

FARM AND DAIRY

&
RURAL HOME

Farm Machinery Number

May 3rd, 1917

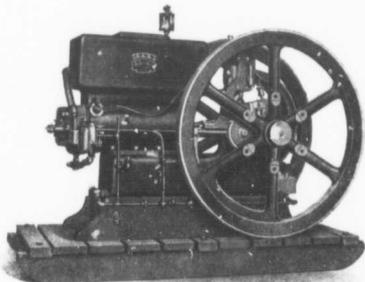


When the Grain is Golden

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LET Brantford Kerosene Engines

MAN YOUR FARM THIS SEASON

An Engine For Every Need

Our
"Ideal"

Combination

Several years ago we concluded that the development of the Gasoline Engine, Automobile and other Industries in which Internal Combustion Engines were used, were going ahead so rapidly that it would be only a matter of time until it would very materially affect the price of Gasoline and decided to be ready to meet the condition.

In spite of the scarcity of farm help this year, it is imperative that we, in Canada, produce just as much food stuffs as possible during the coming season. The great European struggle demands our best effort. We must keep our production up to the maximum. High prices, moreover, for every food product is the second reason why our farmers should do their utmost. More of the work must be done by machinery. The farmer who realizes this and so equips his farm is not only working in his own best financial interests, but in the patriotic interests of the entire country.

The price of Gasoline may soon soar sky high, but it makes little difference to the man who possesses a Brantford Coal Oil Engine, and the price of Coal Oil will never increase like Gasoline as the production is so much greater.

The Brantford line of Engines will run on Coal Oil, or Naphtha, and give the same satisfactory and dependable service as our line of Gasoline Engines have given and at half the cost of Gasoline.

The Gasoline Engine has had its day. The Kerosene Engine takes its place.

Brantford Kerosene Engines have exclusive and patented devices not obtained on any other make of Engine, and which add greatly to their efficiency and economy in fuel consumption.

We make our own special Carburetors and they are of our own special design. Two are used on each Engine: One controls the fuel, and a small one controls the water. Each is adjustable to the finest point of efficiency by a Needle Valve. The Water Carburetor is fully covered by patents and is used exclusively on our make of Engines. You must get a "Brantford" to get the benefit of this wonderful invention. It is set so that the same charge of water is supplied with each charge of fuel, and the governor supplies the same charge of fuel that the Carburetor is set to give.

The Carburetor for using Coal Oil in running an Engine must be right and correctly designed. Manufacturing all our own Carburetors in our own Plant, every one is thoroughly tested, and we know them to be right. Coal Oil must be heated before entering the Combustion Chamber. This is accomplished to perfection on all our Engines, and the fuel is so completely used up that the exhaust is very little different from when using high grade Gasoline. This means fuel saving.

With a Brantford Engine you will obtain as much power from a gallon of Coal Oil or Naphtha as any other Engine will derive from a gallon of Gasoline. This is a pretty strong statement but we know what we are talking about. Compare the price of Gasoline with Kerosene and you will realize what this means.

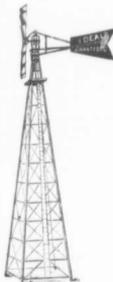
Can you afford to buy and run a Gasoline Engine? Guess not, unless you have more money than you know what to do with.

There is no better built or higher grade Kerosene Engine on the market, and in getting a "Brantford" you are getting the best that money can buy.

If you are in need of cheaper power it will pay you to see our representative, or write us direct for full information.

BRANTFORD "IDEAL" WIND MILLS

Our "IDEAL" windmills are known from one side of Canada to the other. They are the easy running kind. With them you get all the power there is in the wind. A two months' test of windmills, at the Royal Agricultural Show in England a few years ago, proved this conclusively. Among twenty-three competing windmills from all over the world, the "IDEAL" clearly outdistanced all other by pumping 30% more water than its nearest competitor, without showing any appreciable sign of wear. If you want a windmill with such a record—a mill that will last a life time and longer—buy an "IDEAL." We mail a Windmill Catalogue on request.



"Ideal"

The Brantford "Ideal" Hopper Coiled Tractor
25-15 H.P.

Operates on Gasoline, Coal Oil, Naphtha, etc.

The "Ideal" is strong enough to pull five plows and has power, it is beyond the experimental stage, and contains many new and exclusive features which have added very largely to its great success.

We shall be pleased to answer all inquiries for further information.

We also make full lines of Pumps, Tanks, Steel Saw Frames, Water Supply Goods, Etc.

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You can only do this by having your grain thoroughly ground before feeding. Shrewd farmers realize this and a grinder is considered part of every up-to-date stock farm equipment. The "Maple Leaf" grinder is of the same quality of workmanship as every other piece of machinery that we turn out. It contains every valuable feature essential to a good machine. The same close care, moreover, is taken in testing our grinders as in any other machines. The grinder is run and thoroughly inspected before it leaves our factory. This year it will pay you to do your chopping at home. Get a "Maple Leaf"—\$2,500 of which are in use to-day. A Grinder Catalogue will be sent at your request.

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FARM AND DAIRY & RURAL HOME



We Welcome Practical Progressive Ideas.

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., MAY 3, 1917

No. 18

What Acreage Is Most Desirable for a Dairy Farm?

Modern Implements and Machinery May Make Larger Farms Popular

MY idea was always a little farm well tilled," said a college student to me as we discussed the work that he intended to follow on leaving the O. A. C. "Now I don't believe I would take a small farm as a giftsmot if I had to live on it. I believe that the large farm is the more profitable, and I have been brought around to this view by reading a book called "Farm Management," by Prof. G. F. Warren, of Cornell University.

"Prof. Warren presents the case for the large farm," he continued. "He opened my eyes. I began to look around me. One case struck me particularly. It was of a tenant farmer that I had known for some years. He had rented 60 to 100 acre farms and never seemed to get ahead. Then he rented 150 acres, he made some money, and is now on a farm of his own. The larger farm did it. I used to like to read "Three Acres and Liberty," "Ten Acres Enough," and similar books based on fancies but not facts. Prof. Warren bases his conclusions on general averages, and the average man stands a better chance on more than 100 acres than he does on less."

Evidently this young college man had been looking into the subject pretty thoroughly. Evidently, too, farmers as a whole had come to the same conclusion. The tendency of the Canadian farm is to add to its acre rather than be split up to accommodate an increasing population. In almost any section of rural Canada we can find farm houses with the windows boarded up and the buildings deserted, but the land still worked. It has been added to the estates of neighboring farmers. The principle underlying this tendency toward larger farms is that in this country land is comparatively cheap, while labor is scarce and wages are high. The object of the good farm manager is to use his own labor and that of his family and the hired man to the very best advantage. The rapid improvement in farm implements and the substitution of horse or tractor for manual labor, has made it possible for him to best attain his object on a comparatively large acreage.

Warren's Investigations.

Prof. Warren's investigations, which are the most authoritative that we yet have, were conducted largely in New York State, and he deals very thoroughly with the relationship between the size of the farm and the labor income of its owner. For instance, in the counties of Tompkins, Livingston and Jefferson, in New York State, 1,988 farms were investigated. The following table shows the relation of size of farm to labor income:

| Acreage | Number of farms. | Average acres per farm. | Average acres of crops. | Average Labor Income. |
|------------|------------------|-------------------------|-------------------------|-----------------------|
| 20 or less | 74 | 22 | 14 | \$121 |
| 21 to 49 | 141 | 44 | 26 | 252 |
| 51 to 100 | 616 | 79 | 40 | 403 |
| 101 to 150 | 572 | 105 | 66 | 548 |
| 151 to 200 | 204 | 177 | 89 | 772 |
| Over 200 | 281 | 281 | 134 | 996 |

F. E. ELLIS, B.S.A., Editor Farm and Dairy.

Since these investigations were conducted by Prof. Warren, many similar farm surveys have been made by the United States Department of Agriculture, and the results have always been approximately the same. When figures are available for the farm survey that is to be conducted in Ontario this year, it may be almost taken for granted that results here will be very similar. It would not be correct to assume, however, that the labor income of the manager and proprietor would continue to go up with every increase in the size of the farm. There is a limit to the number of acres that can be profitably worked in one year. Not long after my chat with the college friend alluded to, I visited a large dairy farm near Woodstock, Ont. The proprietor was working 225 acres which he owned, and an additional hundred was rented. The lease on the 100 had just expired, and it was not going to be renewed.

The proprietor informed me that he found there was more profit in 225 acres than in 325. His own land he could work with the help of himself, his family, and a couple of hired men. The additional acre required more help, more mechanical equipment, and so increased the length of haul with both crops and manure that the added revenue was not sufficient to pay the added expenses, including rent. And he was a good manager. Bonanza farms have almost always been a failure. Such as still exist are owned mostly by wealthy men who have other sources of income, and do not require to make a profit from their farms. From my observations among dairy farmers in Eastern Canada, I should say that the most profitable dairy farms vary from 150 to 200 acres in extent. Very few of these farms are devoted solely to dairying. Quite a large area is devoted to cash crops, and other stock, too, is handled when opportunity offers.

Big Implements—Big Farms.

It was labor scarcity that lent stimulus to inventive ingenuity and prompted the manufacture of big, wide, working farm implements. It is these implements largely that explain the desirability of the larger farm. On the average dairy farm to-day the following expensive implements are almost a necessity: A mower, a side delivery rake, a tedder, a hay loader, a corn harvester, a binder, a grain drill, a manure spreader and a milking machine. The most of these machines cost over \$100. If we counted the value of all the other tools, implements and machinery needed on a well equipped farm, the total investment in this one item alone would be at least \$5,000. Few small farms have half of the tools that are really needed. If the smaller farmer did manage to accumulate a first class equipment, his small acreage could not use them enough to pay for the investment. The more efficient and numerous machines become, the larger our farms must be. Referring to Prof. Warren's investigations, we find that on the farm of 30 acres or less, the investment in machinery per acre was \$5.95. As the farms increased in size the investment on machinery per acre decreased until the farmer with 151 to 200 acres had an investment of only \$3.34, and yet he was better equipped. From that point the investment per acre increased. That was in Tompkins county. In Livingston county, the investment per acre varied from \$7.05 on the 30-acre farm to \$3.13 on the farm of 200 acres or more.

The United States Census statistics also throw some light on the relation of farm acreage to farm machinery. Taking the United States as a whole the investment per acre on farms of 20 to 49 acres was \$2.08, and on farms of 50 to 999 acres \$1.31.

(Continued on page 17.)



Why Food Will Be Scarce

FIGURES furnished by the United States Department of Agriculture, which is now as interested in promoting food production in the United States as is our own government here in Canada, place the number of men removed from productive pursuits by the war at 56,000,000. Of these, 6,000,000 men have already been killed; 4,500,000 are in prison camps; 15,000,000 have been wounded, of which number 1,500,000 have been permanently incapacitated. There are now 5,000,000 men in the hospitals. These under arms at the front total approximately 35,000,000 men.

Think of it! 56,000,000 of the able-bodied men of the world withdrawn from the ranks of producers. Half the population of the United States, counting every man, woman and child; almost eight times the population of Canada. When we consider the small crops of the last year, the small surplus of food that there is now in the world, and the great reduction in the number of producers, it is easy to understand the worldwide dread of famine. Conditions call for the greatest production of foodstuffs that is humanly possible.

Tractor or Horse? A Comparison of Costs

The Case for the Tractor Stated by H. K. Revell, Huron Co., Ont.

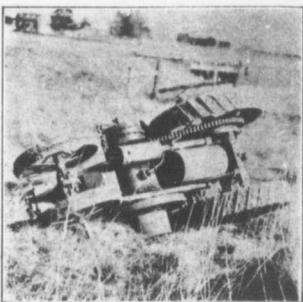
PROBABLY the most important consideration the prospective purchaser of a farm tractor will have to deal with in deciding whether to purchase a tractor or not, will be, "What will it cost to operate a tractor?" and "Can I profitably use a tractor on my farm?" Both of these questions must be settled by the individual, and both factors will be largely controlled by careful management of the machine, by a generous application of horse sense, also by adapting as much work to the tractor as possible; that is, if you have much road teaming, hitch two or three wagons to your tractor according to the power available and nature of the roads. Endeavor to do as much belt work as is possible, and so forth, but ever bear in mind, "My own farm first."

We have not had our machine long enough to speak authoritatively regarding operation costs, but from what we have seen of other machines of the same make and the way our own machine works, we are very favorably impressed with it. We purchased, after long consideration, a 10-20 gas and oil tractor. The company from which we purchased has been in business 75 years, and we feel there is very little danger of our tractor becoming an orphan. This firm has a branch house in Toronto, which gives efficient service to Ontario customers.

Tractors were primarily built for plowing purposes, hence I will endeavor to make a comparison in plowing costs, using horses and tractors. Every manufacturer has to consider the following items in his costs: Interest on investment, depreciation, insurance, building expense and others. I maintain that to be fair to himself the farmer should apply the same figures in his factory. With horses under consideration we must add to the above items, horseshoeing, veterinary charges, feed and labor spent upon the horses. It is difficult to give accurate figures, and for some items we can hardly give any figures. However, I give the following as being fairly approximate.

Cost of Horse Maintenance.

We will suppose that a man goes to the bank and borrows all money needed to make his investment. He will pay seven to eight per cent. interest. Suppose we buy a team for \$300. At eight per cent. our interest will amount to \$24 per year. We have to have a stable, but as figures are not at hand I leave this item out of consideration. How much labor will a good teamster spend in the care of one team for 365 days? From my own farm experience with my teamsters, I estimate one hour a day spent in grooming, stable cleaning, harnessing and unharnessing each day the team is used. United States authorities have estimated that a farm team is used on the average 100 days a year. The 265 days includes all lost days or part days and resting time, while plowing, etc. Therefore, this gives us 100 hours on work days. On the balance of 265 days about 20 minutes twice a day will be expended in feeding, cleaning, etc. This gives us 176 hours, or a total of 276 hours' labor in one year; at 20 cents an



Just an Incident of the Day's Work.

At the Whitby tractor demonstration one light tractor turned over in a side ditch. A couple of minutes later it had been pulled back to position and was plowing as usual.

—Photo by an editor of Farm and Dairy.

hour this amounts to \$55.20. From my own experience and that of other horse owners, I estimate a team will eat about \$50 worth of hay per year, and approximately about \$100 worth of oats. For bedding about four loads of straw at five dollars a load will be required. On each day the team is used, the teamster will spend one hour in the stable in preparation of the day's work. As this time has already been charged against the team, we will charge them for the balance of the day at \$1.80. This time being spent in the field. For 100 days' time, this amounts to \$180. A set

of harness costs about \$30. These costs summarized, are as follows:

| | |
|--|----------|
| Interest on \$300 for one year at 8% | \$24.00 |
| Labor, grooming, harnessing, stable cleaning, etc., 276 hours (one year) at 20 cents | 55.20 |
| Hay, one year | 60.00 |
| Oats | 100.00 |
| Straw for bedding | 20.00 |
| Interest on harness at 8% on \$30 | 2.40 |
| Labor, driving team for 100 days at \$1.80 | 180.00 |
| | \$441.60 |

This gives us a grand total of \$441.60, the actual cost of one team for 365 days. But as the team is



A Heavy Tractor Doing Great Execution in a Stubble Field of the Corn Belt. This tractor, however, is of a heavier type than will become popular in Eastern Canada.

only used actually about 100 days each year, the cost per work day is \$4.41.

Many farmers will dispute the statement that a team works only 100 days in a year. This is an average, but let that critic count up actually every idle day, and the single hours and parts of hours for one year. Then let him count the time he spends resting his team at the end of the furrow, and I promise him he will get an eye opener.

Experience and observation tell me that a good day's work for a team plowing is two acres. Then our cost of plowing with horses is \$4.41,

which is \$2.20 per acre. In justice to the horses we must also add the value of shoeing, veterinary charges, interest on stable, depreciation and insurance. We must also subtract from this total cost the value of manure produced, any colts raised, and in some cases an increase in the value of the team instead of depreciation. But these are items that depend largely upon the horse sense of the owner.

The Tractor Cost Account.

Now, let us look at the tractor in as fair a light as we have treated the horse. In Bulletin 719 of the United States Department of Agriculture, the following table of tractor data is given. The modern light weight tractor is a new machine, and as improvements are made these figures will undoubtedly be changed in favor of the tractor. These estimates were taken from more than 200 tractor owners who have used the modern light weight tractor two or more years.

| Size of Tractor. | Average estimates of owners as to probable number days year's service. | | Average used during year. in days. | Life in days. |
|------------------|--|-------------------|------------------------------------|---------------|
| | year's service. | used during year. | | |
| 2 plow | 6 | 49 | 294 | |
| 3 " | 8 | 49 | 392 | |
| 4 " | 8½ | 60 | 510 | |
| 5 " | 9 | 65 | 585 | |
| 6 " | 10½ | 70 | 735 | |

Our outfit is a three-plow outfit. That is, we pull a grand total of four plow of three 14-inch bottoms. It is operated by the tractor driver. Mr. Dickerson gives the following table as a summary of daily costs for a three-plow outfit.

| | |
|---|--------|
| Fuel, 2½ gallons gasoline per acre, 8.2 acres per day at 18c. a gal. | \$5.69 |
| Cylinder oil, one-fifth gallon per acre, 8.2 acres per day, at 40c. | .66 |
| Lubricating oil, one-eighth gal. per acre, 8.2 acres per day at 30c. | .31 |
| Grease, waste, etc. | .20 |
| Labor, one engine operator | 2.50 |
| Depreciation | 3.22 |
| Repairs and renewals | 1.16 |
| Interest on investment | 1.55 |

Taxes, insurance, shelter

..... 51

Total daily cost for 8.2 acres

..... \$13.80

Cost per acre, stubble plowing

..... 1.68

From my own experience I will change this table for the following:

Fuel, 2 gals. coal oil per hour, 20 gals. per day at 19c.

..... \$3.80

1 gal. gasoline per day at 35c.

..... .35

Cylinder oil

..... .50

Lubricating oil

..... .30

(Continued on page 14.)



A Modern Potato Digger in Operation on a New Brunswick Farm.

Handling the Potato Crop Machinery Does It on Our Farm

By A. MCKINNON.

EIGHTEEN years ago we started to grow potatoes on a commercial scale. We found the crop profitable and increased our acreage. We have never allowed the crop, however, to assume a place of first importance and dwarf the other lines of our general farming. We have found that potatoes are profitable some years and not so profitable other years, and that the most money in the long run is made by keeping the acreage fairly stable from year to year. During the years that we have been growing potatoes we have learned much and changed our methods on several occasions when increased knowledge and experience showed us where we can improve. No factor in recent years, however, has so influenced our methods as the steady improvement in potato planting and harvesting machinery. In adopting these machines we have been conservative. We have watched them being tried out on the farms of neighbors. We know all about their initial failures and now we have the whole outfit and are perfectly satisfied with everything from the planter to the digger.

We prefer a clover sod to precede potatoes. The sod is plowed as early in the fall as possible and surface worked until winter. In spring we apply barnyard manure if we have it and plow again. When the land is thoroughly worked and mellow and deep, the potatoes are planted, the sets being 14 inches apart in the drill and the drills 30 inches apart. This spring plowing and spring working is even more essential since we purchased the potato planter than it was when we turned out the drills with the plow. With our potato planter two men and two horses can put in four to five acres of spuds a day. Two men could not put in much over one-half an acre if working with a plow and dropping by hand. The same machine that plants the potatoes also distributes the fertilizer at the rate of 500 lbs. to the acre right in the drill along with the seed. We put in the potatoes good and deep and immediately the planting is completed, we harrow thoroughly.

We drag the field several times up to the time that the potato plants are four to six inches high. Then we scuffle, using a two-row machine for most of the work. Then comes the spraying for bugs and blight. Here modern machinery is a wonderful convenience. The power for our sprayer, which covers six rows at a time, is furnished by a cog wheel on the wheel of the sprayer cart. Here is a small point that is important. We direct the spray ahead so that it strikes the foliage on the side covering the whole leaf, rather than straight down on the tops of the potato plants. We spray four or five times during the

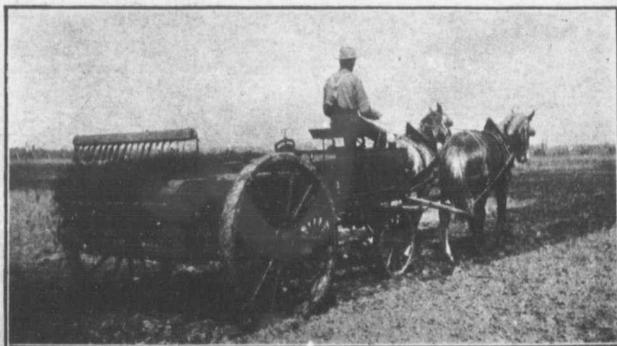
season, and very seldom do we have a rotten potato. Were it not for our modern labor saving spraying device, we would not spray at all.



