHITES Limited
COLLINGWOOD, ONTARIO

for full particulars as to our line of Washing Machines. They have in stock the

- Maytag Hand Washer
- Maytag Power Washer
- Maytag Electric Washer
- Maytag Multi-Motor Washer
- Maytag One-Horse Engine



SEE THAT ENGINE

Maytag Multi-Motor Washer

BETTER STILL

Show this advertisement to the dealer you trade with and ask him to write them.

Every machine warranted for three years

WHITES, LIMITED

are sole distributors for the Province of Ontario, Quebec, Nova Scotia New Brunswick, P. E. Island.

Write them now--to-day

Better Be Sure Than Sorry
Your profits depend upon the health of your flock.

Pratt's POULTRY REGULATOR
Regulates the blood, bowels and digestive organs. Keeps fowls active and makes them lay more eggs. Prevents disease.

Write for FREE Book, "Poultry Wrinkles."

PRATT FOOD CO.
of Canada, Limited
68 J. Claremont St.
TORONTO

WASHDAY—and the Boiler Leaking!
Simply fill the hole with VOL-PEEK and it will be ready for use in 2 minutes. Costs only 1/2c. per mend. Keep a package on hand.

VOL-PEEK mends holes in all kinds of pots and pans, graniteware, aluminum, tinware, enameledware, etc.

Your dealer has it, or from us, 15c. and 25c. per package, postpaid.

VOL-PEEK Mfg. Co., Dept. D.,
P.O. Box 2924, Montreal, Can.

Gossip.
Escana Farm Shorthorn Sale, June 29.

One of the most important announcements made in these columns in recent years came last week when Mitchell Bros., Burlington, Ont., announced that their entire Escana Farm herd of Shorthorns would be dispersed by public auction at the farm on Friday, June 29. Mitchell Bros. and the Escana Farm herd have long been bright spots in Canadian Shorthornism, and there are many, even those who have felt keenly the Mitchell competition at the shows, who will feel that the dispersion of this splendid herd may not be for the betterment of the Shorthorn breed in Canada. It is to be hoped, however, that in this case the Canadian breeder will not let all the good things go to our cousins across the border, as he has too often been in the habit of doing in the past. At the head of the herd is the noted imported bull and sire of Canadian show-yard winners, Right Sort. He is a Bruce Mayflower bull, sired by Red Rosewood, bred by Gordon, while his dam is Sophia 2nd, one of Scotland's greatest breeding cows, got by Duthie's Choice. Many breeders have pronounced Right Sort one of the greatest sires that Canada has ever seen, and a review of three seasons' shows finds his get standing mighty near the top. He sells with a good number of his get in the sale, and is without doubt the most noted and valuable mature sire ever led into a Canadian public sale ring. Newton Grand Champion (imp.), junior sire at Escana Farm, also sells with the herd. He is a wonderful calf; on his dam's side he is a straight Marr-Clara, while his sire, Grand Champion, also a Gordon-bred bull, was considered one of Scotland's greatest sires. Newton Grand Champion will need very little introduction on sale day, his individuality will speak for itself, and the fact that he has been used on a lot of the best things at the farm, including the daughters of Right Sort, should increase his worth considerably, as it also should the value of the females to which he has been bred. A review of the females to be sold will be given in these columns next week along with a note or two more regarding the other four bulls offered. Catalogues will be ready for mailing by June 15 and will be sent to all on request. In reviewing its pages it will be remembered that this is not only a dispersion of a noted herd, but Mitchell Bros. have been at all times breeders and not dealers. The score or more bulls that went out yearly from Escana Farm were always bred on the farm, the show animals were selected from stock bred on the farm, and with the exception of the service sires, which were imported with an occasional importation of breeding females, nearly everything that passed through the Mitchell ledger was a Mitchell product. Further particulars regarding the females, including 10 imported cows with calves at foot to British service, will be given next week. Look up the advertisement elsewhere in this issue, and write at once for catalogue to Mitchell Bros., Escana Farm, Burlington, Ont.

Questions and Answers.
Miscellaneous.

Scabs on Mare's Back.

I have a driving mare that is breaking out in scabs, especially around the forehead and back. A watery fluid runs from them. There is also a scab on her knee which is causing the leg to swell, making her limp. What is the trouble and how should it be treated?

J. K.

Ans.—It is rather difficult to diagnose the case without seeing the mare but the symptoms indicate eczema, although it is not often eczema will cause a scab to form on the knee or cause lameness. Treatment for eczema consists of administering 2 drams aloes and 2 drams ginger, following up with one ounce Fowler's solution of arsenic, twice daily for a week. Dress the parts twice daily with a warm five per cent. solution of one of the coal-tar antiseptics. After each dressing keep the mare comfortable and warm. It is possible that the scab on the knee is due to a bruise causing inflammation to set up. Bathe the knee with hot water which will tend to allay the inflammation and reduce the swelling, then dress with the coal-tar antiseptic.

Economical Light and Power

Fairbanks-Morse Electric Plant, will bring more real comfort, satisfaction and happiness to your farm home than you would part with at ten times its cost.

This plant, complete in all details—ready to set up—is simple to operate and will give you light, day or night, anywhere you want it. You can iron any time in any room.

The Engine can be used to run machines for other purposes at the same time it is running the dynamo or it can be moved to any other location with ease.

Let us send you complete information free of cost.

Fairbanks-Morse Power Farm Equipment

The CANADIAN FAIRBANKS-MORSE CO., LIMITED
Montreal and principal cities.

The Peter Hamilton All-Steel Rake—No. 4

will positively rake your fields clean, without the teeth catching or digging into the ground and mixing dirt and dust with your hay, because the points of the teeth run parallel with the ground and are held rigidly in place. The wheels and the curve of the teeth are extra large and will gather up a large windrow.

Buy a PETER HAMILTON RAKE if you want large, clean windrows of clean hay. Made in 8, 9 and 10 ft. sizes, for either one or two horses.

Write to-day for free illustrated folder.

Peter Hamilton Company, Limited
Peterborough, Ont.

Another Wet Season in Prospect

You will need Canvas Covers for your Engine, Thresher, Stacks, etc. Canvas Duck is very high in price this year, but we bought early and can quote you attractive prices.

Get our prices on Belting, Hose, Oils and All Power Users' Necessities.

Ask for our 1917 Catalogue.

WINDSOR SUPPLY CO., 57 Sandwich St., West, WINDSOR, ONTARIO

LINCOLNS C. NICHOLSON,
of Horkstow, Lincolnshire, England

has for sale Pedigree Lincoln Long Wool Rams and Ewes from his world-famous flock of ALL DUDDING-BRED SHEEP. By winning the CHAMPION and "ALL" the first prizes in the two-shear and yearling-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

OUR LATEST IMPORTATION OF CLYDESDALES

arrived at our barns late in November. A number of them since have been prominent winners at both Guelph and Ottawa. But we have others (both stallions and mares) that were never out, the majority of the stallions weigh around the ton, and better quality and breeding were never in the stables. Come and see them. We like to show them.

SMITH & RICHARDSON, Columbus, Ontario

Clontarf Farm MANNING W. DOHERTY Established 1824
Clydesdale Horses-Holstein Cattle-Yorkshire Hogs
We always have some choice young breeding stock to offer.

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BREEDER OF HIGH-CLASS CLYDESDALES
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Write me for prices on champion mares.

