

# FARM AND DAIRY & RURAL HOME



DEVOTED TO  
BETTER FARMING  
AND CANADIAN  
COUNTRY LIFE



Toronto, Ont., April 12, 1917

Comm. of Conservation  
Asst. Chairman  
Jan 13



AN ARISTOCRAT OF THE FARM.

ISSUED EACH WEEK.

Address all Correspondence to  
The Rural Publishing Co., Limited, Peterboro, Ont.

ONE DOLLAR A YEAR.

Once  
Over!

Two diskings in  
one with a double-  
action harrow!

Cutaway  
CLARK

Disk Harrows  
and Plows

Save half the time and labor and have a better seedbed.  
Use a CUTAWAY (CLARK) Double Action Harrow. Its rigid  
main frame causes the rear disks to cut and turn all the land  
left by the fore disks—and with equal force. It will

**Quickly Cut, Pulverize and Level**

the toughest plowed land. The CUTAWAY disks are of cast-steel  
forged sharp—and they penetrate deep without binding up on  
trash. Dustproof, oil-soaked, hardwood bearings and perfect balance  
make light draft. Tongue track not required—close hitch. Many  
CUTAWAY (CLARK) Harrows in use 25 years and still giving splendid service.  
There's a CUTAWAY for every need and a size for every requirement. If  
your dealer has not the genuine CUTAWAY, write us direct. Be sure to  
send for our new free  
book, "The Soil and  
Its Tillage." Plan  
now for better crops.

THE CUTAWAY  
HARROW COMPANY  
607 MAIN STREET  
HIGGANS, CONN.



Maker of the original CLARK  
disk harrows and plows

## THE LIGHT-RUNNING GILSON

FEED AND ENSILAGE CUTTER

The simple, scientific, carefully worked out construction of the  
Light Running "Gilson Silo Filler" makes it absolutely impos-  
sible to clog throat of blower, no matter how fast the corn  
is thrown in. The Gilson is rightly called

THE KING OF CORN CUTTERS!

because of its remarkable elevating power,  
absolute safety, durability, strength and  
simplicity—it stands supreme. It has con-  
venient and quick knife adjustment; solid  
steel-bound cutting wheel; patented safety  
reverser—and is guaranteed to cut and elevate MORE ensilage with the  
SAME power than ANY other ensilage cutter IN THE WORLD. Write  
to-day for catalogue and proof. Manufactured and guaranteed by  
GILSON MFG. CO., LTD., 197 York St., Guelph, Canada



## WE WANT TO DEMONSTRATE ON YOUR FARM

We will send a Gilson Engine, any  
size, without charge, to any responsible  
farmer in Canada to try out on his own  
farm at his own work. Write for  
further particulars of our free offer,  
offer, catalogue and special Intro-  
ductory prices.



GILSON MFG. CO.  
LTD.  
267 York St., Guelph, Ont.

# STEELE BRIGGS

PROVED  
THE BEST BY  
EVERY TEST

"CANADA'S  
GREATEST  
SEED HOUSE"

FOR SALE  
EVERYWHERE  
IN CANADA

# SEEDS

## BOOKS

Make yourself more efficient. Improve your spare  
time by reading. Send for our descriptive catalogue  
of Farm Books. A postal will bring it to your  
address. Write.

Book Dept. FARM & DAIRY Peterboro

## District Representatives at Work

EARLY in the winter it became ap-  
parent that dealers in grain  
were planning to dispose of  
quantities of oats purchased in the  
Western Provinces through the ordi-  
nary commercial channels as seed oats.  
I have examined quite a number of  
samples of grain of this description.  
In the great majority of cases these  
oats are seriously polluted with wild  
oats, and I have advised the dealers  
that it would be exceedingly unwise to  
offer them for sale as seed, and that  
unless the packages containing the  
oats were labelled in accordance with  
the Seed Control Act, that they would  
be liable to prosecution under the Act.  
In spite of this there have been sales  
amounting to perhaps two or three  
hundred bushels of Western oats carry-  
ing a considerable quantity of wild  
oats, which will be used for seed by a  
number of less progressive farmers in  
the county, and this, in spite of the fact  
that there are within the county con-  
siderable supplies of reasonably good  
seed oats of the O. A. C. 72 and other  
standard varieties. The only attrac-  
tion which induced these men to pur-  
chase the Western oats was that they  
were enabled to give their notes in  
payment, and so defer finding the  
capital to secure their seed until later  
in the season. It is difficult to suggest  
any plan by which such short-sighted  
and improvident buying could be over-  
come.—H. Street, Northumberland Co.,  
Ont.

### Live Stock Improvement.

Farmers are taking a very deep  
interest in the assistance to horse  
breeding offered by the Federal Depart-  
ment. It is likely that three or four  
Clubs, if not more, will be formed in  
the County.

The scheme for marketing wool ap-  
pears to be popular with the farmers,  
and after discussing the subject at the  
Dalton meeting, Mr. Wiggin received  
the signatures of eight men who are  
ready to ship their wool to Guelph.  
This was practically every sheep  
breeder in the audience. We are for-  
warding to Mr. Wade the names of  
sheep breeders as rapidly as we can  
get them from the various townships.  
—J. Laughland, Simcoe Co., Ont.

### Students for Farms.

Interest in the movement to place  
High School students on farms is in-  
creasing very rapidly. A number of  
students have interviewed us, and we  
are pleased to note that the majority  
wish to enlist for the sake of helping  
in production and not for the sake of  
securing promotion without the usual  
examination. The idea is being well  
received by the farmers, and we notice  
that the trend of conversation is now  
for larger crops. The feeling is that  
the crops will be looked after if the  
grain is put in.—H. C. Duff, Grey Co.,  
Ont.

### Dairying in New Ontario.

I organized two Live Stock Im-  
provement Associations. The first  
association has 15 members to start  
with, all of whom signed up at the  
meeting. These 15 members have 50  
cows at the present time, and ex-  
pect to have 10 more by the end of  
April. This association is going in  
for the production of milk for the  
Hymers Cheese Factory, and there-  
fore selected a Holstein. I may say  
that while the vote was unanimous  
for a Holstein, the second choice was  
dual purpose, largely because of the  
splendid record made by this strain  
of cows around Hymers last year in  
producing milk that required less  
than 10 pounds to make one pound of  
cheese. This association means more  
that improving the cow, which is  
very important; it means another  
milk route for the Hymers Cheese  
Factory with the production of 50  
cows added to the factory's supply.

At Nolaqu 20 members signed up  
and selected a dual purpose sire.  
These people are all Plains, and they  
want a strain of cow which will be  
good for buttermaking. At first they  
wanted a Jersey sire, but after I made  
a comparison of the Jersey and dual  
purpose, considering both the milk  
and beef production, they selected the  
dual purpose. The 20 members who  
belong to this association have 64  
cows at the present time, and the  
offspring think they will have no trou-  
ble in securing at least 10 more mem-  
bers with an additional 20 or 25 cows.  
The majority of these cows have  
Shorthorn and Ayrshire blood in them,  
and with a good sire and proper se-  
lection of the females, I expect to see  
many good animals of the dual  
purpose strain produced in this sec-  
tion of our district.—G. W. Collins,  
Thunder Bay, Ont.

### A Prosperous Egg Circle.

On Tuesday we attended the an-  
nual meeting of the Millbrook Egg  
Circle. This Circle has increased its  
membership from 45 to 86 and dis-  
posed of 30,000 dozen eggs as against  
12,000 dozen last year. The price  
paid over and above the local price  
varied from 2c to 3 per dozen. The  
Circle netted its members over \$700  
for the eggs handled. Mr. Stuart's  
address was much appreciated, and  
deal with the future opportunities  
of Egg Circles, and recommended the  
Circle to consider community breed-  
ing and crate fattening of poultry.  
Many expressed themselves in favor  
of the community system preparatory  
to the crate fattening scheme.—G. A.  
Williams, Durham Co., Ont.

### White Wyandottes That Lay.

On Friday I visited the farm of  
Mr. Chas. Calvert near Reaboro.  
This man has the largest flock of  
White Wyandottes in the Province  
in the county. Last year he built an up-  
to-date poultry house, 25x50, which is  
one of the best I have seen. He has  
100 pullets and 100 yearling hens, and  
during the months of January and  
February he sold about \$85 worth of  
eggs. At the present time he gets  
about one case a week. The pullets  
have been doing most of the laying  
up to the present time.—A. A. Knight,  
Victoria Co., Ont.

## Annual Meeting of the P.E.I. Dairymen's Association

PROBABLY never so enthusi-  
astic and interested as at-  
tending at the meeting of the  
Dairymen's Association, at Charlot-  
town, on Wednesday last. The reason  
for the overflow of spirits was the  
great increase in the dairy output of  
the little Island Province over the pre-  
ceding year, which amounted to 25  
per cent, the figures comprising the  
increase being \$116,000 over 1915. Talk  
about new industries (and our people  
are all the time talking about starting  
new industries) is all very well. But  
let us, in the meantime, endeavor to  
enlarge and develop the great dairy in-  
dustry which we now have running at  
such a tremendous pace. 25 per cent  
increase in 1916. This dairy industry  
brought into our Province last year,  
with little outlay except labor, \$180,000  
for butter and \$361,000 for cheese, or a  
total of \$541,000, about 46 per head of  
the total population of the Province, or,  
in other words, \$36 for each of the 15,  
000 farmers in the Province.

If we look at the districts that are  
the most prosperous in the "Light and  
Island" they will be found to be those  
in which dairying is carried on in an  
up-to-date manner. New Perth, Gow-  
drie, a Brae, Kensington, Hamilton, York,  
Bedford, Grand, Marshfield, Lunenburg,  
and others that might be men-  
tioned—these are some of the lo-  
cations added to the factory's supply.  
(Continued on page 3.)



# FARM AND DAIRY



We Welcome Practice Progressive Ideas.

## & RURAL HOME

The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

VOL. XXXVI

TORONTO, ONT., APRIL 12, 1917

No. 15

## A Substitute for "Biddy"

Our Experience With Artificial Brooding in 1916

F. E. ELLIS, B.S.A., Halton Co., Ont.

IN the recent Poultry Number of Farm and Dairy we told of our 1916 experiences with artificial incubation. We have started on the 1917 period. The incubator is now running in the cellar with 400 eggs in its charge. The machine is getting every attention, as it carries a precious cargo. Every egg in it is from pure-bred tramped stock, and such eggs cost a lot of money. The incubating of the eggs, however, is a comparatively simple matter, and we prefer to trust the incubator rather than setting hens. With it we are almost sure of a good hatch. In our experience, artificial incubation has been easy. We are now getting ready for the really difficult end of the artificial method of rearing chickens, the brooding season. It is here that the patience and skill of the poultryman is tried to the limit.

We are reminded of an article that we read in an American poultry journal some months ago. It was written by a minister and dealt with his experience in artificial brooding. When he was through relating his own disastrous experiences, he remarked that he would like to hear from others with experience in artificial brooding, on condition that they "were not addicted to the use of profanity in their correspondence." We quite appreciate the minister's feelings in the matter. Our experience was not all pleasant, but we learned much even if we did lose much, and this article is an attempt to give Farm and Dairy readers an opportunity to learn by our experience rather than their own.

### In Incubator 48 Hours.

After the hatch is complete we leave the chickens in the incubator for 48 hours. When the chicken is born it contains the yolk of the egg, and it is according to nature's intention that this yolk should feed the chick for the first couple of days. During this period there is no better place for them than the brood chamber of the incubator, where the temperature can be controlled more accurately than in the best brooder. Open the ventilating slides of the incubator and let them have lots of air. It will be necessary, too, to open the front door slightly. We watch the chickens. If they crowd to the front of the incubator, it means that they are too warm, and if they seem to be panting, more air is necessary and the front door must be opened wider. If the weather is at all warm, the front door may be opened several inches, and the method that we have found satisfactory to keep the chickens back in the incubator, is to block the passage with excelsior or wood wool. On the other hand, if the chickens crowd to the back of the incubator, they are getting too much air, and are too cold. Close the door as required.

Now for the brooding equipment. We favor the large-sized coal burning brooders which handle the chickens in flocks of 200 to 500 each. Our brooding stove sits in the centre of a colony house

eight feet square, built specially for the purpose. The house is on skids, double floored with roofing paper between the two floors, is four feet high at the back and seven feet at the front. In the front are two windows a couple of feet square and openings of equal size covered with cheese cloth, the latter to provide ventilation. Incidentally we might remark that this cheese cloth must be swept off a couple of times each day or the pores will become clogged with dust and ventilation will be deficient.

### The Coal Burning Brooder.

There are so few coal burning brooder stoves in Canada that a description of ours may be interesting. It is built on the same principle as the universal hover, except that in place of a kerosene lamp supplying the heat, a small coal burning stove sits in the centre of the hover and the hover itself is five feet across, and, therefore, capable of accommodating fully 10 times as many chickens as the common lamp heated hover. The draught is regulated by a Thermostat and, in some machines, though not in our particular make, the regulation has been gotten down so fine by the manufacturers that not only is the draft checked at the smoke pipe by the thermostat, but the bottom drafts are closed or opened at the same time. The very fine regulation of temperature, however, is not so necessary as might appear as the chickens regulate the temperature themselves. With a very hot fire they will get

out from under the hover altogether, and if the fire cools down they draw in nearer to the stove.

The advantages of this system of chicken rearing are numerous. Instead of having numerous flocks of 50 with the oil burning hovers, or still more numerous flocks in charge of the "Biddies," we have one flock of 300 to 500 chickens, and with labor therefore reduced to a minimum. It is the only system we know of that enables the dairy farmer to carry a good sized poultry plant without hiring additional labor.

### Our First Mistake.

Our first mistake (and we have more failures to relate than successes) was in the choice of a brooder. We knew that the system was good, as it was in successful operation on hundreds of poultry plants in the United States, and was strongly endorsed by the Central Experimental Farm at Ottawa. The stove that we purchased, however, was of a self-feeding type, and so constructed that the operator could not see the fire at all. We were constantly working in the dark and hard coal fires are difficult subjects to handle when they get low, especially when the fire chamber is so small as in a brooder stove. Then again, we tried to use too large coal. In this we followed the manufacturer's instructions and used nut coal. The feeder frequently choked, and did not feed, and the fire would go out in spite of us. When the fire had gone out several times and almost frozen the chickens, we started to use pea coal and had better success. Even then, however, the fire would go out every three or four days, and many a time I have been up until after midnight working with the fire, while the chickens clustered around an oil heater that we learned to keep on hand for such emergencies.

Our first move in getting ready for the chickens was to thoroughly scrub the brooder house floor and walls with a three per cent solution of zenolene. Then clean alfalfa chaff and sand were scattered over the floor an inch or so deep. The fire in the brooder stove was started three days ahead of the time that the chicks were expected to be transferred from the incubator in order that the thermostat might be properly regulated in the meantime. Our first brood consisted of 265 Barred Plymouth Rock chickens of the O. A. C. bred-to-day strain. When put in the brooding house, they were as strong and vigorous chickens as one could wish to see. Four weeks later, when they were removed to smaller colony houses to go on range, there were only half of them left.

### An Attack of "Lungers."

This was our most disastrous experience in the chicken business. For the first few days everything seemed to be all right, then a few were noticed to be going around looking decidedly dumpy, got pasted up behind, and soon it be-

### Renewing the Flock

ON any farm there is labor enough to care for one or two hundred laying pullets or hens. But to be profitable the flock must be frequently removed and renewing in the past has been difficult. Now the incubator holding 280 to 400 eggs, and the coal burning brooder accommodating several hundred chickens in one flock, seems to have solved the problem of keeping the laying houses full of pullets. Of these two, the incubator and the coal brooder, the latter is the one that the farmer poultryman will most appreciate. A flock of 200 pullets, well bred and intelligently cared for, will return as great net profits as a herd of 8 or 10 cows. Such has been the experience of the writer of the adjoining article, whose experience in brooding he here gives in detail.



came the common thing to find a few chickens dead every morning. The chicks had charcoal, red and fine oyster shell before them at all times. This was good. They had sods to pick at and this, too, was good. Where we fell down was in the feeding method. We attempted to follow a method that is successful with one of the largest and most experienced poultry farmers of Canada. We are now convinced that his system is not a desirable one for the beginner. According to his method, liberal amounts of the various grain mixtures were placed before the chickens and left there for five minutes, then removed. We believe that the chickens were over fed. When almost a

third of the chickens had died, we decided that something had to be done. I wrapped up a corpse or two, packed my travelling bag, and started off for Guelph to interview Prof. Graham. The worthy professor knew what my trouble was before I had half told him. They had had serious difficulty with the same disease at Guelph, he told me. At that I began to take courage. If experts like Prof. Graham had had trouble with the disease, then why should I, a beginner, be downhearted. The result of our interview was that Prof. Graham recommended a feeding method which, he said, would keep up the vitality of the chickens to such a point that they would not be so subject to this disease which he called "lungers." On opening up the chickens that had died we found that the lungs had been replaced by a grayish pulpy matter.

When at the college I went out to see the stove brooders that were there giving good satisfaction. They had two going with about 500 chickens under each, and the chickens were as healthy and doing as well as the ones in smaller flocks with universal hovers. The coal stoves in the college brooders, however, were of a different type than our own. They were simply diminutive Quebec heaters in which the fires never went out and never gave any trouble. I went home. We applied Prof. Graham's methods, mortality began to decrease almost immediately, and it almost ceased when we moved the Rocks out to make room for the second hatching, which were White Leg-horns.

#### Success at Last.

It is this second hatch that we prefer to tell our friends about, for here we had better success in bringing the chickens through the brooding period than we had ever had even with the natural method of brooding. The hatch consisted of 300 chickens, and when artificial heat was removed at the end of six weeks, only three of the chickens had died, and two of them as a result of accident. From then on till the end of the summer season, only one chicken died from an unknown cause. We had profited by our first experience, and by the application of Prof. Graham's feeding methods. We now know that we

(Continued on page 6.)

## Nutrients to Develop Fetus

### The Quantity Practically Negligible

**L**IBERAL feeding of dairy cows during the period of pregnancy and particularly during the last couple of months is popularly believed to be necessary because of the heavy demands made on the cow's system for the development of the unborn calf. Prof. C. F. Eckles, Missouri College of Agriculture, as the result of carefully controlled experiments is led to the conclusion that the amount of nutrients necessary to develop the bovine fetus is so small that it can-

during the period of gestation a ration even less than was found necessary to maintain her dry and farrow during the same months of the year. Discussing these experiments, Prof. Eckles writes:

"It is the practice of the best dairy cattle men to feed cows liberally during gestation and especially in the later stages. Some emphasize this practice as necessary for developing the fetus while others place stress upon the favorable condition for a large milk production resulting from having the cow in high flesh at the time of parturition. This liberal feeding is unquestionably one of the chief factors in bringing about the maximum milk and butter fat production for a cow, and is understood and followed by those most successful in this respect.

"It is a matter of common belief that the size and vigor of calves is directly influenced by the feeding of the mother, but it is still an open question as to how far this is true. There is abundant evidence that the size of the calf is determined mainly by breed and heredity and not to any great extent by the feed of the cow. It is a common observation that cows poor to the point of emaciation may bear calves of normal size for the breed. It is also a matter of observation that the calves of cows excessively fat are often undersized at birth. Apparently, it is only extreme cases of poor nutrition or the lack of some constituents in the ration covering a long period of time that may be expected to exert any marked influence upon the size of the calf. The calves from the four cows used in our experiment averaged above normal although the cows received as a ration only sufficient for maintenance when farrow. The weights of these calves are given in comparison with the average birth weight of calves for the breed.

"Cow 27; breed, Jersey; weight of calf, 75 lbs.; weight of average calf for breed, 53 lbs.

"Cow 62; breed, Jersey; weight of calf, 48 lbs.; weight of average calf for breed, 53;

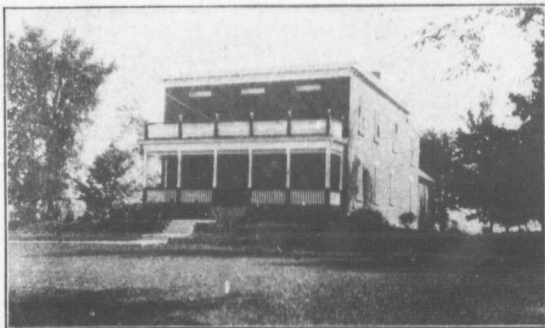
"Cow 206; breed, Holstein; weight of calf, 95 lbs.; weight of average calf for breed, 89 lbs.

"Cow 304; breed, Ayrshire; weight of calf, 82 lbs.; weight of average calf for breed, 64 lbs.

"It is evident the size of the calves was not influenced by the plane of nutrition of the mothers.

The cooperative principle is for each member to provide, if possible, sufficient capital to finance his own trade with the society. It is therefore necessary to get a large number of members with modern investment prepared to do business with the society rather than that the capital should be subscribed from a comparatively few, from whom the necessary volume of business cannot be expected. The profit is made on the trade, not on capital, and if the latter is fully subscribed by each member taking one share only, it will be more likely to ensure success for a cooperative association from the start.

FINE BUILDINGS IN CHATEAUGUAY CO., QUE.



Above is the home of Mr. Hector Gordon, and below the dairy barn in which is housed one of Canada's best herds of pure-bred Ayrshire cattle.

—Photo by an editor of Farm and Dairy.

not be measured by ordinary methods of experimentation.

Four cows were kept during the entire period of gestation at the Missouri Experimental Station on a ration found by six months' trial to be only sufficient to maintain them at uniform weight when not pregnant and not producing milk. These cows developed calves of normal size for the breed on this ration, and one cow weighed 48 pounds more after the calf was dropped than when bred, and the other weighed only 17 pounds less.

This result was confirmed by two additional cows, the feeding of which was regulated during gestation by that required to maintain a dry farrow cow at uniform weight. One of the Jersey cows developed a normal fetus while receiving



## Clover is Our Banner Farm Crop

A Discussion of Varieties and Cultural Methods—By *Jas. Atkinson*

**C**LOVER is our banner farm crop. In the term "clover" I include all varieties—red, mammoth, alsike and alfalfa. My first farming was done in my native province of New Brunswick. Part of the old homestead was marsh land and part of it upland. The upland was poor; the marsh the very richest and best clay land in Canada. With marsh mud and clover, we managed through a long series of years to make our upland so productive that we could grow bumper crops of grain, potatoes and roots. It was always a point which called for differences of opinion among our New Brunswick farmers as to which deserved the most credit for our productive upland fields, the marsh mud or the clover.

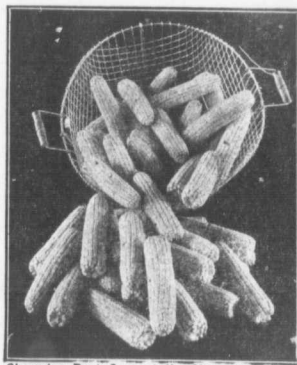
A few years after we comfortably settled in New Brunswick, the wanderlust seized me and we all moved to Ontario. We expected to find different conditions here, but I was not long observing that the best of my new neighbors were as enthusiastic clover advocates as my old neighbors had been, but that the most enthusiastic clover advocates of them all were talking most of what was to me a brand new clover—alfalfa. Now, after a goodly number of years farming in two provinces under different climatic conditions, I find my enthusiasm for the clover crop as great as ever. I regard clover as the basis of permanent agriculture, and it was my desire to pass on some of the things that I have learned about the crop that gave birth to this article.

### Distant Fields in Alfalfa.

First there is the selection of variety. I plan to keep all the distant fields of the farm in alfalfa. This is possible with us because the distant fields are well drained and the soil is of a limy nature. These fields we cut for hay or pasture discreetly, very discreetly. In alfalfa these fields call for a minimum of labor, and this is a great advantage where every trip to these fields means a quarter of a mile or more. On the farm we have a couple of stony fields. These two we keep in alfalfa. There is too much wear and tear on

machinery and horses to justify the working of stony land. Following are three points, which, I believe, explain our almost invariable success with this crop:

In the first place, there is lots of lime in our soil. Alfalfa simply will not grow on a soil that is acid or even neutral. It must have lime and had nature not bountifully supplied our fields with lime we would apply it. In the second place, the roots must be inoculated with the proper bacteria to draw nitrogen from the air, or the stand will die out in a year or two, unless the soil be excessively rich and able to supply nitrogen direct. We always inoculate our seed with pure culture, supplied us from the Ontario Agriculture College. In the third place, we have always insisted in getting the seed of the Ontario variegated alfalfa. When I made my first seeding of alfalfa in Ontario, I was ignorant enough to go to the local feed man and take what he gave me. I got Northern grown seed, but I have since discovered that Peru is north of the equator, even though it is in South America, and that probably



Champion Dent Corn at the Kingsville Show.

few essentials to its best success that are neglected, even in our progressive neighborhood. First, consider the rate of seeding. The average is probably four to six pounds of seed to the acre. With such seeding on good land the clover grows very coarse in stem, and I don't blame the cows when they leave a lot of it in their mangers. I always use 12 to 15 lbs. to the acre, and get a finer hay, a greater tonnage, and one that the cows will eat clean. The extra hay per acre will pay for the extra seed several times over, to say nothing about the superior quality of the forage. Along with the clover we seed a little timothy to help hold the clover up, and also to safeguard against the remote possibility of the clover being winter killed, in which case we would still have a crop of timothy.

### Don't Bury the Seed.

The covering of the seed is important. One of the greatest mistakes I think that was ever made is to use the clover seed attachment which the ordinary grain drill. The tendency of this implement is to cover the seed far too deeply. The seed is buried and never reaches the surface. We prefer to sow our clover seed with a hand seeder of the blower type, and then drag in very lightly with a tilting harrow. If the tilting harrow is not to hand, I would suggest a return to the old brush harrow. Another point is, never let the clover bloom the first year. If the clover is allowed to bloom in the fall after the nurse crop of grain is taken off, there will be little or no crop the next year, for its life's cycle is then complete.

