

# The **CA**ver—Not Claims—**re** Buying **FARM**

WINNIPEG CANADA  
-SEPTEMBER  
NINETEEN FIFTEEN



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Plowing, this  
A. & T. 25-50  
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**BETTER FARMING — BIGGER CROPS — BETTER**

THE GRAY TRACTOR  
MUNICH APOLIN

IRON  
THE  
SWEENEY  
K.C.B.

THE HUME  
TRACTOR

JOVE

# The BIG BULL

with the  
7-Horse Pull

## The Tractor that will Fit Your Farm

Do you farm 100 or 1,000 acres? It makes no difference; there is a profitable place on your farm for a good light tractor, and sooner or later you will be in the market looking for the best. That's the "Big Bull—with the 7-Horse Pull,"—built on experience of the real tractor needs of the farm, developed to its present efficiency through actual working conditions, and now the most rapid selling and most satisfactory working small tractor in the West.

More power at lower cost is the big need of the average farmer. Horses are about the most expensive power that can be used. Their cost is high, their keep is high, they cannot be used continuously without disaster and they are barred from a great deal of the work of the farm where power is needed.

The "Big Bull" is not only a powerful, mobile tractor, that will do all the heavy work on the farm—plowing, discing, seeding and harvesting, but it is also a complete stationary plant that will grind feed, saw wood and do practically all the light work about the farm. It gives you the extra power needed at the busy seasons and can be worked steadily, day in day out, without tiring. One of our satisfied customers at Rosenfeld informs us that he attached his "Big Bull" to his 20-40 separator and that it did excellent work, threshing 90 bushels in one hour, with only a fair stand up of wheat. He claims that if the stand up had been good, he would have threshed 100 to 125 bushels per hour.

**CUT OUT THE COUPON**, fill in your name and address and send for the "Big Bull" folder. Find out from every source all that you can about its power, its simple construction, its easy operation, its strength and durability and the Company behind it. Compare it with any other known light tractor for price and efficiency. THEN place your order without further delay and we will promise immediate delivery. We are now delivering two carloads per week and the output is steadily increasing.

"—the strongest and best put together machine I ever purchased"  
—says Mr. Walker,

The Bull Tractor Co., of Canada. R.R. No. 1, Box 20, St. Louis, Man.  
Dear Sirs: Replying to yours regarding the Bull Tractor I purchased from you some time ago, I am pleased to state it has been quite satisfactory, or you would have heard from me before this.

I started in with a brush breaker in timber land that was full of oak roots. The machine has stood up good under a very severe test. I might state it is the strongest and best put together machine I ever purchased. There has not been a loose nut on the outfit since I got it.

Since I quit breaking I have gone over my summerfallow and am now using it on the binder. My eleven year old boy steers the engine while I attend to the binder.

There is one point I am convinced of, which caused a good deal of argument before I purchased. I find I can hitch any four horse machine and do light work cheaper, and heavy work that four horses could not begin to do, where a person with a larger tractor requires a new equipment that runs into a lot of money.

Yours truly,  
(Signed) H. A. WALKER.

### Our Unqualified Guarantee

We sell the "Big Bull" Farm Tractor on an absolute guarantee to do just what we claim for it, otherwise to be taken back without a cent's expense to you and your money refunded. We don't know how to make the offer more generous and fair. If we did we would cover it in this guarantee.



7 H.P. at the Draw. 30 H.P. at the Belt. Guaranteed.

**PRICE**  
l.o.b.  
Port Arthur, Ont. **\$695.00**

**TERMS**—\$100 cash with order and the balance (\$595.00) when the machine is delivered, plus freight to point of destination. The standard price of a machine of the "Big Bull" power and efficiency is at least \$1,000. We sell for cash at \$695.00 plus freight, and save you approximately \$300.

**BULL TRACTOR CO. OF CANADA Limited**  
333 Main Street WINNIPEG, MAN.

FACTORY AT PORT ARTHUR, ONT.

Repair parts can always be obtained at the Winnipeg Office.

**Coupon**  
T 2

**BULL TRACTOR**  
**COMPANY OF**  
**CANADA, LTD.**  
333 Main Street,  
Winnipeg, Man.

Gentlemen,—Kindly forward all literature and information relating to the Bull Tractor.

Name .....

Address .....



# Be Sure It's Power—Not Claims— That You're Buying

↓

Pay the Price and get something worth while in a Tractor. You'll never regret it if you buy an Aultman-Taylor. Not built to fit a price, but built to do the work.



↓

For Deep Fall Plowing, this A. & T. 25-50 will do the work up in tip-top shape. It's built for just such work and it stands the grind, year after year.

There is one thing sure, you cannot get something for nothing. This applies to power as well as anything else. If you want power—the kind to do justice to you and your farm, you cannot procure it for a mere song. If you buy a cheap tractor, one cheap in price, it is cheap in construction as well. Instead of proving a source of profit, it is bound to prove a nuisance and finally find a resting place in a fence corner on your farm. When you buy a tractor, be sure that it is amply large for your needs. Be sure that it has abundant power at the draw bar and at the band wheel for your every requirement—see that this power is smooth, economical and dependable. Here is where many a farmer has made a grave mistake. He bought too small and too cheap a tractor, discovering after it was too late that he had bought something absolutely worthless—that he had been misled by glaring advertisements and misrepresentations to buy something called a tractor, but far from being such in performance.

Why take chances? It's your good money you're spending, so why not buy a tractor that you know is right—a tractor that has made good in every nook and corner of the country, an

## Aultman-Taylor Gasoline-Kerosene Tractor

(25-50 H.P., 30-60 H.P.)

You can bank on an Aultman-Taylor Tractor every time. It will fulfill your every power need. When you place your order for an Aultman-Taylor, you get just what you pay for—you get power, not claims. You get something that is a pleasure to operate and profitable to own. It would be a foolish move on your part to buy one of these so-called cheap tractors—a tractor in name only, not in achievements, when you can buy a real tractor; one with a reputation back of it—a tractor that holds the World's Economy Record; one that not only bears a name that stands pre-eminent in the annals of agricultural pursuits, but permeates with real merit.

Aultman-Taylor Tractors are not the cheapest tractors, but they are the Best. We want you to write us for full particulars concerning our tractors or any other machinery we build. We court correspondence and comparisons. Let us hear from you. Drop us a post card—to-day.

## The Aultman & Taylor Machinery Company

Lock Box No. 64, Mansfield, Ohio

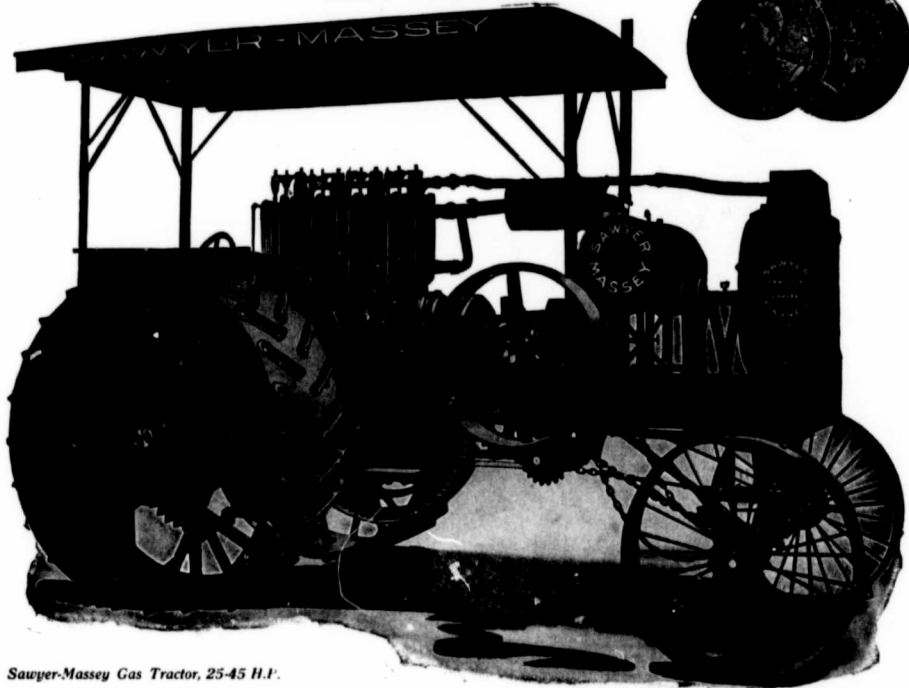
BRANCHES: Minneapolis, Minn.; Great Falls, Mont.; Regina, Sask.; Calgary, Alta., Canada.



THE PREMIER COMPANY

THE PREMIER GOODS

MADE IN CANADA



Sawyer-Massey Gas Tractor, 25-45 H.P.

## WATCH THE SAWYER-MASSEY THRESH!

Put a Sawyer-Massey team to your threshing and watch the straw fly! And watch the ripe grain flow down into the sacks, too, every kernel of it! The Sawyer-Massey team, gas tractor or steam tractor, "Great West," "Daisy" or "Eclipse" thresher will make short work of your harvesting and threshing and put in your pocket the extra profits which come from a good job quickly and well done.

The Sawyer-Massey "25-45" Gas Tractor won the Gold Medal at the last Winnipeg Contest, proving itself the best in Canada. Sawyer-Massey Steam Engines, built in many styles and sizes to suit every farm are proven money-makers and recognized as the standard wherever used. Sawyer-Massey Threshers, the big "Great West" in five sizes, the smooth-running "Daisy" in two, and the little "Eclipse" are famous for their speed and thoroughness.

A Sawyer-Massey team will make money for you this year. Write for our big Illustrated Catalogues.



## SAWYER-MASSEY COMPANY, Limited

*Builders of Steam and Gas Tractors, Threshers and Road-making Machinery*

Head Office and Factory HAMILTON, CANADA  
 Branch Offices and Warehouses: WINNIPEG, Manitoba; REGINA, Saskatchewan;  
 CALGARY, Alberta; Agency, BUENOS AIRES, Argentina

# SAWYER-MASSEY



Vol. XX.

WINNIPEG, CANADA, SEPTEMBER, 1915.

No. 9

WE must follow the "Path of Progress" whether or not we so desire. This applies to-day to the light tractor as much as to any other one thing. A great many had come to believe that the internal combustion tractor as a means of farm power had reached the height of its popularity and was gradually sinking behind the "Hill of Obscurity," to be remembered only as a passing fad in the long line of farm implement development.