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Two Canadian-bred stallions, rising 3 year old, sired by imported horses, one from an imported dam other's dam is Dolly Murray, the Canadian-bred champion mare at Toronto, 1913. Come and see them. They are priced to sell. We are offering some choice young bulls and a few females.

LAURIE BROS., AGINCOURT, ONT.

Welland District Shorthorn Breeders' Club

are still offering young bulls of serviceable age, and a few breeding females.

Chas. Galner, Secretary, Box 607, Welland, Ontario. A. E. Howell, President, Fenwick, Ont.

JUNE 14, 1917

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Application in
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The noted trotter
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At special pr
Victor of C
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Get high-clas
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10 to 24 months
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\$1.00 bottles F
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Agents wanted.
V.S., Kingston

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of nine months
Royal Saxon.
Could also spare
Bright, Ont.,

DANGEROUS
as well as painful

Backache Neuralgia
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WILL RELIEVE YOU.

It is penetrating, soothing and healing and for all cases of Wounds, Felons, Interior Cancers, Burns, Boils, Carbuncles and all swellings where an outward application is required CAUSTIC BALSAM HAS NO EQUAL. Removes the soreness—strengthens the muscles. Price \$1.50 per bottle. Sold by druggists or sent by express prepaid. Write for Booklet 1.

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Yet your best horse is just as liable to develop a Spavin, Ringbone, Splint, Curb or lameness as your poorest!

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has saved many thousands of dollars in horse flesh by entirely curing these ailments.

Ed. Hirstone, Jr., Haliburton, Ont., writes: "I have been a user of your Kendall's Spavin Cure for about 20 years, with good results. Could you supply me with your Treatise on the Horse? Don't take chances with your horses. Keep a bottle of Kendall's handy, \$1—6 for \$5. Our book 'Treatise on the Horse' free at druggists' or Dr. B. J. KENDALL CO., Enosburg Falls, Vt. 119

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Angus—Southdowns—Collies

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Learn the merits of the Brown Swiss. Get acquainted and become a breeder of these cattle. For information, write to **RALPH H. LIBBY**, Sec. of Canadian Brown Swiss Association Stanstead, Quebec

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if your teams are equipped with

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These pads prevent Sore Shoulders and cure Gall Sores. Your dealer will supply you, or write BURLINGTON BLANKET CO., Ltd., 793 King Street West, Toronto, Canada.

UNKO 2.11½

The noted trotting stallion, sire of Vanko, 2.06¼, and twelve others, is now owned by **P. J. KEARNS**
Lot 7, Con. 2, Aldborough, Wardsville P.O., R. R. 1.

Kennelworth Farm Aberdeen-Angus

At special prices. Six young bulls sired by Victor of Glencairn. All are of serviceable age, and show individuals.

PETER A. THOMSON, Hillsburg, Ont.

BALMEDIÉ ABERDEEN-ANGUS

Get high-class Angus bull and breed the champion steers. I have show-ring quality bulls from 10 to 24 months of age; also choice 1 and 3-yr. old heifers. T. B. BROADFOOT, FERGUS, ONT.

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.

Brownlee Shorthorns. Offers a choice lot of young bulls, ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. Douglas Brown, Bright, Ont., R. R. 3, Ayr Station, C. P. R.

Questions and Answers.
Miscellaneous.

Owner of Screen Doors.
When buying a house do the blinds, screens and storm-doors go with the house as part of the same deal? Neither party mentioned the above articles at the time of sale.
F. J. W.

Ans.—The things mentioned are not considered in the deal unless specifically mentioned.

Vendor, Purchaser and Telephone.
A sold his farm to B, and A owned the telephone in the house. Neither A nor B mentioned anything about the telephone in the deal till after the deal was closed. Then B agreed to give A \$15.00 for the phone and A to throw in a pair of new batteries which A did. A has witness to this agreement. Now B refuses to pay for the phone and says that it belongs to the house and should go in with the farm.
Ontario.
H. McL.
Ans.—B is wrong.

Gossip.

The Watt-Gardhouse Sale.
At Salem Stock Farm, Elora, Ont., on Thursday, June 28, seventy head of Shorthorns, a draft of 35 head from each of the herds of J. M. Gardhouse, Weston, and J. A. Watt, Elora, will come before the breeders of United States and Canada, to be sold in what promises to be one of the most noted public sales of pure-bred cattle ever held in the Dominion. It might be well to add that this sale is only the second of a series of annual events that are scheduled to take place at Salem Farm in June of each year. To the 1916 sale Mr. Watt and Mr. Gardhouse were the largest contributors. This year their lots make up the entire sale, and judging from the superior quality of every animal catalogued, all of which are backed by pedigrees that are full of Duthie, Cruickshank, Anderson and Marr breeding, even the high averages of 1916 are doomed to appear small if the buyers are this year at all willing to pay for breeding and quality such as have never been surpassed in any sale-ring on this side of the border. In this sale even much of the best of the season's past shows have been listed. Britannia, the yearling heifer, junior champion of the 1916 Canadian circuit and first at the International in the strongest class of the show, sells as a senior yearling. Escana Blossom, first as a calf and also as a yearling at both Toronto and London, sells at two years, and is in calf to Newton Grand Champion (imp.), the noted Marr-Clara bull bred by Gordon. Duchess of Gloster 79th, a sweet, thick two-year-old heifer out of Duchess of Gloster 78th and by Canada's undefeated champion sire, Gainford Marquis (imp.), is also listed. She is bred back to "Gainford." These are only a few of the great heifers that with twenty other cows, selling with calves at foot, make up as strong an aggregation of breeding females as any International sale-ring has seen in years. A number of the mature cows referred to are also bred again to Gainford Marquis, and these are every one sure to prove leading features of the sale. So much for females, and when it comes down to bulls consigned, another "Gainford" product furnishes the sensation, in the great young sire, Marquis of Lancaster. He is now just turned two, and aside from having the great bull Gainford Marquis for his sire and a Glenbrook Sultan cow for his dam, he is easily one of the outstanding young bulls of the year. It is to be hoped that he may remain in Canada. A number of the best heifers listed have been bred to this young sire, which should surely add many dollars to each of their values. Of the other four bulls catalogued one is a "Gainford." He is a September calf out of an exceptionally good breeding Matchless cow, and he has sufficient Shorthorn character that will surely gain him prominence before another year. The same can be said of the 18 months' bull, Count of Selma by Oakland Star and out of the noted state fair champion, Countess Selma. Full particulars regarding this sale may be had by writing for catalogue at once to J. A. Watt, Salem Stock Farm, Elora, Ont. Kindly mention the Advocate.

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A herd of breeders, feeders, and milkers that give satisfaction wherever they go. One bull for sale, 12 months, white, extra milk strain. Also females any age. Priced so you can buy. One of the finest bulls in Ontario heads this herd.
JNO. ELDER & SONS, Hensall, Ontario

Imported Shorthorns Cows and heifers in calf, or with calf at foot. Yearling bulls and bull calves. One of the best importations of the year. You will be surprised when you see them.
Will. A. Dryden, Maple Shade Farm Brooklin, Ont.