Potato Planting Time in New Brunswick.

Few forms of farm machinery have been more improved in recent years than the implements which handle the potato crop. Where "spuds" are grown on a commercial scale, planters and diggers are considered a necessity. Photos courtesy Canadian Potato Machinery Company.

The harvesting of the potato crop became so burdensome a few years ago, that we were driven to do what we seldom plan to do—we bought the
(Continued on page 15.)



The Manure Spreader Makes the Most of the Manure and of the Operator's Time. Manure is of use to the growing crop only as the plant food it contains becomes available. The more finely the manure is divided the more quickly can plants make use of its fertilizing ingredients. Hence the merit of the manure spreader. This one is at work on the farm of J. Heasterington, Huron Co., Ont.

Milking Machine Experience

Satisfactory With 40 Cows

R. W. IRELAND, Prince Edward Co., Ont.

WE have been milking with a mechanical milker for over three years now, and can say it is a decided success. In February, 1914, we installed a three unit machine, a double unit which milks two cows, and a single which milks one. The double unit cost \$135, and the single \$110, and the pumping outfit cost \$110. We use the engine we have on the sprayer for power. The remaining expense for installing would be for a three-quarter inch galvanized pipe the length of the row of cows.

At first we milked 24 cows with the machine, but have increased them to 40. Two men can milk 40 cows with the three units in an hour and 20 minutes, and rinse out the machine by drawing a pail of clean water through the teat cups before the engine is stopped. This is all the washing it receives, except once or twice a week it is taken apart and thoroughly cleaned, which takes about an hour and a half. If we milk by hand it takes five men to do the work in the same time. We intend to put in another double unit this spring, as two men will then handle the milking in a much shorter time. We strip our cows, as we find it saves time and gasoline.

We find that the cows like the machine, after they get used to it, much better than hand milking, and we get more milk. Last spring, during spraying time, we milked by hand for a week, and when we started our herd went down 25 lbs. in their milk, and when we put on the machine again they came up 25 lbs.

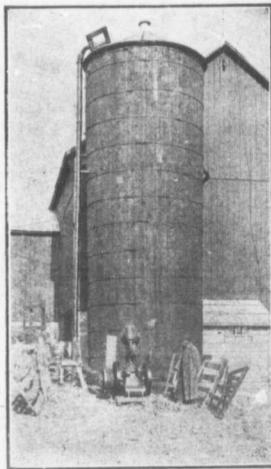
The only parts of our machine that have given out are the teat cup inflations, which have to be renewed every six or eight months. They cost 60c. apiece; this is the part that causes the squeeze. I would not care for a machine that did not have the squeeze, as one can milk much faster with it, and I think cows give more milk the faster they are milked so long as they are comfortable. The other part that has to be replaced is a pulsator spring, once in a while, at 12c each.

The way the labor problem is now, I would have a machine if I had 12 cows, as one man can milk as many as 20 cows with a double unit. We run our machine the year round, as about one-half of our cows freshen in the fall. We could not get along without it, as it is a great hardship to milk by hand now. The machine has never refused to work but once or twice we had to stop for repairs for the engine. I think the milking machine a great boon.

The Filling of the Silo

What It Will Cost and Equipment That Is Necessary—By Tom Alfalfa

SILO filling methods are undergoing a revolution. A few years ago the demand was all for high power engines and cutting boxes of great capacity. As a usual thing the engine, and probably the cutting box also, was owned by a private individual. When the silo filler notified the farmer that he would be along on a certain day, the farmer immediately got a hustle on and notified his neighbors in every direction that he was filling his silo or silos on a certain day, and would they please come along and help. There was a big crowd, a big rush, a huge meal, a lot of excitement and a quick job. We need not speak in the past tense. This is still the common method of filling silos in rural communities, but it is a method that is not now as popular as it was a few years ago. If the types of cutters and blowers on which the



A 7 h.-p. Engine Filling a 34 foot Silo, with a 10 inch Cutting Box.

than refill that silo, but we couldn't ask all our neighbors to come back for another rush job to fill the eight feet in the top of my silo, and I doubt if we could have gotten a machine anyway. The system lost me just one-quarter of the capacity of my silo."

"Anything else?"

"Why, yes. There is not one of us but needs a farm power and cutting box several times a year. For instance, in a good year we all have a little corn left after the silo is filled. Did a few of us have a cutting box with power enough to run it, we could cut the corn as we needed it and feed it to much better advantage than where the cattle are thrown the stalks. All of us have a certain amount of straw and coarse hay that we would like to cut. A small power would make it possible for us to cut our wood. Perhaps we could buy a grain grinder be-

tween us. There is no end to the uses we could make to a small power owned among a few of us."

"I think you had better come in on it with us," he ended persuasively. "The four of us could buy a small outfit at a price which divided amongst us wouldn't hurt any of us. We could supply among ourselves all of the horse labor and practically all of the man labor needed to fill our silos. Now doesn't that look good to you?"

"The Power Required."

The picture that my friend painted appealed to me. It will appeal to many others that have had to wait their turn on an over-worked private equipment which in the end only partly fills their silos. The manufacturers have recognized this need and are endeavoring to supply it. For instance, it is possible to get a 10-inch cutter and blower with a capacity of three to four tons of ensilage per hour that can be operated by a three to four-horse power steam engine or a four to

eight-horse power gasoline engine. An outfit of this capacity would fill a 10 x 25 foot silo in about 10 hours. A 13-inch blower cutting ensilage in one-half inch lengths will have a capacity of four to eight tons per hour, and can be run with four to eight h. p. The stronger the power, of course, the greater the capacity of the cutting box. These capacities are well within the reach of the average silo owner.

An attachment to the blower that should never be omitted when the silo filling equipment is purchased, is the silage distributor. This consists of a series of tubes attached to the upper end of the blower which conduct the corn down to the surface of the silage and distributes it at the will of the man in the silo. As the silo fills up, sections of the distributor are detached. A good corn binder completes the equipment.

There are still those, however, who will favor the high power equipment, and as the high power advocates include in their number some of our best farmers, their opinions should carry some weight. Among these is one of the best farmers in the eastern Ontario county in which he lives. Recently I asked Mr. Gray for his opinion as to the relative merits of large or small power outfits for filling silos. He answered as follows:

"Your question is somewhat difficult to answer definitely. While silos can be filled to good advantage with a small power outfit, it must of necessity mean that a cutter with a carrier attachment be used instead of a blower. Experience has taught us that corn from a blower well operated, will pack into the silo much better and more easily than from the carrier machine. Again, if the actual time of the man is taken into consideration, less labor per ton will be taken into consideration in operating the outfit. When it is impossible for farmers to cooperate and use large machines, then a small power outfit can be used to advantage, but I am much in favor of the large machine."

The Tractor a Source of Power.

The rapid introduction of farm tractors on the comparatively small farms of Ontario, means a supply of power for silo filling that we have not previously enjoyed. The most of these tractors will not provide sufficient power for blowers of the greatest capacity, and if they are to be used as a source of power, smaller cutting boxes will have to be the rule. Mr. J. N. Kernighan, of Huron Co., Ont., is using one of these tractors for power, and he writes me of his experience as follows:

"We have had experience with the large silo filling outfit for the past 15 years, and used the carriers before that with smaller outfits. However, last year we used a Mogul tractor 8-16 oil

(Concluded on page 14.)



The Corn Binder is Now an Essential Part of the Silo Filling Equipment.

Said he, "This system we have always worked under is no good. Take last year, for instance. My corn was ready for the silo on September 29th. Bill got his outfit together and filled a silo or two. Then the demand for his threshing outfit became so great that he had to forget about silos for a couple of weeks. By the first of October my corn was badly frosted, and I decided that it would be better to cut it and let it lie. There it was frosted some more. It was the 20th day of October before there was finally a power available to fill the silo. The corn then was dry and we had a choice between poor ensilage or hauling water to mix with it as it was blown into the silo. We decided to haul water. Then we found that Bill had a lot more silos to fill right away. He wouldn't be bothered with the water, and we had to let the corn go in dry."

I remember the situation very well. Other neighbors had been in the same fix. "Is that all?" I asked.

"No, it isn't," continued my friend with emphasis. "My silo was filled in just about three hours. Just as soon as we were level with the top of the silo, Bill ripped down his pipes, the horses were attached to the truck in about one minute, and in five minutes, tractor and blower trucks were going down the lane to fill the next silo. The next morning the silo had settled six feet, and before we started to use, it had settled eight feet. We had corn left in the field to more

EVERY acre grain together one the 1 their own the tribe, help than month. more ac with the about read pasture a was a zoo. Kitchener way out. carload of the way he soon excl was simi had pract implemen The onl ready had advised u handle the and has But it is rather the most inde He told r hay loads make wh satisfaction there was loader in that I had The evid us confide plements

We star as was to inexperienced with the row. The ones we w rake, that



Haying in British Columbia by a Method that is commendable on Small Farms or where labor is Abundant.

Speeding Up at Haying Time

Haying Equipment As Practical As It Is Profitable

J. C. McLENNAN, Huron Co., Ont.

EVERY year we cut and store from 60 to 100 acres of hay and a corresponding amount of grain. The handling of our large farm was an easy matter when all of us boys were at home together and father directed the work. One by one the boys left for the West or for farms of their own, until I, one of the younger members of the tribe, found myself on the farm with no other help than that for which I paid by the day or the month. Every year the labor problem became more acute, and by the time that I had grappled with the harvesting problem for five years, I was about ready to seed the most of the farm down to pasture and keep labor down to a minimum. It was a good natured Dutch farmer from down near Kitchener, then called Berlin, who showed me the way out. I had been down to Toronto with a carload of stock, and I met him on the train on the way back. As we were both farmers we were soon exchanging problems, and I found that he was similarly situated to myself. He, however, had practically solved the problem with modern implements.

The only implement he mentioned that we already had was the horse fork in the barn. He advised us to get a set of slings with which to handle the grain. His suggestion was adopted, and has since been worth many dollars to us. But it is for his kindly advice on hay loading, rather than unloading machinery, that we are most indebted to that Waterloo county farmer. He told me to buy a side delivery rake and a hay loader, recommending a certain standard make which he said was giving him excellent satisfaction on his 150 acre farm. At that time there was neither side delivery rake nor hay loader in our locality, and I could not remember that I had ever seen either implement at work. The evident prosperity of the man, however, gave us confidence in his opinion, and we had both implements on hand by haying time.

The Initial Bungle.

We started out by making a bungle of things as was to be expected, I suppose, considering our inexperience. We made one round of the field with the rake, turning two swathes into a windrow. The windrow was so much smaller than the ones we were accustomed to make with the dump rake, that we reversed and ran two more swathes

into the windrow. It was a heavy crop of clover. We started the loader. It simply wouldn't work, and we decided that while the machine might do very well in theory it wasn't intended for practical use. I was about ready to give up in disgust when the good wife, who was an interested spectator, found the solution. "Try a windrow half as big and see if it will work," she suggested.



Present Day Conditions Call for the Hay Loader.

The hay loader was adopted on this Ontario farm because of scarcity of laborers. It is safe to say that the loader, along with the side delivery rake, were never so appreciated as they will be this season.

It worked to perfection, and has been doing so ever since.

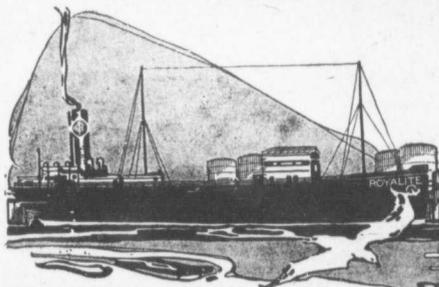
Our haying schedule, which, of course, is at the mercy of wind and weather, is to cut down as much as we can handle at once, in the morning after the dew is off with two mowing machines and two teams. If it is a first-class drying day, and the crop is heavy clover, we go through the field with the tedder early in the afternoon to avoid any tendency to burning the leaves. Late in the forenoon of the next day, the clover is run into windrows with the side delivery rake,

and if the weather has been favorable we start to draw in the afternoon. One of the great advantages of the side delivery rake is that it works somewhat on the principle of the tedder, and throws the hay together lightly, so that it keeps on curing in the windrow. In fact, if there is a nice breeze blowing, we find that clover will cure more uniformly in the windrow than in the swath. Light crops are never tugged at all. If again the weather is favorable, the hay is run into windrows late in the afternoon of the first day, and toward noon the next day the windrow is given a turn over with the side delivery rake and hauling again commences in the afternoon.

Of course, when help is as scarce as it was last year we cut whenever we have any time on our hands and arranged the schedule accordingly. We do not believe in over curing hay, and in order to insure that it is not too ripe before it is cut, we start haying very early, just when the first blossoms are beginning to drop. We then have haying completed before any of it has become too woody to be palatable. At the barn we have an extra team always ready to hitch to the fork to hasten unloading. This year we are planning to do the unloading with our gasoline engine.

In handling the loader we get a boy to drive the team and two men to handle the hay as it comes up. With a steady team the boy might be dispensed with, but the two men are almost absolutely necessary. The loader is attached to the truck in half a minute and we always try to arrange so that it can be unhitched when the load is complete at the near side of the field.

Haying is still hard work, but with our present equipment we are always sure of getting it in, and the most of it in good condition. Our loading equipment has paid good dividends.

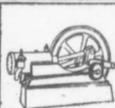


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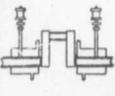
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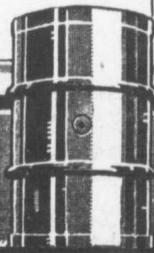


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BRANCHES THROUGHOUT CANADA

For Greater Production

FOLLOWING the annual meeting of the South Renfrew Board of Agriculture at Renfrew on April 22nd, a conference on agricultural production was held with the Renfrew Board of Trade. Farmers express confidence in their ability to do their spring work without more assistance, but all declared that during haying and harvest they would need more help than is now in sight. A committee was formed to deal with the help problem and it is expected that many will volunteer from the city to help with the harvest, even if industrial establishments have to be closed down for a short time.

A similar meeting was held in Peterboro on April 21st. Here again opinion was expressed by representative farmers that they could get the seed in the ground, but that more help would be needed to handle the harvest. Citizens of Peterboro assured the farmers that if they would put in as much seed as they could, the city would go even to the extreme measure of closing stores and shops during harvest time in order to harvest the crop.

The first of the Ontario government farm tractors was put in operation on the farm of E. F. Osler at Bronte, on April 24th. The machine operated was a 18-20 h.p. tractor, drawing a three-furrow plow. It plowed seven acres a day. The machine and plow is supplied free by the government, the farmer paying the mechanic 35 cents an hour for his work and also for the gasoline and oil.

Five tractors purchased by the War Production Club of Toronto, for the use of farmers in York and Peel counties, have been delivered and before this appears in print will be in active operation preparing ground for seed this year. Some farmers are so anxious to obtain these machines that

they offered to provide mechanics to operate them without expense to the War Production Club. Incidentally it might be stated that scores of farmers have already gotten help through the operations of this club.

The crisis in the food situation explained the bringing together of the 45 district representatives of the Ontario Department of Agriculture at the Parliament Buildings last week. The Premier re-emphasized the seriousness of the food situation and the representatives were urged to do all in their power to increase the acreage seeded this spring.

Discussing the use of the tractor, "Ahnik," in the Toronto Globe, notes that during the American Civil War, agricultural production in the north largely increased, although the farm help available fell off, this increase being largely due to the introduction and adoption of labor saving machinery. The writer stated his belief that the tractor, had it been adopted a little earlier, might have had the same desirable effect in the present crisis. Concerning the use of the tractors this year he writes:

"The action of the Ontario Department of Agriculture and of the War Production Club in purchasing tractors and sending them out for farm service comes a little too late to have much effect on the production of ordinary spring grain crops this year; but these can be made the means of increasing the area available for corn and roots, two vitally important crops in connection with live stock husbandry. They can also be made useful, in the lower part of Ontario at least, in breaking up clover sod after the hay has been removed and preparing the ground for buckwheat or corn. I have seen corn six feet high harvested on a field from which a good crop of clover had been taken in the same season. Above all, it will be possible to give a widespread demonstration of their usefulness and prepare the way for a more general utilization next fall."

Save Time and Energy

Hundreds of our machines are being used by the dairy farmers of Canada, at a saving to them of time and energy. Both of these factors mean real dollars and cents.

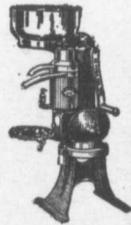
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Don't buy another machine until you have given the "Simplex" a thorough consideration. If you are in the market for a Separator, our illustrated Booklet, free on request, will prove interesting to you.

Remember, too, that we are agents for the famous B-L-K Mechanical MIMMER, and also all kinds Supplies for Dairies, Cheese Factories and Creameries.



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HORTICULTURE

Orchard and Garden Notes

MAKE clean, smooth cuts and leave no stubs when pruning.

Set out rhubarb and horseradish roots now. Asparagus may be set now or even as late as the last of May.

There are a few grapes, such as the Beta and Delaware, that might well be tried in every garden.

A box and sash over the rhubarb plants will hurry their growth.

Watch the hotheds closely. Do not leave the sash on without air while the sun is high. Close down the sash early in the afternoon.

If you want early melons, sow the seed in pots, boxes, or on sods under glass about six weeks before they can be set outdoors, which in this locality is about June 1.

Remember that the fruit of raspberries, blackberries, etc., is borne on wood of last year's growth, hence pruning should not be done until after the bushes are through fruiting except to remove dead or old wood and to thin

the canes.

Spinach, peas, lettuce and radishes should be earliest.

Sow your lawn grass seed as early as possible, but do not put it on sticky, poor soil. Wait until the land works easily.

Don't forget to plant a large bed of strawberries. Do it this year as soon as the ground can be worked.

Early maturing crops should be planted on light, open, rich soil. An exposure to the south will hasten germination and growth.

Have you sprayed your orchard? It is a pretty profitable kind of insurance. Clean, well-formed fruit will

usually sell at a good price. Wormy, poor fruit does not sell readily, if at all.

Scatter some fresh grass seed over the lawn, rake this in, and add some soil in low places. Old, worn-out patches on the lawn may be spaded up and resown with blue grass and white clover seed.

The Small Garden Drill

R. Brodie, Oxford Co., Ont.

OUR garden drill cost us seven dollars or eight dollars; we are not sure of the figures, but they were in this neighborhood. Considering the cost, it is one of the most useful implements on the farm. It is the life of the garden, as it makes the seeding of a good size kitchen garden so simple.

Our garden is a tract of fine, fertile loam, between eighth and a quarter of an acre in extent, beside the house. Every other fall it gets a fair coating of manure and is worked up in the spring with the regular farm implements, and finally cross harrowed and rolled. Then comes the seeding. In most kitchen gardens this consists in opening out drills with a hoe, dropping the seed by hand and covering with the hoe. In our case, we get out our garden drill, put in a package of carrots, parsnips, beets, or other garden vegetables, as the case may be, and complete the whole operation in one quarter of the time it would take to open a drill by hand. These small drills are so finely adjusted that they will handle the smallest quantities of seed just as accurately as they will larger quantities. Our first planting in the spring is all over in an hour, and the men folk on the farm don't object to help putting in the garden, as they are usually supposed to do.

Our drill has a wheel hoe attachment. As soon as the crops show above ground in the garden, the wheel hoe is run down each row, killing any weeds that may have started and all that are germinating. We find the wheel hoe a wonderfully useful implement in the mangel field, where it is run up and down each row just as soon as the mangels can be seen.