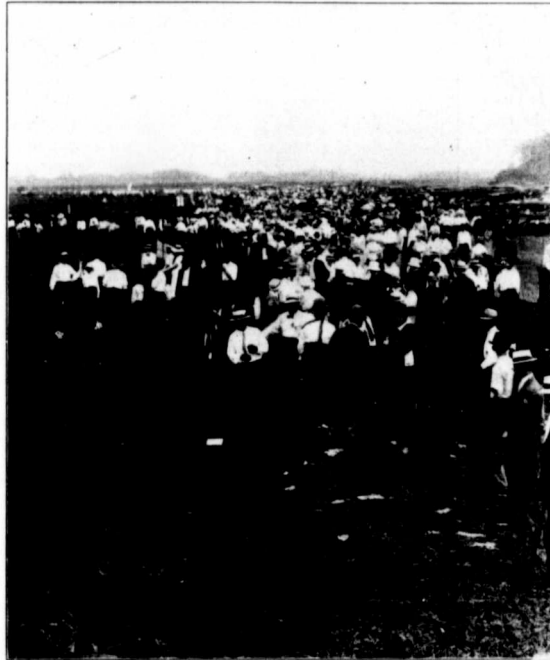
From the old sweep horse power to the steam traction engine was quite a big jump. From the use of this engine as a mere power for drawing a grain thresher to its adaptation as a means of pulling plows was a bold step that was advanced more on account of its being new rather than because it was practical. The original steam plowing engine was a heavy clumsy affair that pulled a big load, but was costly when it came to wear and tear and depreciation. It created a demand for something that was more satisfactory and in due course of time gave birth to the big internal combustion tractor, weighing as much as fifteen tons in some cases.

The large grain raising areas hailed this big iron giant as something that would surely "fill the bill" and money was spent freely in the purchasing of thousands of these machines.

In all fairness, it should not be stated that these big tractors were a failure, because they were not. The main trouble arose from the fact that the agricultural public tried to make this big giant do many things for which it was not

The Path of Progress as Blazed by the Light Tractor

By E. W. Hamilton



A Corner of the Crowd who viewed the Fremont (Nebraska) Plowing Demonstration

intended. It ruined not a few of our farmers and more than one manufacturer was driven to the

brink of bankruptcy (some even went over) while the public sat back and condemned it.

The years 1913 and 1914 really looked bad for the internal combustion tractor as a means of farm power. Bankers sat in condemnatory conclave upon it. The farmer bought sparingly and the United States Government even went so far as to issue a special bulletin upon the subject of "Farm Tractors" that would lead one not closely acquainted with the business to believe that the future fate of this particular farm implement had been practically decided—that it had been weighed in the balance and found wanting.

There were those, however, who believed differently and with faith in their convictions they continued to study the situation closely until out of darkness there came a true light. It was discovered that the real trouble was due to the fact that in the beginning our attempt was made to make the "Farm fit the Tractor," while what was really necessary was to make the "Tractor fit the Farm."

Until a short time ago it was the habit to speak of tractors in terms of so many acres plowed or harrowed, or seeded, or harvested in a day. The manufacturers have now stopped that practice and talk only about horse power at the draw bar and the belt. It has been found that there are no real tractor standards and that guaranteed ratings are more or less of a misnomer. An 8-16 tractor of good design will run at a speed of about one and a half to two miles an hour and draw a two-bottom plow, but the area of land it can plow in a day depends so much upon the kind of land, the kind of plow, the grades, the shape and size of the fields, the skill of the



The Avery String of Tractors at the Fremont Plowing Demonstration

operator and similar conditions that vary widely in every section of the country that about all manufacturers can feel safe in guaranteeing is that the machine will give its rated horse power at drawbar and at belt.

It is then distinctly up to the owner to get the work out of the tractor according to his soil and soil conditions. There is a distinct difference between the prairie loam in certain sections of Illinois and Iowa and the tough gumbo of the Red River Valley. A tractor might do a certain amount of work on the Portage plains in Manitoba that it could not possibly do in certain other sections of this province.

In conversation with one manufacturer recently, he told the writer that it was his intention to advertise his tractors according to plows in future. In other words, he would have, say, a three-plow tractor, a five-plow tractor, an eight-plow tractor and a ten-plow tractor and put his machines out under these names. The manufacturer who attempts such a proposition is very likely to come to grief and in the Province of Saskatchewan, where the new implement law requires that the manufacturer state the capacity of his machine, such a rating cannot possibly be lived up to.

As soon as we have arrived at the happy stage where the tractor is to be made to fit the farm, the numbers of internal combustion machines are bound to multiply very rapidly. Millions of dollars will be spent in this class of farm implement and it therefore behooves someone to work out a scheme of tractor rating that will permit the farmer to buy intelligently.

Why would it not be a good proposition to have dynamometer tests made of the various sections of the country. This could be done by our agricultural colleges with the tractors that are now at hand. It would be a very simple matter to chart each province and arrive at the approximate pounds pull per plow. Then let the manufacturer give his drawbar pull in pounds and the farmer knows then how many plows he can pull.

The light tractor seems to be having its day at the present time. On the United States side of the line there are approximately two hundred different machines, good, bad and indifferent. An observer of the situation will naturally ask himself why such a wave of enthusiasm for the light tractor. The light tractor will tell you that it is because it is the only thing. It is the real solution of the problem. A careful canvas of the farmers will tell you they have found they need a means of mechanical power on the farm to do certain kinds of work and for the present at least, the light tractor seems to fill the bill better than anything else.



The Hume Tractor, Hume, Ill., Drawing La Cross Plows



The Waterloo Gasoline Engine Co., Waterloo, Ia., Hauling La Cross Plows.



Avery 8-16. Avery Company, Peoria, Ill., used Avery Plows.



The Rotary Tiller, Allis-Chalmers Company, West Allis, Wis.

I have talked with men who wouldn't have a light tractor on their farm and who still cling to the old heavy type but these are men who have mechanical ability sufficient to make a success out of any machine.

The great trouble with the light tractor business to-day is the fact that we are trying to arrive at the solution of the problem in too many different ways. Henry Ford might build a car that would suit some people better than his present product, but Henry Ford has built an automobile that he can continue to build from year to year with as few changes as possible, and it gives the greatest satisfaction to the greatest number. By doing so he has been able to get away with a proposition that is second to none in the world's industrial history.

The light tractor business has got to be reduced to the Ford idea and the manufacturer who is going to make a real success of the light tractor business will have to put a type or the market and standardize it and stick to it year in, year out, with as few changes as possible.

The proposition of adding a little more horse power, a little extra weight and a little wider drive every time some farmer wants it, is not going to get anybody anywhere. In the first place, it costs money to scrap machines, re-design and rebuild, all of which cost must be added to the farmer. The manufacturer who has sufficient nerve, backed up by a knowledge of the real tractor needs of the farmer, and who will carry out his ideas, will be the manufacturer that will make a success of the game and at the same time will put the light tractor on the market to stay.

The question naturally arises, "Is the light tractor an all-purpose machine?" Will it do all the work that is required upon the farm. In order to answer this question intelligently, we must necessarily first define what a light tractor is. When we get down to the facts of the matter we will find that nearly everyone has a different definition. In a text book on traction farming, issued in 1913, we find these words: "The average weight of gasoline or oil traction engines should be from five to ten tons. Such a machine as this should develop from 15-40 drawbar horse power and be relied on at all times to perform the hard work usually performed by the horse. In the light of modern experience the above weights are excessive, and we find a great many good machines on the market to-day that weigh anywhere from three thousand to seven thousand pounds. One cannot define a light tractor in terms of weight and be absolutely correct, neither can horse power be taken as a basis of definition. For the sake of convenience we will therefore define a light tractor as one that will pull from one to three plows



All of these Tractors, as well as those shown at the bottom of the following page, are equipped with Waukesha Cylinder Motors



in average soil where the drawbar pull is not over 750 lbs. per plow.

The first thing that the farmer thinks of when he buys a tractor is plowing, and this is primarily what he buys it for. Any machine that is confined to this one operation will very likely not prove profitable. Discing, harrowing, seeding and harvesting all come in for their share of attention, for in this connection it must be remembered that an idle tractor makes no money.

When it comes to threshing, the problem is one of serious consideration, and it is a question in the writer's mind whether or not the light tractor can be used with profit by the average farmer as a means to drive his threshing machine. The man with a small acreage can no doubt thresh his own grain to advantage, but if I am to judge from the experience of a great many farmers in the middle West who have tried out the proposition, it is better to solve the threshing problem in another way. These farmers have found that the syndicate thresher works out better, meaning by the syndicate thresher one that is owned by anywhere from six to a dozen farmers. These same farmers in turn buy small tractors with which to do their individual farm work apart from threshing.

In making the above statement, I do not place any reflection whatever upon the small threshing outfit. It has its place and under certain conditions, a description of which does not occupy a place in this article, they are all right. I am simply giving you a summary of the experiences of many farmers who have tried out the proposition.

In buying a light tractor, there is one fact that the farmer must not overlook when hesitating about putting money into the proposition. He must consider the fact that while he is buying a tractor he is at the same time getting a complete stationary plant, one that will grind feed, saw wood and do practically all of his other light work around the farm. This is where the big tractors do not come up to expectations. It was too large for the ordinary light work around the farm, and the farmer prepared to buy a small stationary engine which compelled him to maintain two power plants whereas one would do the work.

When we sum the whole proposition up, it is safe to say that there is no such thing as an all-purpose tractor. Were it possible to have every farm of the same size and of practically the same soil conditions, growing the same crops, it might be possible to so design a tractor that would meet every requirement, but as it is out of the question, the farmer must study the situation carefully and do his part in making the tractor fit the farm, governing his purchase of a tractor accordingly.

A few years ago we heard much about the



Leader Tractor, Dayton-Dick Company, Quincy, Ill.



The Universal Tractor Company, Columbus, Ohio.



Sweeney's Iron Horse, Sweeney Manufacturing Company, Kansas City, Mo.



The Simplex Tractor Company, Minneapolis, Minn., and Deere Plows.

horseless farm. Any manufacturer who believes that he can crowd the horse off from the farm, is on the wrong track. One manufacturer tried this and lost millions of dollars, practically ruining his company and nearly putting it out of business.

There is plenty of work for the horse and still a place for a tractor on the average farm to-day. There are still plenty of odd chores around the farm where a team is useful to increase a tractor's efficiency. When it comes to cultivating, the horse's intelligence is a factor not found in a machine, though many manufacturers are attempting to overcome this difficulty with steering devices and automatic controls. The horse still holds his place on the average farm and may hold it permanently. What gasoline is doing is to cut down the heavy cost of the extra power needed in a few busy weeks of the year handled by several teams that must be kept and fed twelve months to be equipped for two months work. This extra power can now be had in a machine that eats nothing when it is standing idle.

The writer recently had a conversation with one of the United States Government farm management experts who has made a careful study of farm efficiency, and his statement, based upon an investigation of hundreds of farms in the United States, is to the effect that the horse is the most expensive power that the farmer can use.

The average farmer does not take into consideration the cost of horses' upkeep. The horse has been a part and parcel of his farm for generations and he no more thinks of calculating the cost of keeping these horses than he does of calculating the cost of keeping his family. Some farmers will almost regard it as an insult to the horse himself if one were to calculate in dollars and cents what it costs to keep his horses.

However, this is a matter that the farmer must reckon with. We hear our farmers say that they are not making money, that there is nothing in farming, and until the farmer gets down to a cost basis, farming will be nothing more than a hit and miss proposition. The light tractor will do as much as any other single thing to bring about this proposition.