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Imported and Canadian-bred. More bulls to select from than any herd in Ontario, all of serviceable age; also a large number of females, which are bred right and priced right. All the stock for sale.
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SPRUCE GLEN SHORTHORNS

of such popular strains as Minas, Fames, Miss Ramedens, Florences, Emilys, etc. Have still a few young bulls—thick, mellow fellows, fit for service.
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Thirty-five imported cows and heifers, forward in calf to service in Scotland; also five imported bulls. Our 1916 importations are all choicely bred. Have also home-bred bulls and females. Farm half mile from Burlington Junction. Write, or call and see us.
J. A. & H. M. PETTIT, Freeman, Ontario

SALEM SHORTHORNS

Nothing for sale at present. Annual sale June 28th.
J. A. WATT, Tel. 101, Elora, Ont.

THE MANOR STOCK FARM---SHORTHORNS

Two young red bulls (June and July), a Wimple and a Julia. Would buy a few females of good families.
JOHN T. GIBSON, DENFIELD, ONT.

BRANT COUNTY SHORTHORN CLUB

offers several young bulls of best breeding and fit for service. Also the Beauty-bred bull, Roan Duke 101320, a proven sire, whose dam is a heavy milker. For prices and particulars address:
THE SECRETARY, GEO. L. TELFER, R. R. 2, PARIS, ONTARIO

Pleasant Valley Farms We have for sale (at prices that will move them in the next 30 days) the following exceptionally good bulls 1 ROAN, LADY, 1 BROADHOOKS, 1 ROSEWOOD, 1 WIMPLE, 1 STAMFORD, 1 MERRY LASS, 2 DUCHESS OF GLOSTERS and several others. Also equally well bred cows and heifers bred to (imp.) ROYAL SCOTT, and BBAUMONT BEAU. Inspection invited. Our cattle will interest you. 90 head to select from.
GEO. AMOS & SONS Farm 11 miles east of Guelph, C. P. R., MOFFAT, ONTARIO

Meadow Lawn Shorthorns F. W. EWING, ELORA, ONT.

In order to make room for the crop of calves coming on, attractive prices are being made on the offering of bulls ready for the trade. They are of extra quality and choice breeding, by that great sire, Escana Ringleader, by Right Sort (imp.). Few bulls their equal are to be had.

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—Are prevalent in cold weather irregular work and overfeed in goats both. A system tonic and blood purifier, such as **FLEMING'S TONIC HEAVE REMEDY** will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. Per box, \$1.

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OIL CAKE MEAL

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Mardella Shorthorns

Bulls, females, sires, quality; breeding dual-purpose cattle over 40 years. The Duke—dam gave 13,599 lbs. milk, 474 lbs. butter fat—at the head.

Thomas Graham, Port Perry, Ont., R. R. No. 3

Plaster Hill Herd Dual-Purpose Shorthorns

Just one bull left, 12 months old; a choice one; good milking strain. Can spare a few cows and heifers.

F. Martindale & Son, Caledonia, Ont., R.R. No. 3. Long-distance telephone.

Glenfoyle Shorthorns

Present offering—three bulls from 10 to 12 months. Nice, straight, smooth fellows. Prices easy.

Stewart M. Graham, Lindsay, Ontario

Live Stock Production—Farmers' Opportunity.

Animal products, such as mutton, beef and pork are very high in price, so high that the question is often asked, "Will prices continue high?" They may not continue as high as at present, but they are bound to continue a great deal higher than they were when the war began.

Previous to 1914, United States had an increasing population and a decreasing animal production. From 1910 to 1914 the population increased 7 per cent., while sheep decreased 5 per cent. and cattle 10 per cent. Hogs in the same time increased only 1.2 per cent. If war had not come, prices would have increased, although not as much as they did. Animal production has been reduced or destroyed throughout the whole of Europe and the English colonies. Years will be required to re-establish the herds and flocks after the war ceases.

A few years of good crops will produce a great grain surplus, but this is not true of live stock. Hogs produce at one year, but better at two, sheep at two years but better after three years of age. Farmers are reluctant to increase their live stock; it is a slow process and requires considerable capital and experience. Grain raising gives quick returns and is more attractive to the average farmer.

There is no danger of prices being low for a great many years. The nations of the world will be in the market for breeding stock when the war ceases and, no matter how high prices may go, people must have meat, milk, wool and all that is made from the pelts and hides. Furthermore, so serious is the condition that legislation will probably be provided to prevent price setting and to stimulate production.

Aside from profits, farmers need to engage in animal production. The fertility of the soil must be restored and maintained; there must be a better division of labor on the farm throughout the year than at present, and to be more prosperous the farmers must have a regular monthly cash income. These conditions can be brought about only by live stock and the country will not be most prosperous, and especially the farmer, until they prevail.—News notes, Colorado Agricultural College.

Questions and Answers. Miscellaneous.

Killing Blackbirds

A neighbor is shooting blackbirds in the trees around my garden and buildings.

1. Is he liable to a fine for destroying the birds?

2. What would be the proper way to proceed with neighbor to prevent further destruction of the birds?

Ontario. J. D. A.

Ans.—1. No.

2. Blackbirds are excepted from the protecting clauses of The Protection of Birds Act (Revised Statutes of Ontario, 1914, chap. 263).

Veterinary.

Splint Lameness.

Three-year-old colt stands and walks sound, but goes very lame when trotting. He did a little work last fall and considerable this spring.

E. W.

Ans.—Your colt is lame from splint. He will probably have made a spontaneous recovery before you see this. If he is still lame, give him rest, apply pounded ice to the leg on the inside from the knee to 3 or 4 inches down, or shower or bathe the parts frequently with cold water. Treat this way for 3 or 4 days, and if lameness has not disappeared, rub well with a blister made of 1 dram each of biniodide of mercury and cantharides mixed with 1 oz. vaseline. Tie so that he cannot bite the part. In 24 hours rub well again, and in 24 hours' longer turn in box stall and apply sweet oil daily until the scale comes off. You will soon notice a hard enlargement which will probably disappear in about a year or less.

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Union Stock Yards Toronto

DECEMBER 7 AND 8, 1917

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Sires in use: NEWTON GRAND CHAMPION (IMP.), a Marr Clara, recently imported, and RIGHT SORT (IMP.). His get has won numerous first and special prizes at Toronto.

FOR SALE—Seven bulls, choice individuals at reasonable prices. Also a dozen cows and heifers, some of them bred to our herd sires. Herd numbers 100.

MITCHELL BROS. BURLINGTON P.O., ONT.
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There are men that have good SHORTHORN HERDS that need good bulls to head them. There are men that have herds that are kept to breed thick, easy-feeding cattle, and big cows that are good milkers.

There are men that are trying hard to start improvement in their own herds and in their neighborhoods.

I have a suitable bull for each at a moderate price, and I PAY THE FREIGHT.

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SPRING VALLEY SHORTHORNS

Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

KYLE BROS., Drumbo, Ont. Phone and telegraph via Ayr

Glengow Shorthorns, Cotswolds

For the present, we have sold all the Cotswolds we wish to spare, but 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, Ont.; Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.**

SHORTHORNS

Imported and Canadian bred. **A. G. FARROW, Oakville, Ont.**

NICHOLSON'S SHORTHORNS

Herd headed by "Best Boy" = 85552 =, and "Browndale Winner" = 106217 =. Bulls and females for sale. Visitors always welcome to this herd of long-established reputation.

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Shorthorns, Shrops., Clydesdales

If you want a good young bull, a promising stallion colt, or a young cow or heifer of Scotch breeding and beef type, having dams eligible or good enough for R.O.P., come, see, and satisfy yourself and please the owner. Prices reasonable, that they may be sold. Visitors welcome.