POULTRY



A War Measure

POUULTY keeping at all times is a pleasant and profitable industry. Just now it might be looked upon as something more—a patriotic duty—a war measure. More eggs are required by the Motherland. While she is compelled to exclude some imports for a time, she welcomes eggs. Poultry pays. In spite of high prices, eggs are a necessity. Larger flocks and increased production could be brought about without undue expense. Poultry keeping is an industry that can be carried on with the lighter kind of labor. It can be made a success when only the older people or the younger members of the family are available for the work. Poultry thrives in every climate under almost any conditions; little expense is required to start; returns come quickly, and every month should see some cash receipts.

In all probability there are not as many breeding hens in Canada this spring as there were a year ago. Because of the high price of feed, too many layers and breeders were sold last fall. For the same reason, many hens are not in prime laying condition this spring. To meet the situa-



Real Daylight Saving

In the harvest time every hour between daylight and dark is worth money to the busy farmer.

You get an early start in the morning intending to do a big day's work, but the

binder, mower or other implement breaks down and you must go to town for the repairs. If you have a Ford you are soon away and its speed clips two hours off the former three-hour journey there and back.

Count up the extra half days that a
Ford will save you

during the rush of seeding, haying and harvest. You will find that the Ford will save you a week or more of valuable time on your necessary trips alone.

Many times you will want to take some produce along with you. Then your staunch

Ford is ready to carry a load of 1000 pounds. How handy this would be?

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AGENCY DEPT.

Farm & Dairy, Peterboro, Ont.

ation as many eggs as possible should be hatched. Every breeder who has good fertile eggs for sale should make an effort to place them in the hands of those who will have them hatched rather than send them to market.—Dominion Department of Agriculture.

Animal Matter For Fowls

THE oldest works on the subject of poultry recommend feeding animal matter in some form. But it is only in recent years that feeding green bone became popular. Up until about 1889, winter egg production was not such a feature, great as the demand was, for the reason that there seemed no way of getting the hens down to solid work. There was an improvement, however, when better houses, better feeding, and better care were employed; but still the supply was meagre considering the output at the present day.

The subject of food finally became a serious study, resulting in a conclusion that more animal food must be placed on the bill of fare. But how to furnish it economically did not manifest itself until 1889, when R. W. Mann invented and placed on the market a crude machine, but, nevertheless, the initiative of the present high-class green bone cutters now on the market. As stated, this was the original bone cutter, and it is a matter of poultry history that the term "bone cutter" was actually coined by Mr. Mann.

According to an analysis by Professor James E. Rice, the nutritive value of green bone is 1.5.3, which is greater than any other form of meat—meat scrap, dried blood, dried fish or animal meal.

A Choice of Foods.

Hens are worm and insect hunters, and where they do not have range must be supplied a substitute in some form. Particularly in summer, the handiest meat food is meat scrap and meal meal, many brands of which are on the market. Green bone is better for fall, winter and early spring use. It is safe to feed in an egg ration one-tenth to one-fifth by weight of meat in the total ration, the quantity varying with the richness of the meat and other foods used. It is best to mix the meat in the meal feed. But in the case of green cut bone it is more satisfactory to feed in troughs, allowing a pound of green bone for every 16 fowls, or, an ounce per head.

The animal foods the fowls gather while on free range are usually high in percentage of nitrogenous matter and not a large portion of fat. Many of the artificial foods, excepting such as dried blood and skim milk, contain usually, besides the Nitrogenous matter, a high percentage of fat, which is not especially desired in compounding the ration. For instance, both earth worms and grasshoppers contain nearly 10 times as much protein as fat, while ordinary fresh cut bone contains about equal amounts of protein and fat.

Mistakes have been made in feeding green bone in giving too liberal a quantity. An excess will produce aggravated diarrhoea and worms, and a too liberal supply of meat scrap is apt to cause an overfat condition of the fowls.

It may be possible to have poultry live without any animal matter, but for profit and thrift it is necessary that they receive a certain per cent. of meat in the daily bill of fare, especially when they are confined to runs, or to houses in winter.—M. K. B.

It is a common practice to yard the poultry closely from seeding till the grain gets a start. When so yarded the fowl should have an amply supply of green food—mangels, etc.—and animal matter—meat, milk of dried blood.

**FEED CANADA
With Home-Grown Stuff**

- Rennie's XXX Globe Table Beet Seed Pkg. 10c, oz. 20c, 4 ozs. 70c.
- First and Best Cabbage (hard head) Pkg. 10, oz. 30c, 4 ozs. 90c
- Rennie's Prize Swede Turnip, for table or stock 1/2 lb. 35c, lb. 35c
- Famous Golden Bantam Table Sweet Corn Pkg. 10c, lb. 40c, 5 lbs. \$1.90.
- Select Yellow Dutch Onion Setts lb. 35c, 5 lbs. \$1.70
- Shallot Multiplier Onion Setts lb. 30c, 5 lbs. \$1.40
- XXX Earliest Table Marrow Peas 4 oz. 15c, lb. 40c, 5 lbs. \$1.90
- Stringless Wax Butter Beans 4 ozs. 15c, lb. 50c, 5 lbs. \$2.40
- Rennie's Market Garden Table Carrot Pkg. 10c, oz. 25c, 4 ozs. 75c.
- Best Snowball Cauliflower (Gilt Edge) Pkg. 15c, 25c, 1/4 oz. 85c
- Citron for Preserving (red seeded) Pkg. 5c, oz. 15c, 4 ozs. 40c

Plant Rennie's High-Grade Seeds

- XXX Table Cucumber crisp, tender Pkg. 10c, oz. 25c, 4 ozs. 60c
- Unrivalled Lettuce, big buttery heads Pkg. 10c, oz. 30c, 4 ozs. 80c
- Select Yellow Globe Danvers Onion (black seed) Pkg. 5c, oz. 25c, 4 ozs. 65c.
- Early Canada Water Melon, fine quality Pkg. 5c, oz. 15c, 4 ozs. 40c.
- Improved French Breakfast Radish Pkg. 5c, oz. 10c, 4 ozs. 30c, lb. 90c.
- Rennie's Jumbo Sugar Beet, for stock 1/2 lb. 25c, lb. 45c
- Giant White Feeding Sugar Beet 4 ozs. 15c, 1/2 lb. 25c, lb. 45c
- Perfection Mammoth Red Mangel 1/2 lb. 25c, lb. 45c
- Rennie's Derby Swede Turnip, for stock 4 ozs. 20c, 1/2 lb. 37c, lb. 70c.
- White Field Seed Beans, big cropper lb. 30c, 5 lbs. \$1.25

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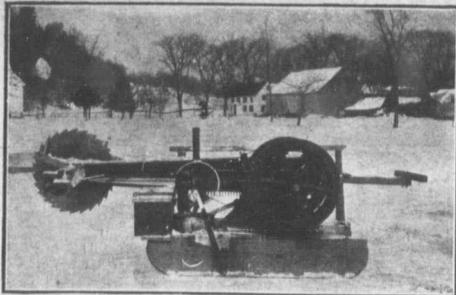
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What are your prospects as "hired man"?
How long will it take you to own a farm of your own?
These are questions which every ambitious man must face.
Don't settle in the rut of hand to mouth existence.
Get a FREE HOMESTEAD
Our "Homesteaders' and Settlers' Guide," to be had for the asking, will tell you how and where. Write to the nearest C. N. R. agent or General Passenger Dept., 48 King St. East, 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.



The very latest. A gasoline ice-saw.

Taking Backache Out of Chores

P. L. C., Chateauguay Co., Que.

FOR 26 years of my life, chores were my bugbear. I liked the farm, I liked the stock, but I cordially hated the chores. I don't like them yet, but each year they are becoming more tolerable. For this I have to thank modern progress along machinery lines.

The first kink came out of my tired back a little over a dozen years ago, when we built our first silo. We had always believed in succulent feed, and every year we grew three and four acres of roots. Whirling the root pulper was therefore an important part of the chores. It happened every day for six months, and it was hard work. How we appreciate the silo! Instead of turning the root pulper for 15 or 20 minutes, what a desirable change it was to take the ensilage fork, climb into the silo, throw out the quantity required for that feeding, and throw it to the cattle, and that was the end of it. We still feed some roots, but the silo affords the most of the succulent feed, and that with a minimum of labor both in growing the corn and in feeding the ensilage.

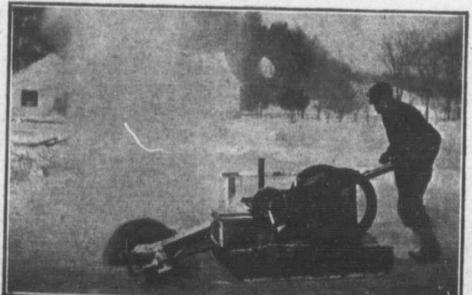
The second and third kinks, and the latter the worst, all came out together, when we installed feed and litter carriers. Our feed carrier runs right under the silo chute. Ensilage is thrown directly from the silo into the carrier, the track runs along between the two rows of cattle, and the ensilage is forked out of the open end into the mangers. On top of the feed carrier we carry a box of grain, and when a cow or a steer gets its allotment of silage, the grain is sprinkled directly on top of it. Here we save a lot of labor.

The litter carrier, however, affords

the greatest relief of all. I never heard anyone who had a good word to say for stable cleaning with a wheelbarrow. For many years, I suppose we averaged 15 good big wheelbarrow loads of manure trundled out of our stable every day for several months. Probably the majority of Farm and Dairy readers know what it is to push a heavily loaded wheelbarrow across a muddy barnyard, up a slippery plank and then have to fork half of it away once it is dumped. Our litter carrier handles more manure than four wheelbarrows. When we are filling it in the stable we lower it to the floor. When full, it is raised to the ceiling by a hoist, which works easily with one hand, pushed out over the manure heap and dumped. As a matter of fact, our litter carrier is more often dumped directly on to the cart or sleds and taken right to the field and spread.

The three kinks that these improvements have taken out of my back in the last 26 years were the most serious. Other improvements have all so reduced labor. For instance, we now have cement floors and a stable water system. More light and a convenient but crude ventilating system, have made the stable a pleasant place in which to work. After all, I guess my present dislike of chores is just the result of earlier work in a less pleasant environment. While I still continue to grumble about chores, I guess, as the younger generation would explain it, I "have no kick coming."

The Ormstown Spring Show, one of the leading dairy and horse shows of Canada, will hold its seventh annual and 8. This show held under the auspices of the live stock breeders' association of the district of Beauharnois, is open to the Dominion of Canada and Franklin Co., N.Y.



In operation. It does the work of five men. Photos courtesy Rural New Yorker.

Double the Value of your farm—

THE United States Department of Agriculture has been making a study of how good roads benefit farm values with the most astonishing revelations which are applicable to Canada.

Several counties in various parts of the country were selected where there has been a wholesale issue of bonds for the construction of a system of good roads. Of course, the bond issue increased the taxes, but at the same time it so multiplied the advantages that farmers found it easier to pay the increased taxes than it had been to pay the earlier ones.

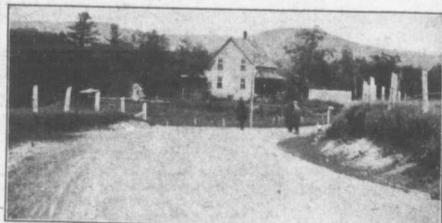
Suppose you are paying \$50 a year in taxes on a farm worth \$10,000. Would you not be willing to have your taxes increased to \$100 if the value of your farm was increased to \$20,000? But that is not the only benefit from good roads.

Good roads make possible consolidation of schools and better education for your children. Good roads reduce the cost of hauling, cases being cited of counties where the reduction in hauling-cost throughout the county was enough in a single year to pay off the entire bond issue. Good roads and big loads bring the farmer close to the rail-road, converting "starvation farms" into prosperous ones, in multiplying the shipments outward from the local freight station and the corresponding inflow of money. You must build the right kind of roads, however, in your county system. Plain macadam roads without Tarvia treatment cost so much to keep up that they are expensive luxuries. Build Tarvia-bonded roads which are capable of resisting modern automobile traffic, as well as frost and weather, and you will find that good roads are not so expensive after all.

We have booklets which we shall be glad to send to Canadian taxpayers on request.

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.



Sherbrooke-Derby Line Highway, near Lennoxville, Provincial Government of Quebec. Constructed with "Tarvia-X" and slag, in 1915.

DELICATE MECHANISM

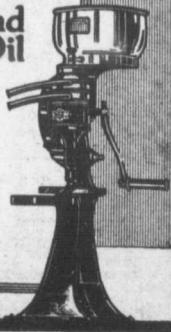
such as the close fitting bearings and adjustments of a hand separator, demands a special lubricant in order to work efficiently.

Standard Hand Separator Oil

is especially manufactured for this purpose. It is absolutely free from all impurities, cannot gum, and besides giving superior lubrication where it is needed, protects the separator from seam rust and corrosion.

Put up in pint, quart, half-gal., gal. and 4-gal. cans. Sold by reliable dealers everywhere.

THE IMPERIAL OIL COMPANY
Limited
BRANCH STATIONS THROUGHOUT CANADA



The Filling of the Silo

(Continued from page 4.)

engine for power on a 12-inch blower so last year. With the smaller outfit with very satisfactory results, fit two less teams and four less men. We had found that it was almost impossible to secure enough help to keep the larger outfit working steadily and easily at any time, much more

heavier portions. A longer time was taken to fill the silos, but the owners for whom we filled considered that they saved from three to \$10, depending on the size of the job, from what they paid formerly, though the price per hour charged was nearly the same but fuel was furnished by the smaller outfit, while the larger one required

wood and water."

Mr. J. D. McLaren, Rostford Co., Ont., is another advocate of the larger outfit. He writes as follows: "In the fall of 1916 our corn crop was light. We had six acres of corn, and it put 18 feet in our 14x24 silo. For power we used a 15-horse traction steam engine owned by one of our neighbors and the Climax B. cutting box, owned by several neighbors. We had five teams drawing corn to the cutter, two men loading and four men in the silo. Two teams were our own. It took about eight hours to put the 18 feet in the silo. We prefer the large cutter to the smaller one as we get the work done more quickly and have more time for plowing and other fall work."

Regarding the distribution of shares in a cooperatively owned outfit, Mr. McLaren adds: "Our cutter has too many men with shares in it. There are about 12 shareholders and we have to wait too long on it, as we are scattered over an area of eight miles. Four shareholders, I think, would be enough."

Cost of Filling.

The cost of filling the silo is governed by many factors, one of the most important of which is the distance which the corn has to be hauled. Mr. D. D. Gray, foreman of Central Experimental Farm, Ottawa, tells me that at their institution the cost has varied from 45 cents to 62 cents per ton of ensilage, depending on the variety of corn and stage of maturity, with an additional cost of five to seven cents a ton for gasoline. This year, filling costs will be greater than ever before as gasoline is still high in price, binder twine promises to be much higher and labor is exceptionally high. Each farmer must take his local conditions into account in determining what silo filling will cost him. Farmers' Bulletin 556 from the United States Department of Agriculture places the following as the help required to fill a silo when the haul is short:

One man and three horses to bind the corn.

Two men to load the corn.

Three men and six horses to haul.

One man to help unload.

One man to feed the cutter.

One or two men to work in the silo.

One man to tend the engine if steam engine is used.

Total, 10 or 11 men, nine horses and three wagons.

The help required might be reduced by cutting and binding the corn a day or two previous to the actual silo filling. With the smaller outfit the help required would be about as follows:

One man to help unstack the corn.

Three men and six horses to haul and unload.

One man to feed.

One man in the silo.

Total, six men, six horses and three wagons.

Much will depend upon the man. He must so arrange the help that each man and team can do the most efficient work. Without his careful attention the filling of the silo becomes needlessly expensive. In any case, however, the cost of filling a silo will not be equal to the loss involved in the feeding of corn fodder, a loss which is two-fold—the amount of the stalk that is not eaten by the cattle, and the inevitable reduction in milk flow or in gains in weight.

Three men and six horses to haul and unload.

One man to feed.

One man in the silo.

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Talk No. 4.—A Square Deal.

NO higher compliment can be paid a man than that he is "absolutely square," and what is true of the individual, applies with equal force to a group of men organized into a company. From the very first, the men who have directed the policy of this company, have been men of the highest standing, and the same high principles which guided them individually have been applied to the management of Massey-Harris Company, Limited.

This spirit of square dealing plays a big part in the manufacturing end of the business.

Massey-Harris implements are good all the way through—nothing is slighted because it will not show—the materials and workmanship are of the very best, regardless of whether they are in some inaccessible part of the machine or may be covered up by paint, and it is a well-known fact that paint can cover a multitude of evil. Each and every part of every Massey-Harris machine is built on honor, and you can absolutely depend on it.

Then, in our dealings with our customers, the same

straightforward policy prevails. Our implements are sold on business lines, everything open and above board, and every machine carries a guarantee backed by a company with both the desire and ability to make good under that guarantee.

The steady development from the little country blacksmith shop to the immense organization of to-day, with its system of factories and branch houses doing business all over the world, is conclusive proof that honest methods have prevailed, both in the manufacture and sale of Massey-Harris implements.

And, when all is said and done, what a source of satisfaction it is to buy from a firm with the full assurance that you are getting a square deal.

MASSEY-HARRIS CO., LIMITED

Head Offices—Toronto.

Factories at Toronto, Brantford and Woodstock.

Branches at:—Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton.

AGENCIES EVERYWHERE

Horse or Tractor? Comparison of Cost

(Continued from page 4.)

| | |
|-----------------------------------|------|
| Grease and waste | 25 |
| Operator | 2.50 |
| Depreciation | 3.20 |
| Repairs and renewals | 1.16 |
| Shelter | 51 |
| Interest on investment per day .. | 2.90 |

\$14.57

My average plowing has been eight



The Carrier For You

In choosing a litter carrier, one should consider all of the equipment necessary for a complete outfit: Carrier, Track, Hangers, Switches, and Swing Pole fittings. Do not place an order before learning of the many distinctive features to be found in LOUDEN Equipment.

LOUDEN Litter Carrier

—A simple in construction, and easily operated. Carrier box is made of heavy galvanized steel, strongly reinforced with angle iron. We use heating gear in our maximum speed and power, made of high carbon steel and is easily installed.

Write today for Illustrated Catalog.

LOUDEN MACHINERY Co. of Canada, Ltd.

Dept. 623 GUELPH, Ont. ☉

acres in 10 hours, which gives a net cost of \$1.82 per acre. In making the comparisons we have not included in the horse account the proportionate value of the stable and equipment; repairs and renewals on the tractor might be likewise included. So, if we cut down our tractor costs to the same basis as the horses, we have to omit repairs and renewals of \$1.16; shelter, 51 cents; depreciation, \$3.20, a total of \$4.87. This cuts daily tractor cost to \$9.70 per day or \$1.08 per acre of plowing.

In my own account I have included both gasoline and kerosene. We always start on gasoline and try to stop on gasoline. This practice makes it a very easy matter to start the motor again.

In addition to plowing, I have used our tractor for hauling on roads and in a very little discing, as at present date, April 21, we have not been on the land to any extent. We spent one-half day grading the soil this spring. At all of these jobs the tractor worked splendidly and gives promise of being a most useful machine. We intend to prepare all our seedbed, pull the seed drill, pull the hay rake and possibly the binder. (Seeding and reaping will almost always require two men, one on each machine. With either horses or tractors, careful management will reduce the operation costs. To the exponents of horse labor, who dispute my horse accounts, I say that if you can legitimately cut down my estimates of horse costs, then I can still do likewise on my tractor costs and we will end up with about the same comparative results.

We have about 150 acres of farm. Had we just had that area and were still following general farming, fruit growing or similar lines, I would still want a tractor. In that case, however, I would likely select a smaller machine, but if I had to change it at all, it would be to a 3-18.

Handling the Potato Crop

(Continued from page 5.)

First digger in the neighborhood, and before he had had an opportunity to see it at work in other hands than our own. It did fairly good work, and when a new and improved design came out, we were encouraged to give it a trial also. We are now as pleased with it as we are with the planter. With the machine that we have, four horses are required and we dig every other row. We have a staff of five or six boys and girls to pick, and by the time the machine has gotten over 50 or 70 rows, the pickers have gotten far enough ahead for the digger to start back on the first rows again. I estimate that we dig four to five acres each day, whereas formerly the same staff could not have dug over an acre a day.

The greatest difficulty that the ordinary grower will experience is that the first cost of this equipment is too great for the importance of the crop on the average farm; likewise too complicated to rent out among neighbors. The digger and the planter might be owned cooperatively among four neighbors without inconvenience to any of them, but if a man had a considerable acreage he would need a sprayer of his own, as the spraying must all be done at just the right time.