On the start the clover seed throws out a very frail, tender root, and for the first few months is a very delicate feeder. Bearing the character of the little plant in mind, I always aim to have the seed bed well pulverized and mellow, but not loose. Frequently I roll the land after sowing the clover and work the surface again with the tilting harrow. A home-made implement that used to be popular down in New Brunswick with a few of our neighbors, and that would, I believe, be ideal both for covering the seed, firming the soil around it, and yet leaving a mulch on the surface, is the common plant drag.

### As a Soil Improver.

I grow clover for two reasons, and I do not know which is the more important. First, because of the high protein value of the hay, and, secondly, because of its value in improving the soil. A few days ago I was reading in a bulletin that

(Concluded on page 8.)



Canadian Ayrshire Breeders at "Stoneycroft Farm."

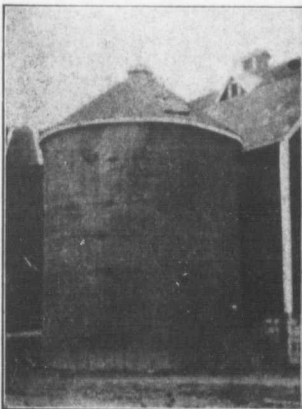
During their last annual meeting in Montreal the members of the Canadian Ayrshire Breeders' Association visited several Ayrshire herds in the vicinity of Montreal. They are seen herewith leaving "Stoneycroft Farm" on their way to Macdonald College.—Photo by an editor of Farm and Dairy.

explains why my Northern grown seed gave me stands that never survived the first winter. Finally, while we pasture our alfalfa extensively, we never pasture it closely, and always make sure that there is a good top on the alfalfa when winter sets in.

### Our Three-Year Rotation.

Fortunately, the fields around our barn are the most easily tillable that we have; very little stone and nice, loamy soil. Here we practise, so far as possible, a three-year rotation. First year, corn and roots, second year, mixed grains seeded down to red clover, and third year, clover hay. And here the red clover of our New Brunswick days is still the standby. It works into a short rotation as other clovers never can. We have tried mammoth clover and found it too coarse to make good hay. Its chief value I presume is as a soil improver. It produces a tremendous amount of green matter to turn under. Mammoth clover, too, I am told, will grow better on poor soil than will red clover, and, therefore, has this additional advantage as a soil improver. It was our experience, however, after turning in one crop of mammoth red clover, that the soil was slightly acid and our next catch of common red clover did not do well. That was down in New Brunswick, where our soil was deficient in lime and my conclusion is that in such cases green manuring must be accompanied by lime. I might mention, too, that we had no aftermath with mammoth red clover.

But to get back to the red clover. There are a



An Old Silo Still in Service.

A stave silo, built many years ago on the farm of O. D. Baise, York Co., Ont., as photographed by an editor of Farm and Dairy.

# PEERLESS PERFECTION

## Absolute Security

WHEN you go away for a day or turn in for the night, you are certain your stock is locked in—they can't get over, under or through—the spaces—a perfect fence for hilly or uneven ground, through streams; protects poultry, ducks, geese, sheep and hogs. Can't sag or break down and will turn an unruly horse.

## Peerless Perfection Fencing

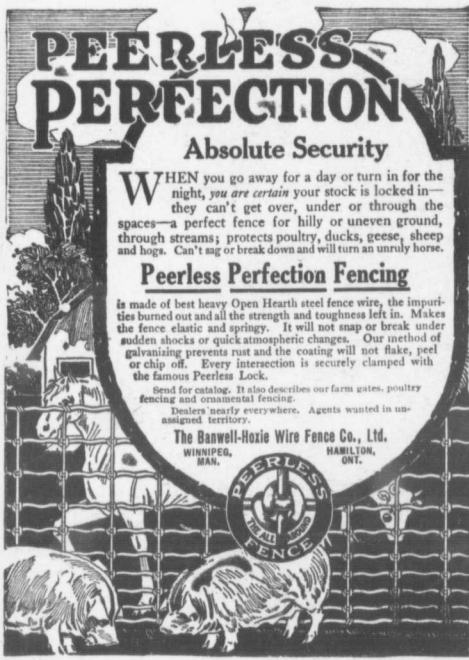
is made of best heavy Open Hearth steel fence wire, the impurities burned out and all the strength and toughness left in. Makes the fence elastic and springy. It will not snap or break under sudden shocks or quick atmospheric changes. Our method of galvanizing prevents rust and the coating will not flake, peel or chip off. Every intersection is securely clamped with the famous Peerless Lock.

Send for catalog. It also describes our farm gates, poultry fencing and ornamental fencing. Dealers' names everywhere. Agents wanted in unassigned territory.

The Banwell-Hoxie Wire Fence Co., Ltd.

WINNEPEG,  
MAN.

HAMILTON,  
ONT.



A chick in the hand is worth 2 in the shell

To raise all your chicks—to prevent bowel trouble, drooping wings and Baby Chick disease, use

**Pratts' Baby Chick Food**

Contains just what's needed to make bone, muscle and feathers. Largely digested, finely ground and packed in dust-proof bags and cartons at 25c 50c and \$1.00. At your Dealer's. PRATT'S White Diarrhoea Remedy used in the drinking water prevents and cures this dread disease. Write for FREE Book on the Care and Feeding of Baby Chicks.

PRATT FOOD CO. OF CANADA, Limited TORONTO P-11  
511 St. Clair Street

## S.C. White Leghorn Day-Old Chicks

Order now from our well known laying strain. Pens mailed to Barron cockers. Satisfaction guaranteed. Write for our booklet re Care and Feeding of Day Old Chicks.

UTILITY POULTRY FARM - Stratford, Ont.  
Lt.-Col. T. G. Delamere, Prop.

## You'll Find the Advertisers

in FARM AND DAIRY are advertising reliable goods. They want to know you, also want to know where you saw the Ad. When writing them don't forget to tell them you saw the Ad. in FARM AND DAIRY.

Get more money for your live stock

FEED THEM  
"MAPLE LEAF"

LINSEED  
OIL CAKE

FINE GROUND OR MILLED

Contains over 25% Protein.  
"Contains" over 35% Carbo-hydrates.  
Write to-day for our free booklet.  
"Facts to Feeders."

THE CANADA LINSEED OIL MILLS  
LIMITED.  
TORONTO & MONTREAL.

## A Substitute for "Biddy"

(Continued from page 4.)

can work this system satisfactorily, and that with rigid care we can duplicate our success of last year, year in and year out.

The feeding method calls for care. The chicks are fed five or six times a day, and every ounce of feed that they get is weighed carefully. The first day the chicks are in the brooder they have warm water to drink and grit on the feed board. For the second day and the rest of the first week, they are fed six times—at 6.45 a.m., 9 a.m., 11.30 a.m., and 2, 4 and 6.30 in the afternoon. The first feeding consists of one-half each of rolled oats and chick feed, one ounce to 50 birds. Second feed rolled oats and hard boiled eggs by bulk, one to five; one ounce to 50. Third feed same as first; fourth feed, bread, milk, shorts, grit and bone meal. This mixture is moist and crumbly, but not too least bit sloppy, and the chickens are given all of it that they will eat. The fifth and sixth feeds are the same as the second feed—hard boiled eggs and rolled oats. All through the week there was fresh clean water before the chickens continual. No milk. Where chickens are kept in such large flocks it is necessary to have several drinking fountains distributed around the room.

Feed in Second and Third Weeks. The second and third weeks the chickens had sour milk to drink. The first feeding consists of rolled oats and hard boiled eggs, one to five by bulk. The eggs which they lasted, were boiled one-half hour. Likewise they got one and one-half ounces to 50 chickens instead of one ounce in the previous week. At nine o'clock commercial chick feed in the litter, one and one-half ounces to 50. At 11.30, eggs and oats; 2 p.m., bread, milk, shorts, etc.; 4 chick feed in litter; 6.30, eggs and oats. In the second and third weeks, the chicks got all they would clean up at 2 and 6.30 p.m.

The fourth week the chicks had rolled oats in front of them at all times. These were not the rolled oats that we use ourselves on the breakfast table, as had been used the first three weeks, but what are commonly known in rural Ontario as horse oats. These rolled oats were fed in a hopper. At noon they got a mash, crumbly wet, of corn meal, rolled oats, middlings and bone meal, equal parts of each, or rather only one-half part of the bone meal. At night they got chick feed in the litter, all they would clean up. Practically the same system of feeding was followed during the fifth week, six weeks and thereafter they were hopper fed, at first with a wet mash at noon, but later this, too, was discontinued, and was fed dry in a hopper. In the hoppers the chickens had the choice of dry mash, of corn and of wheat.

Cleanliness of Primary Importance. If there is any point here that we would like to emphasize above all others, it is the necessity of keeping everything perfectly clean. Drinking vessels must be washed and scalded regularly, and the house thoroughly disinfected, before a hatch is allowed in it. The small points in the management of the chicks are numerous. When they are first put in the brooder house, they don't seem to have sense enough to stay under the shelter where it is warm but will bunch in the farthest corners and many will be suffocated if this bunching is permitted. During the first day or two, a strip of very fine chicken wire about a foot wide must be set up in a circle around the hoyer and about a foot from it, this to keep the chickens near the heat. Gradually from day to day the wire may be moved back farther until the chickens are finally given the liberty of the house. About the tenth

day a tendency will be noticed for the chicks to bunch altogether on one side of the hoyer at night, instead of distributing themselves in a circle around it. The only thing the poultryman can do is gather them up by hand and distribute them in their proper places.

As soon as possible the chicks must be gotten out on the ground, otherwise leg weakness will develop. Ours were gotten out first when they had been in the brooder house a little over two weeks. Here the chicken wire is again brought into play. If given the full liberty of the run attached to the brooder house, the chicks will not be able to find their way back to the hoyer, and in their endeavors to keep warm will pile up in bunches, some will be smothered to death and others killed. Extend the chicken wire out about a foot or two into the run the first day and gradually increase the space the chickens are allowed. For the first week, however, it will be necessary to keep a close eye on the chickens to avoid the outside bunching tendency. Once they have learned to return to the hoyer as soon as they are cold, we allow them to run at large, and from then to the end of the season they have the liberty of the farm.

## A Substitute for Boiled Eggs.

In connection with the feeding method. The schedule as given us by Prof. Graham called for a great many hard boiled eggs, these, of course, to be the infertile eggs removed from the incubator. The fertility of our hatching eggs was so high that the infertile ones were used up before the end of the first week. We found, however, that chick beef scrap made a satisfactory substitute for hard boiled eggs.

We are now getting our brooder house ready for this year. Our old brooder stove will be used for chicks three weeks to seven or eight weeks of age, as chicks of this age will not suffer particularly from a slight chilling in case the fire gets low. For our younger chicks, we have a new brooder stove built on the plan of the Quebec heater, and with it we expect no trouble.

The foregoing directions would make this method of brooding chickens appear to be more complicated and troublesome than it really is. Of course, during the first three or four weeks, the assistance of the women folk is necessary as the farmer himself would not care to stop his team in the middle of a field three or four times a day to go and feed the chickens. My wife really had more to do with the chickens than I had. We keep our brooder house during this period only a few steps from the kitchen door, and the feeding of the chicks is merely an incidental of the day's work in the house. Later in the season, when the chickens are hopped fed, the colony house, chicks and all, can be drawn to any part of the farm desired.

## Cabbage for Green Feed

In a series of experiments covering several years, cabbage has given five tons per acre more of green food than the very best rape. This result, secured by Dr. A. Z. Zavitz, has been a source of surprise to the majority of farmers who have heard him make the assertion. The best results have been obtained by having the cabbage comparatively close together, even though the heads under such planting do not attain the usual size. The main objection to the cabbage as a crop is that the seed is expensive as compared with rape or kale. About one pound of seed is required. The crop is of particular value to the shepherd.

# This Gang



will do less work and poorer work than this gang

At this time, when labor is so scarce and material costs so much, here is the standing wonder to Standard Posts and Fence Users. Why will farmers put up cheap, "made-to-sell" fences and also why they waste hours of back-breaking labor, digging holes three times too big for a fence post, then stick the post in, fill it up, have the posts rot to pieces and have to do it all over again later on?



Steel Tube Fence Posts & Wire Fencing

## "Standard" Fence Carries a Real Guarantee

It is full, Government standard, No. 9 gauge wire. The galvanizing is heavy, uniform and perfect. The uprights are full gauge too. The spacing is always true and uniform. The tests that Standard Fence gets before and during weaving are such you'd wonder any fence could stand them. It's easy for you to put up because it's honestly and correctly made. No man's money can buy anything better. But if you ever have any complaint just write us and you'll see what a real guarantee means.

### Cheap Fencing Doesn't Pay---Us or You

We are more mindful of our quality-guarantee this year than ever before and so should be. Steel is almost a "precious" metal. Galvanizing materials are sky-high too. So don't buy cheap or skimmed fence. We say that whether you buy "Standard Fence or not. A poor fence is an aggravation and an expense and finally a total loss.

THE ONTARIO AGRICULTURAL COLLEGE, GUELPH, LIKES THEM.

Dear Sirs:

I have your favor of the 2nd, regarding the steel tube fence posts which you sent us, and I am pleased to say that these posts have given very good satisfaction indeed. We have used them almost entirely, in connection with our sheep pasture, and they have proved perfectly satisfactory for this purpose. Yours very truly,

(Signed) G. E. DAY.

Standard Tube and Fence Co.

USE THE COUPON BELOW TO-DAY—IT WILL PAY YOU WELL



Putting in Standard Steel Tube Posts—EASY!

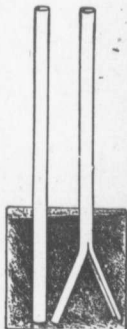
STANDARD TUBE & FENCE CO., LIMITED, WOODSTOCK, ONTARIO.

Without obligating me in any way, I would like to have you send me your catalogue and prices.

Name .....  
Address ..... P.F.D. 12-4-17



Use Standard Steel Tube Fence Posts



Standard Steel Tube Fence Posts.

This is the modern money saving plan over wooden posts which always were a hopelessly wasteful proposition. Standard Posts are driven into the ground with a few mallet strokes and there they stay for two generations or more. They don't wobble or sag. They don't crumble and rot. They don't blow down. They don't harbor crop-destroying insect pests. They don't cost as much as cedar and they hold the fence better. What more could you want?

But here's the big labor and money-saving point: let a man and a boy go out with a wheelbarrow and mallet and they'll put in more posts in a day and do it better than three men and a boy digging holes and putting in posts the old way. Just figure out for yourself the saving that means

### Take a look at our Famous Knot

This knot was originally invented by us and although widely copied our special gradual-curve, whereby the grip is vice-like the galvanizing is not chipped or cracked, has never been equalled.

Standard Fence Post Hooks are supplied free and they give a taut, even grip and cut out the labor of driving staples. Our whole business is built up on big service to farmers. Use Standard Fence and Standard Posts and banish the broken-down-fence bogey, and the weary, wasteful, costly post-hole digging.

Send us your order now.

Prices must go up soon.

Standard Tube and Fence Co., Ltd. - WOODSTOCK ONTARIO



## Annual Meeting of the P.E.I.

## Dairymen's Association

(Continued from Page 2.)  
catties that have pursued dairying in a systematic way. The prices received this year, while possibly the greatest ever, as the amount of milk received at the factories was greater than in 1915. As to the prices, it was stated at the meeting that one man, Mr. Fred Woolley, obtained last year, \$109 from each of his cows, a fact that goes to show that marked improvement has taken place in the individuality of the cows. Mr. John Anderson, a dairy en-

thusiast, though now occupying a government office, referred the meeting to a case of a man in Belfast, who with only 30 acres of land, but who fed the whole product of his small farm, took last year, for cream, \$260 and for pork \$250. Dairying is no lazy man's job, but given the industry and care with reasonable cooperation on the part of the patron, and which is given to most kinds of business in the city, there is no industry in town or country which will pay like it. In Prince Edward Island. We have had abundant proof of this fact, even in our early and tentative efforts, and when prices were, withal, comparatively low, and, when

all inexperienced, our dairy farmers and dairy directors made many mistakes. Now, however, that they have gained experience, and absorbed light, and that conditions point to a further period of good prices, the future of dairying in this province is bright indeed. We look forward to the time when Prince Edward Island will be the Denmark of America, and to that end dairying the basic industry, in conjunction, of course, with pork-raising. In this the fertility of the soil is not only retained, but greatly improved, thus benefiting the whole community.

Some Who Were There.

It was pleasing to see present at this

meeting such old stalwarts as W. J. Gibson; Marshfield; W. H. Lea, M. L. A.; Walter Simpson and J. H. Simpson, Dairyview; A. McLean (last Royce breeder of Milkmaid VII.); Alexander Hamilton, New Perth; P. F. Hughes, Emerald; James O'Connor and C. H. Howat, Kensington; Adam Brown, New Glasgow; George McNair, McPeque; Tupper Ferguson, Marshfield; A. E. Dewar, M.L.A., New Perth, the president of the meeting; H. D. Doble, M.L.A. (making three dairy patrons who are members of the Legislature, Mr. Lauchlin McDonald, Prospect Hill, being absent, and there would have been four dairymen members of Parliament); James McKinnon, Newell; Prof. Theodore Ross, Bedouque, who is once more among the patron members of the Association, having given up his job to wait on his high class milking Shorthorns.

To these men and others not present, the industry owes largely its present proud position; for these stalwarts had deep faith in the dairy business from the start, and with great perseverance and tenacity stuck to the business in the dark days as in the dawn, and it must be a satisfaction to these men to look down upon the Island dairy industry as it stands on the crest of the wave to-day.

Another pleasing feature of the meeting was to see our clergymen taking an interest in our basic industry. As a token of the meeting's appreciation, Rev. Father Gauthier, Palmer Road parish, was made President of the Association for 1917. Rev. Dr. Walker, of Robbly, is another stalwart, though not present. He was who built the first silo in Kings County, and his Ayrshire herd were winners at last fall's fairs, and also the top-notchers at the Gowan Brae factory. Rev. J. A. McDonald, Wellington, another clergyman who was present, and is taking an active part, and in this way looking after the material interests of large and flourishing parishes. A little dairy wisdom sandwiches in all right with Bible wisdom.

Two practical papers, bearing on dairy development, were read at the sessions by W. M. Lea, Crapaud, and Mr. Theo. Ross of Bedouque. The local government was commended by resolution for the aid given to the dairy industry, and advocating a campaign to still further the quality of the dairy output.

At a later meeting of the directors, Rev. Father Gauthier was elected president; Mr. Horace Wright, Bedouque, vice-president, and Mr. J. Walter Jones, Hazelbrook, Secretary. — J. A. M.

## Clover is Our Banner Farm Crop

(Continued from page 5.)

experiments show that 30 to 60 per cent. of the fertilizing value of clover is in the roots and stubble that are plowed under, even though the hay crop is removed, and that an acre of well-inoculated red clover adds about 200 lbs. of nitrogen to the soil, this nitrogen being taken from the air. The extensive root system of the clover works up the soil so thoroughly that I do not consider that deep plowing is necessary in any soil if clover is grown at frequent intervals.

I have mentioned that both alfalfa and red clover require a well-drained soil. Does this mean that the man with the low farm is to lose the advantage of these wonderful crops? Not at all. Our marshes in New Brunswick were as low and wet and heavy as one could very well imagine, but askle clover thrived wondrously. Not only that, but it re-seeded itself. Alike is not so heavy a cropper as is common red, but the hay is more nutritious. White Dutch, the remaining member of the clover family, has a place, I believe, in every permanent pasture mixture.



## Rubbers Save the Children's Shoes and Many a Cold as Well!

Nothing but rubber will see the children dry-shod through these slushy, splashy spring months! See that their feet are well protected, either by rubbers or rubber boots, for their health depends on it.



Approved Certificate

Foot protection is most perfect, and service most satisfying, when you choose rubber footwear bearing one of these marks of proven quality and long wear:



## Canadian Consolidated Rubber Co.

LIMITED


Largest Manufacturers of Rubber Goods in the British Empire

EXECUTIVE OFFICES - MONTREAL, P.Q.

SEVEN LARGE, UP-TO-DATE MANUFACTURING PLANTS IN CANADA

28 "SERVICE" BRANCHES AND WAREHOUSES THROUGHOUT CANADA





**MICA HELPS THE HAUL**

Dry hubs strain  
1. The horses  
2. The harness  
3. The wagon

**MICA AXLE GREASE**

helps all three factors in the haul.  
It smooths the axle surface.  
MICA is the important part of axle grease.

THE IMPERIAL OIL COMPANY Limited  
BRANCHES: ROUGHOUT CANADA

**PATENTS IN ALL COUNTRIES**

Book "Patent Protection" Free  
**BACCOCK & SONS**  
Formerly Patent Office Examiner. Estab. 1877  
79 ST. JAMES ST., MONTREAL  
Branches: Ottawa and Washington

**Scratches and Stockings**

—An ointment to cold weather  
irregular work and overwork  
cause such a crusty, sore and  
blood curdled, such as  
**Fleming's Tonic**  
**Leaves Remedy**  
will prevent these troubles and  
wind deranged, with Fleming's  
Veterinary Ointment Oil equally  
easy to use. Price \$1.00  
Fuller Information in  
**FLEMING'S VEST POCKET  
VETERINARY ADVISER**  
Write for a Free Copy  
**FLEMING BROS.,** Montreal  
83 Church St., Toronto



**BOOKS** Send for our  
Catalogue of  
**Books** Sent Free on Request.

**HORTICULTURE**

The Embargo on Apples

THE British Government, in order to conserve tonnage, has placed an embargo on apples. This embargo constitutes a big problem for the Canadian fruit grower, who, in years past, has found the best market for his large apple surplus in Great Britain. Apple growers may find themselves with large quantities of fruit on hand next fall unless vigorous methods for enlarging the home market are taken in the meantime. The Ontario Department of Agriculture is planning to take the following measures to meet the situation:

1. A campaign advising every loyal citizen of Canada to eat apples every day instead of imported fruit, which amounted in the Dominion last year to \$10,000,000.
2. Advising all householders to preserve or dry or make into jelly, a larger quantity of apples than usual.
3. Canning and evaporating apples this year in a large way.
4. Encouragement of cider drinking.

Effect of the Embargo

THE British embargo placed upon apples and canned fruits containing sugar, may be a serious blow to our Ontario growers, one that will have to be put up with for the sake of the Empire. Fruit growing has always been looked upon as the most speculative branch of agriculture with returns proportionate to the risks. Since the great war started this has been more than ever true. While the export trade of Ontario fruits has not been heavy, it has, nevertheless, absorbed much of the surplus crop that would otherwise cause gluts in our home markets, production now following so close upon the demand. Of more importance to the apple grower, the European markets take all of Nova Scotia's crop under normal conditions and also the surplus boxed apples from the United States. If this year a good average crop is harvested in all parts of the continent, as appears reasonable to expect, our local markets will have to dispose of all the fruit that ordinarily goes overseas. A vigorous advertising scheme will be necessary to again introduce our quality fruit to the Canadian consumer, who has not been very well looked after since 1914. If, as we all devoutly hope, the em-

bargo is removed before our crop is ready, the situation will be relieved to some extent, though with high ocean rates, congestion of freight traffic, etc., low grades and poor varieties are bound to be at a decided discount this fall. Growers will be taking more than ordinary chances in 1917, but remember the old saying, "If you never speculate, you never win"—Ontario Fruit Branch.

Economizing Labor in the Orchard

THIS year when help is nearly impossible to get, the orchardist may be tempted to give his orchard very little attention. On account of the great prevalence of scab in 1916, it would be poor economy to leave all the spraying out, but the pruning might be done away with for this season. Suckers should, if possible, be cut out, a sharp saw being the best tool, in fact the only tool that does satisfactory work. Cut as close to the branch as possible, so that no enlargement will be there after the wound is healed. Every cut is made, leaving a very short stub, and next season there are generally small suckers started from that enlargement. Many trees are so high that it is almost impossible to thoroughly spray them. It would not take long to cut several feet off the top of such trees, leaving the thinning out to future seasons. Where the trees have been fairly well pruned in the past, they would not suffer if they got no thinning in the branches this year, when labor is so scarce.

Several years ago it was considered that three sprays would keep apples free from scab, and in a normal season this still applies. Those sprays would be the dormant, the blossom and after the blossom has fallen. If the grower of necessity has to cut down labor, and has no San Jose Scale or very few Oyster Shell Bark Lice, the dormant would be the best spray to leave out, but if there are any San Jose Scale, he should surely put on the dormant spray—Ontario Fruit Branch.

A Good Lawn Necessary

A **LAWN** is the foundation of every beautiful farmstead picture. Each well framed with trees and green fields. Persons who travel over the province appreciate the change that has taken place in appearances in the last twenty-five years. The house without lawn, tree or shrub, has given place to a home in a setting of well-kept grass and flower plots, shade trees and shrubs. In the early spring the lawn needs



**Giant Yoke Ropes**

vs.  
**Leather Pole Straps**

A year ago when we introduced the Giant Yoke Rope, many were skeptical of its wearing qualities. Just a year's trial under the wear and tear of actual working conditions has proved the Yoke Rope a better buy than the leather Pole Straps.

A pair of Giant Yoke Ropes fitted with rings and slides will cost you less than half the price of similar equipment in leather. They are just as strong and will last as long. The 7 1/2-inch, hard, smooth rope used in this illustration gives the same pulling strength as leather.

Giant Yoke Ropes, per pair, cost \$1.00 \$1.25 per pair, west of Port Williams.

Order from your dealer, or direct, if he won't supply you. Our Free booklets describe the Griffin line in an interesting way. Send for a copy of it.

**G. L. Griffith & Son**  
76 Waterloo St.  
Stratford, Ont.



**GASOLINE AND OIL ENGINES**  
1/2 to 50 H.P.  
Stationary Mounted and Tractor



**WINDMILLS**  
Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.  
**GOOLD, SHAPLEY & MUIR CO., LTD.**  
Brantford, Winnipeg, Regina, Calgary.