Wm. D. Dyer, R. No. 3, Oshawa, Ont.
Brooklin, G. T. R. and C. N. R.; Myrtle, C. P. R.

New

Under date Atlantic Gra ports a fur Since that d strengthened

WHEAT.— demonstrating and at the c are bringing seem to be g day during p prices than declining 22 and the Oc off-grade wh and heated decrease of from the vis and increase the decline r wheat. On for wheat p one.

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New Crop Conditions Favorable.

Under date of May 31 the Canada Atlantic Grain Co., Ltd., of Winnipeg, reports a further decline in grain prices. Since that date the market for wheat has strengthened a little, especially in Chicago.

WHEAT.—The law of gravitation is demonstrating itself on the wheat market and at the close to-night the forces that are bringing wheat prices to lower levels seem to be gaining more strength. Each day during the past week showed lower prices than the day previous, May basis declining 22 cents, July basis 23 cents, and the October option 9 cents. The off-grade wheats such as musty, rejected, and heated were almost unsalable. The decrease of 3,695,000 bushels of wheat from the visible, decrease in the receipts and increase in shipments, did not check the decline nor cause increased buying of wheat. One course seems to be desired for wheat prices, and that the downward one.

The statisticians who furnish figures showing that unless the strictest kind of economy were practiced there would not be enough wheat to go around, are again furnishing statistics showing that consumption of wheat per capita has decreased from 5½ bushels to 4¾ bushels, thus making 50,000,000 bushels more wheat available for export or to carry over, or, in other words, it's the old story of the tail of a short crop being longer than expected.

New crop conditions in the United States are as good as can be desired under present conditions. The estimated yield of winter and spring wheat is 750,000,000 bushels. Crop conditions in Canada are favorable, but so far progress has not been made to enable one to give an estimate of the yield. Foreign crop reports continue to be mixed. From now on the growing crops on the North American Continent will be the price-making factors of old and new wheat.

OATS.—Good crop conditions and the decline in wheat made for a lower oat market. Present prices for oats are low, and an improvement in the demand will remove the bearish influence of the other grains from the oat market.

Questions and Answers. Miscellaneous.

Trespass.

1. Is it lawful for a man to order a Jew off his premises if he did him no harm, simply because another such a fellow gave him trouble some time before?
 2. Is it lawful to use insulting language towards anyone who comes on a fellow's place?
 3. Can a man order another man off his premises in any case?
 4. Is one subject to a fine if not obeying such an order?
- INQUIRER.**
- Ans.**—1. Strictly speaking, yes.
2. No, provided there is a by-law of the municipality forbidding the use of such language. Most municipalities have such a by-law.
3. As a general rule, yes.
4. Yes.

Title by Possession.

1. A son has had peaceable possession of farm for twenty years or more; has made improvements, paid taxes, and done road work. Has paid no rent, nor helped to keep his parents. Father dies without will. What claim has son to farm?
 2. Does peaceable possession for a number of years give one possession of property?
- Ontario. A. G. P.**
- Ans.**—1. He would have, at least, a portion of the estate generally (including the farm) as being one of his father's heirs. He might have title to the farm also and exclusively of the other heirs if all the natural circumstances of his many years' possession of same have been favorable. But we are not informed of all of such circumstances. For instance, the statement of facts does not disclose the nature of the arrangement whereby the son was let into possession at the outset, whether his possession was exclusive of his parents, whether it was continuous, etc. Without a much fuller statement of the case to go upon we cannot venture a definite answer.
2. Peaceable, exclusive, uninterrupted, adverse possession for ten years or more is, generally speaking, sufficient to give title to lands.

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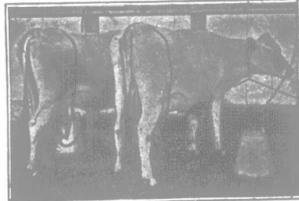
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There Must Be a Reason

"9 Years a Success"

HINMAN MILKERS \$60.00 Per Unit

Can be operated successfully by any boy or girl without injury to cows. A 20-cow outfit costs less than wages and board of one hired man for six months.

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H. F. BAILEY & SON, GALT, ONTARIO

Low Banks Farm Holsteins K. M. Dalgleish, Prop., Kenmore, Ont.
Pontiac Korndyke and May Echo Sylvia—strongest combination of milk and butter in the world. Present offering—3 beautiful young bulls, sired by Sir Echo, from daughters of Pontiac Korndyke, with 2-year-old records of considerably over 20 lbs. each; also 4 sons of Fairview Korndyke, from dams with similar records, going as high as 30.14 lbs. All straight, good individuals at moderate prices.

CLOVERLEA HOLSTEINS
Our entire lot of bulls, fit for service, as advertised, are sold. We still have a number coming on, eight months and under, which will be priced right for immediate sale. Write quick, for they will go fast as the others did.
GRIESBACH BROS. COLLINGWOOD, ONT.

DUMFRIES FARM HOLSTEINS
175 head to choose from. Special offering: bulls from one month to one year old.
Grandsons of Prince Aaggie Mechthilde. Visitors always welcome.
S. G. & ERLE KITCHEN. ST. GEORGE, ONTARIO

KING SEGIS WALKER'S
Oldest daughter with first calf made 456 lbs. milk and 24 lbs. butter; with her second calf, 560 lbs. milk and 29¾ lbs. butter. His first granddaughter, through his son, at 2 yrs. 2 months, made 44 lbs. milk and 23½ lbs. butter. Young stock for sale.
A. A. FAREWELL, OSHAWA, ONTARIO

Riverside Holsteins Herd headed by "King Johanna Pontiac Korndyke," a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 156.92 in 30 days—world's record when made. His ten nearest relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.
J. W. RICHARDSON, R. R. No. 2, CALEDONIA, ONT

When writing please mention Farmer's Advocate

IMPROVE YOUR HEALTH
Drink a beverage having the tonic properties and general flavor of the finest beer. Easily made in your own home with
HOP MALT EXTRACT
Made only from pure hops and malt. An aid to digestion. Excellent for convalescents. Anyone can make it.
Small tins, \$1.00; large, \$1.50
Agents Wanted DEPT. A
Hop Malt Co. Beamsville, Ont.

WANTED—CREAM
We pay highest market prices for churning cream of good quality. We
Remit promptly.
Test accurately.
Supply you with cans.
Give you a square deal.
Enough said. Write for fuller particulars to
ROSEDALE CREAMERY CO.
Kitchener, Ontario

CREAM WANTED
Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.
Ontario Creameries, Limited
London, Ontario

Cream Wanted
We pay highest price for cream at all seasons of the year. We furnish cans and pay express charges. Write for particulars.
WESTERN DAIRY, LIMITED
St. Thomas, Ontario

Cheery Walls Make Happy Homes



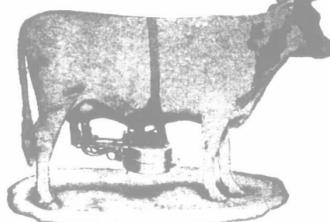
YOU feel their restful comeliness at once—inviting you to slip into cosy slippers, pull up your own chair to the fire, and find a new friendliness in home's attachments.