The manufacturer builds a machine. He puts into it the best iron and steel that can be found. He pays high priced designers and mechanics to assemble this iron and steel into a workable implement, but there is one thing he cannot do and that is endow each machine with a set of brains. The farmer who knows very little about a tractor, especially its power plant, but who is contemplating buying one, had better acquire all the knowledge he can if he has any idea that he is going to make a success of it. I have followed this tractor proposition almost from the beginning.



Two-Wheelers, Three-Wheelers and Four-Wheelers, as well as "Caterpillar" and "drum" grade



I have seen the successes and failures, and I can truthfully say without fear of contradiction, that had the operators been as competent as the machines themselves that the number of failures would have been reduced to a minimum. Three things are necessary, a good machine, a good operator and one who knows what his machine will do and what it will not do.

A few weeks ago I journeyed to Fremont, Nebraska, where a plowing demonstration was taking place. I saw half a hundred different makes of tractors in operation. I saw them pull plows, and discs, and harrows, and wagons and road grinders. I saw all types of machines. I saw one-cylinder machines, two-cylinder machines and four-cylinder machines. I saw three-wheeled machines. I saw machines with the caterpillar tread. I saw machines with the drum tread. In fact, one could scarcely imagine the lengths to which the designer had gone in the construction of light tractors.

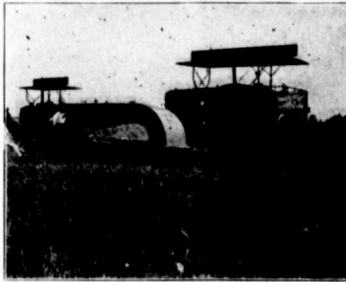
I spent three days carefully watching these implements and I am thoroughly convinced that the light tractor is here. I did not rely upon my own judgment entirely but I talked with hundreds of farmers who had been using these machines and their experiences convinced me that the light tractor has a place with the farm machinery equipment. I do not mean by this that every farmer should immediately place his order for such a machine without first studying the conditions carefully, but I am convinced that when he does look into the situation that he will sooner or later be in the market for a tractor.

The Fremont plowing demonstration to me was a wonderful sight. When you see an old veteran of the game, like J. B. Bartholomew, of the Avery Co., sweltering in a 104 degrees in the shade temperature in order to study the tractor situation, you, as a farmer, can rest assured that the mechanical end of your farm power requirements is going to be pretty well looked after. J. B. Bartholomew was not the only man on the grounds, because I likewise saw Mr. Brantingham, of the Emerson-Brantingham Company. In fact the heads of practically all the concerns who are in the tractor business to-day were there, and they did not ride in limousines either, men who sweltered in the dust and grime of a plowing field in order that nothing in the way of tractor development might escape them, and not only were the manufacturers of the implements themselves on the field, but those who build motors, carburetors, magnetos, spark plugs were there in order to gather all the information as to what was required with a view to building the best possible tractor.

Without pretending to be a prophet, I predict that the light tractor is here to stay and that the next five years will show the light tractor used upon a scale that was never before dreamed of. Volume of business will have a tendency to decrease the price of the light tractor and within a short time they will be within the reach of nearly every farmer.

I love the horse and if it were for nothing more than a consideration of what he has done for the farmer in the past, I would not want to see him wiped off from the farm, but a careful study of the tractor situation convinces me that I need have no fear on this score.

You cannot compare the horse with the tractor. One is an animal with a certain amount of brains, and the other is a machine. They each have their place to fill and they



The Gray Tractor Company, Minneapolis, Minn., and Huber Manufacturing Company, Marion, Ohio.



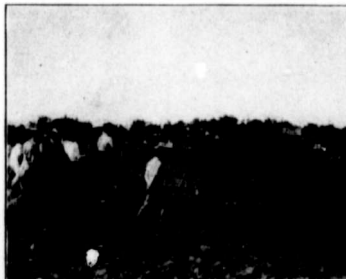
"Hackney Auto Plow," Hackney Manufacturing Company, St. Paul, Minn.



A Good Job of Breaking by Aultman & Taylor's Tractor, Mansfield, Ohio.



Nilson Tractor Company, Minneapolis, Minn.



Bates Steel Mule, Joliet Oil Tractor Company, Joliet, Ill., Using Grand Detour Plows.

are going to fill it. You as a farmer, with due regard for your future welfare and success, had better look into this light tractor situation very carefully. Study it from every angle, for if you do so I am thoroughly convinced that you will sooner or later want a machine.

One writer in discussing the light tractor



The Parrett Tractor Company of Chicago, Ill., with Grand Detour Plows.

has the following to say, which is so apropos to the situation that it is well worth repeating:

In the business of farming there is free competition. This is one of the facts that a man who would succeed on the land must accept.

He must conform his business to it or else discover some day that he isn't making any money.

Prices for farm products are made by the relation of supply and demand—world supply to world demand. It follows that the man who



The Bull Tractor preparing a nice seed bed near Headingly, Manitoba.

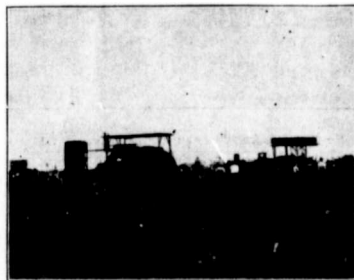
produces most economically and who has the largest economically produced crop to sell, makes the most money.

Under these circumstances the small farmer has been more or less handicapped. The basic principle of American agriculture has been and is yet, the highest production per man—not per acre. Labor in this country is expensive. Land is relatively cheap. The development of machinery for farm use has had in view, mainly the conservation of labor. It has multiplied the number of acres that one man might till and from which he might harvest. So the tendency has been toward the big farm, enormous aggregate production and consequently, lower prices. The small farmer, whose crops cost more to produce than does the crop of the big farm, feels the competition—feels it as the East felt it and as the European farmer felt it when the cheap rich land of the West came under the plow.

**A Problem for the Small Farmer**

This competition must go on even though land is disappearing and the problems of maintaining fertility of the big farm and of making the money invested in it earn dividends, must be given more attention. It ought not to mean the passing of the small farm, and it will not, because there are thousands of men who believe that the small farm affords the ideal farm life. They are going to find a way

to make it pay as fast as necessity compels. Intensive cultivation, co-operation and other means of cutting the cost of production and marketing will be adopted. They are being adopted now. And inventive skill is coming to the small farmer's aid in his efforts to reduce operating expenses.



"Flour City" Kinnard-Haines Company, Minneapolis. Used Case Plows.

Power is one of the most expensive factors of small farm operations. The horses that must be maintained to do the work make sad inroads on profit. A considerable acreage must be given over to producing their feed. They are a risky investment as well as a costly one. A severe attack of colic or azoturia or an attack of glanders, or a stroke of lightning, or the happening of any other of the numerous troubles that are possible, and there is another horse to buy—may be a team. I have known small farmers to lose their holdings through an



The Manitoba Universal Tractor breaking Manitoba Gumbo 7 inches deep.

entanglement of debt brought about from "bad luck" with horses.

**Cheaper Power is Needed**

A cheaper and more dependable power is needed for the small farm. And inventive skill has produced it in the small farm tractor. This implement has gone beyond the experimental stage. It is an assured success, an economy, a convenience, a necessity, to the man who would make his small farm pay more.

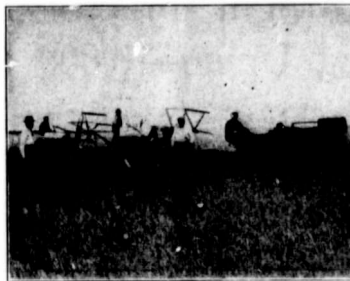
It costs about \$2 an acre to plow land with horses. It can be plowed for from 50 cents to 80 cents an acre with the tractor. And its utility is not limited to plowing. It will pull the disk, harrow and binder. It will have the crop to market. There is no work necessary to production that the tractor can not do. And it eats none of the crop.

It is always ready for service, no currying, feeding, harnessing or doctoring of sore shoulders. It may be worked 10 hours a day or 24, and pulls as strong the last hour as it did the first. That's one big advantage over the horse.

**Monkey Wrench Cheaper than Drugs**

The horse requires a warm stable—a shed for the tractor. The horse often requires a veterinarian. You get after the tractor when it goes wrong with a monkey wrench, which is decidedly cheaper than drugs. And, given good care, it seldom goes wrong.

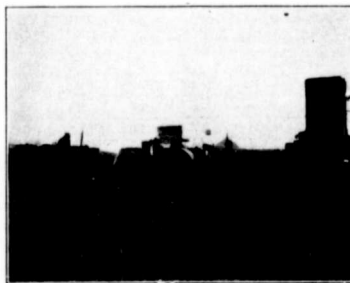
The horse, under average farm conditions,



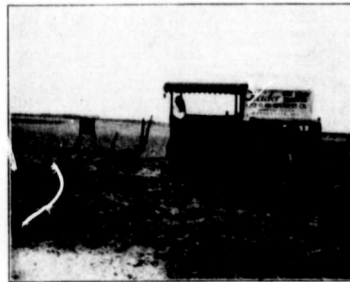
Bullock Tractor of Chicago, Ill., pulling two harvesters.



Hart-Parr Company's Little Devil, Charles City, Ia.



Electric Wheel Company's "All Work" Tractor. Quincy, Ill.



The Heider Manufacturing Company, Carroll, Iowa. Hauled A. P. & O. Plow.



The J. I. Case Threshing-Machine Company's Tractor Pulled Satiley Plows.

is a "plug" after five or six years of service. The tractor is good for ten years of service. And one of a size suitable for the small farm can now be bought for less than the cost of a high-class team.

There is much land that ought to be plowed deeper than we can profitably plow with horses. It would take and hold more moisture, provide more available plant food and so raise bigger crops in dry years or wet. With the tractor, deep plowing is easy. The increase in yield will pay a nice interest on the investment.

One of the arguments for the small farm is that work may be done in season, therefore is more profitable. The tractor increases this power of the small farmer. It gives him more complete mastery over the Monarch Weather by allowing him to crowd three or four or a half-dozen days' work into one.

And the value of the tractor is not limited to field work. It is a hired man that will perform numerous farm chores without tiring, without "kicking," or reminding you that Jones, Smith or Jackson want men at \$5 more a month than you are paying.

**A Hired Man That Never Kicks**

Drive in out of the field after plowing an acreage that fills your heart with joy and the tractor will pump the water for the stock, grind, cut or shred feed, saw wood, run the separator, churn or milking machine, or do any similar thing that may be wanted. Contrast this with unharnessing, rubbing down, feeding and watering a tired team—when tired yourself, but maybe with these other numerous chores waiting.

This is a good time to invest in a tractor. There are war prices on horses. The man who has two teams can sell one and just about buy a tractor big enough for his 160 acres with the proceeds. There will in all probability be war prices on next year's crops. With a tractor to speed the spring work along and get the seed into well prepared ground in season, better crops will be obtained.

Think it over.