Manufacturers and business men of Chatham, Ont., are subscribing to a fund which is to be used as guarantee for farmers who need to purchase seed grain, and have not the cash available. The local men sign a guarantee, which is placed with the banks, practically as collaterals for loans made to the farmers by the banks on notes signed by the farmers. If the farmers fail to protect the notes, then the guarantee fund will make good.

NATIONAL MOTOR OIL FOR NATIONAL USE

Why NATIONAL 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 accumulated—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 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 one of these huge oil stills goes the highest 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 is 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 sold at one-half the

price of an oil made as is National Carbonless Motor Oil.

A Motor Oil loaded with residue will break under heat and fall to perform its function. The residue and deposit which becomes incandescent, causes pre-ignition under heavy duty and finally, after continued use, cooks 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 in this distilled water in a brand new tea kettle and reboil it; you will find little if any scale in the 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.

A juicy sirloin steak cooks more evenly than chuck steak. Wool is more serviceable than cotton. Gold jewelry gives satisfaction long after some of the Christmas brands have turned green. Quality in anything costs more than the low grade article—in National Carbonless Motor Oil—in National manufacture, service and efficiency in use—full value for your money.

You should use National Carbonless Motor Oil for economical and perfect lubrication.

Other NATIONAL Products

White Rose Motor Gasoline. Always uniform. Every drop is continuous power. Pure, dry, carbon-free.

See-ee-Track Oil. Especially made for modern tractors. Proper body to lubricate most efficiently—saves cash in machinery depreciation.

National Light Oil. Bright, clear light for lamps. No smoke, odor, lubricates well or cleans. 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, Transmissions; gives perfect lubrication and is manufactured especially for use 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 greases. Buy it by the pail.

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

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 See-ee-Track Oil..... (give size above)
 National Light Oil..... (give size above)
 National Motor Grease..... (give size above)
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My name is.....
 My address is.....
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 My car is.....
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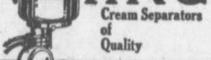
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VIKING Cream Separators of Quality



A VIKING CREAM SEPARATOR can be had from \$26.70 up to \$86.15. But whether it is a one-cow separator or a fifteen-cow separator, you can depend upon that the Viking will give you a better service for less than you would pay elsewhere. You get not only a low cost but also a better one. You get a larger capacity with fewer parts to wash, and fewer parts to wear out.

Write for interesting descriptive booklet, or ask your dealer.

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"Metallic" Ceiling

and wall plates make very handsome, easily cleaned, fire-retarding interiors. Splendid for home, church, school, etc. Fix up your room and see how you like it. Get prices and illustrations from **Metallic Roofing Co., Limited - Manufacturers, Toronto**

USE A FOX TRAILER FOR TRUCKING



It will reduce your delivery expense because its first cost is low, and it hauls an 1,800-pound load on almost the same gasoline as is required to run the car. The Fox Trailer means maximum delivery service at minimum expense.



The Fox Trailer is constructed on an all-steel frame. This insures rigidity and durability. The tires are of solid rubber mounted on regular automobile wheels. The draft is direct from the trailer axle. This gives an even pull without bumping.

Model F 6, shown above, with 6 ft. box . . . \$35.00
Model F 8, with 8 ft. rack body \$95.00

Prices are F.O.B. Windsor, Ontario

Write Dept. 8 for illustrated Booklet, or see the Fox Trailer at your local automobile or implement dealer.

FOX BROTHERS & CO., LIMITED

WINDSOR, ONTARIO

"Walter would rather stay home and milk than go away on a picnic!"

HOW to get along with less hired help, and yet escape the drudgery that drives boys away from the dairy farm—this is the problem that is being solved by the



EMPIRE Mechanical Milker

No one seems to like hand milking, yet every boy loves to run a machine. Here is a typical example of how it works out:

AMHERST, N.S., Jan. 5, 1917

Dear Sirs—
Walter, who was 16 years old, loves a machine, but hated to milk cows, so we bought the Empire Milking Machine that was shown at the Winter Fair at Amherst in 1915. It has given good satisfaction in every way.
We have milked at the rate of 40 cows an hour, but think it best not to exceed 32, as that leaves very little strapping to do.

One cow that only gave 21 quarts the year before, gave 29 quarts with the machine; two others that gave 22½ quarts the year before gave 26 to 28 quarts this year when machine milked. We have just one cow that refuses to give her milk down with the machine. The cows are very much quieter when machine milked and sore teats are all done away with. Walter has taken full charge of engine and milker since it was put in and has never missed a milking—would rather stay home and milk than go away on a picnic. Geo. E. PATRICK

While overcoming the strongest objection to the life of the dairy farmer, the Empire Mechanical Milker is helping hundreds to make more money. Why shouldn't YOU be one of them? Write for illustrated Booklet and full particulars to Dept. 8.

THE EMPIRE CREAM SEPARATOR CO. OF CANADA, LIMITED.
MONTREAL. TORONTO. WINNIPEG. 64

Make the Farm Car Pay Its Way

Some of the Accessories Designed to Increase Its Usefulness



THE children nowadays don't flock to the front door every time an automobile goes down the road. Oh no, that was 15 or 20 years ago, when we ourselves, lots of us, were children. Now, every town man with a four-figure salary has his car, and every farmer with the mortgage paid off, and many with mortgages not paid, either, have a car or are going to get one. The town man has his car for pleasure. The farmer has more opportunities to turn his car to more practical use, and manufacturers are doing all in their power to enable the farmer auto-owner to make his car pay its way, aside from the pleasure he gets out of it. It is the purpose of this article to call attention to a few of the more useful of these accessories.

The Auto Trailer. No accessory promises to be of greater all-round usefulness than the automobile trailer. These trailers are

of various types. Some of them have two wheels and others four. For the most part they are strongly constructed, with good springs, and wheels built on the automobile plan. The principle underlying the use of the trailer is that a car can pull a much greater weight than it can carry when loaded directly on the car. Trailers designed to be drawn by small touring cars, such as most farmers own, have a rated capacity of 1,000 lbs.

A trailer of this capacity can be used to great advantage by any farmer who must make frequent trips to the station or to market with milk, cream, eggs, or dressed poultry. Market gardeners can probably make better use of their trailer than any other class. The additional cost of operating it is so small as to be hardly worth considering, and a well-made trailer will outwear the average car.

The Ford Auto Truck.

A used automobile can be very readily transformed into an auto truck. Farmers like cars of an up-to-date model, and some of them make a practice of trading their old cars on new ones after just one or two years' use. What happens to these old cars. Many of them are made into light trucks for retail merchants. The cities are full of them. Manufactur-

ers now propose to help the farmer turn his old car into a truck for his own use, and the diagram herewith shows a Ford car transformed into an auto truck of one ton capacity, in just a few hours. In the illustration the truck is equipped with a stock rack; it can be used just as expeditiously for marketing grain, vegetables or hay. These trucks have a chain drive. The engine runs in high gear, but the equipment of the truck accessory reduces the high speed of the engine to low speed on the driving axles with consequently more power. Thus speed is changed into power, without heating the engine, as would be the case were it driven continuously on low gear. These farm trucks are due to become increasingly popular, especially among city milk producers, gardeners and fruit growers. They are now made in Canada and at least one United States manufacturer has



recently opened up a Canadian agency.

The Auto Tractor.

This device, also illustrated, has not been on the market long enough to be thoroughly tried out. The rear wheels are removed, and traction wheels, with a special driving device, put in their place. With the auto tractor, as with the auto truck, speed in the engine is substituted for power on the driving axle. The auto tractor illustrated also supplies a special radiator and fan to be attached to the car to avoid overheating.

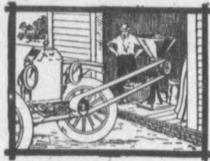
The Auto for Farm Power.

Every farm car is equipped with a 20 or more hp engine. Why not use this engine as a source of farm power? In answer to this question, which thousands of farmers have asked, manufacturers have placed several practical devices on the market. The most common of these, known as the "auto power," is really an extension forward of the cranks shaft, and is thus connected directly with the engine. It develops large



When You Write---Mention Farm & Dairy

power, and several Canadian farmers have filled their silos cut wood, ground grain, etc., with this form of belt power. The most difficult point



to avoid is the over-heating of the engine.

The "Helping Henry" device works on a yet simpler principle, as is made abundantly clear in the small diagram herewith. By a lever like arrangement, the rear part of the car is lifted right off the ground, and the hind wheels are in contact with the two pulleys of "Helping Henry." This device generates considerable power,



but not so much as is possible from a direct connection with the engine.

These are only a few of the numerous devices on the market. Columns would not suffice to describe them all.

What Creage is Most Desirable for a Dairy Farm

(Continued from page 3.)

These figures seem conclusive. But is the small farm doomed? Not unless the spirit of commercialism which is greed of gain, attains complete sway in the hearts of men. Probably there will always be those who value the independence that is conferred with the ownership of land, but who do not wish to be worried with the management of a large business that involves the employment of hired help. To such the small farm will appeal. Their financial rewards can never be as great as those of the man who farms the larger acreage, but the small farmer can make a good living and if his tastes are simple, he can be independent. We know of many who are so farming and from their viewpoint the small farm is best.

Nor is it necessary that the small farmer should deprive himself of all the benefits of modern machinery. Cooperation will help when two or more small farms are located near to each other and their owners have the capacity of getting along agreeably together. Such farmers might cooperate in the ownership of their hay making machinery in the same way that their neighbors with larger acreages cooperate to own silo filling and tractor machines. Neighboring small farmers might combine their labor during the haying and harvesting seasons. The small farm seldom carries more than two horses. Horse labor, too, might be combined to draw cutaway harrows, wide working cultivators, two-furrow plows and the grain binder. Where people can agree to work cooperatively, one of the great advantages of a large farm disappears and the small holder may make almost as much money per man as is made on the larger area. His labor income, however, can never be as great, as the profits on the labor of others, which are a part of the returns of the extensive farmer, will be lacking. This is one of the great problems that it is proposed to investigate in Ontario by means of a Provincial soil survey.



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About the future Size of your herd

The capacity of the Standard cream separator is interchangeable. You take no chances on your future separator requirements. If later on you find that you need more cream separator capacity to take care of your larger herd, all you have to do is to replace the bowl and fittings—the not the whole machine if you have the

Standard



Interchangeable Bowl. This bowl and casing lift right out—easy to replace with a larger size.

This important, exclusive feature is certainly a money saver to dairymen and farmers. It costs a great deal less to interchange bowls with the Standard than to exchange the entire machine for a new one. Putting in the new bowl means no loss of efficiency, for the bowl is changed complete. The gearings of all Standard machines are made for 1,000 pound capacity. Think of the over-capacity advantages you have in 350 to 800 pound Standards!

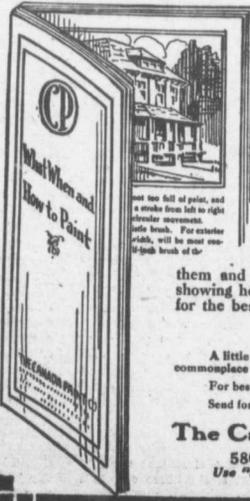
All you have to do in order to change a 350 pound capacity machine into a 450, 600, 800 or 1,000 pound machine is to substitute your bowl for the different capacity bowl and attachments that you require. We accept the used bowl in exchange, less reasonable allowance for wear and tear. So you see you need not worry a minute about the size of machine you buy now.

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The Rural Publishing Company, Ltd

PETERBORO AND TORONTO

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

Free Tractors

THE factor which operates most strongly to prevent farmers from investing in tractors is their high first cost with consequently, heavier annual charges for depreciation. It is unquestionable that many more tractors would now be in use in Canada were it not that the price paid the manufacturer plus a heavy protective tariff, makes the first cost almost prohibitive. Just how important an element is the tariff in this first cost may be gathered from comparisons of prices of tractors in the United States and of the same tractors in Canada. One reliable American firm, for instance, has a small farm tractor, which did excellent work at the Whitney demonstration, that sells for \$365 to United States farmers, and is sold for \$575 to b. Toronto; the difference represents the tariff toll almost exclusively.

In view of the great need for all of the mechanical assistance that can be possibly utilized in production, we regret that the government saw fit to reject the resolution calling for free tractors of the farm type during the duration of the war. Farm and Dairy ventures to hope that when our legislators at Ottawa have had an opportunity to give the matter more thought, that they will consider the matter of duty free tractors in a more favorable light. In this connection we might well learn from the enemy. Some years ago there was a serious strike of farm laborers in Austria. The food supplies of the nation were threatened. In order to encourage the importation of implements that would take the place of manual labor, all duties on imported machinery were rescinded for the time being, and during the months that the customs tariff was inoperative, Austria imported more improved farm machinery and made greater strides in mechanical farming than she had ever done in any previous period. Likewise food production was maintained and the strikes broken.

Never before in the history of the world was

food so urgently needed as it is at the present time. From the standpoint of natural opportunities, no country is better able to provide it than Canada. All that we need is help. Immediate action in the matter of free tractors would help somewhat this spring if the railroads at the same time could be induced to hasten deliveries, but the chief benefit of more and cheaper tractors would be observed when the time comes to sow next fall's wheat crop. This question, closely connected as it is with the problem of production, is too big a one at present to be viewed from any partisan or protective standpoint.

The Help Situation

CITY men, many of them with farm experience, have offered their aid for a few weeks or a few months on the farms this season. So far there have been more offers of help than applications from farmers for men, although applications for help are now becoming more numerous as the schemes of war production clubs come to be better understood. This tardiness on the part of farmers to apply for needed help has occasioned surprise in the city. In not a few cases this surprise has taken the form of resentment. The offers of help have been made in a patriotic spirit. Are farmers lacking in patriotism when they do not step forward immediately to accept the proffered aid? The townsman wonders.

The factor that our town brethren forget is that the season's plans are not made a month before seeding, but the previous fall, and perhaps earlier. For years farmers have had to contend with a scarcity of experienced labor, and farming operations have been gradually adapted to this scarcity. The systems now followed, therefore, have resulted from conditions extending over a period of years, and they cannot be altogether changed because of the belated offers of help now coming from the cities. We believe, too, that few city people have any idea of the amount of capital that is required to finance the operations of a 100-acre farm for a single season. With seed, labor and implements at the inflated prices that prevail this year, the need for capital is greater than ever before, and from lack of capital many farmers are prevented from using the labor that they would like to. In so far as lies within his power, however, the farmer will do all that can be humanly expected of him to produce the food that the world so much needs. Farmers will get in all the seed that they can, and when harvest time comes around, the cities will be given ample opportunity to aid in the storing of the crops.

Just Lack of Tact

WHILE discussing this problem of farm labor and the city man's relationship thereto, Far and Dairy would suggest that a certain kind of advice which is being handed out liberally by city organizations cannot but be regarded on the farms as unwarranted interference, interference that tends to create prejudice among farmers, who are as fond of managing their own affairs as are other classes of the community. A case in point comes to our attention from Essex Co., Ont. There a local committee in the town of Windsor recently organized to "help Essex county farmers in food production." Here is the help they are giving—they have unanimously decided to ask that the Dominion Government prohibit the killing of lambs, calves and young pigs, and if necessary they will send a deputization to Ottawa to back up their suggestion. They believe that were their suggestion to be adopted, and every animal born on the farm reared to maturity, that food supplies would be enhanced by the addition of millions of pounds of meat.

Farmers would like to have it explained to

them just how, with feeding stuffs scarce and high and experienced labor unobtainable, it would be possible to conceive any more of the live stock increase than they are now doing. Advice such as this, which is not based on knowledge, can be very well dispensed with, especially in such times as the present, when all classes should be working in closest cooperation.

Milking Machine Statistics

PROFESSIONAL Paper 423 of the United States Department of Agriculture records the results of investigations that will be of interest to every prospective purchaser of a milking machine. Officials of the department went right out to the dairy farmers themselves and asked them numerous questions about the milking machines that they were using. The two questions of most importance were these: "Has the use of a milking machine influenced the production of your herd?" and "Do you find that the machine has magnified or lessened sore teats, spider in the teats, garget, milk fever and other udder troubles?"

To the first question there were 156 replies. Of these 124 agreed that there was no noticeable difference in herd production, sixteen thought there was less production and sixteen more production. To the second question there were 129 answers; 103 observed no difference, eleven had less trouble from udder diseases and eight had more.

Many experimental stations and agricultural colleges have investigated the merits of the mechanical milker. As a rule, however, dairy farmers are more interested in knowing what their fellow dairymen think of the machine when given a good practical test. The investigations just reported afford the most conclusive testimony yet offered as to the value of mechanical milking.

A Needy Class

THE province of Ontario is doing a great work in assisting needy people of many classes through its insane asylums, grants to hospitals and other similar methods. There is one needy class, however, which has been overlooked. This is the blind of both sexes over twenty years of age. The province supports a school for the blind at Brantford, but as this school educates only the blind who are under twenty-one years of age it falls to reach the large number of people who have become blind through accident or other cause after that age. The only effort that is being made in the province to assist this class is an Ottawa association for the blind. This is largely a voluntary effort on the part of a few public spirited citizens of Ottawa, and is supported mainly by private subscriptions, supplemented by a grant of four hundred dollars from the Ottawa city council. The excellent work that is being done by this association proves the possibilities and need for such work being conducted on a larger scale by the province.

The attention of Farm and Dairy was called to this situation recently through the case of a young woman who suddenly became blind. She held a good position, but lost it, and soon had expended all her means endeavoring to regain her eyesight. At present she is being looked after by strangers, but has little prospect of ever becoming self-supporting. The Ottawa school for the blind teaches the blind how to cane chairs, weave baskets, make brooms and other similar work. Its twenty-two blind workers are nearly all self-supporting. The needs of this class of people should be recognized by the Government, especially in view of the number of soldiers who have been blinded by the war and whose care must not be neglected.

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New Branches Organized

ORGANIZATION work continues apace and the United Farmers of Ontario is continually adding to its membership. On April 10th, Mr. J. J. Morrison organized the Pefferlaw U.F.O., with E. G. Connor as president and Philip Shier as secretary. There were 70 present at the organization meeting and a strong club was formed. Mr. Morrison is confident that there will always be good reports from this club. On April 16th another club was organized at Midway, E. Selinger president and John Vallack, secretary. There were 35 present at this meeting and it promises to be a good club. A club, organized at Formosa on the same day with an attendance of 40, did not elect a president at the first meeting, but they did elect an able secretary in the person of E. G. Kuntz, and the outlook is good. On April 17th, 23 men turned out at Lakelst and a U.F.O. was organized. John Wolfe, president, Garnet Wright, secretary. At Belmore there were 38 present and a club was organized which will be known as the Inglis School Section Farmers' Club. Finally on April 21st, at Maple, Ont., U.F.O. was organized, M. Scrivener, president and W. T. Cook, secretary.

The Late John Bright

JOHN BRIGHT, Dominion Live Stock Commissioner, died at his home in Ottawa after an illness of three weeks. In his youth Canada loses one of her best men in the live stock world. The wealth of floral tributes sent from all over Canada bore eloquent testimony to the esteem in which he was everywhere held. Funeral services were conducted in Ottawa and the body went to its last resting place in the cemetery of his old home at Myrtle, Ont.

The late John Bright was born 51 years ago in East Whitby township on the farm now owned by his twin brother, William. Twenty-seven years ago he left his father's farm and moved to his own, south of Myrtle station. He married Etta Smith, daughter of A. G. Smith of the township of East Whitby. She, with one son, Gunner Roy at the front, and one daughter, Doreen, survives. Gunner Bright was wounded last September, but has now recovered and is probably back in the advance.

Immediately after moving to his own farm, Mr. Bright entered into the breeding of pure bred stock, Clydesdale horses, Shorthorn cattle and Cotswold and Shropshire sheep. Later he purchased the farm adjoining Myrtle station on the C. P. Ry., and lived there till his removal to Ottawa in 1912.

His Official Capacities.

He was for a number of years reeve of Whitby township and was warden of the county of Ontario in 1906. For four years he was president of the Clydesdale association. He was a prima mover in having the South Ontario county show changed from Whitby and for four years was its president, the fair attaining great success under his direction. For a number of years he was director of the Maple Leaf Farmers' Mutual Fire Insurance Company, resigning when he came to Ottawa.