PEDLAR'S PERFECT METAL CEILINGS AND WALLS

quickly change dull, dreary rooms to ones you like to linger in. Whether you prefer plainness or a touch of ornament, you will find many to please you in the 2,000 styles and Period designs to choose from. Easy to put on over plaster or wood, the joints fit snug so they cannot show or come away. Last without repair as long as your house. Shall we send you the complete Ceiling Catalogue L. F.

Write for it.
THE PEDLAR PEOPLE LIMITED
(Established 1861)
Executive Offices and Factories
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Branches: Montreal, Ottawa,
Toronto, London, Winnipeg.

OMEGA MILKING MACHINES



MILKS FAST AND CLEAN
Has no rubber connections for the milk to pass through, but transparent celluloid tubes. The OMEGA is simple to operate, sanitary, and easily washed. It is used in the private dairy of H. M. King George V. at Windsor Castle. Increased the milk flow 3% in a 17-day test on ten cows at the O.A.C., Guelph.
WRITE TO-DAY FOR FREE BOOKLET.
C. RICHARDSON & CO., St. Mary's, Ont.

HOLSTEINS at Your Price

On June 20th, at Oakville, we are selling 5 tested cows, 3 heifers, due in Aug., from tested dams; 1 bull from 30-lb. sire. SEE THEM. AFTER JUNE 20TH: We have the only 2 sons in Canada of the 49-lb. bull, Ormsby Jane King, only mature son of the world's most famous cow. One of them for sale. Also a 30-lb. calf, whose dam and 2 great granddams average 38.4 lbs. butter in 7 days. 11 bull calves of lesser note and females all ages.
R. M. HOLTBY, R. 4, Port Perry, Ont.

RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pietertje, and the others are by King Segis Pontiac Duplicate. Can also supply a few females. R. W. Walker & Son, Port Perry, R.R. 4, Manchester, G.T.R., Myrtle, C.P.R.

Willowlee Holsteins

A few bulls left 4 months old; dams, 65 lbs. of milk a day. \$50.00, delivered.
A. MIGHT, R.R. No. 6, Brampton, Ontario.

First cow—"It is going to be an awful summer for us."

Second cow—"Yes, it will probably be treason to kick the farm help."

Questions and Answers, Miscellaneous.

Coal Ashes.

Are coal ashes worth drawing two miles to scatter on a corn or pasture field?
R. J. I.

Ans.—Coal ashes have practically no fertilizing value. If the soil were heavy clay, working them into it might improve its physical qualities. We would not consider them worth drawing. Wood ashes are of a different nature. They contain a considerable quantity of lime and a fair amount of potash.

Millet For the Silo.

Will millet keep and make good feed if put in a silo? When is the best time to store it? How long will it keep in the silo?
H. A. L.

Ans.—Millet is not a crop that is recommended for silage in Ontario, although we understand that it has been successfully ensiled in some parts of the United States. Corn, owing to its composition, gives the best satisfaction in silos. There must be a certain proportion of sugars and starches in order to produce the proper fermentation that will ensure the crop keeping in the silo. We have had no experience with ensiling millet, and have been unable to secure information as to the length of time it can be kept, or its feeding value when taken out of the silo. It is sown about the same time as corn, and from 20 to 30 pounds of seed sown to the acre.

Setting Out a Hedge.

Is it too late to plant a hedge of evergreen trees? We have a piece of ground which would be greatly improved by a hedge. What is the best kind of trees for a hedge? How should they be set out? Where is the best place to secure trees? We wish to plant them in the cemetery and expense is a consideration. There is a cedar swamp near here, and it has been suggested that we plant cedars. Would they be satisfactory as a hedge?
M. B. C.

Ans.—Cedar or spruce make a very satisfactory hedge. Under the circumstances we would be inclined to favor the cedar. Early spring is the best time to plant them. It is too late now to guarantee success; therefore, we would advise delaying planting until next spring. Trees from 1½ to 2 feet in height are recommended for planting. If the soil is at all heavy it should be loosened up by digging in green manure. The hole should be dug large enough so that the roots can be spread out and the tree planted just a trifle deeper than it previously was. After planting, a little manure may be spread around the tree to aid in retaining moisture and encourage growth. No doubt suitable trees may be secured in the swamp spoken of. If satisfactory ones cannot be found there, write some of the nurserymen advertising in these columns.

The First Milking—Blind Teats.

1. Is it advisable to milk a fresh cow perfectly dry for the first two or three milkings?

2. A fresh cow has a large udder which is not caked, but I cannot procure a drop of milk from three of the teats. The other teat milks freely. The cow is three years old and this is her second calf, but I don't know how she milked the first lactation. I purpose putting a calf on the cow; is this advisable?
W. D. K.

Ans.—1. It is advisable to follow nature as closely as possible in order to avoid trouble. A calf takes a little milk at a time and takes it often. Consequently, when milking by hand it is well not to empty the udder the first couple of days. This will tend to ward off the trouble known as milk fever.

2. Evidently the three teats are blind. If you cannot secure milk by using a siphon, it is doubtful if anything can be done. Your veterinarian might, on examination, locate some trouble which would prevent the milk coming down into the teat. However, if milk was forming in any great quantity in these quarters and was not being drawn the udder would likely cake and inflammation set in. It is possible that the cow has never given milk in these quarters. A calf may secure enough from one teat to keep it in a thrifty condition, and if there is any milk in any of the other three teats it will get it.

MANOR FARM

Senior Herd Sire is

KING SEGIS PONTIAC POSCH

Sire, King Segis Pontiac Alcartra (the \$50,000 bull)
Dam, Fairmont Netherland Posch
7-DAY RECORD, 4 YEARS, 29 DAYS

Butter..... 32.54
Milk..... 511.50
% fat..... 5.09

Junior Herd Sire is

KING KORNDYKE SADIE KEYES

Sire, Sir Sadie Korndyke Segis
Dam, Lulu Keyes
7-DAY RECORD

Butter..... 36.05
Milk..... 785.40
Highest day's milk..... 122.80

What better combination can be had? I have no sons from my junior sire yet; there are just a few left from King, from good A. R. O. dams, and priced right to sell.

Gordon S. Gooderham

Manor Farm

Clarkson, Ont.

BULL Twenty Months Old

In good shape for heavy service. Low, good length, deep middle, very straight, neat at shoulder, neck and head, masculine, a good feeder and in good condition. Dam as a junior two-year-old, made 15 lbs. butter; sire a grandson of King Segis and Blanche Lyons DeKoi, a 33-lb. cow with a 33-lb. full sister and a 30-lb. daughter. This bull is handsome, smooth, and true in type; a little more black than white. He is cheap at \$150 on car, at Toronto. R.F. Hicks, Newtonbrook, York Co., Ont.

Sunnybrook Farm Holsteins

YEARLINGS:—Male and female for sale, from high-record dams testing from 14 to 30 lbs. butter in 7 days, giving from 7,000 to 12,000 lbs. of milk; sired by Sunnybrook Mercedes Natoye, whose dam has a seven-day record of 29.34 lbs. butter, and Count Favorit Sylvia Segis, highly strained in the blood of the world's only 50-lb. cow.

Joseph Kilgour, Phone, Toronto, Adelaide 3900, Belmont 184, Eglington, Ont.