**DEEP TILLAGE**

Recognizing that the seed bed is the home of the plant and that from it the plant receives its supply of food material, it stands to reason that there must always be present a sufficient supply of humus if the plant is to be supplied with growing material. Hence in plowing, great care should be practised in gauging the depth, for we know that the subsoil is deficient in food and therefore to turn this up is to merely dilute or weaken the crop producing surface layer. In our efforts to secure a wider feeding range for the plant we are sure to do harm, unless the depth is gradually increased and with each slice of new soil brought to the surface, organic matter, preferably barn yard manure, is thoroughly mixed with it.

Compactness being essential to insure capillary attraction, it is advisable to plow as early as possible, in order that the seed bed may have time to settle before seeding time. The sub-surface packer helps materially in compacting the soil and so re-establishes capillarity between the lower and upper strata. The disc harrow is also a very helpful implement for this purpose. By all means, the land should be well harrowed or disked, double disking is preferable, as soon as possible after plowing. Thus the furrow slice is packed down, so that it will not dry out so readily. Further disking and harrowing before seeding renders possible a well packed seed bed.

# A Few of the Light Weight Tractors Now on the Market Weighing Under 10,000 Pounds

MANUFACTURER	ADDRESS	FUEL USED	Rated Horsepower		Speed of Tractor Miles per Hour	Speed of Engine, Revolutions per Minute	Pulley		Wheel Front	Wheel Drive	Capacity Kerosene Tank, Gal.	Capacity Gasoline Tank, Gal.	Capacity Water Tank, Gal.	Total Length, In.	Total Width, In.	Total Height, In.	Approx. Road Wt., All Tanks Filled, Pounds	Approximate Shipping Wt., Pounds	
			Diam., Ins.	Face, Ins.			Diam., Ins.	Face, Ins.											
Aultman & Taylor Machinery Co.	Mansfield, Ohio	Gasoline and Kerosene	18-36	2-20	600	20	10	38	10	70	23	35	101	60	165	90	125	12,500	11,700
Avery Company	Peori, Ill.	Gasoline and Kerosene	8-16 12-25 20-35	11-3 11-2 11-2	600 570 500	19 19 22	7 8 8	24 30 38	6 8 10	50 56 69	12 20 20	61 61 61	14 15 21	60 104 176	56 80 90	53 105 108	4,900 7,500 11,500	4,900 7,500 11,500	
Baker Manufacturing Co.	Springfield, Ill.	Gasoline	40	2	900	14	8	12	12	15	30	30	100	72	52	8,000	7,000		
Bull Tractor Co.	Winnipeg, Can.	Gasoline	5-12 7-20	4 2	750 720	12	6	30 36	6 6	60 60	12	12	15	6,014 7	78 147	62 77	54 75	3,300 4,770	2,970 4,000
Bullock Tractor Co.	Chicago, Ill.	Kerosene	30-20	2-4	600	12	13	4	4	25	13	138	66	102	8,150	7,500			
Case, J. I., T. M. Co.	Racine, Wis.	Gasoline	10-20	2-21-3	800	17	6	30	8	52	20	20	150	67	60	4,300			
The Denning Implement Motor Co.	Cedar Rapids, Ia.	Kerosene-Gasoline	14-24 18-30	21-31	800	8-12	8	30	41	48	12	20	100	128	77	62	4,400	4,000	
Diamond Iron Works	Minneapolis, Minn.	Kerosene-Gasoline	36	1-8-3	600	20	10	40	8	66	15	50	145	0	8,500	8,000			
Dauch Manufacturing Co.	Sandusky, O.	Gasoline	15-35	2-31-51	750	15	8	36	5	56	16	26	35	25	147	84	72	8,000	8,000
Dayton-Disk Co.	Quincy, Ill.	Gasoline	18	21-31	750	14	7	38	6	54	18	18	140	0	114	64	70	5,750	5,500
Electric Wheel Co.	Quincy, Ill.	Gasoline	12-221	7.5-2-4-3	750	12	7	28	5	48	16	15	13	8	125	70	58	4,350	4,300
Emerson-Brantingham Co.	Rockford, Ill.	Gasoline	12-20	1.6-2.3	800	12	7	40	10	60	24	25	9	180	96	63	5,300	5,000	
G. W. Elliott & Co.	DuSmet, S. D.	Gasoline	25 40	21 21	600-800 600-800	10 12	5 6	30 34	5 6	36 42	48 60	10	10	30	132	70	66	2,900	2,600
Hart-Parr Co.	Charles City, Ia.	Kerosene, Gasoline and Distillate	221	1.80-2.83	600	15	7	30	10	64	26	22	27	154	93	92	6,900	4,300	
Heider Manufacturing Co.	Carroll, Ia.	Kerosene-Gasoline	10-15	1-4	750	14	7	30	05	57	10	15	5	10	0144	74	96	6,000	5,900
Hoke Tractor Co.	South Bend, Ind.	Gasoline	40	2-5	6-1500	10	7	60	10	24	6	12	168	70	84	4,000	4,000		
Holmes Tractor Co.	Pt. Clinton, Ohio	Gasoline	12	11-4	750	12	6	36	5	48	10	11	65	10	138	72	54	4,400	3,900
Huber Manufacturing Co.	Marion, O.	Gasoline and Kerosene	15-30	2-31	700	15	8	34	8	54	16	16	6	65	156	78	84	6,000	7,000
Hume Manufacturing Co.	Hume, Ill.	Gasoline or Kerosene	20-30	2-21	800	12	8	24	10	73	16	27	10	20	144	74	96	7,200	7,000
International Harvester Corporation	Chicago, Ill.	Kerosene	8-16	2	400	20	10	36	6	54	10	19	35	135	56	61	5,000		
Joliet Oil Tractor Co.	Joliet, Ill.	Gasoline	30-13	21-31	900	8	8	30	17	17	24	26	5	132	104	70	5,600	5,200	
Kinnaird-Haines Co.	Minneapolis, Minn.	Kerosene-Gasoline	23	21	700	23	8	42	8	72	16	11	110	100	9,500				
Kuhnert & Ryde Co.	Chicago, Ill.	Kerosene-Gasoline	15	21-4	700	23	8	36	9	50	12	25	5	118	0144	78	72	6,000	5,600
The Lawter Tractor Co.	St. Mary's, Ohio	Kerosene-Gasoline	40	3	700	23	8	38	12	25	6	25	25	150	82	94	6,500	6,500	
Mayer Bros. Manufacturing Co.	Mankato, Minn.	Kerosene, Gasoline or Distillate	35-20 22-16	11-21-5 11-21-5	750 900	12 12	6 6	32 32	54 54	20 12	35 25	5	14	102	75	73	8,700 5,200		
Minneapolis Steel and Machinery Co.	Minneapolis, Minn.	Kerosene-Gasoline	15-30	11-21	700	15	6	36	10	63	14	24	3	95	0149	78	113	9,840	9,200
Nevada Tractor and Tractor Co.	Nevada, Ia.	Gasoline-Kerosene	40	14-31	800	12	8	38	14	40	8	11	16	108	80	75	7,400		
Pioneer Tractor Co.	Winona, Minn.	Kerosene-Gasoline	12-24	2-21	700	12	8	31	4	60	12	40	15	104	80	67	5,000	4,800	
Peoria Tractor Co.	Peoria, Ill.	Gasoline	30	21-31	750-850	10	6	30	5	60	18	12	35	163	72	111	3,400	3,200	
Parrot Tractor Co.	Racine, Wis.	Gasoline	10-20	21-41	900	15	7	46	4	60	10	13	5	145	74	94	5,100	5,000	
The Russell & Co.	Massillon, O.	Kerosene-Gasoline	12-24	11-21	1,000	12	6	30	6	53	10	20	6	136	61	100	4,800	4,500	
Samsom Iron Works	Stockton, Cal.	Kerosene	15-30 5-10	2-4 2	1,525-575 450	20 14	8 6	32 26	12 7	48 40	16 14	30 12	29 10	149 136	60 52	50 48	8,200 5,800	7,800 4,200	
Simplex Tractor Co.	Minneapolis, Minn.	Gasoline	25-30	2-4	750	14	9	36	8	60	30	10	25	35	144	96	64	5,300	5,300
Sweeney Tractor Co.	Kansas City, Mo.	Gasoline	15-25	21-31	1,000	10	9	35	12	48	54	30	50	153	68	54	4,000	4,500	
Strite Tractor Co.	Minneapolis, Minn.	Gasoline-Kerosene	12-25	11-21-4	780	36	7	36	6	60	20	20	20	28	162	72	66	4,200	4,000
Waterloo Gas Engine Co.	Waterloo, Ia.	Kerosene	20	21	100-750	14	8	28	41	52	10	20	2	11	0143	83	63	4,840	4,770
Wallis Tractor Co.	Racine, Wis.	Gasoline	20-44	21-31	650	14	10	34	14	60	20	30	14	171	74	72	8,500	8,350	
Western Steel and Iron Works	Winnipeg, Can.	Gasoline	9-18	2-21	800	12	8	42	6	60	20	16	5	156	84	74	4,250	4,000	

### The Farmer as an Engineer

Every farmer is an engineer, whether he knows it or not. The engineers of the various agricultural colleges are teaching the things farmers have always had to teach themselves, and teaching them better; but they are the same things. They study agricultural machinery, but it was the farmer himself who invented most of the machinery they study.

More than ever the farmer must be an engineer now. It took engineering to shear sheep with the old shears, and good engineering, too; but now it is best done by shearing machines operated by power. It took engineering to

house cows in the old barn, feed them the hay and grain, water them economically, milk them by hand, strain and set the milk, and churn it; but it takes better engineering to build a sanitary barn, keep out contamination from the milk as is now necessary for the best markets, build and fill a silo, carry away the manure in a carrier, milk with machines run by gasoline engines, separate the cream with either a power machine or one run by hand, and get the cream to market in good condition. Yet to all these things we must come if we have not already done so.

And the end of the new agricultural engineering is not yet. We must have a water supply in the house, run by gravity, power

or hydraulic ram. We must dispose of the sewage—civilized life will soon require it of such of us as have not already made the break to the new system. We must have bathrooms and sanitary closets. We must have lighting systems, wherever possible, in which we will use some sort of gas, gasoline or electricity. The children must have these things or they will go where they can get them. There is no use kicking against progress. There are neighborhood laundries to build, and creameries and cheese factories. The whole matter of better schoolhouses will soon resolve itself largely into a matter of buildings—buildings and teachers.

Then there is the whole field of

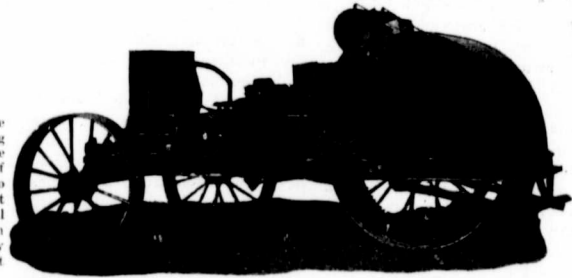
tractors. This industry has not yet begun. American inventive-ness will one day bring forth machines for every sort of farm—and machines which will be cheaper than hand labor. The farmer of to-day needs to study and understand the internal combustion engine—and the farmer of the future will be an expert. The farmer is the best equipped average man to handle the modern machine in the world. He runs his engines and his motor cars more economically than the average town man, because he lives with machines of many sorts. He is an engineer, and he will steadily become a better one. From typewriters to tractors is a long range, but the farmer covers it, and not half badly either.