He was greatly interested in the winter fat stock shows. For many years he was director of the Guelph Winter Fair and was president for two years. He was also associated with the Ottawa Winter Fair since its inception and was president for two years, retiring last year to be succeeded by Mr. William Smith, M.P. for South Ontario, probably his best friend outside of his own family. Much of the success of both these fairs was due to his efforts and in-

telligent grasp of live stock matters. He played an important part in the nationalizing of the live stock records and time has shown the wisdom of the system. He was also the first chairman of the Stallion Enrolment board and was one of the most active in promoting the legislation in the provincial house.

Since coming to Ottawa he had taken a special interest in the Central Canada Exhibition and last year was induced to accept the presidency. The success which attended the fair last year was due in a very large measure to his personality and his efforts. He had a wonderful way of getting all the directors working with him, and among no body of men is his death more regretted than with the Central Canada Exhibition directors.

As Live Stock Commissioner his work reached from ocean to ocean. It is no idle phrase to say that his place will be most difficult to fill.

W. R. Reek Goes East

W. R. REEK, B.S.A., so recently appointed assistant to Dr. G. C. Creelhan in connection with his duties as Commissioner of Agriculture, has resigned to go to Fredericton, N.B., as Deputy Minister of Agriculture for that province. Mr. Reek's training will stand him in good stead in the important position that he is now called upon to fill. Graduating from the Ontario Agricultural College in 1910 Mr. Reek for sometime acted as private secretary to the late Dr. C. C. James. From there he went to the Ontario Agricultural College as associate professor of animal husbandry. Prince Edward Island next claimed him and there he had charge of the administration of the funds apportioned for agricultural education by the Dominion Government. In all of these positions Mr. Reek proved himself efficient and capable and New Brunswick is to be congratulated on securing his services as Deputy Minister.

The Provincial Plowing Match

EDITOR Farm and Dairy: At a meeting held some time ago in Toronto, the Ontario Plowmen's Association, in conjunction with the Department of Agriculture, arranged to hold a Provincial Plowing Match and Tractor Demonstration at "Oak Park Stock Farm," Brantford, Ont., on the 24th, 25th and 26th of October.

At the demonstration last year the Ontario Plowmen's Association placed the farm machinery end of it in the hands of Mr. P. G. Van Fleet. We had many complaints about his arrangements. Mr. R. J. Fleming, on whose farm the demonstration was held, stated that Mr. Van Fleet did not fulfill his agreement, and the Plowmen's Association was also dissatisfied with his conduct of the machine section of the demonstration. This year we have decided that Mr. Van Fleet shall be in no way connected with our Provincial Match and Tractor Demonstration.

We have been informed recently that Mr. Van Fleet intends getting up an opposition demonstration, to be held on September 19th, 20th and 21st, near Toronto. As you will readily understand, the dates selected for his demonstration are exceedingly busy ones for the farmers, and all the fairs and exhibitions in the Province are going on about that time.

We would be very glad, indeed, if through your journal you will do what you can to encourage a large attendance at our Provincial Plowing Match and Tractor Demonstration at Brantford on October 24th, 25th and 26th.—J. Lockie Wilson, Secretary Ontario Plowmen's Association.



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Winning the Wilderness

(Continued from last week.)

"He sent it to me," Horace Carey spoke up. "Business still keeps him busy. He's a humane man."

"Up to a point he is," John Jacobs broke in. "Let's be fair. He is a large-sized boomer and a small-sized rascal. A few dollars won't bear the light of day, but mainly they are inside the law. I've let him handle all but my grazing land around Wykerton. He's done well by me. But he's been at his line a quarter of a century and he'll end where he began—in a real estate office over in Wykerton, trying to get something for nothing and calling it business."

"Horace Carey?" Jim Shirley called next.

"Here," Carey replied. "With a big H," Todd Stewart declared. "Same doctor of the old school. Why don't you get married or take a trip to India, Doctor? Not that we aren't satisfied all over with you as you are, though, and wouldn't hear to your doing either one. You belong to all of us now."

"I may have a call to a bigger practice some day, a service that will make you proud of your former honorable townsmanship. At present I'm satisfied," Carey said, with a smile.

Four years later the men remember this reply and the attractive face of the speaker, the sound of his voice, and the whole magnetic presence of the man.

"John Jacobs?" Shirley called next. "The merchant prince of Careyville," Asher Aydelot declared. "The money-lionizing Shylock. Didn't let the boom so much as turn one hair black or white. Land owner and stock holder of the Wolf Creek Valley and hater of saloons seven days in the week. Whatever it may mean in New York and Cincinnati and Chicago, being a Jew means being a gentleman in the corner of Kansas," Asher was running on, till John Jacobs threw a chair cushion at his head and Jim called out:

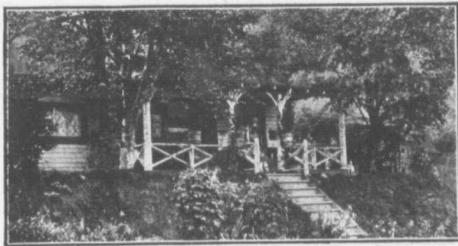
"Cyrus Bennington." "Dusted by the boom. Lived at the public crib ever since. Held every little county office possible to get, asking now for your votes this fall for County Treasurer. Will end his days seeking an election and go at last to be with the elected," Cyrus Bennington frankly described himself.

"Not so bad yet as Todd Stewart," Todd declared. "He lost everything in the boom except his old Scotch Presbyterian faith. Now head clerk in J. Jacobs' dry goods and general merchandise store. Had the good sense, though, this old Todd did, to send his son back to the land and make a farmer out of him, and the second generation of Stewart in this valley promise to make it yet. Why don't you revert to the soil, too, Bennington?"

"Todd is doing well with his

leases," Asher Aydelot declared. "He'll be a landowner yet." "My family, especially the girls, object to living on a farm," Cyrus Bennington said gravely. "They have notions of city life I can't overcome. Jo especially dislikes the country and Jo runs things round the Bennington place."

"James Shirley, Esquire," Jim announced and added quickly. "The biggest sucker in the booming gang. Lost his farm to the Chambers Company. Holds a garden patch and homestead only, where once the Cloverdale Ranch smiled. All under mortgage also to other capitalists.



A Home in the Mountains—The Pride of its Owner.

Farm and Dairy publishes in this issue an article by Mrs. Edith Stevenson Rutherford and herewith may be seen an illustration of her home in the Kootenay Dist., B.C. Mrs. Rutherford is an enthusiastic lover of flowers. In writing us she says: "If I could show you a picture of this place as it was when I came here and as it is now, I think you would understand just why and how much I love my garden."

Boys, I'd be ready to give up if it wasn't for my little girl. What's the use in a man as big as I am, with no lung power, keeping at it?" There was a sad hopelessness in Shirley's tone.

"No, no!" the men chorused in one voice. "Go on, Jim, go on!"

"Asher Aydelot." Jim pretended it was the rollcall they demanded.

"Gentlemen," John Jacobs began seriously. "But at that moment Leigh Shirley, followed by Rosie Gimpek, came from the side door with a tray of glasses and a pitcher of lemonade.

"Gentlemen, a toast to the man who stuck to the soil and couldn't be blasted to financial ruin by a boom, the wheat king of these prairies. Our host, Asher Aydelot."

"The cloth-hopper, Buckeye farmer," Jim added affectionately, and they drank to Asher's health.

"Lord bless you, Aydelot. You said the money was in the soil, not on top of it. I remember you looked like a prophet when you said it," Cyrus Bennington declared. "But I was wild to get rich quick and let my soil go. I never look at Aydelot's spreading acres of wheat increasing in area

every year without wondering why the Lord let me be such a fool."

"Well, you've spent a lot of days in an easy chair in the shade of a county office since then while I was driving a reaper in the hot sunshine," Asher insisted.

"You are the strongest man here now, for all your farm work, Aydelot," John Jacobs asserted. "It is the stone that really breaks a man down."

"Not in his nerve, nor in pocket-book," Todd Stewart added. "Here's a toast, now, to the second generation, and especially to Thaine Aydelot, son of the Sunflower Nineteen years old to-night."

"What is Thaine going to follow, Asher?" someone inquired. "I suppose you'll be making a gentleman out of him, since he's your only child."

"My father tried to make a gentleman out of me and failed, as you see," Asher replied.

"Tragic failure," Jim groaned. "Seriously, Aydelot, what's Thaine to do?" The query came from Dr. Carey; the company awaited the answer.

"He isn't wanting to follow anything right now. He has a notion that the earth is following him," Asher said with a smile. "And having handled Aydelots all my life, I'm letting him alone a little with the hope that at last he'll come back to the soil as I did. He goes to the Kansas University this fall and he has all sorts of notions, even a craving for military glory. I can't blame him. I had the same disease once. I don't believe in any wild oats business. I hope Thaine will be a gentleman, but I don't

tell on me nor let him know. He says he's called." And when a preacher gets that in his blood there's no stopping him."

At that moment Virginia Aydelot and a group of matrons came thronging out.

"Come in for the Virginia Reel," they demanded. "The young folks are having refreshments on the side porch and Jo Peep wants us to dance for him."

"May I have the honor?" Horace Carey said, bowing to Virginia Aydelot. "With pleasure Horace," Virginia replied with a smile.

As they left the way to the dining room, Dr. Carey said: "I congratulate you to-night, Virginia, on your son, your kindly husband, and your busy, useful life. You've won two, you two."

"Not yet," Virginia replied. "Not until our son proves himself. He's a farmer's boy now. Wait five years till he is the age his father was when he came out here. The feat of victory is the second generation." Jo Peep's fiddle began its song and the still young middle-aged guests with their host and hostess kept time to its rhythm.

CHAPTER XIV.

The Second Generation.

The second generation gave little thought to what was filling the minds of the first settlers. To-night, the company was a large one and a dozen years later more than one young matron remembered Thaine Aydelot's birthday party as the beginning of a romance that ended happily for her.

"Jo, you are the queen of the ball to-night," Todd Stewart, Junior, declared, as he led her to the cool veranda after their fourth dance together. Jo looked the part in the moonlight, as in the lamplight.

"Oh, no, I'm not. Leigh Shirley is Thaine's favorite, and his choice is choice to-night," Jo said coquettishly. "Damn him! We all know who his choice is, all right," Todd said. "But, Jo, can't a fellow have half a chance, anyhow? You know, you can't help knowing a lot of us would fight for you."

He caught her hand in his and she did not resist at once.

"Oh, Jo, I know one fellow, anyhow—"

"Look at Thaine now." Jo interrupted him, as Thaine came near the open window. "Todd, do you know why he thinks so much of Leigh Shirley?"

"Of Leigh? Does he? I hope he does. He shows good taste, anyhow. Everybody from Little Wolf Creek clear to Northfork likes Leigh."

Jo's eyes flashed.

"She must be very popular."

"Oh, not as they like you, Jo. You must know the difference between you two, a real beauty and a sweet little girlie."

"She's not so sweet. She tries to attract and doesn't know how," Jo declared, for jealousy belongs to the dominant.

Todd Stewart's sense of justice was strong, even in his infatuation. "Why, Jo, you mustn't be jealous of Leigh. She's the girl the boys can't make like them for the heart's sake, the sweet little creature. And yet, she's a cute child. But you are our pride, you know, and to me—well, let me take you home to-night, and I'll tell you about my pride."

"I don't care for your pride, if you all admire the cute child." Jo withdrew her hand from his. "Here comes Thaine now. I think you'd better take Leigh home. Thaine will take me, I'm sure. But if you get refreshments with you," she added, for she knew how to play on more than one string.

"Why, Josephine, my queen, my

(Continued on page 28.)

The Upward Look

The Power of Influence

By it, he being dead, yet speaketh.—Hob. 11: 4.
He is one of the most practical and businesslike of men. But, written in his own hand on a card attached to a wreath of exquisite calla lilies, on the coffin of an old friend, were the words: "With deepest sympathy of Mr. and Mrs. M. B. Fay and family." Yet she, his beloved, had been taken away several months before.

Anyone that looked at that card could not but be deeply stirred at the thought of what a vivid reality the nearness of her presence is to him. He says she is always with him, so strong is his faith. Also while reading over the card one could feel again the true loving sympathy of her tender, responsive heart. She seemed indeed to be present again in that bereaved home, speaking the right word of sympathy.

I often think of the many ways she is always speaking to her own and her friends and those whose lives she touched.

She is constantly speaking through her influence over her husband. Those that know them both know what she has done for him, and through him for others. She is ever living and speaking through her children. As you look at them you hope and pray that they may live long enough to carry out her aims and aspirations for them. They are trying to do this, yet even more than when they had her visible presence in the home.

Then her work and influence is still being felt with the many, many with whom she was associated, or with whom she came in contact in a wide variety of interests. As she has lived and spoken, so is she now living and speaking, and will be for years to come, as each in turn carries on that blessed influence.—I. H. N.

Housecleaning Wrinkles

THE cleaning of windows is an important part of the work of house cleaning and it requires a certain knowledge of what to do and what not to do in order to make the windows look clear and bright. We are tempted at times to wash windows when the sun is shining on them, but this makes them cloudy and streaky as they dry before they are well polished. The best plan is to wash the inside first, as the defects on the outside of the glass will then show up to better advantage.

How about those curtains which we fear will surely go to pieces if they are laundered once more? It is a good plan to fold such curtains evenly three or four times in the bath tub with white thread. Allow to soak for sometime before washing and remove the bastings only when they are ready for the stretchers. The extra weight which is added when the curtains are wet causes them to tear if lifted by a single thickness. If they are too far gone to put in the stretchers, they can be folded over a sheet on the clothesline and the scallops carefully pulled into place. It is sometimes difficult also to wash new curtains on account of the dressing which they contain. By soaking new curtains for a few hours in a strong solution of salt and water, this dressing will be removed.

The heaviest and most awkward articles we have to lift during housecleaning time are the mattresses. It is very wearisome to tug at a heavy mattress on which there does not seem to be a spot where one can get

a good grip. It is a good plan to sew stout straps of tape or canvas to the sides of the mattresses before attempting to lift them and by having the straps large enough to admit the hand readily, the mattresses can be lifted around with little trouble.

A can of paint will work wonders in freshening up various parts of the home and it gives one so much more satisfaction if some little renovations are performed along with the routine of housecleaning. If the furniture is rubbed up with varnish it will also do much to brighten up the rooms. It is rather hard to secure good dyes nowadays, but if one can come across the shades they desire, the coloring of faded draperies or cushions will transform a room which has become dingy from much use.

Mrs. Youngbride—"Our cook says those eggs you sent yesterday were quite old."

Grocer—"Very sorry, ma'am. They were the best we could get. You see, all the young chickens were killed off for the holiday trade so the old hens are the only ones left to do the layin'!"

Mrs. Youngbride—"Oh, to be sure! I hadn't thought of that."

In the kitchen proper have a really good, modern range; if it burns wood or coal let it be understood distinctly that the man of all work on the farm is to keep a large boxful at hand, with kindlings. No woman ought to get her own fuel in.



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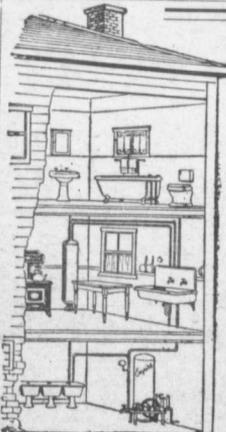
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Where are the Gardens of Other Days?

A Visitor to Ontario, After Twenty Years Absence, Asks the Question—
Edith Stevenson Rutherford, Kootenay District, B.C.

LAST night, for the first time in months, I went to sleep lulled by the sound of rain falling on my attic roof. The first indication that spring was really on her way, so stirred my blood and my longing to be again in my beloved garden, that I slept nearly did not get to sleep at all, but spent the best part of the night planning what I should do as soon as all the snow disappeared, to make up for three months' absence from my garden last year.

For be it known unto you, oh dwellers in lovely Ontario, that last August there returned—after an absence of nearly twenty years—the daughter of one of Ontario's pioneers, who spent her first years on the farm her father professed with his own hands from the virgin forest. In the years since my coming to British Columbia to live, I thought I had quite conquered my longing for Ontario and become a thorough Westerner, but oh! it was good to see Ontario fields again, with their edges trimmed with beautiful trees, her cosy farm houses and big barns bursting with harvest, and—strange indeed to eyes that had not seen Ontario for so long—the queer, round buildings beside nearly every barn, which I finally identified as silos.

Special Sunset Display.

The evening that I left Toronto for Peterborough, I think Providence must have arranged a special display for my benefit, there was such a gorgeous sunset, and I could not tell you how lovely it all seemed to me. Perhaps most wonderful of all were the noble elms and maples that are so plentiful on the farms along the line of the C.P.R. But the sight that really brought the tears, was a flock of crows flying slowly against the sunset sky to their nightly quarters in a pine grove. Please don't laugh at me, but try to think how you would feel if you hadn't heard or seen a flock of crows flying across the fields for nearly 20 years. In our part of British Columbia we have no crows, and you can't imagine what a difference their absence makes. I would rather hear the caw, caw, caw of a crow flying over my garden among the mountains than have the chance of hearing one of the world's famous singers, and I am passionately fond of music at that.

The three months I spent in Ontario were delightful, but as my return in many ways than I remembered or had thought possible, but the thing I could not understand, and which seemed such a pity, was the disappearance of the gardens I used to surround the farm houses in my youth. In my old neighborhood in Peterborough county I only saw two farm houses where any real attempt at a garden had been made, and the gardens I used to delight my childish heart had nearly all been completely obliterated. When I lived in that neighborhood nearly every farm was owned by the man who had cleared it, but on my return I found only four farms still held by the sons of those men, which, perhaps, accounts for the disappearance of the old gardens. It seemed such a shame that the old names should die out and the work of the pioneers be forgotten.

Beauty of Old Home Gone.

On my dear father's old place desolation reigned supreme. It had been rented for years and the things those tenants did to it would break your heart. The beautiful trees that used to grow along the roadside had all been cut down. The old house was gone, though the magnificent old hand-hewn timbers still remained and are to be used again, but the dear garden that I loved as a child was absolutely destroyed. How well I remember it with

its huge clump of peonies—the old Piney roses—the yellow iris, and the Viceroy—which we called Sweet Home—and the big hot Star of Bethlehem under the old sour apple tree. There was Ribbon Grass and Live-forever, Bluebells of Scotland and Orange Lilies, and the little white flower we called Bridal Rose and which I now know to be Achillea Alba. There was tea plant and cabbage roses, crimson roses that edged the path and the tiny blue flags that edged the flower-beds. I had tried for years to get some of these last, being a bit of a maniac about iris, of which I have a large collection, but not until her first years on the farm her father knew what I meant or be able to procure it. From the first minute I decided to go East I had it in mind to get some roots of those dwarf iris, and felt sure I should find them in the old garden at home. But not a trace remained of all those old flowers. Even the big, white and purple lilacs and the beautiful exim honey-suckle had vanished and I searched in vain for anything in the shape of a flower or shrub that I might transplant to my

A FIRELESS COOKER CONTEST.

IT will soon be time for fireless cookers and probably some of Our Women Folks are thinking seriously of installing one this summer, either home-made or a patent style. We feel sure that any who are contemplating such an addition to their household equipment would be glad indeed to get some practical information on the subject from those who already have cookers in their homes. Will those who are using fireless cookers give other the benefit of their experience? Is your cooker a homemade, will you not tell us how it was constructed and whether it has been a success wholly or in part? Or if you are fortunate enough to have one of the patent cookers, it would be equally interesting to know how it is working out. It has been claimed by some users of fireless cookers that they save from 70 to 80 per cent. in fuel. In your experience has the fuel bill been materially lessened?

For the best letter on this subject we will award a description of the contributor for a year and a half or pay them \$1.50, and for all other letters published, we will extend the contributor's subscription for one year. Letters should be in our hands not later than May 15. Address, Household Editor, Farm and Dairy, Peterboro.

dear garden here among the mountains.

However, I was not to be beaten, for a trip to the old swale, and a hunt in the long grasses rewarded me with several roots of the cowslips or marsh marigolds that used to turn that spot into a fairland of yellow blossoms when I was a child. They do not grow so rampant as it would break your heart. The beautiful trees that were in splendid shape when I planted them last fall, and I look forward to seeing those golden blossoms this spring for which I have hungered for 20 years.