DEAL WITH  
**Farm & Dairy's Advertisers**

*The New Series*  
**CHEVROLET**

THE CAR FOR BUSINESS—THE CAR FOR PLEASURE

Canadians who want a reliable automobile fully equipped with every device necessary for comfort and convenience in motoring, choose the Chevrolet Four-Ninety.

The quality of the Chevrolet appeals to people of wealth. The price permits ownership by those of moderate means. Electric starting and lighting equipment built in as part of the car.

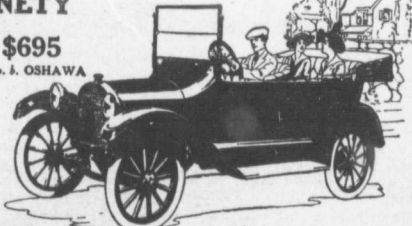
**Chevrolet Motor Co. of Canada, Limited**  
OSHAWA, ONTARIO

WESTERN REGION AND DISTRIBUTING BRANCH: REGINA, SASK.

**FOUR-NINETY**

**\$695**

f. o. b. OSHAWA



SEND FOR DESCRIPTIVE LITERATURE.

to be cleared of such rubbish as leaves and twigs and weeds. This may be done by raking, as soon as the ground is hard enough to prevent injury. One should never go on the lawn when it is soft.

An application of rotted barnyard manure will furnish plant food to enable the grass to grow strong and to make it dark-green in color. Rolling will firm the surface and make it more even. Where the grass has been worn off or worn through, a little seed should be scattered over and lightly raked in.

Kentucky blue grass is the best

variety for permanent lawns. For the first planting, a mixture of eight pounds of Kentucky blue grass, one pound of Red Top and one pound of white clover may be used. The clover and Red Top will give way in a few years to the blue grass.

The teacher had given the boys this subject for composition: "What I would do if I suddenly came into possession of \$10,000." One little fellow, after chewing his pen holder for some time returned a blank sheet. "That," replied the precocious youth, "is what I'd do if I had \$10,000."



#### Moisture in Incubators

**A** HUMID atmosphere in the egg chamber of the incubator is one of the first essentials to the hatching of strong, healthy chickens. If the atmosphere of the egg chamber be dry, the eggs will lose moisture

and that means vitality. Where plenty of moisture is supplied, however, the vitality of the chickens will be greater, the shells of the eggs are softened, and it is easier for the chickens to break out. So important do some poultrymen regard this point of moisture, that they make a practice on the 18th day of dipping all the eggs in warm water and then rolling them in the egg chamber without wiping. This practice, they say, softens the shell and increases the hatch.

Our incubator is in the cellar. One of the reasons why the cellar is the best place on the farm for the incubator, is that the atmosphere there is moist; that is, if there is no furnace in the cellar. To make even more certain of a moist atmosphere, we sprinkle the cement floor every day. Our machine is of a type known as the sand tray machine; that is, under the eggs there are shallow galvanized pans filled with clean sand. To these trays we keep constantly adding enough hot water to keep the sand sopping wet. Just before the hatch begins the sand trays are removed, the brooder trays put in their place and the incubator closed up until the hatch is complete. Did we have an incubator without the sand tray provision for humidity—and there are lots of them on the market—we would certainly have trays made and put them in the machine anyway.—F.E.E., Halton Co., Ont.

#### Poultry Yard Incidents

**O**NE evening at feeding time we noticed a pullet having a violent spell of coughing, after which she breathed very heavily. Upon examination, it was discovered that the throat was irritated, and the crop full of undigested food. Placing her in a separate coop, we gave the fowl a teaspoonful of glycerine, to which we added three drops of a family liniment. The next morning she was all right again, and never after showed similar symptoms of ailment.

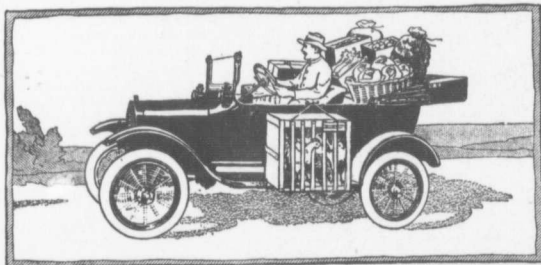
Two or our Brahma pullets got too fat for us, and being yarded with a vigorous cockerel, they eventually broke down behind, assuming very much of a duck shape while standing up. When fed grain they were compelled to sit down to eat it. Yet with all that trouble, they kept up remarkable laying. Finally they became broody, and we gave each a sitting of eggs. To our surprise, after bringing out a hatch, they reduced so in weight that the "break down" appearance had left them entirely. This might be called a "rest cure."

Of our cockerels got into a sore throat and being strong, vigorous, there was a lively time when we appeared upon the scene. When we did, one of the birds had his comb and wattles badly torn. We at once washed off the blood, using warm water, and then heavily coated every part of the sores with carbolic vaseline. In addition, we gave a teaspoonful of whiskey water—one-fourth whiskey and three-fourths water. It saved the bird from catching cold, and the wounds healed nicely.—M.K.B.

#### Chicken Raising Pointers

**H**ERE are ten cardinal points in raising young chickens:

1. First feed the chicks when thirty-six hours old. Provide sharp sand or clean grit. Give them dry bread and sweet milk, mixed with chopped boiled eggs and dry bread or cracker crumbs. Feed this once every three hours for two or three days, then once a day for ten days or two weeks.
2. Don't overfeed. Give only what the chickens will eat up eagerly in a few minutes.
3. Exercise aids digestion and assimilation and keeps the chickens contented in confinement.
4. Give a scratch feed consisting of



## Quick Hauling To Market

**J**UST think of the time the Ford saves a busy farmer in hauling milk to the cheese factory—vegetables, butter, eggs and poultry to market—fruit to the railway station. One fruit grower, last season, made four trips a day to the railway station, a total of 144 miles, and carried as high as 72 crates of 11 quarts each on a trip. He couldn't have made more than one 36 mile trip a day with a team.

The Ford soon pays for itself in the time it saves the farmer. With help so scarce, every farmer needs to make use of every precious minute of his time. To him the Ford car is a real necessity. Indeed, some farmers tell us that it is doubtful if they could carry on their farm work under present labor conditions if it wasn't for the time the Ford saves them.

No farmer need be without a Ford. In fact, the average farmer could afford one if it were double the price. It is as easy to drive as a horse, three times as fast, and costs less per mile to run. Why not order one to-day?

**Ford**

Touring - - \$495

Runabout - \$475

F.O.B. FORD, ONTARIO

Ford Motor Company of Canada

LIMITED

FORD - - - ONTARIO

# CLOVER SEED

Red Clover No. 1	.....\$13.00
(extra fine)	
Red Clover No. 2	..... 12.00
Alsike No. 1	..... 13.00
Alsike No. 2	..... 12.50
Timothy No. 2	..... 4.00
(No. 1 for purity)	
Alfalfa No. 1	..... 13.00
(Northern Crown)	
Silvermine Oats for Seed	1.10
Cotton bags, 30s. Freight paid on lots of \$25.00 and over.	

**CALEDONIA MILLING CO.**  
Caledonia, Ontario

## Pull 100 Stumps A Day—With The Hercules

NO STUMPS too big. Get the richest, most productive land into crops. Makes more money. **Hercules on 30 days' free trial—three year guarantee.** Sale and fact. Send post card for free book. Introductory price offer now.

**HERCULES MFG. CO.**  
1905 28th Street  
CENTERVILLE, IOWA

**SEED CORN**  
A particularly fine lot of hand selected seed on 'his cob, Long-fellow, White Cap, Learning and Bailey.  
Write for prices delivered.  
J. S. WAUGH, Chatham, Ont.

## DUSTING



### 40 ACRES A DAY

"Niagara" Dusting is six to eight times faster and does the work just as well, if not better, than the old method. No fruit grower can afford to be without it this year.  
Send us your name and address and get our free book on Dusting Machines and Materials.  
For San Jose Scale, Oyster Shell and Peach Curl use Soluble Sulphur.  
Order Arsenate of Lead now. We have a fresh supply of Highest Grade paris and powder.  
Write us to-day. Let us tell you how to save 25 per cent. of your last year's spraying costs.  
Everything for Spraying: Lime Sulphur, Niagara and Accessories.

**The Niagara Brand Spray Co.**  
Limited  
Burlington, Ontario

finely cracked grains, as well-seasoned corn, wheat, steel-cut oats, millet seed, etc., or commercial chick food in a light litter, such as hay chaff.

5. Feed a mash rich in protein which contains five per cent. beef scraps after the chicks are two weeks old, and 10 per cent. after they are three weeks old, or give a mash of finely ground grains, corn meal, oat meal or wheat bran.

6. Give an abundance of green food, as short grass on the spot, young oats or rye, lettuce or cabbage leaves.

7. Keep the surroundings free from filth. Clean coops and yards frequently to prevent droppings from contaminating the food.

8. If you can get sour milk regularly feed it. Do not alternate sweet and sour milk. This will put the digestive system out of order in a few days.

9. Keep off lice by liberal use of insect powder. Grease the head slightly with cottonseed oil, vaseline or lard. Do not overdo at any one time.

10. Remember you can do more toward making a good fowl during the first ten days of its life than during any forty days afterward.

### Crop Acreage in West

STATISTICS compiled by the Dominion Department of Agriculture to show that unless there is a favorable spring the acreage under crop in the West this season will be considerably below that of last year. Owing to the bad weather and shortage of labor there was less fall plowing than usual in Alberta and Saskatchewan, although Manitoba reports a substantial increase in acreage ready for crop.

Alberta reports that through summer fallowing, breaking and fall plowing there are about a million and a quarter acres ready for seeding. The amount of summer fallowing and fall plowing is reported as considerably less than the previous year.

Saskatchewan reports a decrease of over a million acres over a year ago ready for seeding. The total acreage ready is reported at 3,447,700 against 4,504,891 the year before. In addition, in the spring of 1916 conditions were very favorable for spring plowing, and nearly five and a half million acres were prepared for seeding then. Unless favorable weather intervenes there will be a considerable shortage this year.

Manitoba gives a more optimistic report, and the acreage ready for seeding is given at 3,171,826, an increase over a year ago of 375,166 acres.

### Feeding Hogs at Profit

EDITOR Farm and Dairy: Having read in Farm and Dairy, accounts of the profit or loss in feeding hogs, I venture to give you my experience in the matter. I bought the hogs at a pretty high price, considering their quality. The meal was mixed wheat and oat:

Bought 4 hogs	.....\$ 20.00
8 hogs	..... 57.00
5,629 lbs. meal, at 2c a lb.	..... 112.58
200 lbs. bran, at \$1.40 per 100 lbs.	..... 2.80

Total expenditure	.....\$192.38
Receipts:	
5 hogs, at \$11.80 per cwt., weight 218 lbs. each	.....\$128.60
3 hogs, at \$11.90, weight 193 lbs. each	..... 69.00
3 hogs, at \$10.20, weight 250 lbs. each	..... 75.50
Killed 1 hog for our own use, weight 210 lbs., dressed, at \$15	..... 31.50
Total receipts	.....\$304.60

Which shows a clear profit of \$112.22, less time, labor, feeding, etc.—A Halton County Farmer.

## 25 times as much interest as the savings bank pays



A savings bank account is a splendid thing, but if you own cows and have no silo you will find that a few dollars invested in a good silo will bring you very much greater returns than the same amount put into the bank. The average savings bank pays 3% or 4%.

### An IDEAL GREEN FEED SILO will pay 100%—and do it every year

A prominent dairy authority says that a silo is worth its entire cost if it is used for only one year. The life of an IDEAL SILO is from twenty to thirty years. Is it any wonder farmers are finding it profitable?

Practically one-third of the feeding value of your corn crop is lost when fodder is allowed to dry. An IDEAL will not only save all the nutritive elements of the fresh, green corn, but will convert into rich, juicy, milk-producing feed corn stalks that cattle can not otherwise eat up clean. It reduces feed bills, means more milk, healthier cattle and less labor in feeding.



Write today for a catalogue. It shows you every detail of the IDEAL, and explains just why you get it more for your money than in any other silo.

### THE DE LAVAL CO., 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 Cylinders and Buttermakers. Catalogues of any of our lines mailed upon request.

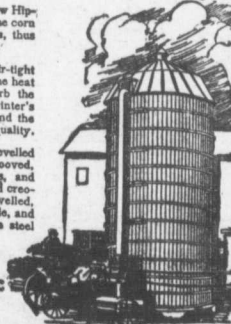
MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 Branches and Local Agencies the World Over

## Though Moderate in Cost the TORONTO 1917 MODEL SILO Makes More and Better Ensilage

—more ensilage, because the new Hip-Roof makes it possible to tramp the corn firmly right up to the top of the walls, thus adding tons to the effective capacity.

—better ensilage, because the air-tight walls of 2" creosoted spruce retain the heat and aid fermentation; do not absorb the acid; and protect the ensilage from winter's frost. Thus there is no waste around the outside, but all the ensilage is of first quality.

The staves are of No. 1 Spruce, bevelled to fit the curve, double tongue-and-grooved, joined at the ends with steel splices, and thoroughly soaked with pine tar and creosote. The doors are also 2" thick, bevelled, rabbitted, snug-fitting, interchangeable, and easily opened from the outside. The steel hoops and malleable lugs are guaranteed to stand the maximum strain.



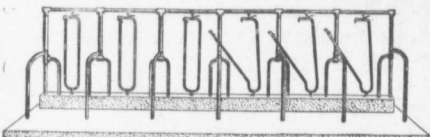
### The TORONTO Pneumatic Ensilage Cutter,

with its Thom's Patent fan arrangement, and convex Sheffield steel knives, will cut the corn and fill your silo with less power and bother, yet greater speed, than any other machine of the same size on the market. With this and a TORONTO Engine of your own, you could cut your corn at just the right stage, and avoid the serious losses that come from delay and leaving the corn lying in the field.

Our Booklet, "Toronto Ensilage Equipment," describes the principles and essentials of making good ensilage, from start to finish. It's free—write for it!

We also manufacture Engines, Windmills, Pumps, Stable Equipment, Etc.

**Ontario Wind Engine and Pump Co. Limited**  
Dept. 73  
TORONTO and MONTREAL.



## For the Sake of ECONOMY ALONE!

O.K. STANCHIONS AND STALLS

save money, space, time and labor. Far more satisfactory than wood. Many dollars are saved every year on repair bills. Wood quickly rots and must be replaced, but Steel is practically indestructible.

**O.K. CANADIAN**

### U-BAR STANCHIONS AND STALLS

enable you to stable more cattle in the same barn space than with wooden stalls, yet each cow has just as much room.

Then there is the big saving in time and labor. The cleaning of the barn is done much more quickly and easily. Valuable time is saved for other, and more important, work.

The combination Gravity and Spring Lock on O.K. Stanchions is the simplest and surest lock yet devised.

Stalls of 2-inch iron tubing with "T" clamp fastened by 2 bolts. Strong, rigid, easy to set up. Send Coupon to-day for FREE Book. 41-13



Canadian  
Patent  
Machinery  
Co.  
Limited,  
493-500  
St. Paul  
St.,  
Calif.,  
U.S.A.

Fill out this Stanchion and Stall Book FREE. When will you build or remodel? How many cows? Name Address

## Fencing? Yes, but what kind?

The farmer who thoroughly examines the relative merits of the various brands of wire fences offered to him will not have any difficulty about deciding upon the one he ought to have. Let him decide by that most unerring of all tests—weight. Why judge by weight? Because weight means strength, and strength means durability and long life. Of the different makes of wire fences, there must naturally be one that will weigh heavier than the rest.

The heavy-weight among fences is the "Ideal"

The reason is that all the wires are full gauge No. 9 hard steel wire; every wire is full of life and strength, and heavily galvanized to properly protect and preserve that strength. You therefore get longer service from "Ideal"—most for your money in strength, durability and all-round satisfaction.

## Ideal Fence

It is to your interest before buying fencing to get a copy of our catalogue; a postal will bring it.

The McGregor-Banwell Fence Co., Limited  
Walkerville, Ontario, Canada. 22



**A FAVOR OF YOU** Please mention FARM AND DAIRY when writing to our advertisers.

## The Best Ayrshire Bulls for Canada

WHAT is the best Ayrshire bull in Canada? No person knows in Eastern Canada who would unhesitatingly say, Hume's Hillside Peter Pan, senior and grand champion at Toronto. Until lately others would have claimed this and claimed the honor for Hobbsland Pieceem imp, the young bull shown by J. H. Black, of Lachute, Que., at the Ottawa Exhibition, where it succeeded in taking the grand championship honors away from even Hillside Peter Pan. As this young bull has since been sold to a United States breeder, he must be considered out of the running. Otherwise his claim for first place would have been difficult to have set aside. This then, leaves Peter Pan well entitled to claim the honor for the east.

### The Prairies Champion.

Ayrshire breeders on the prairies have good reason to make another selection. The outstanding bull of the three prairie provinces is Morton Mains Planet, owned and shown this year by D. T. Ness, of De Winton, Alberta. The bull was an easy champion wherever shown, including such exhibitions as Calgary, Red Deer, Edmonton, Brandon, Saskatoon and others. While it is true that the competition in Ayrshires was not strong at these exhibitions, Morton Mains Planet was shown in grand form, and was ready to face the strongest competition that might have been brought against him. This bull has been a noted winner in the west for some years. It seemed to be the general verdict that he was never shown in better form than this year. Mr. Ness, like his father and brothers, and we might say his nephews, is a master hand at fitting stock for the show ring, and in showing them. Morton Mains Planet has muscularity and plenty of vigor, with true Ayrshire type. Combined with this he is well proportioned throughout, having depth and heart girth, with a well sprung open rib and broad shoulders. He lacks something of the substance of Peter Pan, but is more attractive to the eye as you look him over, and probably has greater depth behind the shoulder.

### British Columbia Contenders.

After all is said and done, however, it is a question if the two best bulls of the breed may not both be located in British Columbia. We refer to the two bulls, Willamoor Peter Pan, owned by Joseph Thompson, of Sardis, B.C., and Lessnessock Comet, owned by Shannon Bros., of Cloverdale, B.C. It is a desperately hard matter to make a comparison of bulls of such outstanding good qualities as the five mentioned without seeing them in the ring together, especially when three of them were in show yard form when seen and two of them were not. Yet if we were to make the effort we say that neither of these two bulls has anything to fear in the matter of comparison with the other three. If we had to make a choice between them all the probabilities are that the decision would go in favor of Willamoor Peter Pan.

Willamoor Peter Pan, when we saw him last July, had just turned three years old. His chief fault, looked at critically, was a slight tendency to a plainness about the head. When this has been said there is little left to criticize and much to praise. He is the longest bull of the five, combined with which he has the most substance, exceeding even Peter Pan in this. On top of this, when we saw him, he was in no sense overfed. Other good qualities are his great depth, a well-turmed barrel, strength across the loins, an unusually broad quarter, a top line as straight as a rule and a smoothness throughout which we have never seen exceed it. The accompanying illustration, which we snapped of him in the pasture field, shows some of

these qualities, but hardly does him justice. As it makes him look a little plain, which is an impression it does not give as you look him over. He was sired by the famous Peuchen Peter Pan, the grand champion Ayrshire bull at the international dairy show in 1911, and again last year at the World's Exposition at San Francisco. Two of this bull's daughters are ex-world's champions, with 2-year records of 12,732 lbs. and 15,099 lbs. of milk respectively.

### Another Good One.

Lessnessock Comet is another good one. In type and grand conformation he is very similar to Morton Mains Planet, but we would judge him to be slightly larger and possibly 100 to 200 lbs. heavier. He may not be quite so smooth. There is no bull in the east so much like him as Auchebrais Sea Foam (Imp.), shown by G. H. Montgomery, of Phillipsburg, Que., and the winner this year at Sherbrooke, Que. Lessnessock Comet is a younger, smoother bull. This bull's head, from an angle, is a standpoint would be hard to fault. He shows great masculinity and vigor, and we doubt if any of the other bulls mentioned would quite equal him in this, unless possibly old Auchebrais Sea Foam, combined with which is strength of constitution and a good barrel and quarter.

It would be interesting, indeed, if these five Canadian bulls, or rather four, could be brought into the same show ring. Hillside Peter Pan never showed to such advantage as this year, and in the other three bulls we have foemen worthy of his steel. Of course, the bulls mentioned are not the only good ones. There is the famous champion of champions, Masterpiece, owned by E. R. Ness, and who ever some-what crippled in his feet; Netherlon Lochinvar, owned by Senator W. W. Owens, Montebello, Que., a most stylish young bull that stood second at Ottawa and third at Toronto, and Tangswold Victor, owned by A. S. Turner & Son, the champion at London, but placed fourth at Toronto.

### Before and After Calving

THE dry cow on any farm can be made to produce a maximum return if properly fed and cared for from the end of one milking season to the end of the following. She should not be forced to rustle her living during her period of pregnancy. This time the unborn calf is developing most rapidly, causing a heavy drain upon the body of the cow. Plenty of nutritious roughage, such as silage, roots and alfalfa and little grain, will keep her in good condition.

Leave the cow alone in a clean box stall at calving time unless help is needed. If necessary, call a veterinarian. After calving give the cow plenty of warm water, and keep her out of draughts, or blanket her. Feed lightly of warm bran mashes for a day or two, gradually working up to full feed in from two to four weeks.

Milk several times daily the first few days. Do not milk dry until the udder is normal.

According to rumor, there is a movement afoot to have the stamping of cream cans discontinued, that is cans for carrying cream by railway or boat, claiming that cream is no longer sold by measure, but by the pound, and the top of this, when we saw him, he was in no sense overfed. Other good qualities are his great depth, a well-turmed barrel, strength across the loins, an unusually broad quarter, a top line as straight as a rule and a smoothness throughout which we have never seen exceed it. The accompanying illustration, which we snapped of him in the pasture field, shows some of



## Clover Seeds

High Grade Government Standard Seeds

	Per Bus.
No. 1 Mammoth Red Clover	\$15.00
No. 1 Red Clover Fodder	15.00
No. 2 Red Clover	12.50
No. 1 Alsike Clover	12.50
No. 2 Alake Clover	12.50
No. 2 Timothy (this seed grades extra 1 for purity and germination)	4.25
No. 2 Timothy (this seed grades No. 1 for purity and germination)	4.00
No. 2 Timothy	3.25
White Blossom Sweet Clover (Ontario grown, free of mustard)	13.00
No. 1 Alfalfa (Northern grown)	13.00

### SEED GRAIN.

	Per Bus.
Marquis Spring Wheat	\$4.40
O. A. C. No. 21 Barley	1.45
Banner Oats	1.25
O. A. C. No. 12 Oats	1.25
Golden Vine Peas	3.50
Crown Peas	3.50
Canadian Beauty Peas	4.25

### SEED CORN.

	Per Bus.
Leaming Fodder	\$1.75
Improved Leaming	2.00
Southern White Fodder	1.75
Red Cobb Fodder	1.75
Compton's Early	2.75
Sanford White Flint	2.50
Golden Glow	2.40
Wisconsin No. 1	2.50
Pride of the North	2.00

Terms Cash with order, bags extra at 30 cents each.  
We pay the freight on all orders of \$25.00 or over East of Manitoba.  
Send for samples if necessary.

## TODD & COOK

SEED MERCHANTS  
Stouffville, Ontario

## FEEDERS CORNER

Conducted by S. D. Archibald.

### The Plank Drag

FOR crushing lumpy soil and for leveling and smoothing soil until it is in that fine, crumbly condition, so essential for the proper germination of vegetable seeds, there is no implement that can equal the simple plank drag. It can be made by anyone, consisting simply of four or five two by ten planks, lapping two inches on each other and nailed together and being further reinforced by cross strips two by six inches to which each of the planks is securely bolted. It is drawn by a chain which is fastened to the ends of the cross pieces by means of light clevises. When necessary the drag can be weighted.

The use of the drag is not confined to preparing garden soil. In some places it is used on a larger scale in the fields. Sager Wheeler, the Saskatchewan wheat king, is a strong



The Plank Drag.

advocate of the plank drag, which he uses in putting the finishing touch on the seed bed preparatory to sowing it with his famous, world-beating wheat. Besides providing a fine seed bed it establishes a dust mulch on top, and this is important in preventing evaporation.

### Cottonseed Meal Affects Butter

IT has long been known that cottonseed meal, fed in excessive quantities, has a detrimental influence on the quality of butter. Just what these effects are has recently been investigated at the Missouri State College. There it was found that the feeding of cottonseed causes a firmer bodied butter, frequently of gummy consistency, a higher standing up quality or ability to withstand a higher temperature without losing its body, a flat oily taste and a better keeping quality. These effects, it was decided are due largely, if not entirely, to the cottonseed oil in the meal.

The extent of the effects of feeding cottonseed products is greatly modified by the character of the roughage fed. The effects are most pronounced when cottonseed products are fed with dry feeds, such as timothy hay, timothy hay and corn stover, cottonseed hulls, or alfalfa hay. The effects are least pronounced when the cottonseed products are fed with a liberal ration of corn silage, and some of the effects may be counteracted entirely. Studies of the cause of the counteracting effects of corn silage are being made by the authors with the view of selecting the other roughages with similar properties.

Small amounts of cottonseed products may be fed to cows on fresh pasture, with very beneficial effects upon the body and keeping qualities of the butter.

The effects of feeding cottonseed meal upon certain of the constants of the butter fat may be somewhat modified with continuous feeding. The effects on the melting point of the fat and the other properties of the butter continue, however, as long as the cottonseed meal is fed.

Hearing is Believing.  
Teacher—Rachel, use indigo in a sentence.  
Rachel (after much thought)—The baby is indigo cart.—Exchange.

You Can "get along" without this book

But

you should not try to

More than a hundred thousand farmers are already profiting by its suggestions. It is helping them to make more money out of farming than they ever made before. It is helping them to increase the value of their farms, and enables them to keep their farm help profitably busy all winter long. It is a large well illustrated book



—full of practical directions, from which you can make all kinds of modern farm improvements at small cost.

Remember Concrete Improvements are fireproof; rot-proof; vermin-proof and indestructible.