# Are You Prepared

to increase your crop acreage and at the same time cut down expense? You cannot fix the price that you will get for your wheat, oats, barley or flax, but you can, to a great extent, overcome the loss through a slump in prices by increasing your yield and at the same time decrease the cost of raising it. You can do this with a

## Manitoba Universal Farm Tractor



This tractor is strictly in keeping with the "Spirit of the Times." The tendency to-day is towards **Light Weight and Low Cost.** The big plowing demonstrations held during the past two months in the United States have shown conclusively that the big heavy weight tractor is practically out of existence. What the farmer wants is something that will pull from two to three plows and work in all kinds of soil conditions. The big tractor cannot move when the ground is soft and what is more, it is injurious to the soil through packing it. The result is a demand among farmers for a minimum of weight with a maximum of pull. The "**Manitoba Universal**" is a happy combination of these two requirements. So perfectly does it do its work that it has been dubbed

### "The Light Weight Tractor with the Big Pull"

LET US ANALYZE THE MACHINE ITSELF AND SEE WHY THIS IS SO

**FIRST**—It is a three wheel machine with its entire tractive effort concentrated in one big drive wheel 60 inches in diameter and with a 20 inch face. This wheel runs upon the land and not in the furrow, thus giving it the best possible opportunity to get a grip. By carrying the driver upon the land a direct pull is obtained, thus eliminating side draft that must otherwise be overcome by complicated hitches that cause trouble and use up power.

**SECOND**—It weighs but 4,000 pounds, but with this weight so distributed that the harder the pull the firmer the grip. Field practice for the past five years gives 2,000 pounds per plow as the correct tractor weight. It will not pack the soil as much as a team of horses, and nowhere near as much as the number of horses equivalent to its drawbar horse power.

**THIRD**—It has a two cylinder opposed motor that is simplicity in itself. It is so constructed as to be practically dust proof with force feed oiler, governor and magneto gear driven and integral with the motor itself, thus insuring the perfect working of these essential parts.

**FOURTH**—Its one drive wheel does away with the necessity of using a differential gear and to further simplify the machine the main drive is through a chain, thus doing away with a noisy chain of gears that is expensive to build and expensive to maintain.

**FIFTH**—The **Manitoba Universal** is designed in accordance with the best engineering practice. It is strong and heavy where needed and light where little strength is required. In this way we give you a tractor that combines a minimum of weight and low cost with a maximum of efficiency.



### What the Manitoba Universal will do for You

1. It will pull two 14 inch plows in breaking and 3 in stubble at a speed of two miles per hour.
2. It will pull a 24 disc drill, an 8 foot cultivator or a 10 foot disc harrow.
3. It will pull an 8 foot harvester 2½ miles per hour, 24 hours per day if necessary.
4. It will haul a 4 ton load on practically any road with ease.
5. It will drive a feed chopper, ensilage cutter, wood saw, or any other machine requiring belt power within 20 h. p. capacity.

**SPECIFICATIONS :** **MOTOR**.—4 cycle double opposed, 5-inch bore and 6¼-inch stroke; driven and unit with the motor. **Magneto, force sight feed, oiler, water pump and governor** are all gear driven and work with vibration. **GEARING**.—Is all crucible steel, cut with 2½-inch face, except master gear and pinion which are of the best cast, carrying a tensile strength of 15,000 pounds to the square inch. **FRAME**.—The frame is of heavy 6-inch channel steel, hot riveted together, with corner plates also hot riveted on all corners to insure rigidity. **WHEELS**.—Rear wheel is 60-inch diam., with 20-inch face. Front wheels are 42-inch diam., with 6-inch face. **DRIVE**.—The traction drive is through a chain, thus doing away with a train of gears, and at the same time increasing the tractive efficiency of the machine. Speed change is accomplished through this chain in a very novel manner. **WEIGHT**.—4,000 pounds. Fuel tank capacity 16 gallons.

### The Price is \$697 F. O. B. Winnipeg

The **Manitoba Universal** is the tractor that will solve your farm power problems. It will render you cheap and efficient power wherever and whenever required. Let us tell you more about it by filling in the coupon.

**Western Steel and Iron Works Ltd.**  
 Winnipeg, Man.  
 Please send me descriptive literature regarding your  
 light weight tractors  
 I am familiar with  
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 Town.....  
 Prov.....  
 C.T.F. 2

## Western Steel and Iron Works

LIMITED

WINNIPEG, CANADA

You saw this advertisement in this magazine. Don't forget to say so when writing.





# MIXED FARMING

## MANITOBA - SASKATCHEWAN - ALBERTA



BY W.C. McKILICAN B.S.A

No. 19

### Horses on the Mixed Farm

**H**ORSES are a necessity on every farm. Cattle, sheep, swine may or may not be raised according to individual choice, but no satisfactory way of eliminating the horse has been brought forward. True, the first settler may do for a while with the slow but easily kept ox, or mules may be used, but the farms where these continue to supplant the horse are rare indeed, and even in the case of mules, mares are necessary to raise them. On every farm there is power needed for drawing implements and transporting supplies and crops, and so far the horse has proven himself the most satisfactory all-round power on the farm. There has frequently arisen the idea that mechanical power, such as tractors and motors, would drive the horse off the farm. While the usefulness of gasoline and steam power on the farm cannot be questioned, there is a place for the horse than cannot be assailed by any of these, and when it comes to a question of economical labor, the horse has strong arguments in his favor. Especially on the mixed farm of small or moderate size the horse seems to be the most desirable type of power.

### Feed and Care of Work Horses

There is a great difference of opinion as to how horses should be fed. Much loss is occasioned every year throughout Western Canada by errors in feeding. Yet it is not advisable to lay down any definite or fixed set of rules for the guidance of those who have horses to feed. The horse can make use of a great variety of feeds, and the needs of a horse will vary greatly with the kind and amount of work he is called upon to do. Good judgment, or, in other words, common sense, is the main requirement in feeding horses properly. While it is impossible to impart this quality, still some suggestions may be helpful to those who already have it. Lack of regularity is the commonest cause of trouble in horse feeding. If a horse is accustomed to a certain quantity of feed, and is suddenly given a much larger feed, there is a danger that he will get sick. If more feed is needed, the ration should gradually be in-

creased to the new requirement. When it is required to reduce a horse's feed owing to quitting work or getting sick, it is quite permissible to reduce suddenly, but increases should always be made gradually.

Moderation in feeding is always advisable. This does not mean under-feeding; the horse should get enough to keep him in good flesh, but often when a horse is expected to do unusually hard work, he is given unusually heavy feed to make up for it. This is a mistake, it is better to stick to what the horse is known to be able to digest rather than put on his system the extra burden of heavy work and heavy feed at the

factory. Sheaf oats are used very much for roughage for horses. They make excellent feed, especially if cut on the green side. Generally speaking, a horse should get all the hay he will eat up clean. Sometimes an idle horse that is inclined to be a glutton has to be restrained, but a working horse should get all he wants. He should, however, be made to clean it up and not to waste it or leave it in the manger. A feeder can soon learn how much each horse can finish; he should then give just that amount so that the manger is empty for the next meal.

Next to feeding, the most important thing in caring for working horses is the prevention of sore shoulders, feet, backs, etc. This is largely a method of vigilance, to observe any trouble before it actually comes and to prevent it. Harness, and especially collars, should be made to fit properly. Hard worked horses should be thoroughly groomed

every day and the sweat and dust worked out. Shoes should be changed frequently enough to avoid causing foot trouble. The weak spots of each horse should be known and a careful watch kept on them to prevent the outbreak of trouble.

### Wintering Idle Horses

With the long periods of frozen ground and winter weather that we have in this country and the great rush of work at seed time and harvest, it is impossible to avoid a large amount of idleness in horses. It has been pointed out in previous articles that mixed farming distributed labor much better than a one-crop system. However, even though mixed farming does make some winter work for horses in hauling out manure, etc., it is small compared with summer labor. Consequently many of the horses that are absolutely necessary in the summer, are only a bill of expense in the winter. It is important that the expense they cause be made as light as possible. This may be done by turning them out doors. If they have an open shed to shelter in during storms, they will do as well outdoors over winter as in the warmest stable; in fact, their health will be better than it would be if they were tied up in idleness. They will grow a very heavy coat of hair and after the first cold snap they will not suffer any particular discomfort. This may seem cruel and heartless to newcomers who have not seen it tried, but it has been thoroughly demonstrated that horses wintered in this way come in, in the spring, fat and in the best of health. If they have a straw stack to forage around, they will get most of their feed from it. Sometimes horses are able to live on a straw stack alone, but it is usually advisable to feed them a little grain or some unthreshed oats. If they appear to be losing flesh, they should get more grain but on the other hand if they are getting fat it is a sure sign that they are faring well.

### Raising Horses

We have discussed thus far working horses only. On many farms horses are kept for work only and the farmer has to buy the new ones he needs. It would appear to me to be a more efficient method to have brood mares as part of the working force



"Light Tractors" we can never place on the shelf  
(By courtesy of Canadian Kodak Co.)

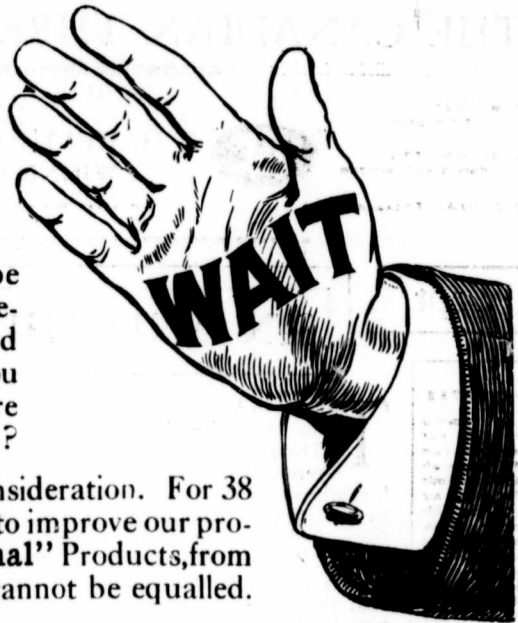
same time. A better plan is to spread the extra feed out over a longer period by feeding up a little before the heavy work starts and continuing a little while after for recuperation.

Oats is the standard grain feed for horses. When reasonable in price they are unexcelled and there is no need to look for any other feed. Occasionally oats are scarce and very dear. This has been the case for the past year. At such times it often pays to substitute other feeds. About the best substitute for oats is a mixture of corn and bran if they are cheap. Corn is a good feed for fattening and is used very much in the United States for working horses as well. However, it is rather heavy and unbalanced and a mixture of bran lightens it up and makes a better balanced mixture. Barley and bran might also be used for horse feed if corn were dear. The amount of grain should vary with the work the horse is doing, from nothing

Continued on page 25



# Just a Moment, Mr. Traction Owner!



The fall plowing season will soon be with you, and you will, as usual, be requiring a considerable quantity of oils and greases. If we are too late to talk with you on your harvest needs, why not secure our prices for your fall requirements?