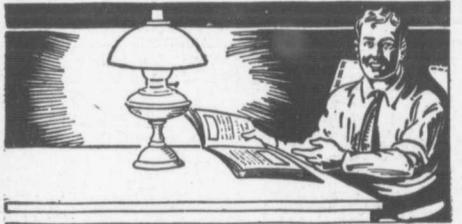
A "Real Garden" course. As for the little "blue flags," I was fortunate enough to get some roots at the adjoining farm, one of the few

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MONTREAL

that is owned by the son of the man who cleared it, and where I found a "real" garden well started, and closely enshrined in the heart of the mistress and her pretty daughter, and serving, I know, to ease the heart-ache and loneliness so common to us all in these sad days when so many of our boys are "Somewhere in France."

It was delightful to find the farmers enjoying the convenience of motor cars, rural mail and rural telephones, with cream separators and a dozen other things in the homes to make the work of the women lighter. And yet, with it all, it seemed to me they were missing something that makes all the difference between living and simply existing. "Where there is no vision the people perish," and where there are no gardens the home becomes mere: an abiding place and lacks that true union with the soil, that love for nature and all outdoors which more than anything else roots the heartstrings in the home and makes it the dearest spot on earth.

The country is so lovely and there is such a wealth of beauty in tree and vine to be had for the mere trouble of transplanting, that it made me fairly ache to pass house after house without the shelter of a single tree and where no attempt had been made to really beautify the grounds. Perhaps the editor may let me come again and I may be able to communicate to you some of my enthusiasm for gardening; that "occupation for which no man is too high or too low," and help you a little to plan gardens and surroundings that will be a constant joy to yourselves and to "those that pass by."

HOME CLUB

Men and Their Ways

"MEN are almost as trying to the temper as clothes, but clothes can be sent back for alterations and men cannot—at any rate not those who are old enough to be worth altering. You do pretty much what you like with a gown, but you cannot let out a tuck in a man's temper if it is too short, or insert a gusset into his views if they are too narrow, or put a false hem on his brain if it is not quite large enough."

The above is not original, but I consider it worthy of repetition, and I would like to add my views on the subject.

Man is woman's natural protector; he is so big and strong and so sure of himself, and laughs at women's fears, so that we are glad to rest all respon-

sibility on his broad shoulders. But the man will enclose placidly through the night while the woman's keen ears are strained to hear the stealthy tread, her nostrils are the first to smell the acrid smoke, or her intuition senses the coming danger. And it is she who is often the braver of the two when real courage is required.

Vanity is an inherent quality in man. In nature the male has been given more gorgeous beauty than the female. Robin redbreast sports a gay red vest, and shows himself off as a very cheery bird, while his meek little wife is a plain Quakeress. The peacock struts around, spreading his gorgeous, many-hued tail, while the hen has no ornament. Trees and shrubs which bear separate male and female blossoms, have beautifully colored blossoms for the male and most unattractive ones for the female. So in man with a head of curls, a pair of fine eyes, a charming moustache, perfect teeth, erect figure, broad shoulders, and we say, "What a handsome man! What a dear he is!" He may have sinned the unpardonable sin, yet he is Society's darling because of his physical attraction.

Man is conceited. Give him a trust, single him out for some favor, and he shows back his shoulders and struts about with a very important air. The poet puts it this way:

"But man, vain man, dressed in a little brief authority,
Most ignorant of what he's most assured,
Whose mighty essence like an angry ape,
Plays such fantastic tricks before high heaven,
As makes the angles weep."

Well, man may be vain or conceited. Conceit is a factor that often makes a man of him, carrying him to heights unattainable without it. It is simply superlative self esteem. But with it all we admire him, we smile on him, we love him and become his willing slaves. We even consent to cook for him, darn his socks and keep him comfortable, just for the pleasure of owning him, for his protection and for our love for him.

As our protector he dons the khaki. He needs his vanity and conceit, now—his vanity to keep his uniform crisp and polished—his conceit to carry him through dangers. He is sure to be spoiled by our women folk, who consider every man in khaki a hero. We begin to knit for him, to plan for him, to work for him. We send him off with a smile on the lips, a tear in the eye and an ache in the heart. It is the way with women to show their love, pride and sacrifice. "God save our splendid men!"—"Tirza Ann."

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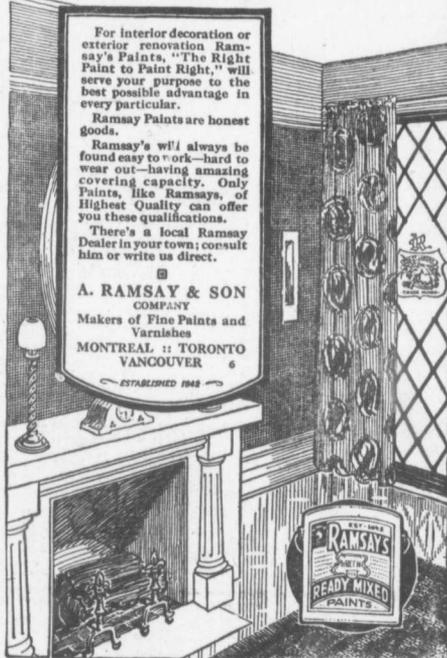
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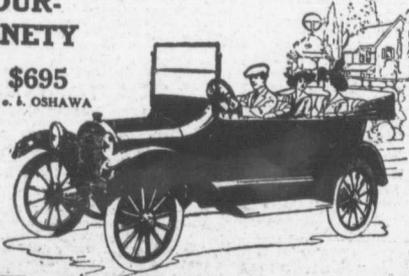
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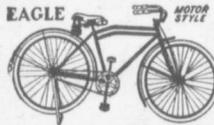
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One of the difficulties which we encounter when using an oil stove is the cooking of several articles of food at one time. For instance, with a three-burner stove we may have the tea-kettle over one burner, meat over the other and we want to cook two or three kinds of vegetables. Some people cook one vegetable first, take it off and put on another, but while the latter is cooking the former is cooling down. It is possible to keep food hot for a considerable length of time if the vessel in which it has been cooked is placed in a larger dish of boiling water. Another way of overcoming the difficulty of purchasing saucapans especially shaped for fitting over gas or oil burners, which allow two or three to fit over one burner. Still another suggestion has come to attention in the form of a regular cooking kit. Here is the idea:

Get a large agate or porcelain kettle, or even a good-sized lard pail will do. Then get a small pail or two, some baking powder tins and a wire basket. We will suppose that we are having potatoes, beans, squash and onions. Place the beans in a small pail and add the water for boiling, and in another pail or tin, the onions, and place these in the large vessel. Fill in water around these dishes and in the chicken dishes fill it with potatoes. The wire basket should fit down into the top of the pail and, in it goes the certain things may take different lengths of time to boil and in that case it would be necessary to start them ahead of the other food.

This plan might not be practical for the large family, but it possibly suggests other schemes which could be worked out satisfactorily.

Mother's Day

WHEN we reach manhood or womanhood, many of us, under the stress of our own cares and responsibilities, have a tendency to forget the loving and faithful heart who watched over us during the tender years of our existence. For the past few years, however, the second Sunday in May has been specially set apart in honor of "the best mother who ever lived—the mother of your heart." Miss Anna Phillips, a Philadelphia woman, felt that she owed so much to her good mother that she would like to show it in some special way, and the idea of a Mother's Day Sunday came to her with the result that all over our continent one day in the year is dedicated to the memory and praise of our mothers. The day is observed by wearing a flower and through some distinct act of kindness, visit, letter, gift or tribute, showing remembrance of the mother to whom grateful affection is due. It has been said that Mother's Day is equally Father's Day and is designed to deepen and perpetuate all family ties.

In writing about mothers, Dr. Talpage once said: "In all ages God has honored good mothers with His love. Why did a good mother, St. Bernard had a good mother, Walter Scott had a good mother. Why did Titian, the Italian artist, when he sketched the Madonna, make it a German face? Why did Rubens, the German artist, in his Madonna, make it a German face? Why did Joshua Reynolds, the

English artist, make his Madonna an English face? And why did Murillo make his a Spanish face? I never heard, but I think they took their own mothers as the type of Mary, the mother of Christ." Is this not a wonderful tribute to mothers?

Haat thou sounded the depths of yonder sea
And counted the sands that under thee
Haat thou measured the heights of heaven above?
Then mayest thou speak of a mother's love.

There are teachings of earth, and sky and air;
The heavens, the glory of God declare;
But far more bright, beneath, above;
He is heard to speak, through a mother's love.

The Call of Home

By J. M. Hunter of Farm and Dairy.
I'M going back to Ayrshire, I'm going home some day,
I've wandered from the homeland, and I've come too far away;
But yearning voices call me when the evening sunsets glow
"Will you not come back to Ayrshire that you left so long ago?"

Yes, I've wandered far from Ayrshire, on a strange and alien track,
And I sometimes wonder whether I can find the pathway back.
But still I hear the voices, though I'm far across the sea,
"Come back again to Ayrshire, there's a welcome still for thee."

Oh, pleasant 'tis in Ayrshire to view her rivers fair,
To feel her balmy breezes, and to breathe her cooler air;
To hear the blackbirds warble, and to hear the laverock sing
In the early, early morning, when the year is at the Spring.

The hills are green in Ayrshire, with Nature's verdure spread,
Where often I have wandered till the evening twilight veils the head.
Till the golden sun was setting, and Arran hills were grey,
And the peace of Heav'n descended, at the closing of the day.

I'm going back to Ayrshire, but the tracks seem strange and new,
I pray that I may find the path I've sought the long years through.
For I long to rest by the Ayrshire hills, that look on the Western sea,
Though the faces I loved have vanished, and those who once loved me.

Substitute for "Spring Tonic"

WE are all familiar with that "tired" feeling in the spring of the year, when it is an effort to drag one foot after the other and we find our work very strenuous. Of course, we decide that we need a "spring tonic" and first thing we know the whole family is taking some particular tonic which we favor. This may or may not be the proper thing to do, but according to home economics specialists, vegetables and fruits are a good substitute for "spring tonics." Less meat and more vegetables and fruits make a good spring diet.

Dried, canned or fresh fruits make good desserts when served with a simple cake made as follows: Break an egg into a cup, fill the cup with sugar, pour into the mixing bowl, and beat until light and creamy. Add two tablespoons softened butter, three-fourths cup milk, and one and one-half cups flour sifted with three tablespoons baking powder. This makes twelve little cakes which may be served with any fruit sauce.

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Just fancy, readers! Whether a blacksmith, carpenter, engineer, labourer, farmer or clerk, could you by solid hard grinding wear, every day in the week—no rest Sundays—wear a small hole in a \$25 pair of Pants or a \$4.50 Suit, in six months? Could any of your boys wear a small hole in a \$12.50 Suit, in six months? Remember, six months of solid grinding wear and tear—no rest Sundays—but every weekday and Sunday too! If any reader can do this, he can get another garment free of charge.
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Efficiency—the Watchword For Homemakers

ONE of the most important subjects in which housekeepers and homemakers should be interested to-day, is the science of home economics, or the way in which our homes are mapped and equipped. Within the last few years the importance of this subject has been rapidly forcing itself upon us, and we will do well to study it from every angle in order that we may gain as much information as possible and profit thereby. We have just been looking through a bulletin on planning and equipping the home, by Helen W. Atwater, of the Experiment Stations office at Washington, and as she treats the subject in a practical manner, we consider it worth while to reprint some of her ideas. She says:

"The problem of making the home as efficient as possible includes many different kinds of questions, which make necessary a great deal of study along many different lines. Every intelligent housekeeper who studies the household problems of cooking, cleaning and furnishing and tries to solve them with the help of both practical experience and scientific information, hastens the day when household management can be as accurately planned as that of the factory and the farm.

"Planning and equipping a home in an accurate and systematic way does not mean that it should not have individuality. On the contrary, while the principles which govern a wise choice of furnishings are the same for all kinds and conditions of houses and families, the articles actually chosen in accordance with these principles, would vary just as much as the houses and the families for which they are intended. The income influences choice, but the fact that one cannot pay high prices does not mean that one must put up with inconvenient or unattractive things.

"Since the kitchen and laundry are the rooms where the hardest part of the household labor is performed, the question of efficiency in their equipment is especially important. This

cupboard, she will waste a considerable amount of energy in the course of a day's work. It certainly is worth her while to study her movements as she works and see if by changing the place in which some things are kept, or by moving the work-table or the kitchen cabinet, she can not reduce this waste of energy. The height of work-tables, sinks and laundry tubs has much to do with the ease of working. Different kinds of work, of course, call for tables of different



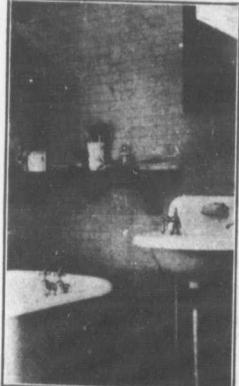
"Helping Mother."

The little girl shown in the illustration is the daughter of Mr. D. Cotes, Lewis Co. Que. She is busily engaged in preparing beans for dinner.

heights. Ironing, for example, which consists of pressing down hard, is easier on a low or table than would be chosen for general work. A table for such housekeeper to test out the matter for herself before she buys a new table or has a new sink set up than to trust to general rules. A table with an adjustable top which permits the working height to be easily changed, has been made for experimental use in our calorimeter laboratory.

"Built-in closets or cupboards are other features of equipment which are most important to the housekeeper. If she has anything to do with planning her house, she should try to locate them where it takes the least possible number of steps to get at or put away their contents. A small closet, provided with shelves and drawers especially adapted to the things kept there, is more satisfactory than a larger closet poorly arranged. In planning drawers, it is well to remember that a larger number of shallow ones are usually preferable to a few deep ones, because all of the space in them can be used without piling things on top of each other. Similarly, narrow shelves, preferably not more than a foot wide, are saved more convenient than wider ones and are easier to keep clean. Many housekeepers prefer the movable kitchen cabinets to built-in cupboards for kitchen supplies, because they have a convenient place for all the necessary things and no waste space.

"If the best equipped house is the one which in all its features and furnishings are most completely suited to the needs of its occupants, the standard for every family must be adapted to such individual peculiarities as the location of the house, the amount of the family income, the size of the family and their different occupations and interests. Judged by this standard, a woman who with limited means, has made a convenient, comfortable and attractive home out of an unpromising, inconvenient farm house, has shown greater ability than one who, with the help of an expensive decorator, has obtained a fine site in a house equipped with all modern improvements."



A Corner of the Bathroom in the Home of Mr. W. W. Ballantyne, Perth Co., Ont.

efficiency depends not only on having the most convenient devices for doing the work, but also on having them placed where they can be most conveniently used. If a woman has to go to a distant closet or pantry every time she wants a dish or a little flour, or even if she has to cross a large room as she moves between the stove and the work-table, the sink a d the

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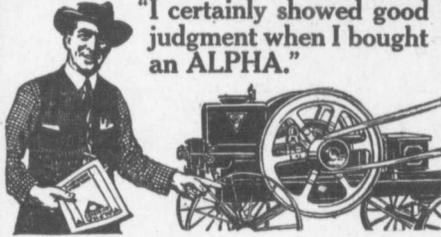
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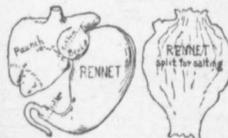
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The Makers' Corner

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.

Paying For Cheese Factory Milk

BULLETIN 276, from the Wisconsin Experiment Station, discusses the payment for milk at cheese factories from the quality standpoint. The subject is a timely one, and the findings of the Wisconsin Station have particular application here in Ontario, with the Dairy Standards Act on the statute books but yet inoperative.

In the bulletin the pooling system is treated almost as if it were obsolete which it is in Wisconsin. It admits that payment for milk on a straight fat basis would be hardly fair, were some patrons to send in six per cent. milk and others three per cent. in that six per cent. milk will not make twice as much cheese as three per cent. milk. This is-



dom happens, however, and ordinarily all lots of milk received at the factory will be within .5 per cent. of the average test, and under average conditions the unfairness of the fat test method of payment is negligible.

Under any conditions, the bulletin considers the straight fat test more nearly consistent with justice than the pooling system, but where the variation of the loss of milk received is greater than 5 per cent. the "fat plus six-tenths method" is recommended. Briefly, it consists in adding .5 per cent. to the fat test of each patron's milk in figuring out the amounts year-ly. An extract from the bulletin further explains the method:

"Five patrons, whose milk tests are 3.0, 3.5, 4.0, 4.5, and 5 per cent. respectively, each deliver 100 pounds of milk at a cheese factory. The 500 pounds of milk yielded 53 pounds of cheese, which was sold so as to leave 15 cents a pound, or \$7.95, to be distributed among the five patrons. How much should each receive?"

By the pooling system each man will receive \$1.59. Using the fat test plus six-tenths system, they would be paid as follows:

| Patron's No. | Test | plus | fat | plus | 60% | per cent. | to be paid on 100 lbs. of milk |
|--------------|------|------|-----|------|--------|-----------|--------------------------------|
| 1 | 3.0 | 3.5 | 3.5 | 3.5 | 34.565 | 1.728 | \$1.413 |
| 2 | 3.5 | 4.0 | 4.0 | 4.0 | 34.565 | 1.413 | \$1.413 |
| 3 | 4.0 | 4.5 | 4.5 | 4.5 | 34.565 | 1.413 | \$1.413 |
| 4 | 4.5 | 5.0 | 5.0 | 5.0 | 34.565 | 1.413 | \$1.413 |
| 5 | 5.0 | 5.5 | 5.5 | 5.5 | 34.565 | 1.413 | \$1.413 |

—\$7.958
 In order to show the accuracy of the system, the bulletin invites comparison with a method where the payment

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Now consider the time saved in cleaning the Sharples. The bowl is the most simple in existence—just *one* piece in it, no discs or blades. Simply run a brush through it once or twice—and cleaning's done!

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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.

WALKVILLE, ONT. PARKE, DAVIS & CO.

is based on the actual make of cheese as in the following table:

| Patrons' No. | wt. of milk delivered | wt. of fat lost | Yield of cheese containing 37% moisture | Price per lb. of cheese—Cents | Value of cheese at 16¢ per lb. |
|--------------|-----------------------|-----------------|---|-------------------------------|--------------------------------|
| 100 | 2.6 | 9.45 | 11.260 | 1.4178 | \$1.4178 |
| 100 | 4.0 | 10.60 | 11.744 | 1.6990 | \$1.6990 |
| 100 | 4.5 | 11.74 | 12.50 | 1.7818 | \$1.7818 |
| 100 | 5.0 | 12.50 | | 1.9350 | \$1.9350 |

\$7.9485

The diagram herewith is from this same bulletin.

Stamping Cream Cans

IN 1915 the Inland Revenue Department, Ottawa, issued circular G 1187, which stated that all milk cans the railroad type must be inspected and stamped for accuracy of gallonage before being sold or put into use. If the cans are merely shipping cans, the milk or cream content being paid for by actual weight, then no further inspection takes place. If, however, the shipping can is the basis of trade, periodical inspection must follow. The Weights and Measures Department claim that in past years eight gallon cans were made to hold 3 3/4 quarts and credit given for only 8 1/2 lbs.

Such are the regulations. Creamery men are now beginning to object to the expense involved in the stamping of cream shipping cans and the following resolution adopted by the last provincial dairy convention of Alberta, held at Calgary, voices the opinion of cream-rymen generally:

"Whereas milk and cream are now purchased by scale weight and test, and whereas the present Act governing the stamping and marking of milk and cream cans is expensive and inconvenient in its operation and is no longer required for the purpose for which it was originally intended. Therefore this convention of representative dairymen respectfully suggest that the Federal Government take necessary steps for the prompt repeal of those sections of the Act dealing with this matter."

This resolution was presented to the proper authorities at Ottawa and Mr. C. Marker, Dairy Commissioner for Alberta, writes Farm and Dairy that there is some correspondence pending in connection therewith.

An Objection.

Dairymen are not a unit apparently in desiring the abolition of the stamping clause as it applies to cream cans. Mr. W. F. Stephen, secretary of the Montreal Milk Producers' Association, writes Farm and Dairy that much of the sweet cream shipped into Montreal is sold on the basis of measure and to such producers the stamping of cans is a distinct benefit. Mr. Stephen writes Farm and Dairy further as follows:

"I think the proper way to purchase cream, and one which is being followed by many companies, is by weight and paid for according to its butter fat content. One of the objections which our association has against allowing cream cans to go unstamped, is that frequently, in the case of a producer shipping both cream and milk, he cannot always discriminate between stamped and unstamped cans and we fear that once discontinuing the stamping of cream cans and it would be only a short time until it would be discontinued with milk cans also. Again the manufacturers are opposed to the move on the ground that the creamery men may want a larger can and require different machinery and the keeping in stock of two assortments of cans instead of one."