Why not send your name and address, with the coupon below, and get this book? It is free.

Address  
**CANADA CEMENT COMPANY**  
Limited  
40 Herald Bldg. Montreal

## EARN \$10 A WEEK AT HOME

The Hosiery trade is booming Help to meet the huge demand Industrious persons provided with profitable all-year-round employment on Auto-Knitters, Experience and distance immaterial.

Write for particulars, prices of Knitting Machine, etc. Send 3c stamp to  
Kearney Knitting Machine Co., Ltd. Dept. 511 E. 257 College St., Toronto.

## A PAYING INVESTMENT

Store your corn in a BISSELL SILO and it will keep sweet and asppy. BISSELL SILOs are built of seasoned timber saturated with Wood Preservative Oil. They are durable, heavy, hooped structures, with airtight walls and tight doors. In several sizes with or without roofs.

Write Dept. for free catalogue. 97  
T. E. Bissell Co., Ltd., Etam, Ont.

## MAKE YOUR BIKE A MOTORCYCLE

at a small cost, by using our attachable motor. Fits any bicycle. Easily attached. No tools. No expense. "Compare With Others"  
Mr. C. F. Williams, 21 Dundas St. W., Toronto, Ontario, Canada, writes: "I have used your motor on my bicycle for several months and am very satisfied with it. It is simple, reliable and easy to use. I have recommended it to several of my friends and they are all very satisfied with it."  
Free Book Write today for free booklet describing the BISSAW Bicycle Motor. Attachments, prices, etc. Our prices run from \$10.00 to \$15.00.  
Dept. 100 Galesburg, Kan., U.S.A.

## Give Your Crops a Better Start

A Peter Hamilton Spring Tooth Cultivator will work your soil into a perfect seed-bed. It is designed to cut every inch of the ground and cultivate it thoroughly to an even depth.

## Peter Hamilton Cultivators

have specially constructed sections that give the teeth great freedom of action. They are so flexible that a ridge and furrow can be thoroughly than two teeth out of the ground at once. The teeth are made of high-grade steel with reversible points. The frame is strong, well-braced and properly trussed.

Send for our free illustrated booklet and post yourself on the merits of this cultivator.

Dealers wanted in open territory.  
**The Peter Hamilton Company**  
Limited  
PETERBOROUGH  
ONTARIO



## GROW ONIONS FROM HIGH GRADE SEEDS

Selected Yellow Globe Danvers Onion (black seed) oz. 25c,  
¼ lb. 65c, lb. \$2.10, 5 lbs. \$9.25.  
Select Large Red Wethersfield Onion (black seed) oz. 25c,  
¼ lb. 65c, lb. \$2.10, 5 lbs. \$9.25.  
Early Yellow Danvers Onion (black seed) oz. 20c, ¼ lb. 60c,  
lb. \$1.90, 5 lbs. \$8.25.

Yellow Dutch Onion Sets (choice) . . . . . lb. 35c, 5 lbs. \$1.70  
Shallot Multiplier Onions (for green onions) . . . . . lb. 30c, 5 lbs. \$1.40  
Chantemay Red Table Carrot . . . . . Pkts. 5c, oz. 25c, 4 oz. 65c, 65c. \$2.00  
XXX Cardinal Globe Beet . . . . . Pkt. 10c, oz. 20c, 4 oz. 50c, lb. \$1.50  
Prize Hard Head Cabbage (12 lbs.) . . . . . Pkt. 5c, oz. 20c, 4 oz. 90c  
Perfection Cucumber (for table or pickles) Pkt. 5c, oz. 20c, 4 oz. 50c  
XXX Pink Skin Tomato (continuous cropper) . . . . . Pkt. 15c, oz. 60c  
Rennie's Mammoth Squash (biggest that grows) . . . . . Pkg. 25c  
English High Grade Mushroom Spawm . . . . . Brick 65c, 5 bricks \$1.65  
XXX Solid Head Turnip . . . . . Pkg. 10c, oz. 25c, 4 oz. 75c  
Kangaroo Swede Turnip (high quality) 4 oz. 20c, ¼ lb. 35c, lb. 65c  
Irish King Swede Turnip (table or cattle) . . . . . 4 ozs. 20c,  
½ lb. 37c, lb. 70c, 5 lbs. \$3.40.

Jumbo Sugar Beet (best for stock) 4 oz. 15c, ¼ lb. 25c, lb. 45c

Culture leaflets for any of the above Free with orders.  
Sweet Scented Nicotine (Tobacco Plant), mixed colors Pkg. 5c  
Early Cosmos, Crimson, Pink, White or Mixed Shades . . . . . Pkg. 10c  
XXX Spencer Giant Sweet Peas . . . . . Pkg. 15c, oz. 35c, 4 oz. \$1.00  
Summer Cypress, lovely summer hedge . . . . . Pkg. 5c, ¼ oz. 25c  
XXX Climbing Nasturtium, all colors . . . . . Pkg. 10c, oz. 20c  
Branching Giant Asters, Pink, White, Crimson or Mixed . . . . . Pkg. 10c  
Giant XXX Comet Asters, mixed, all colors . . . . . Pkg. 10c  
XXX Defiance Sweet Mignonette . . . . . Pkg. 10c, ¼ oz. 60c

"Pakro" Seedtape. "You plant it by the yard."

2 pkts. for 25c. Ask for descriptive list.

Rennie's Seed Annual Free to All. Delivery Free in Canada.  
Order through your LOCAL DEALER or direct from

**RENNIE'S SEEDS** W.M. RENNIE CO., Limited  
King and Market Sts., TORONTO  
Also at MONTREAL WINNIPEG VANCOUVER

**"I could not have done without it  
this Summer, as help is so scarce"**



Here is the experience of one of the  
scores of dairy farmers for whom the

## EMPIRE Mechanical Milker

is taking the place of the hand help they can no longer get, and enabling them to keep their herds together and take advantage of the prevailing high prices.

### Testimonial—

I have used one of your "Empire Milkiers" since early last April, on from 30 to 45 cows continually, and can find no injurious effects on the cows. They seemed to like it from the first use, and I think gave rather more milk than with the best hand milking. Easy cows seemed less inclined to leak, and hard ones gradually became easier.

I have sent the milk a number of years to the Borden Condenser Company, and have had no complaints. I have just followed the instructions for keeping it clean. I could not but, have done without it this summer, as help is so scarce. I may say further that I have been milking cows for over 50 years, and have been in the milk business nearly that length of time. I have had no previous experience with milking machines, but have had very little trouble or expense for repairs. I have used it on 50 heifers never milked before, with perfect satisfaction, no matter how small their teats were.

The Milker has been of more practical value to me than I ever expected.

WILLIAM COLYER.

We will be glad to send you Booklets showing exactly how the Empire Mechanical Milker works, and telling the experience which dozens of prominent dairy farmers have had with it. Address Dept. E.

The Empire Cream Separator Co. of Canada, Limited,  
50 MONTREAL TORONTO WINNIPEG.

### Feeding Grain in Pasture

IN the past we have followed the practice of feeding a little grain to the cows in summer. Will it pay to keep on doing it this year with grain prices as high as they are? (a) If the pastures are good, (b) if some ensilage is fed in case of short pastures, (c) if selling crops, peas, oats and vetches are provided?—A. H. Halton Co., Ont.

It is usually an excellent plan to feed some grain to dairy cows on pastures, as it not only helps to balance the ration of pasture grass, but it insures a greater contentment on the part of the cows and they come to the barns more readily for milking.

The amount of grain to be fed would depend on the condition of the pastures and the price of feeds.

Feed prices, however, are sure to drop considerably as soon as the pasture season opens. On early June pasture I would advise very little grain and this composed of largely oat seed or some similar rather constipating grain mixed equal parts with bran or crushed oats. Later in the season when pastures are short I would advise feeding a grain mixture composed of equal parts bran, old cake and gluten feed or distillers' grains.

If ensilage is used to supplement pasture shortage, the meal should be fed on the ensilage. If selling crops such as peas, oats and vetches are used the meal should be fed first and the selling crops later. The writer does not wish to give the impression that very heavy grain feeding is profitable during the pasture season, but rather that a light ration of grain even though limited to one pound or less per day per cow when pastures are good, is profitable in the extra milk produced and the greater ease in handling the cattle.

### A Choice of Corn Varieties

I AM in a quandary. Have not yet purchased my seed corn, and am debating whether to get seed of a variety called Eureka or so on with the Wisconsin No. 7 that I have been growing in the past. The Wisconsin went all to ear last year, and did not fill the silo. The Eureka apparently would fill the silo without any trouble, but they would be little grain, and perhaps it would not mature so thoroughly as the Wisconsin. What I would like to know is this: Would the feeding of Eureka ensilage necessitate a heavier grain ration, and would it tend to decrease the milk flow (would it be heavier grain feeding)? The problem is so important one with a view of the labor situation, and if I can grow 20 to 25 tons of ensilage per acre instead of 15 to 16 it is changing my mind and willing to do so.—"Dairyman," Halton Co., Ont.

Undoubtedly the best quality of ensilage for the feeding of dairy cattle is made from corn cut in the kernels and are in the firm dough state. Not only is there more actual food value in the corn at this time, but a better grade of ensilage may be made with less trouble.

If there is a difference of six to ten tons per acre in the yielding qualities of Wisconsin No. 7 and Eureka I would certainly advise the use of the heavier yielding Eureka even though the food value per ton was not so great. Undoubtedly the greater amount of food grown per acre with the Eureka would be more than sufficient to counterbalance the greater yield per ton of the Wisconsin No. 7. If the Eureka does not mature so well greater care must be taken in filling the silo in order to prevent sour silage. Probably more ensilage may be consumed by the cows and slightly more grain fed than where ensilage of a more mature quality is used, but even so this difference in the yield per acre would warrant this.—E. S. A.

### Cows Need Plenty of Feed

PROFIT in dairying may be substantially increased by maintaining a heavy flow of milk during the winter era of high prices. Good

yields can be expected only from cows that have been properly housed and fed. To be economical, the ration should be made up as much as possible of appetizing home-grown feeds. Protein feeds are needed to build up without tissues and carbohydrates to produce heat and energy. Both classes of feeds are in the production of milk solids. The ration should be balanced by using some of each. The protein may be supplied in alfalfa, clover, or cow peas. If these are not available, use oil meal, gluten meal, or cottonseed meal. Feed such carbohydrates as corn silage, roots, corn fodder or stover, and grass hays. Give the cow plenty of nourishment without too much bulk.—U. O. N.

### Pasture for Pigs

PASTURE should by all means be provided for the pigs. This is the cheapest food that can be provided and good for the pig. The pigs requires green food. Alfalfa is one of the best pastures. It is relished by the pigs, is nutritious and provides feed during the winter pastures season. Many report splendid success with sweet clover. Oats, barley and rape can be sown in the spring and will produce green feed till the hays can be fed green corn. If no alfalfa is available on the farm for pig pasture, this spring will be the time to sow it.

When the pigs are on pasture, they should be fed some grain and the pigs will get along with less grain when on alfalfa than on most any other pasture.—N.D.A.C.

### The Value of Chore Time

R. McGe, Chateaugay Co., Que.

IT was getting on to six o'clock. The work wasn't done. The manager looked worried. "Why don't you ask the men to come back?" I finally ventured.

The manager had several hundred men in his employ. He looked to me like a big fellow who would simply have to say "go" to his men and they would go, or in this case, "come" and they would come, but what he answered was, "Why, it would take what little profit there was in the work out of it. You know by the arrangement we have with the Trade Union, we have to pay one-half more wages for overtime work than for the ordinary hours. We do not count on overtime wages."

On questioning this manager I found that it is a general rule in the city that if a man is asked to come back to work after six o'clock that he is paid extra wages for the extra time that he works. I could not help but compare this with the rule on the farm where chores are too often done after six o'clock, with no thought of extra wages for the men. Of course the first idea that would occur to the farmer would be that he could not afford to do chores before six. My idea is, however, that if chores cannot be done before six there is something wrong with the business. It is not economically as profitable as it should be and it is time to get out of the saddle that will not pay for the chore time it requires.

I say let us put a value on every hour that we work and have on our farms only those branches of farming that will pay wages on all the hours expended on each branch. If we are dairy farmers, chores will be an important part of the expense account. It is only by doing this that I can see any hope of our being able to compete with the city employer.

How about that germination test? Oats especially should be put through it this year.

**Cooperative Live Stock Marketing**

By W. H. Tomhave.

**I**N order to market live stock cooperatively, an association must be formed. To do this requires only the adoption of a constitution and bylaws and the election of a board of directors, who will appoint a manager to handle the business. The manager should be an honest, energetic, up-to-date man, a good judge of live stock, and a good business man.

It is better to ship during the fore part of the week in order to get the stock on the market when most of the purchasing is done for the week's slaughtering. In case there is not stock enough to fill a car each week, the stock should be held over, as the freight rates are much higher per hundred on less than a carload.

The farmers belonging to the association report to the manager by telephone when the stock is ready for shipment, stating the kind and approximate weight, so that the manager can order a car of the proper size for his shipment. All stock should be reported at least one day before the date of shipment.

On the day of delivery the manager and his helper receive and weigh the stock and give each man a receipt made out in duplicate for the number of animals delivered, the weight on delivery, and the number or mark used in marketing his stock. If all individuals are marked, each man's stock can easily be identified when sold on the market.

**Feeding Geese and Goslings**

**G**EESSE are generally raised where they have a good grass range or pasture, as they are good grazers, and, except during the winter months, usually pick up most of their living. The pasture may be supplemented with light feeds of the common or home-grown grains or wet mash daily, the necessity and quantity of this feed depending on the pasture.

Goslings do not need feed until they are 24 to 36 hours old, when they should be fed any of the mashes recommended for chickens or ducklings, or a mash or dough of two-thirds shorts (middlings) and one-third cornmeal, which can be made equal parts shorts and corn meal, and five per cent. of beef scrap added after six weeks. Bread and milk is an excellent feed for young goslings. Fine grit or sharp sand should be provided for goslings by feeding five per cent. of it in their mash or keeping it in a hopper before them. If the goslings are to be fattened, the ration should be changed to one-third shorts and two-thirds corn meal by weight, with five per cent. of beef scrap added, while a feed of corn should be given at night. Most geese breeders do not confine their geese for fattening, but feed them freely a few weeks on a fattening ration before they are to be marketed. The geese may be confined for two or three weeks and fattened, but some green feed or vegetables should be added to the ration.

**The Dairy Calf at Birth**

**L**ARGE numbers of dairy calves are destroyed every year by bacterial infection shortly after birth. The most deadly of these diseases is white scours, or calf cholera, which generally proves fatal in a few days. Infection enters through the navel cord. To guard against the disease, disinfect the stall where the calf is to be born, and bed with plenty of clean straw. Shortly after the calf is born, saturate the navel cord and belly with some good disinfectant solution. Then tie the navel cord up against the belly with a band of clean cloth.

**M A D E I N C A N A D A**



*Those things that need your attention on the farm:*

You, Mr. Farm Owner, who are about to make your first trip of the season to the farm, will find a score of things that need attention. Whether it is rented or "worked on shares," or whether you employ a superintendent, you, *the owner*, have certain things that you want done, will order done. And you want a record of how things look now:

- Certain old fences.*
- The foundation to the corn crib.*
- The south porch.*
- The broken hoops on the silo.*
- The land that needs tiling.*
- The condition of the orchard.*
- The condition of the horses and cattle and hogs.*

And one obvious thing to do is to make an auto-photo-graphic record. Make pictures of the things that don't please you, as well as pictures of the things that do please you. And alongside of each picture make a brief memo, —at least a date and title, an authentic, indisputable record written on the film at the time. It's a simple and almost instantaneous process with an

**Autographic Kodak**

*Catalogue, free, at your dealer's or by mail.*



**CANADIAN KODAK CO., LIMITED**  
TORONTO, CANADA

**NO PRICE CHANGES**

**W**E believe this is a good year for the fence user to buy fencing. From present indications wire will be higher, and fence will be so scarce as to be hard to obtain at any price. This condition may hold for several seasons. The wise man is buying liberally now. He is getting his fence at a reasonable price and also having the use of it to help him raise more and better crops while prices are high. At the same time he is performing a patriotic duty in helping to supply the nation with the food it so much needs.

**THE PAGE WIRE FENCE COMPANY**  
**LIMITED.**

WALKERVILLE, TORONTO, MONTREAL, ST. JOHN.

# FARM AND DAIRY

AND RURAL HOME  
PUBLISHED EVERY THURSDAY



**SUBSCRIPTION PRICE, \$1.00 a year.** Great Britain, \$1.20 a year. For all countries, except Canada and Great Britain, add 50c for postage.

**ADVERTISING RATES, 12 cents a line per inch in an insertion.** One page 48 inches, one column 12 inches. Copy received up to Saturday preceding the following week's issue.

**UNITED STATES REPRESENTATIVES**  
STOCKWELL'S SPECIAL AGENCY

Chicago Office—People's Gas Building.  
New York Office—Tribune Building.  
Toronto Office—37 McCull Street.

#### CIRCULATION STATEMENT.

The paid subscriptions to Farm and Dairy exceed 23,000. The actual circulation of each issue, including the copies of the paper sent to subscribers who are but slightly in arrears, and sample copies, varies from 24,000 to 25,000 copies. No subscriptions are accepted at less than the full subscription rates.

Sworn detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

#### OUR GUARANTEE.

We guarantee that every advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our paid-in-advance subscribers, we will make good the amount of your loss, provided such transaction occurs within one month from date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."

Repeat shall not ply their trade at the expense of our subscribers, who are our friends, through the medium of these columns, but we shall not attempt to adjust trifling disputes between subscribers and honorable business men, who advertise, nor pay the debts of honest bankrupts.

**The Rural Publishing Company, Ltd.**  
PETERBORO AND TORONTO

"Read not to contradict and to emulate, nor to believe and take for granted, but to weigh and consider."—Bacon.

### City Magnates in Overalls

THE Toronto Board of Trade at last realizes the seriousness of the national food problem. Members of that Board are holding meetings in their factories and warehouses and setting the situation before their employees in an endeavor to persuade the latter to abandon their contemplated holiday trips and spend a couple or three weeks helping the farmers get on in their crops. Some have offered their employees an extra three week's holidays for this purpose. A few of the leading business men have said that they are going to undertake some work on the farms themselves.

The idea is an excellent one. The need truly is great. Farmers will welcome every bit of help they can get, no matter where it may come from when it is given in the spirit of impulsive good will. A few of these city business men, however are apparently somewhat mistaken in their view of the situation. They speak of "helping" the farmer. While they are partly right they are also, largely wrong. The farmer does not need any help given in a patronizing spirit. If no additional labor whatever were provided for the farms this summer, the tiller of the soil could still seed a certain acreage, and with the help of his family grow enough for his own requirements and a lot to spare. There will be no starvation in the country. It is the city that may be face to face with famine. It is city industries that would suffer most heavily from a contraction in national industry, due to a decline in agricultural exports. We would respectfully suggest, therefore, to the few members of the Toronto Board of Trade and other similar organizations who appear to hold this mistaken viewpoint, that it is time they realized that the problem of food production is theirs even more than it is ours, and that we are willing that they should help themselves, if they so desire, by helping us.

### Local Government Losing Ground

THE councils of Darlington and Clark townships have led the way in protesting against the act to provide for a provincial highway system in Ontario. According to the terms of this act, thirty per cent. of the cost of highways to be constructed and a similar proportion of the maintenance charges will be provided by the townships through which the highways pass. This is less than one-third of the cost of construction, but if we may judge from the Toronto-Hamilton highway, even one-third may be a heavy expenditure if the first cost of the proposed permanent highways should even approximate \$9,000 a mile. In the expenditure of this money the councils will have little or nothing to say. The amount is determined by the provincial government, and it falls to the township councils to raise the taxes and pay the piper. The protests of these townships will probably prove ineffectual, but the councillors will at least have the satisfaction of having done what they could to stem the growing tendency to centralise all power in the provincial government, and take away from the townships the right of local self-government in road construction.

While the Ontario Department of Public Works is to be commended for the evidence it has given of its desire to improve the main roads of the province, its plans in connection with the new highway system are as yet so indefinite it is not possible to say whether the fears of the townships that their credit will be seriously exploited are well founded or not. It is pointed out that Ontario cities have already exploited their credit almost to the limit. The province has done likewise. The townships, on the other hand, with the council directly under the eye of the taxpayer, have administered their finances more carefully than any other public bodies. And as long as they have the chief say as to the expenditure of township monies, their financing will be safe and conservative. If, however, the province assumes the right to impose new taxation on the townships, as in the case of the rural highway system, it is possible that the credit of the rural municipalities so affected may soon be as badly exploited as is provincial credit, and the taxpayers be helpless to prevent it. Many of the councillors in Eastern Ontario who are protesting against the new act are not opposed to highway improvement. What they fear is that the arbitrary assumption of taxation powers that rightly belong to the township, may constitute a dangerous precedent.

### Who Gets the Money?

NOW that the United Farmers' Cooperative Company, Limited, is doing business on a scale that amounts to the hundreds of thousands of dollars a year, and is showing profits of several thousand dollars a year, farmers are beginning to ask who is going to get the benefit of these profits. Recently an officer of a live farmers' club in Wellington county wrote the Central Company as follows:

"As I am one of the directors of our local farmers' club I would like to ask a question which we have been trying to discuss, although nobody seems to know what they are talking about. What becomes of the profits of the United Farmers' Cooperative Company? Supposing in ten years you made \$50,000 profit above expenses, who would get this money?"

The question is a natural one, and although it has been answered before in the columns of Farm and Dairy, it is one that is likely to be asked many times again, and, therefore, it is desirable that as much light as possible shall be thrown upon it. The by-laws of the United Farmers' Cooperative Company, Limited, provide as follows:

"The net profits of the Company, each year, after providing for the payment of the div-

"dend on the paid in capital stock, and after setting aside such sum as the directors may determine for a reserve and contingent fund, shall be divided among the shareholders of the Company in proportion to their purchases or sales from, to or through the Company, or be retained or applied by the Company for the general advantage of the shareholders of the farming community as may from time to time be determined by the shareholders in general meeting assembled. Non-shareholders may, within the discretion of the directors, be granted half the rate of rebate payable to the shareholders of the Company in proportion to their purchases or sales from, to, or through the Company."

So far a portion of the profits of the Company has been used to declare a seven per cent. dividend on the paid-in stock, a portion has been used to extend the work of the United Farmers of Ontario, and the balance has been used to increase the working capital of the Company. While the by-laws provide that the surplus may be paid back to those farmers or farmers' clubs who purchase or sell goods through the Company in proportion to their purchases or sales, there are many difficulties in the way of bringing this arrangement into effect, although it is aimed to do so in time. It may be necessary to secure special legislation to permit of the profits being paid back in this way, but if so, it is anticipated that efforts in that direction will be made in due time. So far, the farmers' organizations in Western Canada have not found it possible to distribute dividends in this way, although the importance of doing so is fully recognized and the matter was discussed at some length at the last annual meeting of the shareholders of the Grain Growers' Grain Company in Winnipeg.

One thing is certain, the profits of the Company will be used in the best interests of the farmers of the province of Ontario. The Company was organized to promote the interests of the farmers. Its stock is held by farmers and farmers' clubs and its officers are farmers. For a few years it may be necessary to use a considerable portion of the profits to increase the working capital of the Company and thus enable the Company to purchase goods to better advantage. It is probable, also, that a considerable proportion of the profits will be used for educational purposes. If the Cooperative Bill recently introduced in the Legislature were to become law, the powers of the directors of the United Farmers' Company to use money in this way might be considerably curtailed, should the law be made to extend to the United Farmers' Company. This is one of the reasons why members of the United Farmers of Ontario have gone on record as opposing the provisions of the Bill as first introduced.

The shareholders of the Company have it within their power at all times to decide how the dividends shall be distributed. This is what makes the United Farmers' Company a real farmers' company, and what assures its being conducted and its profits distributed in the interests of the farmers of Ontario as a whole.

Above all other institutions the church and the school have the greatest influence on the moral and social life of a rural community. Education, mental, moral and spiritual, is the function of the church and school. Impressions gained there will be carried into the every day life of the whole community. In the love of beautiful surroundings, which go so far to make country life enjoyable, fostered by the surroundings of the average country church or schoolhouse? Unfortunately their surroundings are almost always bare and unattractive. The effect of beautifying the surroundings of church and school will be seen and felt in every home in the community. It is worth while to make our churches and schools attractive.



## In Union There is Strength

### That Cooperative Bill

THE request of the United Farmers of Ontario that the Provincial government should postpone the enactment into law of the bill relating to the incorporation of cooperative societies until the next session of the legislature in order that in the meantime the farmers might consult with the government with the object of drafting a more complete bill and one more acceptable to the farmers, has not been granted by the government. The bill passed its third reading, and on April 4th was referred back to the committee of the whole House to permit consideration of certain amendments proposed by the premier.

Premier Hearst was requested in the House to have the bill held over another year to permit fuller consideration of its provisions. He replied that the representations which had been made by the deputation from the United Farmers of Ontario had been carefully considered by the government. The amendments he was proposing in the bill were somewhat in line with their suggestions and in so far as their views were not met by the amendments, they were not approved by the officers of the Department of Agriculture. He said that he had decided that the bill should be passed, but he was prepared to watch carefully its operation and would instruct his officers to do so. If in the working of the bill it appeared that any difficulties arose, or any improvement could be made, he would be prepared to consider suggestions sympathetically at the next session. The bill, therefore, has been duly enacted into law. It is probable that the United Farmers will have important changes to suggest in it at the next session of the legislature.

### Interesting Meetings

EARLY last week Secretary F. J. Morrison, of the distance telephone message from an officer of the Embro Farmers' Club, in Oxford county, stating that Mr. F. C. Hart, of the Department of Agriculture, Toronto, and Mr. Green, the district representative, were to hold a series of meetings in that section to discuss with the members of local Farmers' clubs the advisability of their becoming incorporated under the provisions of the new cooperative bill. The officer of the club requested Mr. Morrison, or some one representing the U.F.O., to attend. Mr. Morrison and Mr. R. H. Balboet, the president of the U.F.O., both attended meetings held at Embro and Dickson's Corners, and Mr. Morrison a third meeting held at Woodstock.