**"Quality"** has always been our first consideration. For 38 years we have been continually striving to improve our products, and we to-day feel that our **"National"** Products, from a standpoint of efficiency and economy, cannot be equalled.

## White Rose Motor Gasoline

Absolutely the highest grade gasoline made. Through a special process of double distillation all the carbon-forming elements are removed. Guaranteed to develop more power with less carbon than any other.

## Lily White Engine Kerosene

The finest engine kerosene on the market. Water white in color and of high gravity.

**LET US FIGURE ON YOUR OIL ORDER!** Simply fill in coupon below and we will mail you at once full information about our products, and prices F.O.B. your station.

### CANADIAN OIL COMPANIES LIMITED

Winnipeg Brandon Regina Saskatoon Calgary Edmonton

CUT OUT COUPON AND MAIL

CANADIAN OIL COMPANIES, LIMITED,  
WINNIPEG—REGINA—CALGARY.

Gentlemen:—Without any obligation to purchase, send me prices and literature on your products as listed.

NAME .....

P.O. ADDRESS .....

R.R. STATION .....

Will be in the market on .....	1915 for:
WHITE ROSE MOTOR GASOLINE .....	Gallons
REX MOTOR SPIRIT .....	Gallons
LILY WHITE ENGINE KEROSENE .....	Gallons
ENGINE DISTILLATE .....	Gallons
NATIONAL GAS ENGINE OIL .....	Gallons
NATIONAL CARBONLESS MOTOR OIL .....	Gallons
CUP GREASE .....	Pounds
GEAR GREASE .....	Pounds
COOLING OIL .....	Gallons

# THE CANADIAN THRESHERMAN AND FARMER

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Sept.

## SIN AND THE SOW THISTLE

1915

### OUR GUARANTEE

No advertisement is allowed in our columns until we are satisfied that the advertiser is absolutely reliable and that any subscriber can safely do business with him. If any subscriber is defrauded E. H. Heath Co., Ltd., will make good the loss resulting therefrom. If the event takes place within 30 days of date advertisement appeared, and complaint is made to us in writing with proof, not later than ten days after its occurring, and provided, also, the subscriber in writing to the advertiser, stated that his advertisement was seen in "The Canadian Thresherman and Farmer." Be careful when writing an advertiser to say that you saw the advertisement in "The Canadian Thresherman and Farmer."

**T**HERE'S A SOVEREIGN REMEDY for every ill—if we only knew it. Think of those frightful epidemics recorded on the tombstones of our forefathers which have been swept away by the breath of knowledge. Ascertained facts took the place of superstitions, human intelligence and human energy applied these facts and the thing was done. Had these facts never been dug up, the remedy had not been found; had the remedy never been *tried out* we would still be fighting the "black plague" if it had not long since swept our race from the face of the earth. The price of this wonderful deliverance is a sum that can be "raised" by any one for any trouble that a human creature may have created for himself, viz.: the knowledge of certain facts and sufficient energy to apply them until the trouble is overcome.

SIN AND THE SOW THISTLE have their sovereign remedies. Christianity is the one cure for sin. Where it seems to have failed it will be found that it really has never been *tried*. Many things called by the name are in operation, but any one of these lifeless impersonations of Christianity, or all of them together, will no more eradicate sin than incantations will exterminate the sow thistle. But we have seen Christianity really tried and can bear testimony to its power to transform certain two-legged creatures from brutes into men. We have also seen the sow thistle remedy applied to certain portions of Canadian soil and can also testify to the fact that in every case it transferred the mastery from the weeds to the workers.

THIS IS NO CHEAP SPECIFIC, this wonderful weed-killer. You can no more buy an automatic weed-killer that will "do the job" than you can buy a bar of soap that will keep the body clean by holding it at arm's length from the sweat and grime. This remedy (which we have seen operating in Manitoba) was nothing more than the *invincible energy* of one or two farmers harnessed to an implement of the cultivator species. There is quite a variety of these weed destructors, but their effectiveness does not appear to be so much in the design of the machine as in the use that is made of it. Now, everybody who reads this has seen or heard of these "eradicators," which are simply a type of guillotine for the decapitation of everything in plant life that grows upward from roots in the soil. There are also a host of other "remedies" such as tar-paper for smothering, poison mixtures, etc., all of which are common knowledge, as well as the various proposals to introduce antagonistic crops (as sweet clover, etc.) into the weed-infested fields.

WE WOULD NOT DISCOUNT any one of these. Our purpose in this brief space is not to discuss any other

than that one "treatment" without which all of them are futile, the one that has never really been *tried*, namely—the element of human energy carried on persistently till a certain point has been reached. We are quoting from no authority. We claim no monopoly of information, but simply record our own observations, confining these for the present to the farms, railway property and town sites of Manitoba. What we have to say may seem commonplace, but we would rather hold aloft a neglected or despised commonplace than claim the authorship of the slickest novelty in human expression that has no foundation in fact.

THE SOW THISTLE PEST is of comparatively recent growth we are told. Something like ten years is about the period during which it has existed as a pest in Western Canada. Our acquaintance with it and its fellow criminals in Manitoba extends to within a few months of that period, but those nine odd years have produced some remarkable developments in "weed culture." Now, if all this that we have seen can be built up by simple neglect, how much more might not be torn down by well directed energy? We make no indiscriminate onslaught upon the farmers of the Province. The most heart-breaking circumstance of the case is that so many of them are doing all that human skill, energy and well-conceived machinery can do to keep the weed pest out of their fields, and their best efforts are rendered abortive by—it may be—their immediate neighbors, still more by the railway "clearances" near to their farms.

THE BEST LIGHT SEEN YET in this murky outlook is the energetic campaign the Minister of Agriculture has initiated. It might be called his "maiden speech" as a Cabinet Minister, and we would rather have this silent *force* constantly at work than any flamboyant vaporings "on the floor of the house," unsupported by a single act outside of it that did not demonstrate to every son of the soil that there was such a thing as the Noxious Weeds Act on the Manitoba statute book. We haven't a word of "advice" since he has taken this course and had the wisdom to engage in it the services of one whom the whole West regards with feelings of unqualified respect and confidence.

IF A CIVILIAN CAN DEAL EFFECTIVELY with habitual law breakers; if character, information and experience can direct this onslaught upon the weeds to a successful issue, surely Professor Bedford is one to whom we may look for the best that can be done—in leading, if not in driving, men to the performance of their simple duty. As time goes on there is one thing he will certainly "demonstrate": that he cannot be led blindfold past a notorious weed-preserve to oblige one who has become "indispensable to the party."

### SUBSCRIPTION RATES

Postage prepaid, Canada and Great Britain, \$1.00 Per Year. Single copies 15 cents. Postage prepaid, United States and Foreign Countries, \$1.50 Per Year.

Falling to receive paper, you should notify the office at once, when mistakes, if any, will be corrected immediately.

All Subscriptions must be paid for in advance and no subscription will be accepted for a shorter period than six months.

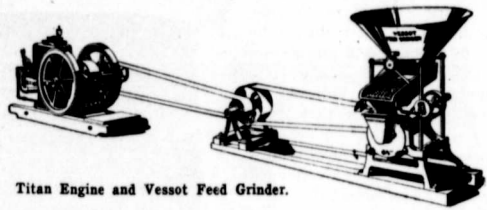
Advertising copy in order to secure good position should be in our hands not later than the 15th of the month preceding date of issue.

Advertising rates furnished on application.

# Own a VESSOT FEED GRINDER

Run it with a

## Small MOGUL or TITAN Engine



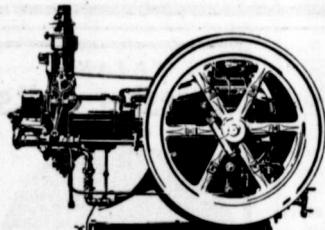
Titan Engine and Vessot Feed Grinder.

**W**HAT better recommendation than this could a feed grinder have—It grinds barley corn, crushed car corn, oats, wheat, rye, peas, buckwheat, screenings of any kind of mixed grain or any other feed stuff, fine or coarse as desired, and removes foreign substances. This is the claim for the **Vessot Feed Grinder** made at Joliet, Que. Quebec.

It grinds all feed stuff—because of its excellent grinding plates. So well known are the original Vessot plates, and so highly thought of by all who know them, that numerous imitations are appearing on the market. To insure our customers getting genuine plates, we have arranged to have the trade mark, "S.V." placed on every genuine Vessot plate so plainly that you cannot go wrong. Look for the "S.V."

As fine or coarse as desired—and we mean what we say. Vessot grinding plates have such a nicety of adjustment and do their work so uniformly well that a clean, satisfactory job is assured. The two-sieve spout removes all foreign matter, from nails and stones to dust and sand.

One caution only—use steady, reliable power to drive a Vessot grinder, such power as is furnished by an **International Harvester** oil engine—**Mogul** or **Titan**.



Mogul Tank Cooled Stationary Engine.

Buy a Vessot feed grinder in the size best suited to your work and a Mogul or Titan oil engine to run it. There is no better feed grinding outfit.

See the IHC local agent, or write to the nearest branch house for full information.

### International Harvester Company of Canada, Ltd.

BRANCH HOUSES Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Hamilton, Ont., Lethbridge, Alta., London, Ont., Montreal, P.Q., N. Battleford, Sask., Ottawa, Ont., Quebec, Que., Regina, Sask., Saskatoon, Sask., St. John, N.B., Winnipeg, Man., Yorkton, Sask.

You saw this advertisement in this magazine. Don't forget to say so when writing.

**T**HE gas tractor has come. It is a practical device, serviceable, ever ready, efficient. This efficiency will greatly increase when the average man ceases to regard the tractor in terms of horse and thinks of it as simply mechanical. The tractor is not a horse and the comparison is not justified. Years ago when the first street cars were built engineers were handicapped by the same comparison. The automobile has been charged with being the agent that would crowd out Dobbin, but it has not yet occurred, and the most vehement friends of the horse have come to regard the automobile as an economic necessity. Later, the situation in regard to the tractor will so adjust itself that the wonder will be that we got along without it for so many years.

Spectators at a traction demonstration always compare the machine to the horse. What will it do on soft ground? What will we do with our horses if we use a tractor? Why buy a tractor when we must keep our horses for work that the tractor will not do? Why do not the manufacturers build a lighter tractor? These are some of the questions asked and not without reason. The tractor is rather mysterious, a sort of mechanical wonder, in most localities where it has been but little tried,

## The Farm Tractor is Rapidly Coming Into Its Own

Is Practical, Serviceable and Efficient

By W. C. Smith

and the term tractor too often brings a mental picture of the enormous West. It seems a difficult matter to apply it to the chopped up farms of the corn belt or the small farms of the East until one has become acquainted with its uses and purpose.