SENSATIONAL OFFERING IN 30-LB. BULLS

We have at present several 30-lb. bred bulls, all nearing serviceable age, that must go out to several of the country's best herds in the near future. They are sired by one of the three sires used in the herd during the past year. Pontiac Korndyke of Het Loo, Avondale Pontiac Echo, or King Segis Alcartra Spofford. Our herd contains more 30-lb. cows than any other herd of equal size in the Dominion. Extended pedigrees mailed on request.

ROYCROFT FARM W. L. Shaw, Prop. NEWMARKET, ONT.

Hospital for Insane--Hamilton, Ont.

Our only offering at present is a bull born February 10th, 1917, a grandson of Dutchland Colantha Sir Mona, and the great cow Lakeview Lestrangle, 28.34 lbs. butter in 7 days. His dam is a high-producer and tester, and carries the blood of King of the Pontiacs, and King Segis.

Apply to Superintendent

WANTED--Registered Females

I am on the market for a number of pure-bred Holstein females, with records up to 30 lbs. Would be pleased to hear from you as to what you have to offer. Kindly state in your first letter, pedigree, price and full information, with photo of each animal

W. G. Bailey, R.R. No. 4, Paris, Ont. Oak Park Stock Farm

SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day and their average butter records are over 35 lbs. a week. We have 60 heifers and young bulls to offer, by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON, R. R. 2, Hamilton, Ont. Phone 7165

Evergreen Stock Farm Registered Holsteins

Just now we are offering a very choice young bull, five months old, whose five nearest dams average over 30 lbs. of butter in seven days and 100 lbs. of milk in one day. Also another bull calf whose dam was the top-price cow in the Woodstock Sale. Bell phone.

A. E. HULET, NORWICH, ONTARIO

SILVER STREAM HOLSTEINS--SPECIAL OFFERING:

Two bulls fit for service, sired by bulls with 30-lb. backing, and from R.O.P. dams with records up to 500 lbs. butter made as two-year-olds. We also offer three bull calves from 3 to 6 months. If you want a bull of like breeding, write quick. Priced reasonable so you can buy.

J. MOGK & SON, R. R. No. 1, Tavistock, Ont.



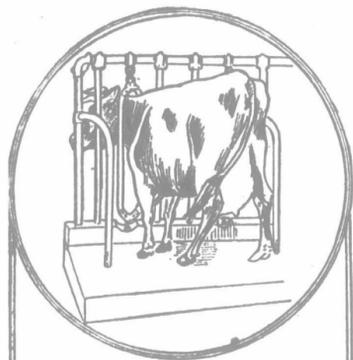
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is
A Profitable Cow**

ARE your cows contented?
Are they profitable? If not, make them so by doing away with your old-time wooden stalls. They gather dirt, harbour disease germs, and prevent the free circulation of life-giving air and sunlight.

**LOUDEN'S
Tubular Steel Stable Equipment**
is easily and quickly installed, and insures cleanliness and ventilation. Its use means comfort for your cows and profits for you.

GET INTERESTED. WRITE TO-DAY.
Our book, "Perfect Barn Equipment," and the service of our architectural department, are free.

LOUDEN MACHINERY CO. OF CANADA, LTD.
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Bone Spavin

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

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

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

FLEMING BROS., Chemists
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GREATER RETURNS

**"MAPLE LEAF"
OIL CAKE MEAL**
contains over 35% protein and 33% carbohydrates; purifies the blood, cleans the skin, opens the bowels, and keeps all live stock healthy.
Write to-day for our free booklet, "Facts to Feeders."

CANADA LINSEED OIL MILLS LTD
TORONTO AND MONTREAL

**Every farm should have
an
AYRSHIRE
The Cow for Profit**

WRITE
Canadian Ayrshire Breeders' Association
W. F. STEPHEN, SECRETARY-TREASURER
HUNTINGDON, QUE.

LAKESIDE AYRSHIRES

A few young bulls for sale from Record of performance dams, imported and Canadian-bred, sired by Auchenbrain Sea Foam (imp.) \$5758 grand champion at both Quebec and Sherbrooke

Write for catalogue
GEO. H. MONTGOMERY, PROPRIETOR
Dominion Express Building, Montreal, Quebec
D. MCARTHUR, MANAGER, PHILIPSBURG, QUEBEC

Glencairn Ayrshires Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont., Copetown Stn., G. T. R.

JERSEYS FOR SALE
One bull, twelve months, and one bull calf; also yearling heifers and heifer calves, sired by imported bull and from high-testing dams. Write: CHAS. E. ROGERS, INGERSOLL ONT.

**Questions and Answers.
Miscellaneous.**

Sterile Cherry Tree.

I have a cherry tree in full bloom and free from black knot. It seems to be in a very healthy condition, but up to the present has not borne any fruit. It is a tree probably eight or ten years old. Could you tell me what to do in order to make it bear fruit? Would boring a hole in the tree and enclosing sulphur make it productive?
M. T. S.

Ans.—It is not stated whether it is a sweet or sour cherry tree. It may be possible that some insect attacks the blossoms and prevents the setting of fruit. This would be overcome by spraying before the buds open, with a solution of 2½ lbs. of arsenate of lead to 40 gallons of water. However, if it is a sweet cherry tree and there are no other sweet cherry trees in the vicinity, the failure to bear fruit may be due to lack of fertilization. Some trees are sterile when self-pollinated. Planting another sweet cherry of a different variety near the present tree may have the desired effect. We haven't much faith in boring a hole in the tree helping production.

Enrolling a Stallion.

1. Does a pure-bred stallion that has passed inspection and been enrolled before he was eight years old have to be inspected again?
2. Can the owner of a grade stallion take his horse to a neighbor's stable and breed a mare if requested?
3. Can a farmer use a grade stallion if he wants to?
4. Can the owner of a grade horse charge a fee?

Ans.—According to the Ontario Stallion Act, when a stallion has reached the age of eight years the first inspection thereafter shall be the final inspection, and the enrolment made on the report of such final inspection shall continue to form part of the enrolment, and a certificate shall be granted in accordance therewith on each subsequent renewal of such enrolment.

2, 3 and 4. Yes, if the stallion has passed inspection and is enrolled, thus permitting the horse being traveled. If such is done after the Act prohibits the enrolling of grade stallions it will be in contravention of the law.

Feeding Turkeys.

Can turkeys be successfully raised if kept in confinement? What is the best feed for turkeys when they are shut up?
W. W.

Ans.—Turkeys are of a roving disposition, and after they are six or eight weeks old practically pick their living in the fields. They are much more difficult to raise if penned up. For the first few weeks young turkeys should be kept in a pen. They are particularly delicate the first week and require considerable care until they are about eight weeks old, or until they have the quill feathers well started. For the first week at least they require a warm place that is free from drafts and dampness. There are several rations which have given results. Some poultrymen feed hard-boiled eggs and breadcrumbs for the first three weeks; others prefer breadcrumbs soaked in milk. Two quarts of shorts, one quart of flour, one-half quart of bran and a teaspoonful of soda, mixed with sour milk and baked is also recommended for feeding young turkeys. This cake should be soaked in water before feeding. After the second week wheat may be added to the ration. Under no consideration should this feed be scattered on the ground. Allowing the birds to feed from the hand is the best and safest method. If this cannot be done use a clean board or trough. Keep fresh water before the birds and give them a liberal supply of green feed, such as chopped onion tops or dandelions. Grit is necessary from the first. When the birds are six or eight weeks old they are large enough to go on free range where they secure an abundance of insects and grubs. While they apparently do little harm to the grain. If turkeys must be kept yarded, field conditions must be duplicated as nearly as possible, that is, green food and meat food must be supplied, besides a certain amount of grain. It will be found difficult to keep disease out of the flock unless their feeding ground is frequently changed.