Mr. Hart's address at these three meetings did not cover exactly the same ground and therefore it is not easy to summarize it in a few words. Ever since the organization of the United Farmers of Ontario and the United Farmers' Company, Mr. Hart has not shown a sympathetic attitude to the movement. He has claimed that it was organized on wrong lines and at first insisted that the movement was likely to fail. In spite of this lack of assistance on the part of his department the United Farmers and their Company have progressed to an extent that no cooperative organization formed under the auspices of the government has succeeded in doing.

At the meetings held last week Mr. Hart took the ground that the locals were not organized on a business basis (which is true) and should be incorporated. Later, he said, they might buy a county central and ultimately a

provincial central, but he seemed to think, at the first meeting or two he spoke at, that it was a mistake to have a provincial organization first and through it to organize the locals. Mr. Hart repudiated the idea that he aimed to injure the provincial association and claimed that if the farmers would organize along the lines he indicated, it would ultimately benefit the movement by strengthening it. He apparently lost sight of the fact that a local club generally finds it difficult to establish buying connections unless it has a provincial organization to help it out.

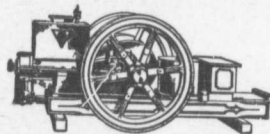
The speakers on behalf of the U.F.O. showed what the U.F.O. is endeavoring to accomplish and what it has already accomplished. At one meeting a lawyer tried to cross question them, but soon was so badly floored that he was not heard from again. At the Woodstock meeting the manager of the Merchants' Bank, who has had some acquaintance with the farmers' movement in the West, strongly urged the farmers to back up their provincial organization and to give it more funds with which to carry on its work. The result of the three meetings attended by the representatives of the U.F.O. was that at none of them were resolutions passed favoring the new cooperative bill or the locals becoming incorporated under it. It was decided, however, to hold a general meeting shortly, at which representatives will be present from the local clubs for the purpose of considering the formation of a county organization.

### Binder Twine Situation

THE binder twine situation in Ontario this year likely to be acute. Last week the United Farmers' Cooperative Co., Ltd., which for two years has imported about 200 tons of binder twine each year from a firm in Belfast, Ireland, and whose operations there is reason to believe have helped to keep down the price of binder twine, received word that they would be unable to secure any binder twine from Ireland this season. They sent their order for this binder twine last November and it was accepted, but now cannot be filled owing to the British government's embargo on shipping. All the leading Canadian firms and seven American firms have been approached to see if a supply of binder twine could be obtained from them on reasonable terms, but without success.

It was inevitable that the price of binder twine would be high this year owing to the steel monopoly in South America. Just to what extent the dealers may take advantage of this situation and of the fact that the United Farmers will not be handling binder twine this year, cannot be determined. It will not be surprising if the price runs anywhere from 20 to 25 cents a pound or about double what it has been in the past. Farmers, therefore, will do well to watch this situation as it develops this year.

A gentleman remarked the other day in a restaurant: "I don't eat eggs now. They are not good. Thin, pale yolks show it." Another said in reply: "Well, I'll order soft boiled eggs, for I know that it is grass and green weeds that make the yolks that very dark color they have later on, and it is the good grain food they have to feed now to make hens lay that makes the yolks so pale. I've raised chickens and know." There are city people to whom the taste of genuine fresh eggs would be a revelation.



## ALPHA GAS ENGINES are "trouble-proof"

You won't find in the ALPHA any of the complicated, delicate parts that cause so much trouble in some engines.

The ALPHA is built for SERVICE. It contains just a few parts as can possibly be used, and every part is strongly made of the best materials obtainable, accurately machined and perfectly adjusted.

You can always rely on an ALPHA to do its work when you need it. It starts and runs on a simple, low-speed magneto and there are no troublesome batteries to watch or fuss with, or to wear out and require renewing. Simply turn on the fuel, give the flywheel a pull and the ALPHA is good for an all-day run.

If you want to saw wood, run a feed grinder or cutter, a cream separator, a pump or a washing-machine, the ALPHA is always ready to do the work—and do it at the lowest fuel cost.

It runs on either gasoline or kerosene, and the sensitive governor prevents any waste of fuel due to changes in load.

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

## THE DE LAVAL COMPANY, Ltd.

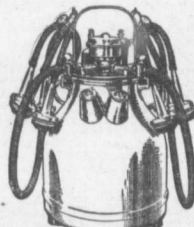
LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.  
Sole manufacturers in Canada of the famous De Laval Cream Separator and Ideal Green Feed Slicer. Catalogues mailed upon request.

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

## Wages Saved Pay for Outfit

That is what the installation of Burrell Milkers does in less than a year, saves more than its cost by cutting in half the milking labor. After the first year the outfit is clear profit.

## Burrell (B-L-K) Milker



One man, operating two 2-cow Burrells, milks 24 to 30 cows an hour. That milking is uniform, thorough and the cows milk better. That milking is more like Nature's milking problem; this way. The Burrell Milkers are air tight and dust tight, yet all parts are easily sterilized.

Send to-day for free, illustrated book giving clear proof of better milking results. Enclose a rough plan of your stable, the number of your cows and a description of your milking problem; this will enable us to give real information for your special case. This information, the results of years of experience, we will also give you free of any charge. Just write to-day.

## Simplex Cream Separator

The only kind of a separator you can afford to own is the one which skims perfectly, with the least expenditure of power and time. The Simplex separator of the largest size is as easy to operate as the ordinary machine of 50 lb. capacity.

Write for booklet which gives full information about the easy running, perfect skimming, and easy-to-clean qualities of the Simplex.

## D. Derbyshire Co., Ltd., Brockville, Ont.

Branches: Peterboro, Ont.; Montreal, P.Q.; Quebec, P.Q.



ALTHOUGH the world is full of suffering, it is full of the overcoming of it.—Helen Keller.

## Winning the Wilderness

(Continued from last week.)

I PROPOSE to break ground for wheat, corn, and to experiment with alfalfa, the new hay product, and to take care of that Aydelot grove and build the Aydelot lake in the middle of it. And I'll be supplying the wheat market and banking checks for half one of these years when your town starters will be hunting clerks in your dry goods emporium, and your farmers, who imagine themselves each a Cincinnatus called to office, will be asking for appointment as deputy county assessor or courthouse custodian. Few things can so unfit a Kansas fellow for the real business of life as a term in the lower house of the Kansas legislature. If you are a merchant, I'm a farmer, and we will both be booming the state when these present-day boomers are gone back East to wife's folks, blaming Kansas for their hard luck. Now, mark my words. But to change the subject, Asher said smiling, "I thought we should have company for dinner. I saw Darley Chambers and another fellow head in here before us. Darley is in clover now, planning to charter a town for every other section on Grass River. Did you know the man who was with him?"

"That's one fly-by-night calling himself Thomas Smith. Innocent name and easy to lose if you don't want it. Not like Gimpke or Aydelot, now. He's from Wilmington, Delaware—maybe."

"You seem to doubt his genuineness," Asher remarked.

"I don't believe he will assay well," Jacobs agreed. "I've doubted him since the day he landed in Carey's Crossing fifteen years ago. In spite of an hour and a half I caught him and Chambers in a consultation so secret they fastened newspapers across the window to keep from being seen."

"Where were you meanwhile?"

"Up on the roof, fixing the sign the wind had blown loose. When they saw me through the uncovered upper frame, they shaded that, too. I've little interest in a man like that."

"Does he come here often?" Asher inquired.

"He's here and away, but he never sets foot in Careyville. My guess is that he's a part of the 'Co. of Chambers and Co.' and that Hans Wyker is the rest of it. Also that in what they can get by fair means, each of the trio reserves the right to act alone and independently of the other two, but when it comes to a cut-throat game, they combine as readily as hydrogen and sulphur and oxygen; combined, they have the same effect on a proposition that sulphuric acid has an Illinois paper. But this is all only a Jew's guess, of course. For myself, I have business with only one of the three, Wyker. He doesn't like my sheep, evidently, because he knows I keep track of his whiskey selling in this town, and keep the law forever hanging over his head. But I've sworn under high heaven to fight that curse

to humanity wherever I find it threatening, and under high heaven I'll do it, too."

Jacobs' face was the face of a resolute man with whom law was law. Then the two talked of other things as they finished their meal.

John Jacobs was city bred, a merchant by instinct, a Jew in religion, and a strictly honest and exacting business man. Asher Aydelot had been a country boy and was by choice a farmer. He was a Protestant of the Mechochick persuasion. It must have been his business integrity that first attracted Jacobs to him. Jacobs was a timid man, and no one else in

here. I've got no love for Doc Carey, ruling men's minds like they was all putty, and him a putty knife to shape like to put down so hard he'll never get over it is that straight-up-and-down farmer, Asher Aydelot of the Sunflower Ranch, who walks like a military captain, and who wears like a hired man, and is so danged independent he don't give a damn for no man's opinion of him. If it hadn't been for him we'd a had the whole Grass River Valley like to apostatize on me. I'm something of a danged fool, but I knowed this boom was comin'. I felt it in my craw."

"So you always said, Chambers," Thomas Smith broke in, "but it's been a century comin'. And look at the capital I've sunk. If you'd worked that deal through, time of the drought in seventy-four, we'd be in clover and no Careyville and no Aydelots in the way. I could have saved Asher's little bank stock then, too."

"You could?" Darley Chambers stared at the speaker.

"Yes, if he'd given up right that first trip of yours down there. When he refused I knew his breed too well. He's as set and slow and stubborn as his old dad ever was. That's what siled them two, they were too near alike; and you'll never catch Asher Aydelot bending to our plans now. I warn you."

"Well, but about this bank account?" Chambers queried.

"Oh, the fates played the devil with everything in two weeks. Doc Carey got in with Miss Jane Aydelot down at Philadelphia, and she came straight

"Shentlemen, you know my hart luck. You see where I be to-day. I not repeat no tiresome history here. Kansas just boomers, and they done dead! You Yacob own all der groun' right oop to der corporation line on tree side, an' he not sell one inch for attitions to die town. He say does noings to keep town goin' in two, tree year. What we care? We be rich by den an' let it go to der devel. But be not sell. Den I go mit you and we organize town company. We'll mark townside, we make Grass River sell to us. We boom! boom! boom. We knock Careyville from de prairie alrerty, care! You Yacob go back to Cincinnati where he belong mit his Chews. He: damned queer Chew, but he Chew all de same all right, all right. I want to down You Yacob, an' I do it if it take tree hundred fifty years. I'll kill him if he get in my way. I hate him. He run me off my saloon in ' Carey Crossin'; my preyery goin' smash mit der damned prohibitory law he growin' rich in Careyville, an' me!"

His voice rose to a shriek and he stamped his foot in rage.

"Hold your noise, Wyker!" Chambers growled. "Don you know who's on the other side of that partition?"

"I bulk that partition mine self. It's von dead noise-breaker," Wyker began. But Chambers broke in: "It's your turn, Smith."

Dr. Carey had described Smith once as rather small, with close-set dark eyes and a stiff, half-paralyzed right arm and wrist, a man who wrote in a cranked left-hand style. There was a crinkled little scar cutting across his forehead now above the left eye that promised to stay there for life. He had a way of cradling a glass, suggesting timidity. And when Hans Wyker had threatened to kill John Jacobs he shivered a little, and for the instant a gray pallor crept across his face, unnoted by his companions.

"We propose to start a town in the Grass River country that will kill Careyville. We two put up the capital. You do the buying and selling. We'll handle real estate lively for a few months. We'll advertise till we fill the place with buyers, and we'll make our pile right there and then—and it's all be done by Darley Chambers & Co. We two are not to be in the open in the game at all."

Thomas Smith spoke deliberately. There seemed to be none of Chamber's bluster nor Wyker's malice in this third part of the company, or else he was better schooled in self-control.

"You have it exactly," Chambers declared. "The first thing is to take in fellows like Jim Shirley and Cyrus Bennington and Todd Stewart, and Aydelot, if we can."

"Yes, if we can, but we can't," Thomas Smith insisted.

"And having got the land, with or without their knowing why, we boom her to destruction. But to be poor, now, why do you want to keep yourself in hiding, and who's the fellow you want to kill?" Darley Chambers said with a laugh.

"I may as well let you know now why I can't be known in this," Thomas Smith said smoothly, even as the gray hue did fill his face. "I came a second time across his countenance—a thing that did not escape the shrewd eye of Darley Chambers this time."

"Wyker is pitted against Jacobs. You are after Asher Aydelot's scale, if you can get it. I must get Jim Shirley, fair or foul."

Smith's low voice was full of menace, boding more trouble to his man than the bluster and threat of the other two could compare.

"I paid you well, Darley Chambers, for all information concerning Jim when I came here fifteen years ago. I was acting under orders, and as

(Continued on page 22.)

## My Ideal Home

OUR ideal home is a farm home. It is situated well back from the road. Its lines are long and low and hospitable. It is screened and overshadowed by great trees, which are God's creation. It is surrounded by green fields, hewn from the mighty forests by the hands of man, leveled and cultivated by man, but watered and bathed in sunshine from above. Unlike the city man I do not live in my home nights, and work in a distant office building or factory in the day time. No, our home, and the fields that surround it, is also my workshop. My home is an independent economic unit. There we together can secure a competence. Great wealth we do not expect. Vast fortunes are not according to the dictates of the Almighty. They are a part of the Devil's handiwork. We are working in cooperation with God, and our returns are proportioned to our good; not according to our greed. The firm at the world live in homes such as ours social problems would never appear, men would dwell at peace with each other, and good will would be universal. There will be a world some are established as foretold in The Book. At present, the farm home, inhabited by God-fearing people, is the nearest earthly approach to the ideal home in the ideal state, which we are told is coming.—W. H. C.

Kansas, not even Doctor Carey, understood him or appreciated him quite as keenly as Asher Aydelot did.

### CHAPTER XIII.

#### The Fat Years.

"The lean years have passed and I approve of these fat ones."

"Be careful, old man. That way lies bad work."

—The Light That Failed.

John Jacobs little realized how far was his estimate of the firm of Chambers & Co. Nor did he suspect that at this very minute the firm was in council in the small room beyond the partition wall—the "blind tiger" of the Wyker eating-house.

"I tell you it's our chance," Darley Chambers was declaring emphatically. "You mustn't hold back your capital now. This firm isn't organized to promote health or Sunday Schools nor some other fellow's fortune. We are together for yours truly, every one of us. If you two have some other games back of your own pocketbooks, they don't cut any against this common purpose. I'm for business for Darley Chambers. That's why I'm

to Cloverdale, and woman-like, made things so hot there I had to let loose of everything at once or lose everything I had saved for myself. Serves her right, for Asher's pile went into the dump, although there's naturally no love lost between the two. But this Miss Jane is Aydelot clear through. She's so honest and darned set you can't budge her. But she's a timid woman and so she's safe if you keep out of her range. She won't chase you far, but she's got fourteen rattles and a button."

"Well, well, let her rattle, and get to business," Hans Wyker demanded. "Here's Chambers says he's here just for business and he wants to get Aydelot and Carey, too."

"Gentlemen!" Chambers struck the table with his fist. "Let's play fair games. Now, so's not to spoil each other's business, I'll fix Aydelot if it's in me to do it, just because he's stood in my way once too often. But he's my side line, him and Carey is. I'm here for business. Tell me what you are here for."

Hans Wyker's little eyes were red with pent-up anger and malice as he burst out:

**THE UPWARD LOOK**

**Victorious Christians**

"For sin shall not have dominated over you; for ye are not under the law but under grace." (Romans 6: 14.)

**W**HAT do you understand that positive statement means? Are you one of those many Christians who have never realized the fullness of its assurance of freedom from the power of sin in your life? Or are you one that is rejoicing in the knowledge that through Christ's presence in your heart you are receiving the victory from Him, now, moment by moment, over the besetting sins that formerly were causing you constant defeat?

Christ offers to set us free from the power of Satan in our lives. He defeated Satan at the cross and arose from the grave triumphant over him. Now He offers to give us, also, complete victory over sin. But we must comply with His conditions.

First, we must have faith to believe that He is able to give us such a victory. That is easy, because who can doubt His power. Second, we must recognize our absolute helplessness to gain the victory through our own efforts. This step, also, should be easy because of many past crushing and humiliating defeats. Nevertheless it often is difficult because Satan endeavors to lead us to trust in works, although we are warned against making the mistake. (Eph. 2: 8, 9. Third, we must believe that Christ desires to give us the victory. Here again there can be no difficulty, for His own spotless character, His love for us, as shown through His death on our behalf, and His hatred of sin must remove every doubt on this score.

Once we have taken these three steps we need to take but one more. We must quietly, confidently ask Him to fulfill His promise and give us the victory and trust Him to do so. This implies, of course, that our lives have been fully surrendered unto Him and that as far as He has revealed it unto us there is nothing in our lives that we knew of that is foreign to His will. We must also let Him do it all.

Satan, of course, will be active. He will strive to create doubts in our minds, many, many of them. He will assure us that some effort on our part, beyond mere faith and trust as the first step is necessary. Don't listen to Him for a moment. Don't argue with Him. Look only to Christ. Trust only in Him. Realize that He is able and willing and that He actually gives us the victory moment by moment as we trust Him for it.

Don't anticipate future failures. Christ will be as strong to help in the future as He is now. It is His strength we trust in, not our own. He does not offer to give us the victory for tomorrow but only for our present need and to continue doing so only as we continue looking to Him for victory.

Don't think that Satan won't continue to tempt us. He will strive to, but Christ offers to enable us to conquer all (not only some) of his fiery darts. (Eph. 6: 16.)

Don't think this means that we will ever have our sinful natures during this life. These will ever be with us. But with us, also, will be something still stronger, the abiding presence of Christ, and in His strength we are enabled to walk in newness of life. (Romans 6: 4.) We are new creatures; all things have become new. (2 Cor. 5: 17.) And as we walk in this newness of life in Christ Jesus He causes us always to triumph. (2 Cor. 2: 14.) Victory comes only when we realize that it is a gift. (1 Cor. 15: 57) that we receive through faith in Christ. Have you claimed your possessions in Christ? If not, do so now. If you have accepted with Christ's conditions you

may have victory now instantly. Christ is holding the gift out to you now. Will you not take it?—I. H. N.

**Guarding the Mouth**

**A** BULLETIN recently issued by the Ontario Department of Agriculture, on "Diseased Mouths a Cause of Ill-Health," and prepared by Arthur Day, D.D.S., goes to show that if all the germs that get into the human mouth took deadly effect, the race would have died out in the first generation. Probably few people have any idea of the enormous number which are to be found in the human mouth. Authorities differ as to the exact number, but a conservative estimate is that the ordinary varieties which are to be found in a diseased mouth number about 15. Bacteria multiply so rapidly, however, that tens become millions in a few hours if the condition of the mouth is favorable to their reproduction. Attention is called to the many diseases, such as chronic dyspepsia, gastritis, certain nervous affections and general diseased conditions of the blood, such as pernicious anaemia, which may be traced to a diseased mouth. These mouth troubles are alarmingly frequent in the children of public schools and in rural localities no adequate measures have been adopted up to the present to cure the evil or to arrest its progress. Statistics show that over 50 per cent. of the children in public schools have decayed teeth or abscessed teeth.

It is pointed out that probably the most common effect of an ill-kept mouth on the mouth itself, is tooth-ache. Toothache is frequently followed by a swollen jaw, the swelling being caused by pus at the end of the root of the tooth. This pus is carried to all parts of the body and sets up many diseases. Swollen glands in the neck are very often caused from the same trouble. The tubercular germ is more or less constant in the mouth and often becomes mixed with this pus and when it enters the glands of the neck, is apt to travel through the entire system, perhaps lodging in a joint or in the lungs.

The tongue is sometimes the seat of ulcers due to the mechanical irritation of decayed teeth having sharp edges and to masses of tartar. The throat may also be infected from a diseased mouth.

It is also recognized that a great many nervous affections are due to unsanitary mouths. Operations, especially upon the stomach or intestines, including the appendix, should not be undertaken until the mouth has been put in a thoroughly healthy condition, when there is time for it, as otherwise the patient is apt to be infected by the swallowing of the disease germs which are in the mouth.

These are but a few of the points mentioned in this bulletin and we would suggest that those who are interested in the subject write to the Department for a copy.

**Color in Home Decoration**

Nellie M. Killgore.

**W**HEN redecorating, the most important consideration is the wall color. Whether tinted or papered, the wall color should be a dull, soft color, making a proper background for pictures and furnishings. Bright wall colors are never restful or pleasing in a room. Colors are always brighter on the wall than in the sample.

Figured wall paper should not be used as a background for pictures, it draws attention from the picture and is confusing. It may be used in conventional patterns for the hall or below the plate rail in the dining room.

As a rule, warm colors are best in

**What, When and How to Paint**

**This Free Book**

contains 40 pages of practical instructions for improving and beautifying your home, both inside and out. It tells you what paint is, how to choose it and apply it so it will not crack or peel. It shows you how to prepare surfaces and the best time to paint so as to get best results. It teaches you how to secure beautiful and harmonious effects economically.

It tells you how to make your home suggest refinement, repose and individuality.

It contains artistic color schemes showing how walls, ceilings and floors should be treated so as to be in harmony with the other decorations and furnishings.

If you are going to paint or decorate your home, send for your copy of free book today.

**The Canada Paint Co., Limited**  
 853 William Street, Montreal.  
 "Sun Garnish" brightens everything it touches.

Avoid caustic and acid preparations that discolor and damage aluminum. Keep your utensils bright as new by using

**Old Dutch**



**DEAL WITH Farm & Dairy's Advertisers**



It Does the Work!!

**EVERY** farm paper tells you to "cultivate." It is good advice. The great question with you is, "What machine?" We say right here that this is one of the very best Spring Tooth Cultivators on the market.

Why? Because the "Champion" has a frame of best heavy steel, braced with strong steel braces securely riveted part to part—making a substantial, long-wearing Cultivator. A solid steel axle carries the frame and sections. And these sections on Frost & Wood "Champion" Cultivators are properly designed. Each section can work independent of the others, when uneven ground is encountered. They adapt themselves to all inequalities of the land. That means every bit of your field cultivated—nothing missed—no green spots left—all weeds cut or torn out by the roots.

Next the pressure. This is applied by that convenient lever in front and put on all teeth at once. See the heavy springs above each section—they keep the "Champion" down to its work. Teeth are made of best quality Spring Steel. Each has a Helper Spring to lend additional strength when working hard land.

The 2-inch narrow points on "Champion" Cultivators are reversible—which means double wear. For weed or thistle cutting wide points are supplied—change can be quickly made.

You should get this "Champion" Cultivator. It will prove a valuable asset to any farm.

Ask us for Booklet on Seeding and Cultivating Implements. A post card will do.

**THE FROST & WOOD COMPANY, Limited**  
SMITH'S FALLS, ONTARIO

For Sale in Western Ontario and Western Canada by  
COCKSHUTT PLOW CO. Limited, BRANTFORD, WINNIPEG

Established 1856  
Our handsome Spring Catalogue now ready. A copy will be mailed free on request.

# SOW SIMMERS SEEDS

J. A. SIMMERS  
Bulbs, Limited  
SEEDS, Plants  
Toronto, Ont.

**The Surest Way** To sell your surplus stock is through the live stock columns of Farm and Dairy. The cost is little and the results certain. Send in your ad.

north rooms, such colors as yellow, pink, light brown, yellow green and copper red. Red should never be used in a pure tone on a whole wall. It is tiresome in large quantities. On the south with plenty of light, use cool colors, blues, blue greens, greens or greys.

Rugs, floors and woodwork should be darkest, the walls next, and ceiling the lightest. Walls should not be too dark. With a low ceiling put the picture moulding next to the ceiling. A drop ceiling makes a room look lower and should only be used with a very high ceiling.

Tans, light browns, and dull or sage greens are good for the living room. In the dining room use green or dull blue on the south, or copper color on the north. A little red is good in the hall. Adjoining rooms should harmonize in color. Red in one room and green in the other are not good. Light colors give a fresh and airy effect in bedrooms.—Colorado Agricultural College.

## FARM CHATS

H. Percy Blanchard, Hants Co., N.S.

### Laying Up Treasures

**T**HAT discussion about the amount of worldly possessions a young man should have before a girl would be justified in marrying him, has "sort of got me." My mind comes back again and again to it; like a sitting hen to her nest. So much was made of the absolutely essential thousand dollars in the bank, and so little of those things such as disposition and character, which really count, and the four E's for a farmer—Education, Experience, Energy and Enterprise.

I remember a good father who once told his son that he had about a thousand dollars with which, later, he might set him up. "But if you are unwise, my boy, you will likely squander it and be without; if you are ignorant, you will have no way to recoup yourself; and if you are bad, you will find it tending to your ruin." So I have decided to spend it on your education. I will invest it in brains or rather, in converting the raw material into a usable product. That is the safest bank in which the money can be deposited, and that bank pays compound interest.

### Education All-important.

The conclusion to which that good man came appeals to all of us who have gone many miles on the life-way. Many a young man to-day is tempted to take up any work that gives good pay. It matters not if such work holds no future in it; and at thirty he is still driving a team, or keeping tally at a lumber pile. After that there seems no time to stop and study; no chance to begin at the bottom, and learn the steps to a successful trade or occupation; the day of opportunity is past. All animals have bodies and feet, some few have hands, but none have a reasoning mind but man. In the money market to-day the toll of the body means little; the skilled hand means more; but the mind means much. Or, as someone has put it, "all of man below the ears is worth its dollar a dozen; all above has no limit of value." Education is one of the things that differentiates between men and man.