We will look into some of the "horse questions" regarding the performances of the tractor. Manufacturers agree that the greatest problem now is to get farmers and others to realize that farming methods must change before the tractor will accomplish its full measure of efficiency. It will not now or ever take the identical place of the horse, and, although many interesting and valuable experiments have been made with light powers, it is an assured fact that the light farm tractor will not do the work of their heavier brothers now in use, even if their purpose to do the light work given to the team is accomplished. Either the heavy

tractor must be used in conjunction with horses or with a heavier power to retain its efficiency. A gas or gasoline tractor known as a "fifteen-thirty" means that it will deliver about fifteen horsepower at the drawbar and thirty under the belt. It will do the work of a large grain farm and is yet small enough for the cornbelt farm. It will pull four plows in heavy sod and manage a medium sized grain separator. Such a tractor cannot, of course, be used for corn plowing and similar work, but can be used in all the operations of seeding, dragging, disking, harrowing and harvesting. On a recent trip through the central west many such tractors were found hitched to hay wagons and loaders and to binders and other heavy work.

For soft ground the manufacturers have provided extension rims for the drive wheels, but when the ground is wet these are of little advantage. These ma-

chines weigh in the neighborhood of eight tons and their use when the soil is wet will show in the growing crop. But with a machine capable of two acres an hour there is but small excuse for working the soil when it is in improper condition. Even on wet soil the danger of packing can be largely overcome by pulling harrows or other soil pulverizers behind the plows. Here, again, we encounter the horse comparison. The farmer is used to getting at the plowing in a rush season and pushing it to the utmost in order to get his crops out in time. With the tractor the rush system may be distributed until it is no longer a rush season. Plowing can be done when the soil is partly frozen. Even when the teams are busy one man and the tractor will do more work than three men and six horses, and do it better. All of the heavy work of a quarter section can be done in sixty days of the year.

Still it is safe to assume that tractors will be made lighter as the demand increases and various experiments are worked out. The industry is just now getting a footing. Heavy casting and cumbersome equipment was the rule with the earlier models, but in all probability the automobile has set the example for the tractor and steel will largely take the place



of cast and the machines will be built more and more flexible. Also the cost will doubtless be reduced as the demand grows. The worst feature that the small tractor will have to contend with will be its abuse on the part of the owner. It is natural for the user of any small power to overload it and the small power overloaded is neither economical or safe. When purchasing any agency for power, whether it be steam, gas, gasoline or kerosene, it is well to base its horse-power on the basis of the heavy work that will be required of it. If it will do the heavy work it will do light work easily and cheaply, but if it is bought with the idea of having a light purpose engine heavy work with it will in too many cases be expensive and unsatisfactory.

With the automatic guides now common on the tractor one man can handle it well in the field when plowing. He has ample time to give attention to the plows themselves. With a little skill any average man can handle it, and manufacturers assist in spreading knowledge concerning the tractor. Many of them have schools of traction engineering in connection with their plants, and there are a number of correspondence schools in this country that teach a similar course. It is not a mysterious thing and there are well defined principles that once learned apply to all machines and form the basis for the operation of all tractors. Just now there seems to be a demand for tractioneers who can qualify as experts for the large manufacturers or take charge of a machine in the field.

But to get back to the original comparison of the horse to the tractor—there is no comparison. The horse has its place just as the tractor has, and the greatest degree of efficiency can be attained only by an intelligent use of each. It has been charged that the manufacturers have been foisting a heavy tractor onto the buying public in order to obtain the greater price at a comparative even cost of production. But this has two sides. The demand has been for the larger tractor and it is only of late years that the small machine has come to the front. Just now a tractor for practically any purpose can be purchased. It is the business of the manufacturer to supply the demand. If the demand is for small tractors then small tractors will continue to be produced, but it is a wise plan before buying to consider well the heavy work the machine will be asked to perform. If it is heavy work for even a short time of the year buy an engine that is capable of handling it and the light work will take care of itself. Time will prove that the farm must come up to the tractor

rather than the tractor down to it, if cost of production and great efficiency are to be achieved.

**Rumely Again**

It will no doubt be a source of considerable satisfaction to a great many of our readers to once more see the advertisement of the M. Rumely Co. in the columns of The Canadian Thresherman and Farmer.

During the past eight months we have received a number of letters from our subscribers desiring to know whether or not it was safe to buy goods from the M. Rumely Co., and whether they could reasonably expect to secure repairs on these goods in the future. We were not on the inside of the M. Rumely affairs, but from what we knew, we at all times gave the assurance that it was safe to do business with the M. Rumely Co., feeling that their embarrassment was only temporary, and that ere long they would again be in sound financial condition.

Announcement has now reached us to the effect that our predictions were by no means unwarranted for the M. Rumely Co. is practically relieved of its financial embarrassment, and is on the way to a good sound business footing.

Mr. Finley P. Mount who was appointed receiver some few months ago has undoubtedly worked wonders. This is especially true in view of the period of financial depression through which practically the whole world is passing. The securing of several millions of dollars to put into a financial enterprise is no small task, and this task Mr. Mount seems to have accomplished. From the information we have on

hand we learn that Mr. Finley P. Mount will be President of the reorganized company, and that Mr. Guy will be Secretary-Treasurer. Mr. Guy has been with the Rumely Co. ever since the financial troubles first began, which was some two years ago.

We also understand that all the outstanding obligations will be taken care of, as well as the unpaid commission certificates. The company in the future will devote its efforts to the manufacture and sale of heavy machinery, having abandoned practically all of their small lines.

A more detailed announcement will appear in the October issue of this magazine.

**New Company Takes Over Manitoba Universal Tractor**

The Western Steel and Iron Works, Limited, of Winnipeg have taken over the manufacture and sale of the Manitoba Universal Farm Tractor.

This little machine has met with a great deal of success in the few months that it has been on the market, and the demand has been so great that it was found necessary to provide larger manufacturing facilities.

The Western Steel and Iron Works have a well equipped plant in Winnipeg, and are therefore in an excellent position to handle this tractor.

This light weight machine has been put to some very severe tests during the past few months, and in every case has backed up its inventor and builders. It is a machine well worth looking into by any farmer. There is not the least question of a doubt but that the light tractor is coming, and it would be well for every man with 80 acres or more under cultivation to investigate this little machine.

**Jumbo Water Wagon Tank for \$25.00**

**Ideal for Threshermen or Stock Watering**  
**Strongly constructed to stand rough work.**  
**Heavy galvanized iron used where most wear comes. Joints are close riveted and heavily soldered. Sold under our guarantee to give good service.**

**SPECIFICATION**  
 Bottom—No. 18 Gauge Galvanized Iron.  
 Sides Corrugated—No. 20 Galvanized Iron.  
 Top—No. 22 Gauge Galvanized Iron.  
 Capacity of Tank—11 barrels.  
 Shipping Weight—250 lbs.  
 Large Manhole—18 inches in diameter.  
 Small Manhole—12 inches in diameter.  
 Faucet—1½ inch.

Dept. 17

**Winnipeg Steel Granary & Culvert Co. Ltd., Winnipeg, Man.**

**"AJAX" Thresher Belts**  
**ENDLESS**



Made in England to meet the requirements of the Canadian West, from the highest grade cotton duck  
**Waterproof and Frostproof**  
 Perfect satisfaction guaranteed  
**\$26 and up**

Write us now for prices on any size

Get our Catalogue on Gasoline Engines, Cream Separators, Manure Spreaders, Etc.

**WM. GALLOWAY, Pres.,**  
**WM. GALLOWAY CO. OF CANADA**  
 Dept. 17 LIMITED WINNIPEG

Four Months \$48  
 Individual Instruction  
 Accommodation secured for Country Students

**Metropolitan Business Institute**  
 WINNIPEG (Phone M. 3529) MAN.  
**The only Business College in a Modern Office Block**  
 Expert instruction in commercial subjects. School equipped with all modern office appliances. Our teachers have been trained under practical conditions and impart instruction both from a theoretical and practical standpoint. Special attention given to backward students.  
 Write for particulars now

**GILSON**  
 Johnson & Sons  
 A husky trouble chaser. Will run pump, washing machine, churn, cream separator, windmills.  
 Write for circular and price. Gilson Mfg. Co.  
 Box 471 Dept. C  
 Winnipeg, Man.  
**\$47.50**

**The "Bull" in the Field at Fremont**

Recently we journeyed to Fremont, Neb., attracted there by what was perhaps the largest tractor plowing demonstration that has ever been held in the world.

Fremont is about 45 miles west of Omaha on the Union Pacific Railway and is situated in what is known as the La Platte River Valley.

We reached there about ten o'clock on a certain morning and upon getting off the train one of the first things that attracted our attention was a long line of flat cars about twenty in number, each one of which was loaded with three Bull tractors. One's first thought was "Just what could be done with so many machines in one place." We took an automobile ride of about two and a half miles which brought us to the plowing field which solved the problem of the Bull tractor's presence in such large numbers at Fremont.

This little machine which sells for about \$600 on the United States side of the line was giving a demonstration along with a number of other makes. We saw a pull two 14 inch plows 8 inches deep in stubble, and it performed the stunt without any trouble. Its low price combined with what it would actually do attracted a large crowd of spectators. At one time we counted 120 farmers following this machine down the field. This interest is particularly noteworthy in view of the fact that over 200 tractors representing more than fifty different makes were on the field.

The ground was comparatively soft and while it was not wet it did not make very firm footing for any machine. The Bull tractor, however, had no difficulty in performing its work as the drive wheel was running in the furrow which gave it better footing than other makes which run on the land. One man operated the outfit and drove the half mile initial furrow down the field in a straight line that was an object lesson in plowing.

The best evidence of what the Bull tractor did at the plowing demonstration at Fremont is the fact that over 60 machines were sold on the plowing field to the farmers in the vicinity of Fremont.

We were told that these sales were not unusual as compared with the sales made at the plowing demonstrations at Bloomington, Ill., Hutchinson, Kan., Enid, Okla., and Sioux Falls, S.D.

The Bull tractor in Canada is

**Have an "Adams" Wagon for Threshing Time**



is one on which you can depend, no matter how hard or heavy the going is. Stands right up to its work because of the excellent material and workmanship put into it. The owner of an "Adams" Wagon knows he can load it to capacity and get to his destination without mishap. Delays this year, due to faulty equipment at harvest time, would be very costly. Protect your self by having a sturdy "Adams" for your work.

We carry a full line of sizes and equipments. Tell our nearest Agent what you want—he will cheerfully show you his line. The "Adams" is recognized throughout the West as the Premier Wagon—and this year is better than ever.

**A "PERFECTION" GRAIN TANK, TOO**

One of the handiest and best pieces of equipment the grain-grower can possess. Built for strength and service. Corners and sides are well braced. An automatic-lock end-gate is provided. Tank is perfectly grain tight, and has great carrying capacity, as can be seen by examining its wide, flaring sides. One of the best investments you could make. See our Agent about it to-day—or further information will be gladly sent from our nearest office. Act immediately.