Discussion of this subject, which is important, is invited through Farm and Dairy.

SEED CORN

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We can supply rank-corned corn, on the cob or shelled, from the following varieties:

Improved Learning, Wisconsin No. 7, Early Ballew, White Cap Yellow Dent.

This corn was grown and cured by specialists in seed corn, and is therefore of a very superior grade of seed.

Let us quote you on all kinds of garden and field seeds, including manure, sugar beets, turnips, carrots, butter beans, white beans, seed potatoes, buckwheat and field grasses.

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THREE CENTS A WORD, CASH WITH ORDER

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

ROOFING MILL ENDS—HEAP. Unequaled for sill, gables, poultry houses and large roofs. A limited quantity of high grade ends of roofing for sale cheap. Write for free catalogue and prices. Address Factory Distribution, Box 51, Hamilton, Canada.

VEGETABLE SEEDS—Best varieties (Beets, Beans, Corn, Peas, Parsnips, Lettuce, Cabbage, Onions, Squash, Cucumbers, Tomatoes, etc.) 25 cents and 50 cent size packets, postpaid. 25c. Satisfaction or money back. Howie Concern, Deeba, Wis.

Famine and World-Hunger Are on Our Threshold!

"In the nations honour, heed!
Acquit yourselves like men.
As workers on the land, do your
duty with all your strength!"

—Lloyd George.

The Crisis

France, England and Italy in peace times did not depend upon America but on Russia, Roumania and Bulgaria for most of their bread stuffs. With these sources closed the crisis of the hour demands that we see that our soldiers and the Motherland are fed.

Everyone in Great Britain has been put on limited rations; meat is prohibited one day a week and the making of cakes and pastry has been stopped. Further restrictions are anticipated.

Bread has gone to 28c. per four-pound loaf in England, for the first time since the Crimean War.

Lord Devonport, British Food Comptroller, proposes taking authority to search the houses of Great Britain to prevent food hoarding.

Forty million men, less the casualties, are now on active service.

Twenty million men and women are supporting them by service in other war activities.

In the last analysis, the land is bearing this burden.

One million tons of food-carrying ships have been torpedoed since February 1st, 1917.

Germany's hope for-victory is in the starvation of Britain through the submarine.

Canada's sons will have died in vain if hunger compels the Motherland's surrender.

The land is waiting—the plough is ready—will we make the plough mightier than the sword?

Will we help the acres to save the flag?

World Hunger Stares Us in the Face

David Lubin, representative of the United States to the International Institute of Agriculture—maintained by forty Governments—reports officially to Washington that the food grains of the world on March 31st, 1917, showed a shortage of 150,000,000 bushels below the amount necessary to feed the world until August, 1917. He declares it is beyond question that unless a greater acreage is put to crop in 1917 there will be WORLD-HUNGER before the 1918 crop is harvested.

The failure of the grain crop in the Argentine Republic which is ordinarily a great grain-exporting nation resulted in an embargo being placed, in March, 1917, upon the export of grains from that country to avert local famine.

The United States Department of Agriculture, in its official report, announces the condition of the fall wheat crop (which is two-thirds of their total wheat crop) on April 1st, 1917, to be the poorest ever recorded and predicts a yield of 244,000,000 bushels below the crop of 1915. The 1916 crop was poor. Even with favorable weather, the wheat crop of the United States is likely to be the smallest in thirty-five years, not more than 65 per cent. of the normal crop.

Under data of April 10th, Ogen Armour, executive head of Armour & Company, one of the world's largest dealers in food products, stated that unless the United States wishes to walk deliberately into a catastrophe, the best brains of the country, under Government supervision, must immediately devise means of increasing and conserving food supplies. Armour urged the cultivation of every available acre.



ONTARIO

The food shortage, he said, is world-wide. European production is cut in half, the Argentine Republic has suffered droughts, Canada and the United States must wake up!

People are starving to-day in Belgium, in Serbia, in Poland, in Armenia, in many quarters of the globe.

Famine conditions are becoming more widespread every day.

On these alarming food conditions becoming known, President Wilson immediately appointed a Food Comptroller for the United States. He selected Herbert C. Hoover, to whom the world is indebted as Chairman of the International Belgium Relief Commission, for his personal direction of the distribution of food among the starving Belgians.

Mr. Hoover is already urging sacrifice and food restrictions, for, as he states, "The war will probably last another year and we shall have all we can do to supply the necessary food to carry our Allies through with their full fighting stamina."

The Problem for Ontario

The land under cultivation in Ontario in 1916 was 365,000 acres less than in 1915.

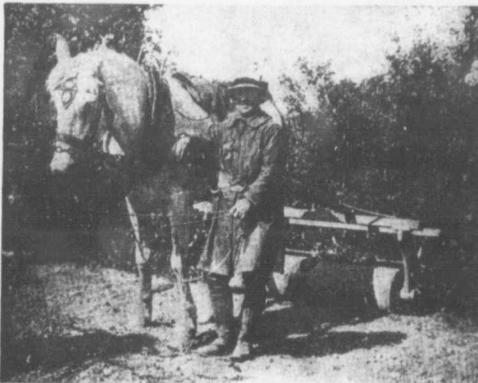
Consider how much LESS Ontario produced in 1916 than she raised in 1915:

| Fall Wheat— | Acres. | Bushels. | 1916 DECREASE | |
|--------------------------------|---------|------------|---------------|------------|
| | | | Acres. | Bushels. |
| 1916 | 704,867 | 14,242,050 | 105,315 | 9,704,961 |
| 1915 | 811,182 | 24,737,011 | | |
| Barley and Oats— | | | | |
| 1916 | 829,886 | 12,388,369 | 24,432 | 7,504,160 |
| 1915 | 852,318 | 19,892,129 | | |
| Peas and Beans— | | | | |
| 1916 | 96,542 | 1,245,979 | 31,401 | 799,070 |
| 1915 | 126,943 | 2,945,049 | | |
| Corn— | | | | |
| 1916 | 285,993 | 12,715,073 | 51,441 | 9,043,424 |
| 1915 | 309,773 | 21,760,496 | | |
| Potatoes and Carrots— | | | | |
| 1916 | 139,825 | 1,408,429 | 34,411 | 5,858,594 |
| 1915 | 173,954 | 13,267,023 | | |
| Mangel-Wurzels and Turnips— | | | | |
| 1916 | 42,793 | 3,756,016 | 8,006 | 15,600,303 |
| 1915 | 50,799 | 26,356,323 | | |

Other crops show as critical decline.

Reports from Ontario on the condition of fall wheat for 1917 are decidedly discouraging.

As there is an average of not more than one man on each hundred acres of farm land in Ontario, the prospects indicate even a still smaller acreage under cultivation in 1917 unless extra labor is supplied.



—Photo from London (Eng.) Hystander.

A FIFTEEN-YEAR-OLD GIRL AT WORK.

Miss Alexandra Smith, one of the thousands of British women workers on the land. She recently won an All-Comers' Champion Prize for plowing.



Copyrighted by the International News Service, New York. —
—McLay in the New York American.
THE SECOND-LINE TRENCHES.

Food Production is the Greatest Problem the World Faces To-day

Owing to destruction by submarines, ocean ships are scarce.

It is much easier to protect shipping between Canada and England than on the longer voyages from India or Australia.

One vessel can make twice as many trips from Canada to Britain as from India, and four times as many as from Australia.

Therefore, every ton of food stuffs grown in Canada is worth to the Motherland two tons grown in India or four tons grown in Australia.

Why the Call to Canada is so Urgent

If this country does not raise a big crop this year, not only will the people of Canada suffer but the Motherland and her Allies will suffer and their military power will be weakened if not paralyzed. Therefore, the right solution of the present war problem comes back to the farm, as to a foundation upon which our whole national and international structure must be built and maintained.

The farmers know that they are the last reserve, and that the soil on which crops are grown is the strategic ground on which wars are decided. To their care is entrusted the base of supplies.

To enable the farm to do the work two factors are essential. The first is Time. Whatever we are to do must be done at once. Nature waits for no man. The second is Labor. Many farmers cannot plant the acres they would because they cannot get the necessary help. Many are afraid to increase their acreage because they fear they would not be able to cultivate and harvest an unusual crop after they had raised it. If they are to do the work that is essential for them to do, the last man in each city, town and village must be mobilized at once.

Every man not on Active Service can help. In every city, town and village are men who by their training on the farm, or by their present occupation, can readily adapt themselves to farm work. These can render no greater service to the Empire at the present time than by answering the call of the farm. Capable men and boys willing to learn should not allow their lack of farm experience to stand in the way.

Can the employer render a more signal service in this crisis than by encouraging these men to help the farmer to cultivate every available acre, and by making it easy for them to go?

Ontario's farm lands are waiting—the implements are ready—the equipment is complete—the farmer is willing—all he needs is labor.

So short is the world's food supply that without increased production many in Canada must go hungry, and even with enormously increased production we cannot expect cheap food. The world is waiting for our harvest.

If peace should be declared within a year, the food conditions will be no better, for the accumulated hunger of the Central Empires must be met. This will absorb a large part of the world's supply.

We do not know when this war shall cease. It is endless—its lengthening out has paralyzed the thought and conception of all men who thought about it and its possible time of conclusion. Three months—six months, we said; nine months, a year, we said; and yet two years and eight months have passed their long dreary and sanguinary length and there is no man who can tell how long this gigantic struggle may yet last.



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—From the New York Evening Mail.
HUNGER TIGHTENING HIS GRIP.

Lloyd George, in a letter addressed to farmers throughout the Empire, said:

"The line which the British Empire holds against the Germans is held by those who **WORK ON THE LAND** as well as by those who fight on land and sea. If it breaks at any point it breaks everywhere. In the face of the enemy the seamen of our Royal naval and mercantile marine and the soldiers gathered from every part of our Empire hold our line firstly. You workers on land must hold your part of our line as strongly. Every full day's labor you do helps to shorten the struggle and bring us nearer victory. Every idle day, all loitering, lengthens the struggle and makes defeat more possible. Therefore, in the nation's honour, heed! Acquit yourselves like men, and as workers on land do your duty with all your strength."

So for the honor of Canada's soldiers in France—and for the glory of our New-born Nationhood—let it be said of Ontario's citizens that, in the hour of our greatest need, their response was worthy of their sons.

We owe a great debt to those who are fighting for us.

Organization of Resources Committee Parliament Buildings, Toronto

Chairman: His Honour, Sir John S. Hendrie, K.C.M.G., C.V.O., Lieutenant-Governor of Ontario;
Vice-Chairman: Honourable Sir William H. Hearst, K.C.M.G., Prime Minister of Ontario; N. W. Howell, Esq., K.C., Leader of the Opposition; Secretary: Albert H. Abbott, Esq., Ph.D.

WE MUST PRODUCE MORE FOOD

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the leading exponent of dairying in Canada. The great majority of the members of the Canadian Holstein-Friesian Association are regular contributors to the paper. Members of the Association are invited to send items of interest to Holstein breeders for publication in this column.

FAT PRODUCTION RECORD BROKEN.

I AM advised through preliminary report and by wire that the Holstein-Friesian Sire, Glen Alex Queen De Kol, 27625, has broken the record for fat production in the senior two-year class of the seven-day division, by producing in seven consecutive days, 63.8 lbs. milk containing 33.83 lbs. fat. She freshened at the age of 3 years, 11 months, 30 days. Her sire is Sir Pontiac Kowitzyke 15b, 48229; her dam is Tietje Queen De Kol, 86772. She was bred by Mr. W. L. Koyes of Deerfield, New York; and she is now owned by Mr. A. C. Hows of New Hartford, New York. In the senior two-year class of this division she displaces Naled Jewel Fat, 31003, whose production for seven days as reported from this office by card is 47.8 lbs. milk containing 25.33 lbs. fat. With this production Glen Alex Queen De Kol is the twenty-first animal to obtain places in the list of Holstein-Friesians with productions exceeding 32 lbs. fat in seven days. If computed on the 50 per cent basis, the equivalent butter production so far claimed for her would amount to 45.35 lbs.—Malcolm H. Gardner, Supt. A. R.

T. W. McQUEEN'S CONSIGNMENT TO TILLSONBURG SALE.

THE best sire in use at the present time to consider from a breeder's standpoint. He is more than half of the whole herd. There is also some reason when it is necessary to make a change of herd sires. This is the reason for offering to the public at this time one of the best bred sires in Canada. Baron Colascha Payne, No. 12973. His dam has a butter record of 35.12 lbs. in 7 days; 127.73 lbs. in 30 days. His two full sisters are each Canadian Champions, one, open for butter, the other for milk in the three and two-year-old classes. Both mother and two sisters have won first place in their class at Guelph, and one of the full sisters was champion over all breeds and classes at three years of age. His brothers and sisters have won many prizes at Toronto, London and Ottawa, Paig. His sire's sire is the great Colascha Johannes Led, who has over 103 A.R.O. daughters, and whose dam held the world's records for both milk and butter for many years, and whose daughters have been world's champions in different classes. Two young bulls sired by Baron Colascha Payne and out of good young cows are also in the sale. Another young bull sired by Lewis Prilly Double Hartog and whose dam is Princess Dixie Mercedes, also in the sale. His catalogue No. is 26. His dam at 3 years 1 month of age made 245 lbs. butter and 118.4 lbs. milk; and 11.84 lbs. butter and 2120.3 lbs. milk in 30 days. She is capable of making a much better record now, but as you will notice, this bull is a twin and so the dam was not in shape to go into heat last year. An older full brother to this bull was sold when a calf for \$250. Among the females offered, you will be attracted to the splendid cow Countess Mercedes Wayne, a daughter of the great show bull, Prince Abbecker Mercoona. She is just dry and due to freshen in June by the herd sire, Lewis Prilly Double Hartog. She is a very heavy and persistent milker and capable of making a large record. Her record for 7 days at 2 years 12, milk 52.5 lbs., and butter 14.4 lbs. Pauline Hartog Colascha and Mary Ann Hartog Colascha are two well developed and splendid daughters of Baron Colascha Payne. They are two years of age; one is fresh and the other will freshen in June. Both are from daughters of Lewis Prilly Double Hartog and she will surely produce the goods. Only one daughter of Lewis Prilly Double Hartog is offered in this sale, Belle Calamity Hartog, whose record at 1 year 11 months is, milk 215.4 lbs., butter 15.06 lbs. She will be 5 years old in May, fresh March 18th and milking over 60 lbs. a day at present without crowding and milking just twice a day. Miss Abbecker Hartog, a double grand-daughter of Lewis Prilly Double Hartog, will place the most critical. She is a fine type, a nice milker and only 3 years old. Will be fresh before sale day and ready to go out for a good season's work. This is the kind that will make the dollars this season.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS FROM MARCH 1 TO MARCH 31, 1917.

(Continued from last week.)

28. Gypsis DeKol Queen, 3176, 9r., 10m.,

6d.; 533.9 lbs. milk, 14.64 lbs. fat, 12.30 lbs. butter. Bertram Hoekin, Cobourg.

24. Zarilda Clothilde 3rd DeKol, 14837, 90-day record; 47r., 10m., 12d.; 834.6 lbs. milk, 270.88 lbs. fat, 238.63 lbs. butter. Colony Farm, Missowaka, B.C.

1. Mildred Pietertje Abbecker, 21509, 4yr., 11m., 25d.; 856.9 lbs. milk, 26.11 lbs. fat, 22.62 lbs. butter. W. L. Shaw, Newmarket.

2. Lady Mercoona Aggie, 26913, 5yr., 11m., 10d.; 624.3 lbs. milk, 21.12 lbs. fat, 26.44 lbs. butter. G. S. Gooderham, Clarkson.

3. Shadawn Cynthia Canary, 24155, 4yr., 6m., 25d.; 694.7 lbs. milk, 21.10 lbs. fat, 26.37 lbs. butter.

14-day record: 4yr., 6m., 26d.; 1169.8 lbs. milk, 39.23 lbs. fat, 34.9 lbs. butter. G. P. Mahon, Woodstock.

2m., 2d.; 474.9 lbs. milk, 17.83 lbs. fat, 21.64 lbs. butter. Thos. P. Charlerton, Ottawa.

14-day record: 4yr., 5m., 26d.; 853.3 lbs. milk, 29.91 lbs. fat, 27.39 lbs. butter.

30-day record: 4yr., 5m., 26d.; 1826.8 lbs. milk, 61.00 lbs. fat, 54.38 lbs. butter.

W. W. Brown, Lew.

2. Forest Ridge Soria Gladys, 25613, 4yr., 8m., 16d.; 477.4 lbs. milk, 14.83 lbs. fat, 13.54 lbs. butter. J. H. Laport, Jr., Four-Year-Class.

1. Pudge Inka Pietertje, 22881, 4yr., 1m., 14d.; 411 lbs. milk, 15.32 lbs. fat, 20.37 lbs. butter.

30-day record: 4yr., 1m., 14d.; 2726.6 lbs. milk, 99.46 lbs. fat, 124.33 lbs. butter.

W. W. Brown.

2. Woodcock Pietje Lookover, 47290, 4yr., 3m., 26d.; 406.0 lbs. milk, 16.18 lbs. fat, 22.87 lbs. butter. A. C. Hardy, Brockville.

3. Calamity Snow Wayne, 21650, 5yr., 1m., 14d.; 478.9 lbs. milk, 17.47 lbs. fat,

Eighth Annual Live Stock Show

Live Stock Breeders' Association

DISTRICT OF BEAUHARNOIS, Ltd.

Will be held at **ORMSTOWN, QUE.** **JUNE 6, 7, 8, 1917**

Come to Ormstown, Quebec on the above dates and see one of the best Live Stock Shows in Canada. All Horses and Cattle judged under cover in the large Stadium at 10 a.m., 2 p.m. and 8 p.m. daily.

HORSE RACING ON THE THREE DAYS OF THE SHOW.

Admission to Grounds: **ADULTS, 25c** **CHILDREN, 15c.**
Write the Secretary for Prize Lists and other information.
NEIL SANGSTER, President. **W. G. McGERRIGLE,** Sec.-Treasurer.

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

COCKSHUTT LIGHT TRACTOR PLOW

The Unanimous Choice of Governments and Prosperous Farmers Everywhere

Just a Few of Its Remarkably Good Points

If you're going in for a light tractor, don't forget the "better half" of the partnership—a suitable gang plow. We have it in the Cockshutt Light Tractor Plow, made in two and three-four sizes.

The Department of Agriculture of Ontario, when they decided to supply Tractors and Plows to aid in increasing the food production of the country, bought Cockshutt Tractor Plows. They are now at work in the following counties: Carleton, Renfrew, Hastings, Peterboro, Halton, Norfolk, Essex and Waterloo. There is a good example to follow.

Ideal for two or three furrows.

You can turn it into a two or three-furrow plow at will.

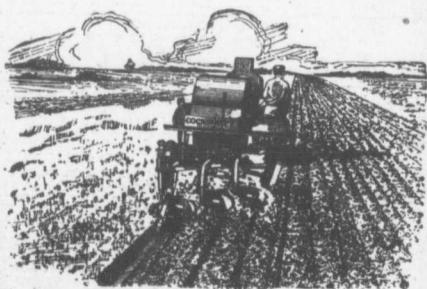
Just a pull on a cord lifts the bottoms from the ground to avoid an obstruction.

Just a pull on the same cord lowers them and the bottoms dig straight to their work like a walking plow.

Change the depth of work by easily handled levers—without stopping or slowing up the plow.

Staggered front wheel ensures absolutely true running with furrows always even—and high clearance to avoid trash.

Cockshutt light draft and high quality materials.



We have a handy, descriptive, plainly worded circular on this Plow. Write for it to-day. Also Catalogues on our full line of Cultivating, Seed and Harvesting Machines.

COCKSHUTT PLOW COMPANY LIMITED
BRANTFORD

Sold in Eastern Ontario, Quebec and Maritime Provinces by **THE FROST & WOOD CO. LTD. SMITH'S FALLS**
MONTREAL, ST. JOHN



Shaving Single Handed in a Military Hospital

Only those who have been there can realize what the Gillette Safety Razor is doing for the wounded!