I remember a talk between a young fellow and his sister. He would never have so spoken to another fellow's sister. Their father was a farmer, and, not so usual, the boy showed great aptitude and liking for his father's business. He was finishing a full course at agricultural college. Now, the sister rather felt above the farm. She despised cows, though she rather appreciated a good horse and buggy when she wished. So, apropos

of nothing in particular, except perhaps of her brother's somewhat tarnished overalls, (super omnia, the professor called them). "Well," said she, "one thing, I will never marry a farmer." "Marry a farmer!" came the retort, "what farmer would ever want to marry you? You cannot cook a decent meal, you can hardly sew on a button, you know nothing about a hen, let alone a cow. I suppose you would want to marry one of those white collar city dudes who, sitting at a cafe, and be a weight if lead round his neck till he died and was happy. Why, you don't know enough to marry the hired man!"

### Brain Capital Necessary.

It was a rough lecture and what Ethel replied held more ginger than sugar. But why that slur at the hired man? Barring, of course, a lot of young fellows, who, to earn ready money for some special purpose, or to get the real practical experience, have for a year or two hired out on the farm, the hired man is simply the man who has passed through the sieve. Generally honest, good-hearted, able, and physically experienced, he is where he is because he lacks one of the essential E's, and especially education. He has no brain capital.

And so in an economical endeavor to make both ends of this article meet, we come back to the fact that the young man qualified to marry one of our critical maidens may have his thousand dollars deposited, not in the bank, but in the various convolutions of his cerebrum and cerebellum, where the exploiter of industry may not easily break in and steal.

### Candied Peel Grape Fruit

Alice A. Ferguson, York Co., Ont.

**T**HE rind of grape fruit, (or, pomelo, as it is also called), is so thick that I wondered if it would not do for candied peel, so I tried it in the same manner in which I prepare the rinds of my oranges or lemons, and found it quite equal to, or even superior to, orange peel. It seemed tender and juicy, and of similar flavor, and is nice either as a confection or in cakes and puddings. Those who use the grape-fruit for the succulent interior only, may, if they wish, make this use of the rind. The following is my method, and I would be glad to know how to prepare these peels. If there is a better way to do it:

Soak the rind of oranges, lemons or grape-fruit in salted water for at least 24 hours. They will be alright if left for some days. The salt removes much of the burning acid from the skin. Place in a saucepan and cover with water, boil till quite tender, which may be for some time. Then add sugar to make a thin syrup. If you prefer, the first water may be removed, and a thin syrup made with fresh water, in which case, syrup will be less strong of the flavor. Cook in syrup for some time till the rind seems thoroughly sweetened throughout. Remove peel from syrup and spread out to dry. Syrup may be eaten, as it tastes much like marmalade, so there is no waste in fruit or sugar.

Have you tried cooking onions in milk in the double boiler if you want them extra nice? By adding salt and butter, they prevent the milk from curdling. One reason why some of us do not cook onions more frequently is, that it is hard to remove the odor from our hands. We are told that by washing the hands afterwards in mustard water, it will take away the onion odor.

When icing a cake, it is sometimes difficult to keep the icing from running off before it cools. Try spreading a little flour over the cake just before putting on icing.



**Women's Institutes in Alberta**

OUR Ontario Women's Institute members will, no doubt, be interested in the progress which is being made by the Women's Institutes of Alberta. They held their third annual convention in Calgary recently and the wide-awake delegates were on the alert for suggestions and help in planning for their future activities.

One of the interesting features of this convention was the Round Table Conference. The questions asked at this conference created a lively discussion and after all, practical discussions of life issues are the most helpful parts of any convention. One question asked was, how to secure greater interest in the meetings. "Make everyone feel we can't do without them," was one good suggestion offered. It was also pointed out that each member should be given some responsibility, by serving on committees, assisting with the programmes and so forth. Enlisting the support and interest of the young girls in the various communities was also brought up. In some districts the girls are cooperating splendidly, but this does not always prove to be the case. An excellent means of keeping up the interest of the girls was to give them the entire responsibility of preparing at least one meeting during the year.

There was a wide diversity of opinion on the question of house to house meetings against a permanent central meeting place. It would appear that local conditions have to be taken into consideration here. The delegates were unanimous in their opinion that the cup of tea was a real social force and should not be dispensed with. It was thought, however, that if a central meeting place was available where a social hour could be enjoyed, that it was probably more suitable than going from house to house.

After a lively discussion on the question of compulsory medical inspection of all rural schools, it was decided to endorse the resolution in favor of this measure as passed by the Women's Institute Board to be forwarded to the government. Consolidated schools also came up for discussion. If the trustees do not look on the idea with the favor, the people themselves must endeavor to enlist the support of the public. As a means of assisting in creating the necessary interest, the delegates were advised to secure material for a debate on the question from the University Extension Department. Many other interesting subjects were dealt with and the delegates considered their Round Table conference so helpful that they expressed a wish for a longer conference in future.

Another interesting feature of the convention was the message brought from British Columbia Institutes by Mrs. James Johnston of Nelson, B.C., the president of the British Columbia Women's Institute Advisory Board. In order to facilitate organization work there, the Institutes are divided into four sections. Boys' and Girls' Clubs are of particular interest to them, in connection with school matters, and they are doing commendable patriotic work. Last year they contributed \$5,000 from sixty working Institutes, are responsible for fourteen prisoners of war besides considerable other work.

Jimmie giggled when the teacher read the story of the man who swam across the Tiber three times before breakfast. "You do not doubt that a trained swimmer could do that do you?" "No sir," answered Jimmie, "but I wonder why he did not make it four and get back to the side where he was."

# Raise Poultry

"There's Money in hens"



To increase the Nation's Food Supply

This is a Patriotic National Duty

10,000,000

Ten million more hens are needed to meet the home and overseas demand for eggs.

That means 15 more hens on every farm in Canada.

Raise two additional broods of chicks and let the hen help you increase production.

Every pound of food produced helps defeat the enemy.

Britain makes insistent demand for eggs at high prices.

Patriotism and profit both urge you to increase the supply.

Let the hen help you. Interest your boy and girl in poultry keeping.

If you need information on any subject connected with poultry raising and marketing, write,

THE INFORMATION BUREAU,  
DOMINION DEPARTMENT OF AGRICULTURE,  
OTTAWA.

HONOURABLE MARTIN BURRELL, Minister.



**BARRED PLYMOUTH ROCKS**

Eggs from high class bred-to-lay strain, \$2.00 for 15. Stock for sale.

A. P. MacVannel - Picton, Ontario

**Poultry Leg Bands, Ear Tags and Buttons FOR STOCK**

Challenge Adjustable Leg Straps. 100 per doz. - The per 100. Single metal colored bands. 100 per doz. - The per 100. Three metal colored bands. 100 per doz. - The per 100. Plastic Ear Tags and Buttons, price according to quantity. Catalogue Free.

**The Rideau Specialty Co.**  
Manufacturers. SHERBROOKE, QUEBEC

**GENTS' SUITS FREE**

Amazing Offer of Gents' and Boys' Suits and Trousers to Readers.

Would you like a pair of trousers absolutely free? A most astounding offer is being made by a well-known Firm in London, Eng. They have discovered a remarkable Holeproof Cloth. You can't tear it! You can't wear it out, no matter how hard you wear it, for if during six months of solid, hard grinding work every day of the week (not just Sundays) you wear the smallest hole, another garment will be given free! The firm will send a written guarantee in every parcel. Think! Just \$6.50 for a man's Suit, and only \$2.25 for a pair of Trousers, or \$2.60 for Breeches. Boys' Suits from \$2.27, Knickers from \$1.00. All these prices include duty and postage, so that readers have nothing more to pay on delivery. All these goods are guaranteed for Six Months' solid, grinding wear. Now don't delay. Send just a postcard to the (Agents Dept. L) Holeproof Clothing Co., P.O. Box 194, Toronto, for large range of patterns, easy self-measure form and fashions. These are absolutely free, and postage paid to any part of Canada, and you can easily measure yourself at home. The firm's London address is 88 Theobald's Road, London, W.C., Eng., but readers should apply to Toronto, Ont.

## For fire-safety, inside the home use 'Metallic' Ceiling Plates

YOU can make your home fireproof and more attractive at small cost by using Metallic Ceiling and Wall Plates. Many beautiful designs with cornices and moldings for any style of room. You can put them on old walls as easily as new. Wash them or brighten up with paint whenever desired.

"Metallic" Ceiling Plates are sanitary, fireproof, inexpensive and good for a life time.

Write for booklet and prices. We manufacture all kinds of "Metallic" building materials and sell direct at lowest prices.

Metallic Roofing Co. Limited, Toronto and Winnipeg



## Winning the Wilderness

(Continued from page 12.)

Jim would have known me then I had to keep out of sight a little."

"Well, and yet has Shirley ever done you that you so down on him?" Hans Wyker asked.

"The smooth mask did not drop from Smith's face, save the small dark eyes burned with an intense glow.

"I tell you I was acting under orders from Shirley's brother Tank in Cloverdale, Ohio. And if Dr. Carey hadn't been so blamed quick I'd have written a letter Mrs. Tank Shirley had gotten to Jim the very day I got to Carey's Crossing. No brother ever endured more from the hands of a relative than Tank Shirley endured from Jim. In every way Jim tried to defraud him of his rights; tried to prejudice their own friend against a kin; tried to rob him of the girl, a rich girl, too, that he married in spite of Jim—and at last contrived to prejudice his wife against him, and with Jane Aydelot interfering all the time, like the old maid that she is, man-

aged to get Tank Shirley's only child away from him and given legally to Jim. Do you wonder Tank hates his brother? You wouldn't if I dared to tell you all of Jim's casuedness, but some things I'm sworn to secrecy on. That's Tank's streak of kindness he can't overcome. Gets it from his mother. I'm his agent, and I'm paid for my work. You both understand me, I reckon.

"We understand, and we stay by you to der ent," Hans Wyker exclaimed enthusiastically. But Darley Champers had a different mind.

"I'll watch you, my man, and I'll do business with you accordint'," he said to himself. "Devil knows whether you are Thomas Smith woker for Tank Shirley, or Tank Shirley woker for himself under an assumed name. Long as I get your capital to push my business I don't care who you are." Aloud he remarked:

"So that's how Jim Shirley got that little girl. She's a comely youngun,

anyhow. But Smith, since you are only an agent and nobody knows it but us, why keep yourself so secret? Where's the harm in letting Shirley lay eyes on you? Why not come out into the open? How'll Shirley know from the Mayor of Wilmington, Delaware, anyhow?"

Thomas Smith's face was ashy and his voice was hoarse with anger as he replied:

"Because I'm not now from Wilmington, Delaware, any more than I ever was. I'm from Cloverdale, Ohio. You know, Wyker, how I lost money in your brewery, investing in machinery and starting the thing, only to go to smash on us."

He turned on Hans fiercely. "And you know how I lost by you in this town and the land around it. I was my money took up all this ground to help build up Wykerton, and you, as my agent, sold every acre of it to Jacob."

This as fiercely as Darley Champers.

Both men nodded and Darley broke in:

"I was honest. I thought Jacobs was gettin' it to boom Wykerton with right. I'd never sold. And him bein' right here was a dang'd sight easier'n havin' some man in Wilmington, Delaware, to write to. That's why I let him in on three sides, appealin' to his pride."

But Thomas Smith stopped him abruptly.

"Hold on! You need money to push your schemes now. And I'm the one who does the financing for you."

"Both men agreed."

"Then it's death to either of you if you ever tell a word of this. You understand that? I'm not to be known here because I'm a dealer. I'm the cashier that was mixed up in the Cloverdale bank affair. And, as I say, if Jane Aydelot had let things alone Tank Shirley and I could have pulled out honorably, but, woman-like, because she had a lot of bank stock and was the biggest loser of anybody, in her own mind, she pushed things where a man would not have noticed or kept still, and she kept pushing year after year. Damn a woman, anyhow! All I could do at last was to commit suicide. Tank planned it. It saved me and helped Tank. You see, Miss Jane had a line around his neck, too. She was the only one who really saw me go down and she spread the report that I'd committed suicide on account of the bank failure. So, gentlemen, I'm really drowned in Clover Creek right above where the railroad grade that cuts the Aydelot farm reaches the water."

Darley Champers wondered why Thomas Smith was so particular in his description.

"I've known Jim Shirley all my life. He was as bad a boy as ever left Cloverdale, Ohio, under a cloud. Got into trouble over some girl, I believe, finally. But you can see why I'm out of this game when it comes to the open. And maybe you could understand, if you knew the brothers as well as I do, why Tank keeps me after him. And I'll get him yet."

The vengeance of the last words was venomous. "Well, now we understand each other we'll not be tramping on each body's corns." Darley Champers urged, anxious to get away from the subject.

With all of his shortcomings he was a man of different mould from the other men. Eagerness to represent and invest large capital and to make by far the best of a bargain by any means, but inside the law, were his besetments. But he had not the remitting hatred that enervated Thomas Smith and Hans Wyker.

Champers' store of energy seemed exhausted. Following the lead and he fell upon the Grass River Valley and threshed it to his profit.

One mid-June evening the Grass River schoolhouse was lighted early, while up from the prairie ranches came the work-worn farmers.

This year the crop outlook was bad, yet somehow an expectant air lifted sagging shoulders and looked out through hopeful eyes.

While the men exchanged neighborly greetings, a group of children, the second generation, were romped about in the twilight outside.

"Here comes Thaine," they shouted as Asher Aydelot and his boy came down the trail.

"Come on, Thaine," Leigh Shirley said, reaching for his hand. "We are going to play drop the handkerchief."

"Thaine's going to stand by me," pretty Jo Bennington declared, pushing Leigh hysterically aside.

Josephine, the week-old baby Mrs. Aydelot had none to see one day, black-eyed, rosy-cheeked girl who looked it over every other child in the neighborhood. And every other child submitted except Leigh Shirley, who had a quiet habit of going straight ahead about her affairs in a way that vexed the pretty Jo not a little. From the first coming of Leigh among the children Jo had resented her independence. But, young as they all were, she objected most to Thaine Aydelot's claiming Leigh as his playmate. Thaine was Jo's idol from earliest memory.

"What's the row here?" Todd Stewart, Junior, broke in. "You mustn't fuss or you'll all have to go in and listen to Darley Champers and I'll play out here by myself."

Todd was a young-hearted, half-grown boy now, able to work all day in the hayfield or to romp like a child with younger children in the evening. He was a leader among the boys of Thaine and Jo, a difference that would tend to disappear by the end of a decade.

"We'll be good, Toddie, if you'll let us stay and you'll play with us, the children entreated, and the game began, with Thaine between Leigh and Jo."

When Asher Aydelot joined the group inside Darley Champers rapped on the desk and called the men to order.

"Gentlemen, let's have a business-like proceeding." "Who shall preside at the meeting?"

"I move Jim Shirley be made chairman. He's the best looking man here." Todd Stewart said, half seriously.

The motion carried and Jim, looking big and handsome and kindly as always, took the chair.

"I'll ask Mr. Champers to state the purpose of the meeting," he said.

"Gentlemen," Champers began with tremendous dignity, "I represent the firm of the Champers Town Company, just chartered, with half a million dollars' capital. Gentlemen, you have the finest valley in Kansas."

The same was said of every other valley in Kansas in the fat years of the boom. But to do Darley justice, he had never made a finer effort in his life of many efforts than he was bent on making to-night.

"And this site is the garden spot of it all," he continued. "The elevation, the water power at the deep end of Grass River (where at that moment only a trace of water marked the river's straggly right of way), the fine farming land—everything ready for a sudden leap into prosperity. And, gentlemen, the A. and T. (Arctic and Tropic) North and South Railroad will begin grading down this very stream inside of thirty days. In this year this year will be a city next year, a changed sight bigger city than Careyville will ever be. Why, that town's got its growth and is beginning to de-exhausted. Following the lead and he fell upon the Grass River Valley and threshed it to his profit.

(Continued Next Week.)

## Outwitting the Frost King

When the snow lies deep on meadow and pasture, the farrowing dairyman rejoices in his trusty Natco Silo. Sweet, juicy and free from mold, the silage holds the cows to full milk flow and puts flesh on the steers and fattening lambs. Your corn crop will go 40% farther when preserved in a

### Natco Imperishable Silo

"The Silo that Lasts for Generations"

Builds of glazed hollow the impervious to air and moisture, and frost-resisting. It's the silo that needs no repairs—has no bugs or light-ens. Strongly reinforced and fully guaranteed. Simple in design, only two parts of the silo, the manager can erect a

Natco. Will increase the value of your farm.

Send for our Silo catalogue and our book, "Natco on the Farm"—both free. Tell us what you intend to build. We have valuable building plans free.

National Iron Proofing Co.

OF CANADA, LIMITED

1263 Dominion Bank Bldg.

Toronto,

Ont.



LADIES WANTED—To do plain light sewing at home, whole or spare time; good pay; week sent any distance; charge prepaid. Send stamp for particulars. National Manufacturing Company, Montreal.

When You Write—Mention  
Farm and Dairy

## Blaze The Trail

For Your Local Agent, by Illustrating

Your Line of Farm  
Implements

In Our Sixth Annual

Farm Machinery Number  
Out May 3rd

Most farmers buy with their eyes open. Let them see your goods.

Write us early for space reservation.

Farm & Dairy, Peterboro, Ont.

## Fashions Suitable for Practical Wear

### IMPORTANT NOTICE

Farm and Dairy patterns shown in these columns are especially prepared for Our Women Folk. They can be relied upon to be the latest models and include the most modern features of the paper patterns. When sending your order please be careful to state bust or waist measure for adults, age for children, and the number of the pattern described. Orders are filled within one week to 10 days after receipt. Price of all patterns to Our Women Folk, 10 cents each. Address orders to Pattern Dept., Farm and Dairy, Peterboro, Ont.



**E**ASTER is over for another year. Those of us who did not have the good fortune, or misfortune, whichever it may be, of our new spring outfit for Easter Sunday, will be able to look over the styles now at our leisure and may incidentally pick up a few ideas from the many new costumes which made their first appearance at Easter time. We hear much about sports clothes, and we immediately think of costumes suitable for serviceable wear. This material should be suitable for the country woman. Jersey cloth is one of the most popular materials in sports goods, being a soft, pliable woven with good wearing qualities. The tailored suit is always in good style of course, but some people are of the opinion that for country wear, the separate coat and dress are more practical. It is hard to get the worth of one's money out of a suit before it goes out of style, unless one goes out a great deal. If the skirt is worn around the house with separate blouses, it will naturally become shabby sooner than the coat.

**2022—Lady's Apron.**—To prevent this apron from hanging too loosely, it is caught in across the back so as will be noted in the small view. For a medium size it requires 4-3/8 yards of 36-inch material. Four sizes: small, medium, large and extra large.

**2031—Girl's Dress.**—This dress shows the Bertha trimming which will no doubt appeal to the artistic eye of many young girls. Such a dress could be made up very daintily. Five sizes: 4, 6, 8, 10 and 12 years.

**2034—Lady's House Dress.**—Here is a very sensible and yet attractive house dress. Either long or short sleeves can be utilized and the large pockets will be found quite convenient. Seven sizes: 34

to 46 inches bust measure.

**2028-2027—Lady's Costume.**—This costume, while simple shows good style. It might be made up in wool material or other kinds. If desired, the blouse could be made silk or some dainty material and the skirt from heavier goods such as gabardine, serge, etc., as the style would look well with separate blouse. This model calls for two patterns, 10 cents for each. The blouse is cut in sizes from 34 to 46 inches bust measure and in the skirt from 32 to 34 inches waist measure.

**2029—Boy's Blouse Suit.**—What style could be more pleasing for the little man than the one shown herewith. Would he not look well in such an outfit. Several blouses might be cut from this pattern and for very warm summer weather, the shirt could be omitted and short sleeves used instead of long ones. Four sizes: 2, 4, 6 and 8 years.

**2018—Girl's One-Piece Dress.**—The school girl will soon be going without her coat and of course will want some new dresses. This style is chic and serviceable. Note the yoke effect, both back and front and the large round collar which harmonizes nicely with the yoke. Four sizes: 6, 8, 10 and 12 years.

**2034—Lady's Dress.**—If styles can be decided upon for summer dresses early, it saves a lot of trouble and worry later in the season when the warm weather is fast approaching. The design shown herewith is attractive and would be suitable for many of the pretty young materials. Six sizes: 34 to 44 inches bust measure.

Now that spring sewing is getting into full swing, those of Our Women Folk who have not yet taken advantage of our catalogue offer would do well to send in their order now. An extra 10 cents will take this catalogue to your home.



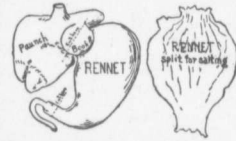
## ROYAL EAST

Has been Canada's favorite yeast for over a quarter of a century. Baked bread with Royal Yeast will keep fresh and moist longer than that made with any other, so that a full week's supply can easily be made at one baking, and the last loaf will be just as good as the first.

MADE IN CANADA  
E.W. GILLETT COMPANY LIMITED  
WINNIPEG TORONTO, ONT. MONTREAL

## CHEESEMAKERS! HANSEN WANTS RENNETS

We have opened a factory in Toronto for the manufacture of our well-known Rennet Extract and other preparations. And we need all the Rennets you can get. You will find it profitable to collect Rennets from the farmers and butchers in your locality and ship them to us. The Rennets should be those of milk-fed calves only.



**GOOD PRICES PAID.**  
Write us for special circular containing full instructions for the preparation of Rennets for shipment, and particulars of the prices we will pay. Do this now—There's money in it for you.

CHR. HANSEN'S CANADIAN LABORATORY,  
201 Church St., Toronto, Ont.

## The Red Cross of Finance

Other assets may depreciate or even become worthless but life insurance remains unaffected by fluctuations in security values.

In the dark days of financial loss and disaster the life policy is often the thing that saves. As a distinguished speaker said at our recent annual meeting—

*"The world of Finance is a field of war in which many casualties occur day by day, but I like to think that in this battlefield the life insurance company fulfils the function of the Red Cross."*

Every private home should of course be protected by means of sound life insurance, but so should every business. The loss of an influential partner might easily be fatal to a business organization.

Life insurance is often the only portion of a man's estate that he can bequeath to his heirs—unencumbered. There is no other asset that can compare with a policy issued by The Mutual Life of Canada.

Write for booklet—"Golden Opinions"

## The Mutual Life Assurance Company of Canada Waterloo, Ontario

**T**HE business survivors are the good advertisers. But good advertising is not chiefly the putting forth of strong advertisements. Advertising is worse than useless if the goods are not as strong as the advertising. Survival is founded on bedrock quality. Good advertising must rest on that. Test the advertising in Farm and Dairy by that severe standard, in actual purchase. We guarantee the integrity of every advertiser in this issue, and believe they will stand the test. Try them and see. When writing, say "I saw your advertisement in Farm and Dairy."

## WATER WELLS DRIVEN AND DRILLED

To any depth, to insure a permanent supply for Cities, Towns, Manufacturers, and Farms. Pumping outfits. Our work is the kind we do not have to apologize for. Write for our circular which is FREE!

J. E. FEELEY & SON

ST. ARMAND, QUEBEC.

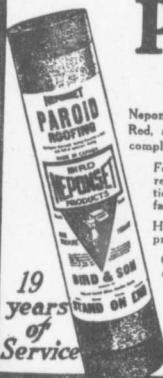


## Look for the Roll with the Paroid Label

NEPONSET Paroid Roofing has achieved a reputation during the last 19 years that is the admiration of all competitors, and this warning is for your own protection.

Paroid makes the one roof which cannot crack, rot, rust, or dry out, and is endorsed by the National Board of Fire Underwriters for its fire protection qualities.

Your guarantee of satisfaction lies in the Paroid roofs that have stood the severest weather during the last 19 years, and are still in fine condition.



## NEPONSET Paroid ROOFING

Neposnet Paroid is made with permanent Grey, Red, and Green Surface. Every roll contains complete kit, and our unconditional guarantee.

For your home, Neposnet Twin Shingles are recommended, having the same good qualities as Paroid, and with crushed slate surface of Red or Green.

Hardware and lumber dealers sell Neposnet products.

Go to the Neposnet dealer and get real satisfaction.

BIRD & SON, Dept. D HAMILTON, Ont.

The largest manufacturers of Roofing, Wall Board and Roofing Felt in Canada.

Warehouses in Winnipeg, Calgary, Edmonton, Vancouver, Montreal, St. John.

Also Manufacturers of Neposnet Wall Board.

## CHEESE BOXES

for the 1917 Season

We make the STANDARD BOX as demanded by

Railway Commission.

Factories at  
Ingersoll,  
Cavanville,  
Peterboro,  
Belleville,  
Ont.

Take no chances with any other.

Write us for prices delivered to your station.

C. B. JANES & CO., Limited  
ORILLIA, ONT.

## The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department, to ask questions on matters relating to cheese making, and to suggest subjects for discussion.

### Results of Successful Course

THE Eastern Dairy School, Kingston, has just brought to a close a most successful course for cheese and butter makers. The attendance was fully up to previous years, which, considering the adverse conditions, is very gratifying. In all, 56 students registered, of whom 26 wrote on the final examinations for diplomas. These successful are as follows, ranked in order of merit:

1st Class—W. L. Tallman, Toledo; Arthur Hawkins, Glen Norman; Archie Lewis, Osgoode.  
2nd Class—J. H. Mitchell, Perth; Harry L. Love, Madoc; Alex. G. Moses, Osgoode; G. W. Francis, Osgoode; Everett M. Fox, Stirling; Horace St. Denis, Moose Creek; Stewart Forbes, Middleville; Peter Bogarsie, Perth; Harry Anderson, Campbellford; Harry Kennedy, Brockville; W. G. Godkin, Osgoode; Dolphis Lavigne, St. Amour; Allan McDonald, Glen Roy; Myrren D. McLaren, Lanark; Wesley Barclay, Vars.

Pass—Fenwick Cramer, Westbrook; Geo. Jackman, Stirling; H. Lochead, Hopetown; L. K. Blanchard, Rockspring; G. C. Henderson, Smithfield; Eddie McAllister, Curran.

### Dairy School, O.A.C. College

THE total registration of students in the various courses at the Dairy School, O.A.C., ending March 31, 1917, was 75, as compared with 73 for similar courses in 1916. These students came from the Provinces of Nova Scotia and Prince Edward Island by the Atlantic Ocean, and from British Columbia on the Pacific Coast, though most of them were from Ontario.