**Don't put off
this silo question
any longer**

It's too important.

Letting things go until the last minute is a habit many of us have, and it's a mighty bad habit, because things that are put off either never get done at all or if done cost more in trouble and expense.

The wise man makes his plans ahead of time. He always has his buildings and other equipment ready before he actually needs them, and he never has to worry himself sick and hire extra help at the last minute to get things done.

There can be no question as to which of these ways is the better.

**Lay your plans now for an
IDEAL GREEN FEED SILO**

Order it and put it up *now*, while you have plenty of time to get it ready. It will be the best investment you ever made.

It will mean 25% more milk in winter at 15 or 20% less expense. It will enable you to keep more cows on the same acreage, and so maintain the fertility of your farm. It will solve the problem of green feed for your cows when pastures fail in summer.

Whether you have many cows or few, good silage means more profit, and the best silage is produced in an Ideal Green Feed Silo.

Write to-day for our large illustrated silo catalogue, which shows you every detail of the Ideal and explains just why you get more for your money in it than in any other silo.

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 Buttermakers. Catalogues of any of our lines mailed upon request.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



MADE IN CANADA

PREPAREDNESS

The Government says
that milk will be paid
for by test—therefore

**Buy Jerseys
NOW**

CANADIAN JERSEY CATTLE CLUB

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London, Ont.

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Brampton

THE DON JERSEY HERD—

OFFERS: Several young bulls, all of serviceable age, and all from R.O.P dams. These are priced right. Interested parties should write or see these at once. We also have females of breeding age. D. Duncan & Son, Todmorden P.O., Duncan Station, C.N.O.

Young BRAMPTON JERSEYS Bulls

For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.P. records, save one. Females, all ages, also for sale. B. H. BULL & SON, Brampton, Ontario.

THE FARM JERSEYS
LONDON, ONTARIO
Jno. Pringle, Prop.

Hillhouse Ayrshires

F. H. HARRIS, Mt. Elgin, Ont.

CANADA'S MOST BEAUTIFUL JERSEY HERD
Present offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother; also cows and heifers. State distinctly what is wanted if writing.

WE WORK OUR SHOW COWS AND SHOW OUR WORK COW
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.

Wool

and HIDES

FARMERS—Why not get the highest prices for your wool and hides by shipping direct to us? You can make the middleman's profits yourself. We send cash the same day goods are received. We are now paying the following prices for goods delivered in Toronto. We pay the freight charges (it amounts to about 1/4c. per lb.) and deduct same from your remittance.

Wool (washed)	62 to 68c. per lb.
Wool (unwashed)	45 to 52c. per lb.
Sheepskins	\$2.50 to \$4.50 each
Beefhides (cured)	20 to 21c. per lb.
Calfskins (cured)	30 to 35c. per lb.
Tallow (rendered)	12 to 16c. per lb.
Horsehides	\$6.50 to \$8.50 each
Horsehair	36 to 37c. per lb.

SHIP TO-DAY

No shipment is too small or too large.
Write for shipping information and tags.

John Hallam
Limited
TORONTO

SPECIAL OFFER OF

Tamworth Breeding Stock

Young sows in pigs. Pedigree papers supplied when shipped.

Herold's Farms, Beamsville, Ont.
(Niagara District)

Yorkshires

From choice stock on both sides. Several young litters.

Also some young sows, ready to be bred.

WELWOOD FARM

Farmer's Advocate, London, Ont.

Swine for Sale—Am offering choice stock in Poland-China and Chester White swine of either sex; most any age. First-prize Poland-China herd, London and Toronto, 1916. Prices easy.

GEORGE G. GOULD, R.R. 4, Essex, Ont.

TAMWORTHS

Pure-bred young stock, both sexes, ready to wean. A choice lot priced reasonable, to sell quickly. Write R. V. Stuart, Strathearn Farm, Orono, Ont.

YORKSHIRES Sows 170 lbs. and under not yet bred. Boars 2 and 3 months, 60 to choose from. Bred from prize-winning stock, Eldon Duke still at the head. Tell us your wants.

Wm. Manning & Sons, Woodville, Ontario.
Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable. C. J. LANG, R. R. No. 3, Burketon, Ont.

MORRISTON Tamworths and Shorthorns. Am bred from the prizewinning herds of England Tamworths, both sexes, 20 young sows, bred to farrow in June and July. Young boars from 2 to 5 months old; Shorthorns of the best milking strain. CHAS. CURRIE, Morriston, Ont.

Avonhurst Yorkshires and Collies
A choice litter of pedigreed Collie puppies, sable and white; both sexes. A few good sow pigs, 8 weeks. B. ARMSTRONG & SON, Codrington, Ont.

TAMWORTHS

Young sows bred for August farrow, and a nice lot of young boars for sale. Write: John W. Todd, R. R. No. 1, Corinth, Ont.

Meadow Brook Yorkshires

I am offering some good litters ready to wean, May 1st. All bred from prize-winning stock. Prices reasonable.

G. W. Miners, R.R. 3, Exeter, Ont., Huron Co.

Champion Berkshires—When buying, buy the best; our present offering are sons and daughters of the two great champions, Lucky Lad and Baron Compton, and out of winners, including champions. Both sexes. W. W. Brownridge, Georgetown, Ont., R.R. 3.

Berkshire Pigs Registered stock, choicely bred young boars, and sows pig, all ages. Can supply pairs not akin.

CREDIT GRANGE FARM

J. B. Pearson, Mgr., Meadowvale, Ontario.

Protecting Tobacco Plants From Cutworm Damages.

"EDITOR 'THE FARMER'S ADVOCATE':"

The bran or mash mixture is probably used more than any other method. It is made by using 50 pounds of bran or an inferior grade of flour to one pound of Paris Green. The mixture is then moistened with 2 gallons of water, and sweetened with one gallon of molasses. It should then be thoroughly mixed. After mixing well the poison bait is ready for the cutworm. On one to two days previous to planting a field in tobacco this mixture should be sown broadcast late in the afternoon or in the evening. It is very destructive to the cutworms if properly mixed, and is effective till it becomes very dry or till a rain comes.

Another method consists in dipping green bits of clover, cabbage, or any green tender stuff in a solution made by using one pound of Paris Green to 50 gallons of water, and scattering the green material thus treated at intervals of a few feet late in the evening. This method involves too much labor to be used on a large scale, but it is very effective.

During the past season a mixture of arsenate of lead, in the paste form, in the proportion of 1 pound of the paste to 7 gallons of water was used to control the cutworms. The plants were pulled from the bed at transplanting time, dipped roots and all into the solution, and then set in the field. When they dried off a good white coating covered the plant. The growth of the plant was good, and no damage was done to the foliage with this strength solution. The arsenate of lead adheres to the leaf and stem of the young plant well, not being easily washed off by rain.

This method gave excellent results last year. Very few plants that had been treated were attacked by the cutworms, but where no treatment was given to the plants the cutworms did a great deal of damage. The main disadvantage of the method is that as the plants are dipped the soil adhering to their roots comes off in the solution and makes it very dirty. The plants should also be set very soon after dipping.