Clean shaving on the firing line, possible only with a Gillette, has saved endless trouble in dressing face wounds. In the hands of orderly or nurse it shortens by precious minutes the preparations for operating. Later, in the hands of the patients, it is a blessing indeed!

As soon as their strength begins to return, they get the Gillette into action, and fairly revel in the finishing touch which it gives to the welcome cleanliness of hospital life. For though he can use but one hand—and that one shaky—a man can shave himself safely and comfortably with a Gillette Safety Razor.

It may seem a little thing to you to send a Gillette to that lad you know Overseas, but to him it will mean so much! It will bring a touch of home comfort to his life on active service, and be even more appreciated if he gets "Blighty".

PEACH BLOW AYRSHIRES

Young Stock for sale, always on hand (both sexes), from high-testing heavy producers. Good udders and large teats a special feature of my herd. Three fine young Sires ready for service. Get particulars of these if you need a sire. R. T. BROWNLEE, Peach Blow Farm, HEMMINGFORD, Que.

FAIRMOUNT AYRSHIRES

Mature cows and young stock for sale always on hand (both sexes) from large heavy producing high testing cows, bred by Robin Hood of Fairmount, Imp. U.S.A. No. 4914, son of the famous Netherhall Robin Hood, Imp. No. 3612. Inspect herd or write for particulars. B. J. TAYLOR

AYERS CLIFF, QUE.

Farnbrook Ayrshires for Sale

Bulls from 8 to 12 months old, out of dams closely related to the two greatest Ayrshire cows in the world, Garraugh and MacIsheer and Jean Armour. COLLIER BROS., Beachville, Ont., Oxford Co.

FOR SALE

One eleven months Ayrshire bull from R.O.P. dam whose record on 2-yr.-old is 8,350 lbs. milk, 246 fat. Write for further particulars concerning him.

WILLIAM BRITTON, R. R. No. 1, CLINTON, ONT.

TANGLEWYLD AYRSHIRES

The Leading R. O. P. Herd Large Cows, Large Teats, Large Records, High Testers. Choice Young Bulls and Bull Calves and a few Cows for sale.

WOLFESEBROS., R. R. No. 1, MOREFIELD, ONT.

It is evidence that you are an up-to-date dairy farmer when you say you read Farm and Dairy regularly.

22.21 lbs. butter, Waburn River, Inverness
4. Frilly Segie Boats, 26120, 4y, 4m, 12d; 417.3 lbs. milk, 16.63 lbs. fat, 20.66 lbs. butter. Dr. A. A. Farwell
5. Dorlish Agriota Netherland, 27373, 4y, 1m, 5d; 467.0 lbs. milk, 15.58 lbs. fat, 19.47 lbs. butter. Roy Newell, St. Davidville.
6. Irons Beryl Kornykio, 27225, 4y, 6m, 15d; 420.3 lbs. milk, 16.23 lbs. fat, 19.05 lbs. butter. Thos. F. Chafferson, Ottawa.

Sr. Three-Year-Class.
1. Calamity Snow, Meekhillside 2nd, 27077, 3y, 11m, 25d; 607.2 lbs. milk, 21.04 lbs. fat, 25.30 lbs. butter. Waburn River.
2. Bimdale Gem, 26641, 3y, 11m, 24d; 523.2 lbs. milk, 20.22 lbs. fat, 25.26 lbs. butter.
30-day record: 3y, 11m, 24d; 2317.4 lbs. milk, 81.64 lbs. fat, 101.83 lbs. butter. L. H. Lipatt.
3. Colony Belle, Canary, 26617, 3y, 11m, 14d; 488.5 lbs. milk, 18.32 lbs. fat, 23.82 lbs. butter.
30-day record: 3y, 11m, 1d; 2085.5 lbs. milk, 73.34 lbs. fat, 91.65 lbs. butter. Colony Farm, Escondido, B.C.
4. Netherland DeKol Princess, 26607, 3y, 11m, 1d; 522.1 lbs. milk, 16.05 lbs. fat, 20.95 lbs. butter.
14-day record: 3y, 10m, 1d; 1040.6 lbs. milk, 31.44 lbs. fat, 35.21 lbs. butter. Roy Nevill, Stratfordville.
5. Willowbank, Hengerveld Prison, 26515, 3y, 11m, 13d; 479.3 lbs. milk, 23.29 lbs. fat, 19.49 lbs. butter. C. V. Robbins, Waindalen.
6. Bessie Ailsa Colantha, 26383, 2y, 9m, 2d; 421.2 lbs. milk, 15.66 lbs. fat, 16.65 lbs. butter. Roba Yokos, Jarvis.

Jr. Three-Year-Class.
1. Daisy Wayne A. Meekhillside, 21656, 2y, 2m, 11d; 462.2 lbs. milk, 17.8 lbs. fat, 20.94 lbs. butter. Waburn River.
2. Ladous Voemans Mercona, 2nd, 26539, 2y, 3m, 24d; 338.7 lbs. milk, 16.18 lbs. fat, 21.23 lbs. butter. A. S. Hisset.
3. Colony Payne Canary, 26123, 2y, 6m, 23d; 340.1 lbs. milk, 16.30 lbs. fat, 19 lbs. butter.
14-day record: 3y, 6m, 23d; 866.0 lbs. milk, 25.73 lbs. fat, 37.33 lbs. butter. Colony Farm.
4. Adeline Schilling Poach, 31834, 2y, 7d; 242.6 lbs. milk, 16.08 lbs. fat, 18.79 lbs. butter. J. W. Richardson.
5. Manor P. H. Girl, 26814, 2y, 6m, 6d; 326.2 lbs. milk, 14.14 lbs. fat, 17.68 lbs. butter. O. J. Hisset, Clarkson.
6. Ball DeKol Mercona, 26644, 2d, 6m, 23d; 344.2 lbs. milk, 14.08 lbs. fat, 17.61 lbs. butter.
14-day record: 3y, 6m, 23d; 683.3 lbs. milk, 27.89 lbs. fat, 35.10 lbs. butter. Elias Snyder, Burgessville.

Sr. Two-Year-Class.
1. Alta Poach, 26742, 2y, 10m, 26d; 520.5 lbs. milk, 18.97 lbs. fat, 22.72 lbs. butter.
14-day record: 2y, 10m, 26d; 1107.9 lbs. milk, 35.35 lbs. fat, 42.1 lbs. butter.
30-day record: 2y, 10m, 26d; 2194.8 lbs. milk, 70.42 lbs. fat, 85.04 lbs. butter. Furnham Ailsa, Coocherville.
2. Butter Queen Kornykio, 32616, 2y, 11m, 3d; 421.2 lbs. milk, 16.63 lbs. fat, 20.65 lbs. butter.
16-day record: 2y, 11m, 3d; 916.7 lbs. milk, 31.85 lbs. fat, 42.32 lbs. butter. J. W. Richardson.
3. Jewel Hengerveld Pontiac, 26111, 2y, 8m, 6d; 269.8 lbs. milk, 18.88 lbs. fat, 19.85 lbs. butter.
30-day record: 2y, 8m, 6d; 1782.4 lbs. milk, 66.00 lbs. fat, 82.50 lbs. butter. Brown Bros.

4. Pontiac Car Dawn Pielje, 36013, 2y, 7m, 25d; 336.6 lbs. milk, 15.39 lbs. fat, 19.28 lbs. butter.
14-day record: 2y, 7m, 25d; 638.8 lbs. milk, 23.71 lbs. fat, 36.89 lbs. butter.
30-day record: 2y, 7m, 25d; 1346.1 lbs. milk, 69.43 lbs. fat, 74.29 lbs. butter. W. W. Brown.

5. Dorothy Wayne of Riverside, 31893, 2y, 10m, 27d; 284.0 lbs. milk, 15.32 lbs. fat, 19.18 lbs. butter.
14-day record: 2y, 10m, 27d; 852.2 lbs. milk, 31.86 lbs. fat, 38.82 lbs. butter. W. W. Richardson, Caledonia.
6. Wayne Paena Calantha, 14982, 2y, 8m, 11d; 467.3 lbs. milk, 14.46 lbs. fat, 19 lbs. butter. Charles E. Butler, Norwich.

7. Emma Segie Kornykio, 34011, 2y, 10m, 15d; 467.3 lbs. milk, 14.41 lbs. fat, 18.62 lbs. butter. W. A. Durant, Chesville.
8. Segie Jewel Kornykio, 34012, 2y, 8m, 6d; 324.3 lbs. milk, 12.88 lbs. fat, 16.11 lbs. butter. W. A. Durant.
9. Olive Abbeher's Poach 4th, 36013, 2y, 11m, 21d; 312.3 lbs. milk, 12.82 lbs. fat, 16.03 lbs. butter.
21-day record: 2y, 10m, 31d; 952.2 lbs. milk, 37.28 lbs. fat, 45.12 lbs. butter. Elias Snyder, Burgessville.

10. Tina Jewel Hengerveld, 27154, 2y, 8m, 29d; 308.8 lbs. milk, 17.87 lbs. fat, 19.44 lbs. butter.

A PLEASANT JOB FOR SOME ONE.

THERE is an excellent position open on the salaried staff of Farm and Dairy for a couple of young men, with farm and business experience. The work will require travelling throughout one-half of Ontario—probably with an automobile—interviewing men and appointing agents for this valuable dairy paper; also picking up information for our Editorial Department. Travelling expenses will be met, a salary paid, and lists of names furnished. The territory to be covered will be mapped out and routed. Every assistance necessary will be given from this office. We want the men we employ in this work to be successful and qualify for a permanent position on Farm and Dairy staff. Write us fully, stating your experience, age, etc. Send a photo if possible. It will be returned.

Promotion Department, FARM AND DAIRY, Peterboro, Ont.

14.44 lbs. butter.
14-day record: 2y, 8m, 29d; 605.5 lbs. milk, 23.43 lbs. fat, 29.27 lbs. butter.
30-day record: 2y, 8m, 29d; 1266.6 lbs. milk, 45.74 lbs. fat, 60.93 lbs. butter. W. Brown.

Jr. Two-Year-Class.
1. Pielje Clothilde Pontiac, 32748, 2y, 8m, 29d; 497.2 lbs. milk, 15.87 lbs. fat, 19.54 lbs. butter.
30-day record: 2y, 8m, 29d; 1641.6 lbs. milk, 64.15 lbs. fat, 80.18 lbs. butter. A. C. Hardy, Brockville.
2. KoraKol, Elsie DeKol, 32424, 2y, 11m, 17d; 332.8 lbs. milk, 14.75 lbs. fat, 18.43 lbs. butter. F. J. McChaplin, Gananoque.
3. Avondale Belle Pontiac, 36212, 2y, 10m, 29d; 309.5 lbs. milk, 14.47 lbs. fat, 18.08 lbs. butter.
30-day record: 2y, 10m, 29d; 1483.8 lbs. milk, 69.70 lbs. fat, 75.88 lbs. butter. A. C. Hardy.

4. Garo Abbeher Rose, 26219, 1y, 11m, 27d; 397.9 lbs. milk, 12.74 lbs. fat, 16.53 lbs. butter. W. J. Bailey.
5. Queen Pontiac Johanna, 26866, 2y, 11m, 16d; 309.0 lbs. milk, 12.06 lbs. fat, 15.07 lbs. butter. J. W. Richardson.
6. Marcella Abbeher's, 36263, 2y, 8m, 24d; 342.2 lbs. milk, 11.42 lbs. fat, 14.27 lbs. butter. W. J. Bailey.
7. Riverside Pontiac Julia, 52823, 2y, 6m, 26d; 277.2 lbs. milk, 11.24 lbs. fat, 14.06 lbs. butter. J. W. Richardson.
8. Riverside Kornykio Annie, 12416, 2y, 6m, 16d; 238.6 lbs. milk, 11.20 lbs. fat, 14.01 lbs. butter. J. W. Richardson.
9. Countess Kornykio Bookler, 37871, 2y, 2m, 8d; 372.5 lbs. milk, 11.01 lbs. fat, 13.77 lbs. butter. W. L. Ester, Stuenandine, N.B.

10. Mountain Duchess Pielje, 48427, 2y, 2m, 16d; 238.0 lbs. milk, 10.42 lbs. fat, 11.90 lbs. butter. W. L. Ester.
11. Lady Belle, Canary, 41245, 2y, 8m, 6d; 283.3 lbs. milk, 9.60 lbs. fat, 12.05 lbs. butter. J. W. Richardson.
12. Belle, Pontiac, J. W. Richardson, 4178, 2y, 2m, 21d; 288.0 lbs. milk, 8.78 lbs. fat, 11.95 lbs. butter. J. W. Richardson.

13. Nancy Kornykio of Mapleton, 41224, 1y, 10m, 26d; 212.4 lbs. milk, 9.28 lbs. fat, 11.40 lbs. butter. J. W. Richardson.
14. Forest Dixie Payne DeKol, 55318, 2y, 6m, 12d; 178.7 lbs. milk, 8.12 lbs. fat, 10.15 lbs. butter. H. Lipatt.
The records of 73 cows and heifers were accepted for the Ontario Record of Merit during the month of March. Six of these records exceed 30 lbs. of butter in seven days. In the senior four-year-old class, Mildred Pielje's Abbeher cow set a new record with 33.95 lbs. of butter from 864.9 lbs. milk. This young cow is an extraordinary milker. Her best record is 33.95 lbs. butter from 864.9 lbs. milk.

W. A. CLEMONS, Secretary.

He is a good farmer—he reads Farm and Dairy regularly.

Registered Holsteins

Bulls from one month to 17 months old for sale. All from our grand herd sire, Echo Segie Fayne, whose sire is half-brother to Segie Payne Johanna. If you need a well-wheeled bull write at once. JOHN M. MONTLE, Sunnyside Stock Farm, STANBEAD, QUE.

One Man Outfit **Doing Three Men's Work** in M. E. G. Lang's Model Dairy, Waterloo, Ont.



LEARN THE FACTS:

And you'll find you cannot but afford to join the great army of Canadian dairy farmers who are making dairying not only Easier but more Profitable by using

A 20 cow outfit costs less than wages and board of one hired man for 6 months. It's the sure way to bigger dairy profit. You can't save on feed without losing milk. But you can save on hand labor.

HINMAN MILKERS
-3-WELL-KNOWN 100 Lb. COWS:-

Milked Daily

No complicated pulsating mechanism—No air pipe lines—No vacuum tanks—No interchange of stable air—No gauges—No valves to get out of order—No vacuum in pail and has natural action (no upward squeeze) teat cups.

WORLD'S RECORD COW



Jennie Bonerges Ormsby, No. 8216. This cow as a two-year-old held the World's Record. She is milked daily with the HINMAN.

With Hinman Milkers

Nothing to freeze. Easy to clean. This simplicity is also responsible for its low cost, both to install and to operate. And it is a **SAFE** Machine. Over 26,000 in use. Buy the Successful Machine.

A. D. Foster & Sons' Valuable Herd is milked with a HINMAN.

Mr. G. A. Hogg has operated his HINMAN Over 3 Years.



Mary Ann Netherland, No. 13268. Official "7" day test 25.92 lbs. butter, 683.2 lbs. milk. Best day's milk 100 lbs. Owned by G. A. Hogg, Thamesford, Ont.

H. F. BAILEY & SON, Galt, Ont.
Gentlemen: We enclose a photo of our cow, Jennie Bonerges Ormsby, No. 8216, the only cow in the world to make over thirty pounds butter a week for five consecutive years. As a two-year-old she held the world's record for three years in the Record of Performance, giving close to seventeen thousand pounds milk in the year and making 832 pounds butter. She is now nine years old, and has raised eight living calves and due to freshen again this month. We have used the HINMAN MILKER on this cow with perfect satisfaction. We might say further we have used the HINMAN MILKER on our whole herd for about one year, and as you have never asked us for a testimonial, or even how we liked it, we feel it our duty to say if we wanted to fault it we could not honestly do so. It is properly named a machine. No machine will work without some one supplying the brains to run it. If this is done the machine will do its part.
Yours truly, D. C. FLATT & SON.



Helens Sylvia Pasch, 21372, Sr.-1-yr.-old. Milk in one day, 1:54 lbs. 7 days, milk 800.4 lbs., butter 25.49 lbs. Owned by A. D. Foster & Sons, Bloomfield, Ont.

Write for HINMAN Booklet "D" and surprise yourself

H. F. BAILEY & SON, Manufacturers under HINMAN Patents **Galt, Ont.**



Summer Pasture For Cattle: Very Important

The Department of Agriculture is anxious to have the farmers reap the benefit of making provision for the hot, dry months.

Winter feeding has been carefully studied and profitable methods are now employed. Haphazard methods are in vogue too often in the system of summer feeding. Pasture is plentiful until June 30th and after August 31st. During July and August heat and drouth prevail, pastures become dry, flies are a serious pest and live stock invariably have to meet this critical period of the summer season by a greater effort to secure sufficient food, with the inevitable result of a falling off in the milk supply, or a lack of general thrift in beef cattle.

The loss in milk reaches 30% of a normal year's yield. Throughout Ontario this loss becomes enormous.

Very often beef cattle are marketed in an unfinished condition late in June to avoid midsummer falling.

Profits are reduced to a minimum under ordinary systems of pasturing. A large amount of valuable food is actually lost every year.

During 1917 Canada can ill-afford any loss which can be overcome with a little foresight. Every cow can be kept up to her normal milk flow during July and August, without extra labor, if summer pasture is provided. Beef animals will thrive regardless of the heat and drouth.

Additional food may be supplied by adopting a soiling system. Crops, such as oats and peas, corn, etc., may be sown and made to return green forage throughout the season, and the results will be satisfactory. But labor to carry on this work is necessary.

Summer silage is excellent where provision has been made for a sufficient supply, but many have not, and will not have this for 1917. One ton of silage will supply one cow during July and August with 30 lbs. per day.

The soiling system involves labor just when it is most needed upon the Ontario farm for harvesting, and when labor cannot be secured some branch of work must be neglected.

Now, no man is anxious to neglect any branch of the farm operations, so a system is required which will allow the cattle to collect their own supplementary food.

The Summer Pasture is the Remedy

BECAUSE no extra labor is required during the harvesting season.

BECAUSE the animals pasture in the ordinary way, and will retain normal condition.

BECAUSE crops can be sown which will give ample pasture, withstanding heat and drouth.

BECAUSE our ordinary grain crops make an excellent pasture—they will thrive.

Here is the Seed required for one acre: 1 bushel of wheat, 1 bushel of oats, 1 bushel of barley, 7 lbs. of red clover.

Sow about May 20th or shortly after seeding of spring grain, has ceased. The sowing is done when the spring rush of work is just over.

In one month six to seven inches of growth will take place and pasturing may be commenced. Rapid and thick growth takes place as the plants are eaten off. If not allowed to head out, growth will continue until late in August.

Red clover thrives well because the shading is not too great, and the compacting of the soil by the cattle is of great advantage.

Results of Summer Pasture at O. A. C.

At Guelph Agricultural College in 1915, with less than one acre per head, the results were:

Seventy-five head of cattle, all over one year of age, were maintained on 28 acres of annual pasture, 8 acres of old natural pasture and 30 acres of third year sod, 66 acres in all, from first turning out in May until August 20th. At that time 35 head were removed.

In 1916, a very dry, hot season, seventy-seven head were pastured on 34 acres of the annual pasture and 36 acres of permanent pasture from the last of May to Aug. 25th, without feeding one pound of silage or other coarse feed, and the milk flow of dairy cattle and growth of beef cattle and young stock were kept at normal during the entire period. On Aug. 25th one-half the cattle were removed to other pasture, but the annual and permanent pasture was sufficient for the remaining cattle during the balance of the season.

Every farmer has the necessary seed—provision can be made for the land. He can get just as good results and reap the benefit.

Every stockman can increase his profits by adopting such a system, because the cattle gather their own food and labor is saved at a period when it is most valuable upon every farm.

Every stockman can add to the food supply of the Empire by adopting methods which will keep his stock in producing form throughout July and August. Every stockman should consider summer pastures most carefully.

Ontario Department of Agriculture PARLIAMENT BUILDINGS, TORONTO

Sir Wm. H. Hearst,
Minister of Agriculture

G. C. Creelman,
Commissioner of Agriculture



ONTARIO