Butter and cheesemakers have been in great demand this year, particularly from Ontario, Manitoba, Alberta and Saskatchewan. A number of graduates have secured positions in the Western Provinces at good salaries. Wages are also high in Ontario for first-class men to take charge of factories. Practically all those competent to act as head butter or cheesemakers were engaged before the close of the term.

The dairy industry of Canada was never on such a sound and satisfactory basis as at present, so far as assured and remunerative markets for milk and its products are concerned.

(Continued on page 27.)

## CREAM

WE ARE OPEN TO BUY

CREAM,

both for churning and table

use.

ASK ANY SHIPPER

about our service and prompt

returns.

ASK FOR PRICES.

The figures for yesterday

were TOO LOW for to-

morrow.

WE FURNISH CANS.

The Toronto Creamery Co.,

Limited

Church St., TORONTO, Ont.

### EGGS FOR HATCHING

Famous White Wyandotte eggs for hatching from prize winning stock. Utility strains, \$1.50 per setting.  
B. W. BALL, R. R. 2, Jarvis, Ont.

### FOR SALE AND WANT ADVERTISING

#### THREE CENTS A WORD, CASH WITH ORDER

ALL KINDS No. 1 Seed Corn. Try our Improved Leaning, Reid's Yellow Dent, on cob or shelled. Geo. Twiss, Wooddale, Ont.

WANTED—To hear from owner of farm or unimproved land for sale. O. O. Mattson, 2387 Cedar Ave., Minneapolis, Minn.

WANTED.—Two men: one with one or two years' experience in Creamery or Cheese Factory and other no experience necessary. Belleville Creamery, Limited, 118 Front St., Belleville.

BUFF ORPINGTON EGGS for hatching, \$1.00 for 15 eggs. 3 chicks guaranteed. Silver cup winners and extra heavy layers. Hugh A. Scott, Caledonia, Ont.

VEGETABLE SEEDS—Best varieties: Beets, Beans, Corn, Peas, Parsnips, Lettuce, Cabbage, Onions, Squash, Cucumbers, Tomatoes, etc. 13 assorted 5c and 10c size packets, postpaid, 25c. Satisfaction or money back. Howie Concern, Besbe, Que.

FOR SALE—100 Cedar Dale R. C. Log-horns. Will furnish you, on short notice, eggs at \$1.00 for 15, or \$5.00 per hundred. Satisfaction guaranteed. A. J. Tamblyn, Orono, Ont.

### WANTED

Experienced single man to work on grain farm in Alberta. Wire wages expected for eight months.  
M. J. McKay, LANFANE, ALTA.

### BOOKS

Write for our catalogue of farm books. If it suits you, we request. Ask us for information on any book you require.  
BOOK DEPT., FARM AND DAIRY PETERBORO, ONT.

## CHEESE-MAKERS!

Are you going to continue using high-priced imported Rennet Extract—or

**Curdalac\* (P. D. & Co.)** and

### Spongy Pepsin for Cheese-making?

During the season of 1916 these two coagulants satisfactorily replaced Rennet in scores of factories; gave full yield of fine-flavored cheese, and with great saving in cost.

Ask the nearest supply dealer for information regarding the use of these products, also for prices and descriptive literature.

\*The term "Curdalac" is used to distinguish the liquid milk coagulant manufactured by Parke, Davis & Co.

Walkerville, Ont.

PARKE, DAVIS & CO.



# It's a car with a Pedigree

**T**HE man who drives his "span of bloods" should look for class, stamina and speed in the car that takes their place.

Every way you look at it, there's more pleasure, better day-in-day-out service, greater dollar-for-dollar value in a car that comes from the Chalmers line.

Chalmers cars are Chalmers clear through. Made in Chalmers shops—the pride of Chalmers workmen. 6,500 people in factories with nearly a million feet of floor space make Chalmers cars. Chalmers ideals rule in making motors, gears. Chalmers knows that everything is well made and good for Chalmers performance on the road. From first to last the Chalmers car is a Chalmers product. It goes forth with a pedigree. It promises long, faithful—and high-spirited service.



Mark now the Chalmers. It is trim in line. It has a fine finish that speaks for soundness clear through. It looks like speed, and speed is there. 45 horsepower in a high-speed 6-cylinder motor. Light and wiry, but powerful on hill, in mud,

in sand. Try it.

Pile in the folks. There's comfort for five and room for more. There's security in the perfect balance of weight on the springs. There's safety the way the wheels hold the road. It's reliable—a car for the family. It's a car that runs true to the Chalmers pedigree.

The Chalmers policy of service to Chalmers owners long has been the wonder of the motor industry. It made the Chalmers success.

In Canada it is emphasized by the building of the large Canadian factory at Walkerville, Ont. The Canadian owner is served by the Canadian Chalmers Company. Men whose interests are Canadian and who have the Chalmers spirit of serving owners of Chalmers cars direct the big Canadian organization.

Chalmers is a car, a man, an INSTITUTION.

Write for Catalogue showing all Chalmers models

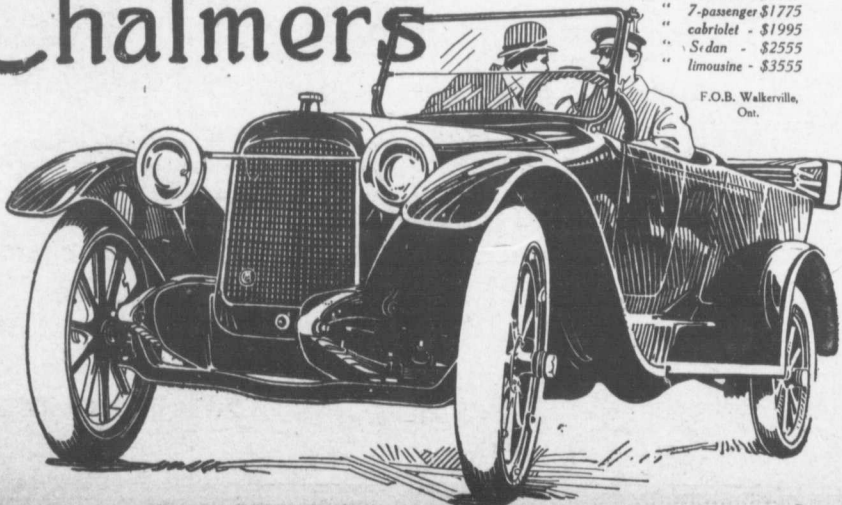
THE CHALMERS MOTOR COMPANY, OF CANADA, Limited, WALKERVILLE, ONT.

# CANADIAN Chalmers

PRICES

6-30 Chalmers 5 passenger	\$1625
6-30 " roadster	\$1625
" 7-passenger	\$1775
" cabriolet	\$1995
" Sedan	\$2555
" limousine	\$3555

F.O.B. Walkerville, Ont.



# Production! Production! Still More Production!

## Produce More Crops by Removing all Your Stumps with a



In order to assist in relieving the shortage in foodstuffs and to enable our Government and that of Great Britain and other countries to feed the large armies in Europe you must make every foot of your farm produce its full share of crops. Read this and think as you never did before—how about that acre of waste, stumpy land down by the south fence? You haven't paid much attention to it—you have rather dreaded the work of clearing it.

**Don't delay any longer**

One man in his odd moments can pull all those stumps without other help than a

### Kirstin Stump Puller

It makes no difference what kind of stump you have to clear or whether you have one acre or one thousand acres the Kirstin method is guaranteed to clear your land from 15% to 40% cheaper than any other method. When you buy a Kirstin Stump Puller you get a guarantee Bond which protects you against breakage—law or no law—for fifteen years and the helpful advice of our land clearing experts is at your command for all time. Look into This Labor Saving—Profit Producing Device—send for our illustrated book.

"The Gold in Your Stump Land" and details of our profit sharing plan, which will be sent you without obligation. Sign the coupon and mail today.

**A. J. KIRSTIN CANADIAN COMPANY**  
63-64 Dennis Street, Sault Ste. Marie, Ont.  
Largest Manufacturers in the World of Stump Pullers—Road and Hoop Poles.

**\$4275**

and up.

### Kirstin One Man Stump Puller

A. J. KIRSTIN CANADIAN COMPANY, 5324 DENNIS STREET, SAULT STE. MARIE, ONT.  
Send me a FREE COPY of "THE GOLD IN YOUR STUMP LAND" and full particulars of The Kirstin Method. The Money Back Bond. The 15 Year Guarantee. The Profit Sharing Plan.

NAME.....  
ADDRESS.....  
SENDING THIS COUPON OBLIGATES YOU IN NO WAY

"Farm and Dairy,"  
Peterboro, Ont.

"Sales have been extra good this season, and we value highly your paper as an advertising medium."

"Yours truly,

(Sgd.) J. W. RICHARDSON,  
"Riverside Farm."

You, Mr. Breeder, can duplicate Mr. Richardson's experience in making sales to the 25,000 dairymen and dairy breeders who receive Farm and Dairy each week. Write us to-night for our liberal contract rates.

FARM AND DAIRY, PETERBOROUGH, ONTARIO.

### SHIP YOUR BUTTER & EGGS

—to us. We are not commission merchants. We pay net prices and remit promptly.

THE DAVIES COMPANY LIMITED  
Established 1854. TORONTO, ONT.

## Complete Auction Sale

### 25 HEAD Imported and Registered Horses

#### On April 26, Grenville, Que.

My entire stock of Percherons, Clydesdales, Belgian standard bred, half-bred, Hackneys and Thoroughbreds. In Percheron stallions, the champion LOIN (3901-9552), dark grey, and another noted prize winner, ROSCOE L. (3477-5641), black. CHANCELLOR (3479-83256), beautiful dapple grey. PRUSSIA (783), although up in years, is in fine condition and gives good satisfaction in the stud. In Percheron mares the champion MARIE (3932-10077), grey, due to foal May 1 to LOIN. HAZEL THORN (4503) and ROSELINE (4502), a matched pair of blacks, half-sisters, two and three years old. We have other Percherons, which space does not permit us to mention. Clydesdale stallions: RADON'S KID (3742), PRIDE OF KARDLY (3876) and BARON ALBRECHTEN (4109). In Belgians we have some of the best blood this side of the water, including the champion six-year-old chestnut, POSENA, standard bred by PRINCE VAN THINE KOENIGK (1852), sired by SIR HADJ APPLE KOENIGK, a grandson of the noted PONTIAC KOENIGK. This is one of the finest opportunities ever offered in the Province of Quebec to get good stock, as no reasonable offer will be refused. QUEEN VILLE is midway between Ottawa and Montreal on the C.P.R. and C.N.R. G.R. station, HAWKESBURY. TWO TRAINS EACH WAY DAILY. Long Distance telephone. C.P.R. leaves Ottawa 8.30, arrives Grenville 11 a.m. Leaves Montreal 9 a.m., arrives Grenville 10.15. Rigs meet both the trains on day of sale.

TERMS—Six months on good security for amounts up to \$500.00. Over that amount will make satisfactory arrangements day of sale.

**J. E. ARNOLD**

**Grenville, Que.**

### Farm Management

#### Stumping 12 Acres

B. D. Kelly, Hastings Co., Ont.

MY experience has not been very large in connection with removing stumps. Last fall I cleared about 12 acres of land which was thick with pine stumps. They were all sizes up to 30 inches in diameter, and were both high and low, that is, some were cut off at the roots or level with top of the ground. With the assistance of another man, we did the work in five and one-half days, all except hauling off or putting into piles for burning.

To do this stump pulling I bought a No. 10 cable Kirstin one-man stump-puller, and used it with success. We took out over 800 stumps, and the soil was mostly sandy loam with the clay hard-pan and clay and stones between the roots. I think this is the cheapest and quickest method of getting rid of Mr. Stump, for two men can pull a fair-sized stump in two to seven minutes with the Kirstin, and by using the cluster cable four or more small stumps or snags can be pulled at one time.

#### Suggestions From Dr. Zavitz

EDITOR Farm and Dairy.—Skilled labor throughout the Province is very scarce. The farmers of Ontario have an exceedingly difficult task ahead of them if they are to increase the production of the most valuable kinds of food materials in 1917. The following suggestions are offered in the hope that they may prove helpful:

1. Carefully plan the crop production for the season at an early date.
2. Thoroughly clean and grade the grain so as to procure the large, plump, sound and well matured seed.
3. Test the germinating power and the vigor of the seed before time to sow.
4. Overhaul implements and machines so as to be ready to start seeding early and to sow each class of crop at the best time for highest results.
5. Arrange for at least a small amount of such cultivated crops as beans, potatoes, turnips and corn.
6. Watch and destroy the weeds before they are able to make much headway.
7. Economize man labor by using three and four horse teams when possible.
8. Plan so as to make the best use of the unskilled labor which is available.

Copies of bulletins on "Farm Crops," "Field Beans" and "Potatoes" may be obtained from the County Agricultural Representative or from the Ontario Department of Agriculture, Parliament buildings, Toronto.

Let us do our part as best we can for the good of humanity and for the prevention of a world's famine in essential food materials.—Dr. C. A. Zavitz, O. A. C. Guelph.

DON'T glut the market with light, thin and unfinished lambs. It would be more profitable to hold such and finish them during the winter months. A good ration consists of a mixture of equal parts ensilage and roots, two to three pounds; clover or mixed hay, two to three pounds; and a grain mixture starting at half a pound and finishing at one and a half pounds per day. A good grain mixture for this purpose consists of oats and bran, two parts each; linseed oil cake, one part, to which may be added toward the end of the fattening period two parts of corn.



**WINDSOR DAIRY SALT**

**For Better Butter**  
USE  
**Windsor Dairy Salt**  
Made in Canada  
THE CANADIAN SALT CO., LIMITED

**THE MARTIN DITCHER AND GRADER DIGS YOUR DITCHES GRADES YOUR ROADS**

**EASILY QUICKLY CHEAPLY**

REVERSIBLE ADJUSTABLE

MADE IN U.S.A.

**DOES THE WORK OF 50 MEN SEND FOR FREE BOOKLET**


THE PRESTON CAR & COACH CO. LONDON, ENGLAND  
83 ROYAL ST. PRESTON LANCASH.

**SEED GRAINS**

We can supply Choice High Grade Seed of all varieties: Red Clover, Alsike, Alfalfa, Timothy, Sweet Clover, Oats, Barley, Buckwheat, Fava, (Corn on cob and shelled), Mangel Sugar Beet, Turnips, Carrots, Butter Beans, Seed Potatoes, etc.

Cotton Seed Meal, (Old Process) Oil Cake Meal, Gluten Meal, Feeding Tankage, Bran, Shorts, Pure Linseed Meal, Feed Oats, Feed Lined Meal and Flaxseed. Also a complete line of High Grade Poultry Feeds. Write for prices.

**CRAMPEY & KELLY,**  
778 Devereux Rd., Toronto



**More Profit from Your Cream**

ONE man (name on request) writes in to say his South Viking gives him 1 1/2 lbs. of butter more a week and that it skims closer by a good deal than the #2 separator he used to have.

Ask your dealer for our free descriptive booklet, or write us Dept. G. South Viking Separator Co. 813 South Park Ave. Chicago

**Dairy School, O.A.C. College**

(Continued from page 24.)

The only drawbacks are scarcity and high price of feed and lack of suitable labor. The latter is being overcome on many dairy farms by the introduction of a milking machine. What the cream separator has done for farmers in the way of improved and labor-saving methods of creaming milk, the milking machine will do in milking cows, which is one of the most troublesome jobs on a dairy farm.

As the year 1918 will mark the twenty-fifth year of the Dairy School sessions, it is expected to have at that time a reunion at the O.A.C. of all those who have been connected with the school at any time as instructors or students. It is hoped that all who may read this will make plans to spend a day in Guelph, on a date to be announced later, probably some time in March of next year.

The following are the proclency lists in the regular and co-testing courses:

**Factory Class.**

- 1. J. A. McManus, Bonshaw, P.E.I., marks obtained, 1,019 (maximum, 1,200); 2. J. Ross, St. Mary's, Ont., 983; 3. R. A. MacEwan, Stratford, Ont., 964; 4. L. Schmitt, Kitchener, Ont., 958; 5. C. O. Wheatley, Sarnia, Ont., 948; 6. W. G. McKay, St. Mary's, Ont., 936; 7. H. Ridley, St. Mary's, Ont., 903; 8. A. Munro, Slate River Valley, Ont., 894; 9. J. L. Beaton, Blackwater, Ont., 881; 10. E. Creighton, Scotaburn, N.S., 864; 11. C. Kells, Drayton, Ont., 862; 12. R. Cousins, Loch Katrine, N.S., 855; 13. W. Harris Brussels, Ont., 849; 14. B. Chaires, Greenwood, Ont., 838; 15. Arthur Gray, Atwood, Ont., 828; 16. Andrew Gray, Atwood, Ont., 821; 17. E. J. Salter, Mimico, Ont., 818; 18. E. Smith, Mount Forest, Ont., 787; 19. L. Anderson, Dungannon, Ont., 782; 20. B. Scott, Wiarton, Ont., 707; 21. E. Dietrich, Walkerton, Ont., 700; 22. H. Lamb, Toronto, Ont., 657; 23. R. Lamb (1), Baden, Ont., 655; 24. R. Gregory (2), Toronto, Ont., 555.

(1) Will be required to pass supplemental exam. in Dairy Bacteriology; and (2) in Written Milk Testing.

**Farm Dairy Class.**

- 1. P. Moore, Pembroke, Ont., 793; 2. F. Groth, Vancouver, B.C., 674; 3. E. Riveria (1), Buenos Aires, S. Am., 559.

(1) Will be required to pass supplemental exam. in Miscellaneous Subjects.

**Cow-Testing Class.**

- 1. B. Jenvey; 2. R. G. Newton; 3. N. James; 4. T. Cooper; 5. J. C. McBeath; 6. G. R. Wilson; 7. G. E. De Long; 8. L. H. Hamilton; 9. L. E. O'Neill; 10. R. C. Elder; 11. G. Arnold; 12. A. Caffey; 13. D. Munro; 14. F. F. Ferguson; 15. J. H. Ross; 16. R. Cousins; 17. W. Sharkey; 18. J. L. Beaton; 19. E. J. Heeney; 20. C. W. Bell; 21. A. J. Munro; 22. I. Statham; 23. T. E. Brooks; 24. C. Kells.

It is said that cheese is only half made when ready for the curing room. If so, it is quite necessary that we have a good curing room. Our room is constructed of five ply of lumber, walls and ceiling, with two ply of felt. We have double doors and four ply of glass in windows which are placed up well from the floor, which is of cement. The cheese are allowed to dry off well after being taken from the hoops before being placed in the curing room. No grease ever runs from the cheese and the temperature is easily controlled.—P. Brown, Greenville Co., Ont.

**From a 10-cow dairy you get**

<p><b>\$575</b></p> <p>worth of cream if you skim in pans</p>	<p><b>\$690</b></p> <p>worth of cream if you use an ordinary separator</p>	<p><b>\$720</b></p> <p>worth of cream if you use a Sharples separator</p>
---	--	---

The above figures show just how the use of the Sharples Separator will soon pay for itself in cream saved over every other method of separation. The reason for this lies in the wonderful Suction-feed which insures clean skimming at widely-varying speeds—drinks up the milk only as fast as it can perfectly separate it. The \$30 gain of the Sharples over other separators (see above figures) is due to clean skimming regardless of how slow the separator is operated.



**SHARPLES SUCTION-FEED CREAM SEPARATOR**

- is the only separator that skims clean at widely-varying speeds
- is the only separator that delivers cream of unchanging thickness—all speeds
- is the only separator you can turn faster and finish skimming quicker
- is the only separator with just one piece in the bowl—no discs, easiest to clean
- is the only separator with knee-low supply tank and a once-a-month oiling system

The Sharples Tubular Bowl (broadly patented) is unique in its cream-saving qualities. Firstly, this bowl is very long, so that the milk travelling from one end to the other is thoroughly acted upon by centrifugal force. Secondly, it is remarkably small in diameter. The milk is whirled around in a very small circle—always going around a sharp turn, which separates the cream quicker and more thoroughly. This patented Tubular Bowl has over double the skimming force of any other separator bowl.

Over a million Sharples users! Made and strongly guaranteed by the oldest and greatest separator factory in America. Write today for catalog to Dept. 77.

**The Sharples Separator Co. - Toronto, Can.**  
The Buckeye Machine Co., Calgary, Alta.  
Distributors for British Columbia, Alberta & Saskatchewan  
The Mitchell & McDougall Brothers Co., Brandon, Man.  
Distributors for Manitoba

**IN THE FIELD MAKING MONEY-**



or lame in the barn, "teating their heads off"? One means profit—the other means loss. When a horse goes lame—develops a Spavin, Curb, Splint, Ringbone—don't risk losing him through neglect—don't run just a great risk by experimenting with unknown "cures". Get the old reliable stand-by—

**KENDALL'S SPAVIN CURE**

Mr. David Yerer, Sooy, Ont., writes—"I have used your Spavin Cure for fifteen years, and know it to be a good cure". Be ready for emergencies, keep a bottle of Kendall's in the barn.—don't—don't—run just a great risk by losing him through neglect. It's a bottle—\$2—for all ailments. Ask your dealer for free copy of book—"Treatise On The Horse"—or write us direct.

Dr. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A. 110

**It Will Pay You to mention Farm and Dairy when writing Advertisers.**



# Co-Operative

Cooperation is simply working together. By such action, we can accomplish what is hard or impossible to attain by individual effort. By pooling our interests, concerted action is promoted and cooperative effort attains the desired result.

Those who sent in their orders for Cement before March 25th may consider themselves fortunate, as the price is now 16 cents per barrel higher for May shipment. We are also advised that the railroads are liable to advance their freight rates, and if they do before that time we shall be obliged to charge accordingly.

Coal Oil and Gasoline have advanced two cents per gallon and sugar 40 cents per hundredweight during the past three weeks.

Farmers having seed corn or potatoes for sale may forward samples to this office, stating variety, price and quantity.

We expect to have our Coal prices revised in about one week or ten days and are still soliciting estimates.

We are still in a position to offer a few carloads of good Western potatoes at an attractive price. We have been advised to-day that potatoes have advanced 25 cents per bag.

Our Produce Department is progressing very rapidly. Get our prices before selling your butter and eggs elsewhere. Send us a statement of what you are shipping.

**The United Farmers' Co-Operative Co.**  
LIMITED  
110 Church Street Toronto, Ont.

## Market Review and Forecast

**TORONTO, April 9.**—The Canadian fiscal year closed on Saturday, March 31st and regarding Canada's revenue, we quote from the Journal of Commerce as follows: Although exact figures of operations will not be available for a few days, it is stated at Ottawa that when they are published they will show the trade of Canada to have been nearly twice that of 1911-12. Ordinary revenue of the Dominion, it is stated, amounted to about \$200,000,000 in the 12 months ended on Mar. 31st, amounting to about \$200,000,000. The total trade of the Dominion was found to have reached about two billion dollars, or a billion dollars more than that of the fiscal year in which the war began.

During the week wheat has advanced considerably and coarse grains have also shown a tendency to move upward in sympathy with wheat. The cattle market has been steady and hog values are lower.

### WHEAT.

It has been announced that the export prohibited. The government considers the measure necessary to safeguard internal requirements. Regarding conditions in the winter wheat belts, the Chicago Herald states that there is a wide variance of opinion. Some report conditions as very bad while others hold out the promise of a moderate crop. What wheat prices will do, can only be surmised and prices are so high that many are disposed with a view to operating. Impending war with Germany has given an impetus to the buying movements on the Chicago market. Local dealers report that export business is practically at a standstill, but with a slight improvement in railway conditions, country demand has bettered and supplies are moving more rapidly. No. 1 northern, \$2.31, nominal; No. 2, \$2.17; No. 3, \$2.11; wheat, \$2.10; No. 2 winter, \$1.98 to \$2.10, according to freight outside; No. 3 winter, \$1.86 to \$1.98.

### COARSE GRAINS.

The tendency in coarse grains is all upward: Oats, C.W. No. 1, 75c; No. 2, 74c; extra No. 1 feed, 73c; No. 1 feed, 72c; extra No. 2, 71c; No. 2, 70c; No. 3, 69c; corn, No. 2, \$1.45; barley, making, \$1.35 to \$1.38; buckwheat, \$1.35 to \$1.45; rye, \$1.65 to \$1.70. Local quotations as follows: Oats, C.W. No. 1, 75c; No. 2, 74c; extra No. 1 feed, 73c; No. 1 feed, 72c; No. 2, 71c; No. 3, 70c; corn, \$1.40 to \$1.45; barley, \$1.65 to \$1.70; buckwheat, \$1.35 to \$1.45; rye, \$1.65 to \$1.70.

Mill feed is in good steady demand and prices are being well maintained. Car lots, delivered, bran, \$2.00; middlings, \$1.95; good feed flour, \$2.70 to \$2.80; bag, \$1.00; Montreal, bran, \$1.95; middlings, \$1.90; middlings, \$1.85 to \$1.90; moultrie, \$1.85 to \$2.00.

### HAY AND STRAW.

No. 2 hay on track Toronto, extra No. 2, \$11.50 to \$12; mixed, \$8.50 to \$11; straw, car lots, \$7 to \$7.50. At Montreal, No. 2 hay, car lots, \$13.50 per ton.

### POTATOES AND BEANS.

Potatoes were steady with few arrivals, but with a number of cars rolling. Ontario, red, \$1.25; York, and Washington, \$1.25. Beans, Japanese, and Canadian, bushel, \$6.50; prime, \$6.75; standard, hand picked, bushel, \$6.00, car lots, \$6.75.

### HIDES AND WOOL.

Country markets quote as follows: Beef hides, fat, cured, \$1.20 to 20c; pig, cured, 20c; green, 18c to 19c; deacons or bob calf, \$1.75 to \$2.00; 10c; sheep, horsehide, country, take-off, No. 1, \$5 to \$7; No. 2, \$3 to \$5; No. 3, No. 1 sheepskin, \$3 to \$3.50. Horsehair, farmer's stock, 41c to 42c. Unwashed fleece wool, as to quality, 35c to 45c; washed fleece wool, as to quality, 45c to 46c per lb.