The difficulty of the solution becoming so dirty as to make it unfit for use can be largely overcome by making a kind of cotton cloth basket or putting cotton on the inside of an ordinary basket and dipping basket and all into the solution. Very little would then be required for dipping the plants.

Another way of applying the solution would be to spray it on to the plants with a knapsack sprayer just after they are set. A large quantity of solution would be required because it would be necessary to apply it heavy enough to cause some liquid to run down the stem of the plant leaving it white on drying.

This method has been tried for only one year, but the results seem to justify its being given a trial by anyone who has had tobacco attacked by cutworms or fears an attack this spring. The cost should be comparatively small for dipping enough plants for several acres.

H. A. FREEMAN, Tobacco Inspector.

Questions and Answers.

Miscellaneous.

Speed of Engine.

A two-horsepower engine in a launch is supposed to run at 800 revolutions per minute. However, it only runs 600. Could I get more speed and have less pitch in the propeller if I ran the engine faster?

J. E. C.

Ans. So far as the propeller is concerned there may be two reasons for your engine not running at its proper speed. First, the propeller blades may be too long, or, in other words, the propeller wheel too large for your engine. Secondly, the blades may not have the proper pitch for the velocity of the boat. Two factors determine the proper pitch for the blades, namely, the speed of the engine, that is, the number of revolutions per minute, and the velocity at which the launch travels through the water. Thus if you have this engine in a very small, light hull you will need a different pitch than if the hull were a heavy one. By adapting the size of propeller and its pitch so as to give the proper engine speed you will undoubtedly have a faster launch.

W. H. D.

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One cow that only gave 21 quarts the year before, gave 29 quarts with the machine; two others that gave 22 1/2 quarts the year before gave 26 to 28 quarts this year when machine milked. We have just one cow that refuses to give her milk down with the machine. The cows are very much quieter when machine milked and sore teats are all done away with. Walter has taken full charge of engine and milker since it was put in and has never missed a milking—would rather stay home and milk than go away on a picnic. GEO. E. FREEMAN

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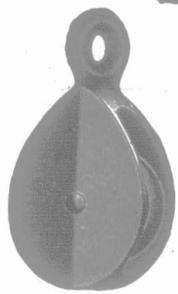
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For only Three NEW Subscriptions

A very dainty design, beautifully decorated in a graceful floral pattern. Six bread and butter plates, six cups, six saucers, large bread or cake plate, cream jug and sugar bowl.

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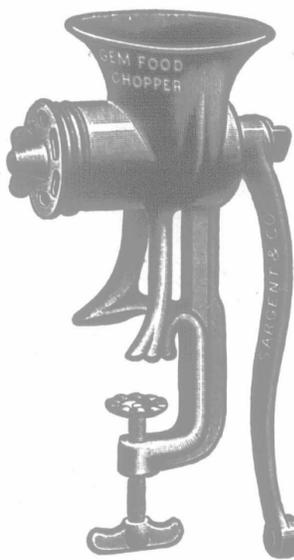
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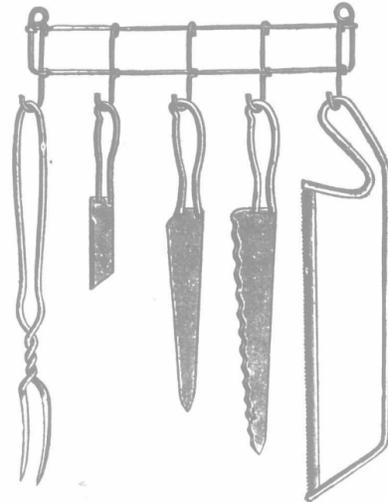


Bibles—For One NEW Subscription. One style, with Old and New Testaments, beautifully bound and clearly printed, with index to names of places, persons and subjects. Has 12 full-page maps. Size, when open, 7 x 10 inches; weight 23 ounces. Would cost \$1.00 to \$1.50 in any book store. Another style, same quality, with centre reference and chromatic index, size when open, 9 x 13 inches.

Silver-Plated Pickle Fork—For One NEW Subscription. Has fancy

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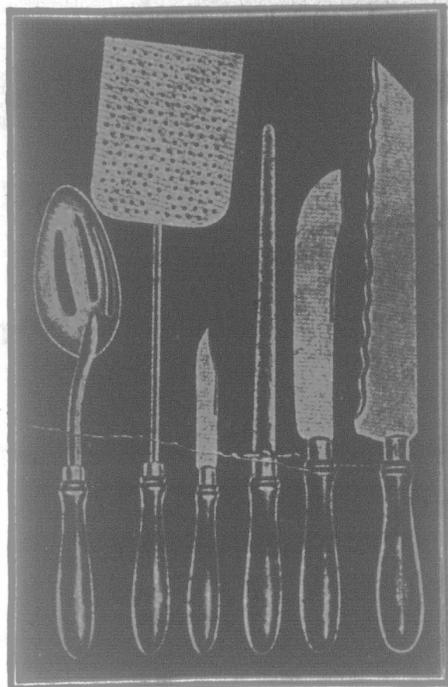
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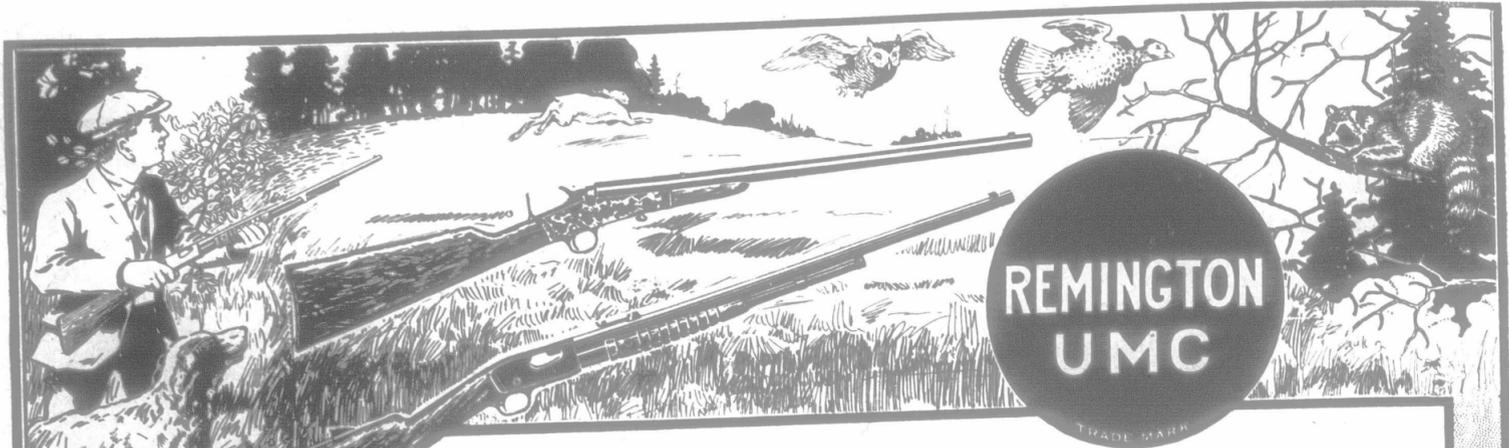


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On account of rapidly changing market on most of these goods, we cannot guarantee delivery indefinitely, although we will at all times do our best in the interests of subscribers.

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