### EGGS AND POULTRY.

There has been no appreciable change in egg prices during the past week. Local firms have bought in Chicago on account of the insufficient supply of Ontario eggs coming on the market, although the supplies from country points are reported as good elsewhere. New flocks in cartons are selling at 41c; ex-cartons, 35c; dealers are paying 34c and 35c in the country. Live Poultry—Buying price delivered Toronto: Whole chickens, fat, in the trade is two cents higher. Chickens, fat, 22c to 24c; fowl, fat, 22c to 25c; chickens, ordinary, 22c; fowl, ordinary, 22c to 25c.

### DAIRY PRODUCE.

Butter is quiet and easier, quotations dropping a trifle. In the creamery district, week. On this market creamery prices, and fresh made, 42c to 44c; storage, 41c to 42c; solid, 41c to 42c; choice dairy cream, 38c to 39c; ordinary dairy cream, 34c to 35c; bakers', 30c to 31c. It is reported that cheese factories are

to open early this season. The factories in the district of Campbellford, Ont., are preparing to open their manufacturing and the first meeting of the Campbellford Cheese Board has been arranged for the 17th inst. Prices remain unchanged and lower prices are not expected for some time. The army and domestic consumption is up to all available supplies. New large are quoted at 27 1/2c; fat, 28c; twin, 28c to 29c; June, large, 28c; twin, 29c. At Montreal finest 20 lbs of fall creamery are being sold at 42c.

### LIVE STOCK.

Cattle prices held steady during the week with a fairly active trade, although receipts were lighter. The demand was steady as usual. Choice heavy steers, \$10.75 to \$11.50; med., \$10 to \$10.50; butchers', choice, handy, \$10.75 to \$11.25; good, \$10.25 to \$10.50; med., \$9.75 to \$10.25; com., \$9.25 to \$9.50; butchers' cows, choice, \$9 to \$10; good, \$8 to \$9.50; med., \$6.50 to \$7; butchers' bulls, choice, \$9.25 to \$10.

## The Sale Programme

### LEEDS COUNTY—

The Brockville Holstein Breeders' Association will give their annual sale of registered animals at the Brockville on April 12th. The announcements will be given in a later issue. Mr. G. A. Gilroy, of Glen Buel's, is the Secretary.

### YORK COUNTY—

York County Holstein-Friesian Breeders' Association will give their first annual sale of registered animals on Wednesday, May 9, at the Fair Grounds at Richmond Hill. Mr. R. W. E. Burnaby, of Jefferson, is Manager.

### WATERLOO COUNTY.

Mr. A. C. Hallman, one of the veteran breeders of Holstein cattle, has decided to give his sale of high class Holsteins at his farm, near Waterloo, Ont., on Wednesday, May 23.

Mr. Arthur Beaker, of R. R. No. 2, Peterborough, Ont., announces a sale of high grade Holsteins (all grades) including about 200 cows, on Wednesday, May 16.

### ARGENTVILLE COUNTY. PRO. VINCE OF QUEBEC.

Mr. J. E. Arnold, the noted importer of heavy and light breeds, will offer his entire stock of 25 stallions and mares at public sale at Grand-Coteau, P. Q., on April 26, 1917. In addition to this offering of pure bred horses there will also be included 600 head of Holsteins, registered and unregistered.

310; med. to good, \$7.25 to \$9; feeders, 600 to 800 lbs., \$2.25 to \$2.50; 700 to 800 lbs., \$2.25 to \$3; stockers, 700 to 800 lbs., \$7.25 to \$8.50; med., \$6.50 to \$7; corn, 1,000 to 1,200 lbs., \$7.75 to \$9.50; owners and cullers, \$5 to \$8.25.

Milkers, good to choice, \$200 to \$250 to \$300. Calves, veal, choice, \$12.50 to \$15.00; med., \$9.50 to \$12; 8 to 15; \$8; 16 to 17; heavy, fat, \$7 to \$8.

Sheep and goats were inactive. Prices held steady with a fair demand. Prices for choice Lams, choice, \$14.50 to \$15; culls, 10 to 12; spring lambs, each, \$13 to \$15; ewes, fat, \$10.50 to \$11; heavy, choice, \$8.50 to \$10; culls, \$4 to \$7.

Packer-buyers have succeeded in bringing down the price of hogs during the week, although offerings in the Toronto markets are not as urgent as heretofore. Hogs off country are quoted, \$16.25; fat and watered, \$16.50 to \$17; country points, \$16.15; less 50c on heavy, \$16.50; range, \$16.50 to \$2.50 on sows and \$2.50 to \$3 on stags.

### THAT 30 POUND BULL.

THE size of the young bull that Mr. Peter Smith, of Stratford, is offering in this issue of Farm and Dairy, France 3rd Hartog 2nd, whose dam, was born 2912 four-year-old, and whose sire's dam was born 4094. Queen, 34.60 lbs. butter and best day's 42c; solids, 11c to 12c; in 6 lbs. tub. The dam of the youngster offered by Minnie Palladin Wayne, 22.33 lbs. butter 3 2/3% ; 7 mos. at year, \$4.14 lbs.

**THE FARMERS SEEDSMAN** FIFTY-ONE YEARS SERVICE

1866 1917

The demand for all kinds of seeds will be greater than the supply this year. The safest plan is to

**SEND US YOUR ORDER NOW**

and guard against the possibility of being disappointed. We pack railway freight on all orders of \$25.00 or more in Ontario and Quebec.

<p><b>SEED CORN</b></p> <p>Ontario Grown. cured in crates, bags, or per bushel.</p> <p>Wisconsin No. 7..... \$2.25 Golden Glow..... 2.15 Husley..... 2.15 White Cap..... 2.15 Lambert..... 2.25 N. Dakota..... 2.25 Compton's..... 2.25 Quebec No. 28..... 2.25 18c per bush, less than in crates.</p>	<p><b>Rack CWT</b></p> <p>Gov't Standard No. 1 Red Clover..... \$14.00 to \$15.00 No. 2 Red Clover..... 12.50 No. 1 Alsike..... \$14.00 to \$15.00 No. 2 (No. 1 for purity)..... \$11.00 to \$14.00 Sweet Clover, White Blossom..... 5.50 North-West Grimm..... 7c lb. No. 1 Timothy..... 5.50 No. 2 (1/2 No. 1 for purity)..... \$4.25 to \$4.50 No. 3 (No. 1 for purity)..... 3.90 Alfalfa—Montana Grown (No. 1)..... 15.00 Ont. Variegated No. 2..... most No. 3 Leyman's Grimm..... 25c lb. North-West Grimm..... 7c lb. Orchard Grass..... 25c lb. O.A.C. No. 21 Harley..... 2.25 O.A.C. No. 21 registered..... 2.25 Alfalfa—Montana Grown (No. 1)..... 2.50 Goose Wheat..... 2.50 Early Britain Peas..... 3.00 Rape (Dwarf Essex)..... 11c lb. Hairy Vetch..... 18c lb. Amber Sugar..... 7c lb. Shudrup Yellow Levianth, Yellow Intermediate, Giant Long Red, in B. pkts. 25c.</p>	<p><b>SEED OATS</b></p> <p>Ontario Grown. cured in crates, bags, or per bushel.</p> <p>White Cap..... 2.15 Lambert..... 2.25 N. Dakota..... 2.25 Compton's..... 2.25 Quebec No. 28..... 2.25 18c per bush, less than in crates.</p> <p>O.A.C. No. 3 Oats..... 2.00 O.A.C. No. 73 Oats..... 1.25 to 1.35 Banner Oats, unregistered..... 1.25 Yellow Russian Oats..... 1.30 Potatoes, Irish Cobbler..... 4.50 Eureka..... 4.50 Delaware..... 4.25</p> <p>White Intermediate Carrot..... 60c lb. Thousand Headed Kale..... 25c lb. Pur Clover and Timothy 90c per 30c for each cotton bag required. Grain sacks free.</p>
--	--	--

M.A.N. 2283. Keith's Prizetaker, Danish, Shudrup Yellow Levianth, Yellow Intermediate, Giant Long Red, in B. pkts. 25c. If 1/2 mos. or more of one variety, 25c. Send for our 1917 Ca. catalogue. It is FREE.

**GO KEITH & SONS** 124 KING ST. E.  
**SEEDS** TORONTO



**HOLSTEINS****FOR QUICK SALE**

A number of pure bred Holstein bull calves, sired by Thurston Hengerveld Kordyke, whose dam gave 110.5 lbs. milk one day and 27.8 lbs. butter seven days. From heavy milking dams. Price, \$30, delivered. Write me if you want a bargain. Satisfaction guaranteed. Jas. Moore, R.F.D., Almonte, Ont.

**TWO SONS OF PONTIAC HERMES**

No. 1.—From a good producing half-sister of Lulu Keyes. His grand-dam also closely related to the May Echo family. Three-quarters light in color and a fine individual, one year old. Price, \$25, delivered anywhere in Ontario.

No. 2.—From a 16,000-lb. half-sister of May Echo Yorboke. A little more black than white, straight and well bred. One year old. Price, \$40, delivered anywhere in Ontario.

E. B. MALLORY

R. R. No. 3 BELLEVILLE, ONT.

**CEDAR DALE HOLSTEIN BULL CALVES AT SACRIFICE**

Sired by Prince Segis Walker Kordyke, whose full sister gave 25.74 lbs. butter in 7 days as a four-year-old, and with his twelve half-sisters average 4 per cent. or better. These calves are nicely marked and out of R.O.P. show cows. Remember, a guarantee satisfaction or refund money. A. J. TAMBLYN, ORONO, ONT.

**HOLSTEINS FOR SALE**

Six mature cows and many others to choose from, 3 to 7 years old. Would be glad to sell several heifers. Some have freshened and others due to freshen soon. I can quote attractive prices. Write Isaac H. Fee, R.R. 2, Onemee, Ont. Shipping facilities G.T.R. or C.P.R.

best day's milk, 96.8 lbs.; average test 4%. He is, Mr. Smith informs us, "a peach of a bull, 11 months old." Mr. Smith has photos for interested parties.

**PERTH COUNTY BREEDERS ORGANIZATION**

PERTH Co., Ont., is to have a Holstein Breeders' Club. About 20 black and white fanciers met in Stratford last Thursday and formed the Perth District Holstein Breeders' Club. The objects of the club are to promote test work and herd improvement among its members, to advertise and boost their breed and to hold consecutive sales. Mr. Jesse Looker presided at the organization meeting. Numerous men from the district and P. R. Ellis of Farm and Dairy gave short addresses. All who spoke had had experience in buying at consignment sales, sometimes favorable, sometimes otherwise, and all expressed their determination to uphold the character of the sales that their club may hold. The officers of the new organization, are as follows: President, David Arbogast, Stratford; Vice-Pres., Richard Macnamara, Stratford; 2nd Vice-Pres., Chas. Baird, St. Marys; Society-Treas., Archibald Parks, London; Director-General, Peter Arbogast, Pullerton Twp.; Tie Wood, organ Twp.; Geo. Elliott, and Jas. M. Boyd, Eliza Twp.; J. E. Whitney, Warrington Twp.; Mr. Adams, Wallace Twp.; and Mr. Makina, North East Hope.

**A NEW JUNIOR TWO-YEAR-OLD CANADIAN CHAMPION.**

In a letter to-day from Mr. H. Lynn, Manager of Mr. A. C. Hoady's Avondale Farm at Brockville he advises us that Lady Waldorf Piette 2nd, a junior two-year-old, who was tested at the test, has made 35.34 lbs. butter in 7 days. This gives her the honor of being the Canadian Champion Junior two-year-old. The dam of this new champion is Lady Waldorf Piette, and the sire is King Pontiac Arts Canada.

**30-Lb. Bull For Sale**

We are offering this choice young sire who writes three neat dams average 20.19 lbs. butter 7 days and 101 lbs. milk 1 day. Write for pedigree, prices, and photo and come and see him. P. SMITH, R.R. 3, STRATFORD.

**Great Demand for Piette Bulls**

Why?—Because they are such excellent individuals. Because they are all great producers.

We are offering three youngsters sired by this great bull, WOODCREST SIRE CLAYDIE. They are three of the choicest things on Avondale Farm. HILL, record nearly 25 lbs. Another born Nov. 14, 1916, son of PIETIE CLAYDIE OF AVONDALE, record over 25 lbs. a daughter of PRINCE HENGERVELD PIETIE and PRIDE OF GLENDALE HILL. Third born Jan. 18, 1917, dam PIETIE CLAYDIE OF AVONDALE, record at two years 19.86 lbs., a daughter of K. P. A. CANADA and PIETIE CLAYDIE OF AVONDALE. Note the three generations of cows. Write at once for prices.

H. LYNN, Manager, AVONDALE FARM, BROCKVILLE, ONT.

**HOLSTEINS**

Could spare 10 cows or heifers bred to the Great Bull KING SEGIS PONTIAC DUPLIGATE. Have one yearling bull, and calves from 19 months down. Myrtle, C.P.R. Manchester, G.T.R.

R. M. HOLLEY,

Port Perry, R. R. 4

**HIGHLAND LAKE FARMS**

Herd sire, AVONDALE PONTIAC ECHO (under lease), a son of MAY ECHO SYLVIA, the world's record cow for milk production and Canadian Record for butter, 41 lbs. Only one other 41-lb. bull in Canada. Our herd of one hundred includes nearly fifty daughters of a 33.31-lb. son of the great KING SEGIS, brother to the sire of three world's record cows—nature 20.68, Sr. 4.77, old 46.84, Jr. 4.77, old 40.52 lbs. Junior herd sire, KING SEGIS PONTIAC CANADA, a half brother to AVONDALE PONTIAC ECHO, interests you, write for prices on either males or females. R. W. E. BURRABY, (Farm at Stop 55, Yonge St. Radial), Jefferson, Ont.

**LAKEVIEW HOLSTEINS**

Are still in the lead. The latest Holstein year book shows that they hold 4 Canadian Records for butter, and Lakeview bulls have won all honors also in both Toronto and London Exhibitions, 1915 and 1916. Now we are offering several richly bred young fellows that are looking forward to the fall fair, and we have decided to give \$25.00 in gold to the man that buys the 1917 winner.

Don't miss this opportunity. Act quick, and plan to spend a day at Lakeview. Terms cash or time.

Major E. F. OSLER, Prop.

Bronte, Ont.

T. A. DAWSON, Mgr.

**CLEAR SPRING FARM HOLSTEINS FOR SALE**

Choice young bulls of first-class breeding from grandson of Pontiac Kordyke and some of our best dams. One this mo. old, dam's record from one to seven weeks old; good, straight, nicely marked bunch. Two two-year-old heifers, due to freshen next fall. Two few cows already fresh or due this spring. Apply to J. C. JAKES

MERRICKVILLE, ONT.

**RIVERSIDE HOLSTEINS**

For Sale, Choice Young Bulls, sired by King Johanna Pontiac Kordyke, a grandson of Pontiac Kordyke, and a brother of Pontiac Lady Kordyke, 58.02 butter in 7 days, 165.52 lbs. 30 days—world's record when made. Also females bred to "King." J. W. RICHARDSON, CALEDONIA, ONT.

**FORSTERCREST STOCK FARMS**

All bulls over six months of age sold. Present offerings, young ones, sired by sons of King Johanna Pontiac Kordyke, brother to a 35-lb. cow. Would sell one or two young cows.

R. B. BROCK, R. R. 5, Simcoe, Ont. R. R. Station Jarvis.

**"JUST THINK OF IT"**

Sr. sire LAKEVIEW DUTCHLAND HENGERVELD 2nd, Grand Champion C.N.E. and Western Fair, 1916, 75 per cent. blood of L. D. Artis, Can. Champ. Sr. 3, with 34.66 butter 7 days. Jr. sire, KING SYLVIA KEYES, born Dec. 13, 1915; faultless individual. greatest dairy cow, milk 140.0 lbs., butter 41 in 7 days, best day 152 lbs. Dam, Helena Keyes, milk 1 day 100 lbs. At 3 years 25.13 lbs., mature 28.30; will be tested again shortly and make next over 30 lbs. A daughter of Helena DeKa's DeKal at 16 yrs., 30.69 lbs., Can. Champ. 20 of "KINGS" record relatives average, 7 days, 23.97 lbs. butter. "KING" is open to service to a limited number of approved cows. Write at once for terms, prices, etc. W. G. BAILEY, Oak Park Stock Farm R. R. No. 4, PARIS, ONT.

**Ourville Holsteins**

Get in the swim and buy a herd header from the family that has produced the first 50-lb. cow by getting a son of FINESTUBBLE KING MAY PAYNE. LAIDLAW BROS., AYLMER, ONT. R. R. No. 1 (Elgin Co.)

**Fairmont Holsteins**

Only two bulls left—6 and 2 mos. respectively—sired by King Segis Alicia Calabany, whose ten nearest dams average over 30 lbs. butter, with almost 4 per cent. fat. Also two heifers in calf to King, due in April. Write for prices, or better come and see them. PETER S. ARBOGAST, R.R. No. 2 (Perth Co.), Mitchell, Ont.


**Holstein Cows Excel All Others**

Proof is found in 100,000 Official Tests For Profitable Yield of Milk, Butter and Cheese. No Other Breed Can Equal Them For the Production of High Class Yields. When Age or Accident Ends Their Usefulness Holsteins Make a Large Amount of Good Beef. W. A. Clemons, Sec'y., H.-F. Assn., St. George, Ont.

# Brockville

The Holland of Eastern Ontario

## 4th Annual Holstein Sale April 25



### 60 HEAD

Brockville District has earned its enviable reputation in not only producing the first 100 lb. and the first Canadian 30 lb. cow, but she is maintaining this reputation by still producing Canadian and World Champions. It is the blood of these that will be offered in our Fourth Annual Sale on April 25. Here are a few of the herds that will contribute:

J. W. STEWART—One of the richly bred and typey herds of the district and carries the blood of Rag Apple Kordyke 5th and other great blood.

BROWN BROS.—Pioneers in Holsteins and in Holstein records. From this herd came the first 30 lb. cow in Canada. They have a choice offering.

AVONDALE FARM—The kind of animals kept at Avondale needs no introduction to Holstein breeders. A special selection goes in from Avondale.

If you are needing choice Holsteins—females on sires—drop a line for a catalogue and be at Brockville April 25.

## G. A. GIEROY, Secretary, GLEN BUELL, ONT.





Photograph of Canadian Oil Companies, Limited, Petrolia, Ontario, Refinery



Always the Sign of Absolutely Unqualified Satisfaction

CANADIAN OIL COMPANIES, LIMITED, is one institution properly considered National in character; producing only highest quality products. It enjoys the merited confidence of hundreds of thousands of Farmers, and in all its history its trade-mark brands, NATIONAL Petroleum Products, stand for a Square Deal with the biggest dollar-for-dollar values.

*J. H. Littlefield*  
Secretary and General Manager

## Why NATIONAL Carbonless Motor Oil Is Better—Why It Costs More—How It Is Made

Steam that escapes through a tea-kettle spout, if caught and condensed, would be pure water.

Distilled water is manufactured on this same idea, only on a larger scale.

Along the sides and at the bottom of the tea-kettle, scale is formed and accumulates—the residue that is left over after the passing of the water into steam.

The same principle that manufacturers of distilled water use is carried out largely in the manufacture of National Carbonless Motor Oil.

Imagine a tea-kettle that will hold 25,000 gallons, then you have some idea of an oil still, used for this purpose. Into these huge stills goes selected Crude Oil from which National Carbonless Motor Oil is always refined, where the oil is heated until it forms a vapor. This vapor is then condensed into a liquid distillate (the same as the vapor from a tea-kettle spout becomes condensed), further refined and then filtered. The result is a clear, clean, carbon-free motor oil—National Carbonless Motor Oil. Residue oils left over in the still never enter into the manufacture of

National Carbonless Motor Oil. Where such residue is used an oil is made of very inferior lubricating properties, and can be and is sold at one-half the price of National Carbonless Motor Oil made as by our own scientific process.

A motor oil loaded with residue will break under heat and fail to perform its function. The residue and deposit which becomes incandescent, causes pre-ignition under heavy duty, and finally, after continued use, coke-like carbon forms. Just as scale is formed in the tea-kettle.

Suppose you catch and condense escaping vapor from the tea-kettle spout? You have pure water. Place this distilled water in a brand new tea-kettle and reboil it—you will find little, if any, scale in tea-kettle No. 2. The same experiment applies to National Carbonless Motor Oil.

National Carbonless Motor Oil, distilled into a vapor, is further refined and then filtered—leaves no carbon, and lubricates most efficiently.

Why pay hundreds or thousands of dollars for a fine motor car and break it down long before its time by unjustly using low-grade, carbon-form-

ing, ordinary motor oil? Why put up with all the many nuisances? Why not always know positively that your motor car, of whatever make, is perfectly lubricated, as it always will be with National Carbonless Motor Oil?

The amount of money a motorist spends for motor oil is really one of his smallest expenses. It is comparatively a trifle in the long run when satisfactory and perfect motor car efficiency are considered.

National Carbonless Motor Oil is a perfect product. It is the last word in quality, the recognized highest grade Motor Oil, and is your best insurance against repair bills caused by faulty lubrication.

Use National Carbonless Motor Oil from every point of view of satisfaction and permanent economy for perfect lubrication of any make of car.

## Other NATIONAL Products

**White Rose Motor Gasoline.** Always uniform. Every drop is continuous power. Pure, dry, carbon-free. Especially made for modern tractors. Properly to lubricate most efficiently—saves cash in machinery depreciation.

**National Light Oil.** Bright, clear light for lamps. No smoke, odor, chattered work or chimney. Uniform heat for incubators and brooders. Best for oil heaters and all purposes for which the best burning oil is required.

**National Motor Grease.** For Differential, Compression Cups, Transmission; gives perfect lubrication and is manufactured especially to be used for any and all purposes, all around the motor car.

**Black Beauty Axle Grease.** Insures a smooth, friction-free, wear-resisting axle. No compounds to clog and gum. Goes farther than ordinary grease. Buy it by the pail.

**Order Today—Decide Now to Buy National Products. We will see that you are supplied, no matter where you live.**

This Handy Oil Can FREE. A slim, long-necked can—will oil hard-to-reach parts.



and enclose two 2-cent stamps. Send me Handy Long-Distance Oil Can FREE. Please give address shipping point and quote prices on items I have marked. I will be in the market about.....  
I use.....gals. gasoline per year I use.....auto grease per year  
I use.....gals. motor oil per year I use.....gals. kerosene per year  
I use.....lbs. axle grease per year I use.....gals. tractor oil per year  
My Name Is.....

Postoffice.....  
**Tear or Cut Out—Mail Today**  
NOTE—This can will not be sent except to Owners

**Canadian Oil Companies, Limited**  
General Offices, Dept. E 2-12 Strachan Ave., Toronto, Ont.

**LONDON - HAMILTON - TORONTO - OTTAWA**  
**BRANTFORD - KITCHENER - WINDSOR - BROCKVILLE**  
**ST CATHERINES - GALT - ST THOMAS - CHATHAM - KINGSTON**  
**STRATFORD - PETERBORO - LINDSAY - OWENSOUND**  
**ETC. ETC.**

# If you want labor

**The Ontario Department of Agriculture Will Help You to Get it. All We Ask is That You Use This Coupon Now**

The Department is fully awake to the needs of Ontario farmers, particularly with reference to the shortage of labor, and is taking quick and vigorous steps to secure an ample supply. The newspapers of Ontario are ringing with appeals for volunteers to work on the farms—business men, retired farmers, students, and others are being canvassed, mass meetings are being held in the cities and towns, and we expect the response will be tremendous.

**Apply for Your Labor Early**

Date.....

TRADES AND LABOUR BRANCH  
**Ontario Government Public Employment Bureau**  
 15 QUEEN'S PARK, TORONTO  
**APPLICATION FOR FARM HELP**

SIGNATURE OF FARMER .....	POST OFFICE .....	COUNTY .....
What is your nearest Railway Station? .....	Acres in farm .....	What kind of farming practised? Mixed .....
		Fruit .....
		Dairy .....

Mark (X) after help required.

<p><b>SINGLE MEN</b></p> <p>Experienced (Plough, Milk, etc.) .....</p> <p>Partly experienced (handle Horses) .....</p> <p>Inexperienced .....</p> <p>Business Men (3 weeks) .....</p> <p>High School Boys .....</p> <p>WAGES—including Board, Lodging and Washing .....</p> <p>\$ .....</p>	<p><b>MARRIED MAN AND WIFE</b></p> <p>Experienced .....</p> <p>Partly experienced .....</p> <p>Inexperienced .....</p> <p>WAGES—if Wife works in your house, \$ .....</p> <p>If separate cottage is provided, \$ .....</p>
---	--

Length of time help is required..... months, from .....

Age Limit.....

All engagements subject to two weeks' trial with wages, and railway fare—if fare has been advanced.  
 High School Boys will all be 14 and over, and will be available for from 2 to 5 months after April 20th.  
 Ontario Government Public Employment Bureaux, Form 11. P.FD3

**Make use of inexperienced or partly experienced help if you can.**

**Keen, solid business men, bright high-school boys, and retired farmers are volunteering. They mean business—they appreciated the need.**

**20% More Grain Wanted in 1917**

The world's reserves of grain are exhausted and we are literally living "from hand to mouth." Great Britain appeals to Ontario farms for an INCREASE of 20% in food to help the Empire beat the savage Hun. This Department is out to serve the farmer in every possible way—with the results of scientific tests, with seed grain, WITH LABOR, etc. Do your part, to-day, by filling in and mailing the above Coupon to-day.

SIR WM. H. HEARST,  
 Minister of Agriculture

**Ontario Department of Agriculture**

G. C. CREELMAN, Commissioner of Agriculture.

Parliament Buildings,  
 TORONTO



**ONTARIO**