**Cockshutt Plow Co., Limited**

Winnipeg Regina Saskatoon Calgary

**REASONS WHY**

Woods are selected, A-grade choice stock. Best of white oak used in spokes and felloes of wheels. Tires are put on to stay. Axles are straight-grained hard maple. Skeys fit perfectly, insuring lightness of draft—no binding or misfits on an "Adams" Wagon. Iron work is made from best open hearth steel is substantial, and will last a lifetime. And special attention is given to painting and finishing. Every part gets ample protection against the elements and presents a snappy, finished job. See one.

manufactured at the plant of the Western Dry Docks Co., of Port Arthur, Ont. and is backed by a strong, well organized company with ample capital to finance a steady output of large capacity.

**Diameter of the Silo**

The diameter of a silo, says the North Dakota Experiment Station should be determined by the amount of ensilage to be fed. If less than 1 1/5 inches of ensilage are removed daily, moulding is likely to start. The warmer the weather, the greater the depth of ensilage that should be removed. In winter 12 dairy cows fed 40 pounds a day will use up the right amount from a 14-foot silo, while in summer it would require 18 cows to use up the amount of ensilage that should be removed daily. For the 12-foot silo, 9 cows in winter and 13 in summer; for the 16-foot silo, 17 cows in winter and 25 in summer. Let the amount of ensilage fed daily determine the diameter of the silo and let the height determine the capacity.

**A Reliable Spavin Cure**

If you have a horse that has bone spavin, ring bone, or split, not over two years, it can be absolutely cured by using Hawkey's

Spavin Cure. In cases of long standing and those that have been fired or blistered, it will cure the lameness and sometimes remove the blemish.

This is sold by H. R. Hawkey and Co., Winnipeg, Man., and they guarantee to refund full purchase price if it fails to cure. The price is \$3.00 per bottle.

This firm are also giving away free of charge, a 96 page vest pocket veterinary book, showing in a clear and plain manner all diseases pertaining to stock, under four distinct headings, Definition, Cause, Symptoms, Treatment. All that is necessary is to drop a card to H. R. Hawkey and Co., Winnipeg, Man., and the book will be immediately mailed free of charge. It is well worth having.

**ERROR**

In the Canadian Fairban's "Farquhar Separator" ad. appearing in August issue the item 33 in. x58 in. complete, etc., should read:

**36 in. x58 in. complete, etc.**

We regret the misprint.

**30 Times Brighter Light than Ordinary Lantern**

Acorn Lantern uses Gasoline or Kerosene, 300 c.p. for 60 hours on 1 gallon gasoline. Burns as well outdoors as indoors and is absolutely safe. Blizzard, rain and wind proof. Every farmer and country storekeeper should have one of these wonderful lanterns. Agents wanted. Write for terms and territory.

**United Manufacturers**  
Galt Building, Winnipeg

**PEDLAR'S "Oshawa" and "Georgio" SHINGLES**

are **Weatherproof** because they lock on all four sides.

FIG. 1 shows a section of the top. Note the strip that hooks into the bottom flange of the next shingle above.

FIG. 2 shows the under side of the bottom lock.

FIG. 3 shows the method of applying the second course of shingles after the first course has been laid.

Write to-day for New Pocket **C.T.**

**The PEDLAR PEOPLE Limited**  
(Established 1861)

**60 Lombard Street, WINNIPEG**  
Executive Offices and Factories:  
OSHAWA, Ont.  
Branches: Montreal, Ottawa, Toronto, London



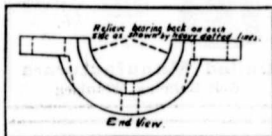
Repairing Gas Engine Bearings  
 By ARTHUR PHILLIPS

A GREAT many gas engines have poured—cast in the bed—babbitt bearings. Sometimes through carelessness or otherwise these do not get the lubrication they should, and consequently get hot and wipe or melt out. It is really a simple matter to re-pour such a damaged bearing. Any farmer with mechanical ability should have no hesitancy in attempting the job. A few simple rules are necessary.

Clean all the old babbitt from the bearing shell. If the shaft is damaged from the heating or cutting, smooth and polish it very carefully with fine emery and oil. Cover that portion of the shaft which is to run in the bearing with lampblack. This is most easily done with a smoky kerosene lamp. Play the flame under the shaft until it is nicely coated with greasy carbon. This is to prevent the babbitt sticking to the shaft.

Now block the shaft in position, taking care to see that it is directly in line with the other bearing, or if both bearings are being replaced, see that the shaft is exactly in its former position and perpendicular to a line drawn through the exact center of the cylinder. Get some common clay and mix it with water to a putty through the exact center of the bearing in position with some shims between it and the frame half of the bearing. Mold the wet clay around both ends of the bearing and make a little clay funnel on top at each end with the hole passing down into the annular space around the shaft.

Melt your babbitt, which should be a good medium hard grade costing not less than 25 to 30 cents per pound, until a white

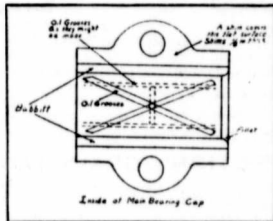


pine stick thrust into it is charred. Don't get the babbitt hotter than this, else its anti-friction character will be destroyed. Be sure that you have enough metal melted to fill the bearing and both the little clay funnels. Now quickly pour the metal into the funnel at one end until it rises and fills the funnel at the other end. As soon as it has cooled somewhat you may knock off the clay and projecting pieces of babbitt.

**Scraping the Bearing**

If the shims have not kept the two halves entirely separate, care-

fully do what cutting is necessary to remove the cap. The mud mold should have been so placed that the metal could run up to and around the fillet turned on the shaft next to the crank. Clean the shaft and bearing all up nicely. Then smear a very thin coating of greasy lampblack on the shaft.

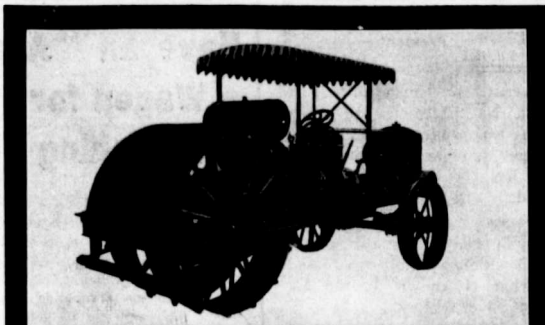


Put the latter in position with the cap on the bearing and rotate it. Remove the shaft carefully and you will find that the lampblack has been rubbed off on the high spots on the babbitt.

These high spots should be carefully scraped down with a scraper. A scraper for this work can easily be made by grinding a three-cornered file on a carborundum stone until the three edges are sharp. All the roughness should be removed and the corners made as sharp as possible. Coat the shaft with lampblack and proceed as described above, repeating the operations many times if necessary until a good bearing all over the surface of the babbitt is obtained. The bearing should be relieved all along the parting some 1/4 to 1/2 inch back. This is, there should be no bearing of the shaft against the metal 1/4 to 1/2 inch each side of the parting of the two halves. If there is bearing there, heating is liable to result since lubrication may be wiped off. If heating does result in a bearing not so relieved, pinching of the shaft due to expansion will occur and excessive heating with consequent melting or wiping of the babbitt will be experienced.

Be sure that a good bearing is obtained in the fillet. If the babbitt is scraped away so that it does not bear here, endwise motion in the shaft will result. If the babbitt bears too heavily against the fillet, heating is bound to result.

Drill the oil hole through the babbitt in the cap. An eighth or three-sixteenths hole is large enough for bearings found on the average farm engine. Leading from this oil hole cut oil grooves in the surface of the babbitt. Practically every mechanic has his own best way of cutting oil



The Kinnard  
 FOUR  
 PLOW Tractor

The latest addition to the "FLOUR CITY" line

The "KINNARD" is a powerful four-cylinder small tractor, unusually well-built, provided with Hyatt roller bearings for all traction bearings, including front and rear wheels. All gearing enclosed and running in transmission grease; two speeds forward 2 1/2 to 4 miles per hour, one speed reverse; 3,000 pounds draw bar pull at 2 1/2 miles per hour; 30 h.p. in the belt; ample power for pulling four 14-inch plows in stubble land and a proportionate number in breaking; weight approximately 7,800 pounds.

Price \$1,187.50 cash f.o.b. Minneapolis.

Can ship promptly if ordered now.

Kinnard-Haines Company, Minneapolis, Minn.

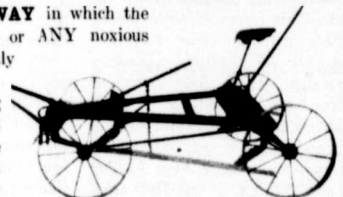
No. 828 44th AVE. NORTH.

DEATH to the THISTLE

THERE IS ONE WAY in which the biggest crop of thistles or ANY noxious weed can be permanently

**DESTROYED**

You must kill the lung surface and as a result in NATURAL LAW the whole plant dies and rots to its last tap-root.



With no more time and labor than is given to the ordinary cultivator, by following our directions on a simple line which we have

PROVED BEYOND ALL DOUBT ON OUR OWN FARM WITH THE MURK THISTLE ERADICATOR

we will settle your thistle, quack grass and all other weed problem for evermore and at the same time STOP ALL SOIL BLOWING.

Write to COMPLETE SUCCESS OR YOUR MONEY BACK

Murk's Thistle Eradicator Co. WINNIPEG

1477 Notre Dame Ave.

Dr. Thomas' Eclectric Oil  
 Relieves all Pain in Man or Beast  
 25 Cent Bottles at all Dealers

grooves. Probably two grooves lengthwise of the bearing spaced so that the cap surface is evenly divided into three rectangular sections will do all that is required. The oil hole should be joined to the two long grooves by a short one cut crosswise. These grooves will be about one-eighth inch wide and three-thirty-seconds deep. Possibly a better way is to cut two diagonal grooves through the oil hole at such an angle to each other that neither the parting nor the edge of the bearing is approached nearer than a half inch. This applies to the two longitudinal grooves mentioned above. They should not approach the edge of the bearing too closely, else the oil will simply run out the end of the bearing.

**Work Should be Done Carefully**  
Carefulness and patience cannot be too strongly urged in all the above work. The success you have with the running of the bearing depends entirely upon it.

When you think you have the bearing properly scraped, put the engine in operating condition and start it. It is advisable to loosen the governor springs so that the engine will run slowly. Use plenty of oil and if possible get some powdered graphite. If there are no signs of heating, run the engine thus for an hour or two. If heating occurs to a dangerous degree, remove the cap and scrape the high spots. If it still continues, remove the shaft and scrape the lower half of the bearing.

Run the engine slowly during this procedure. When you have succeeded in running the engine an hour or two slowly without heating the bearing and with the cap drawn down snugly until there is no looseness in the bearing, speed the engine up to normal. But be careful! Use plenty of oil. Watch that bearing carefully. If it heats at the higher speed, go back to slow speed, after allowing the bearing to cool, and give it a chance to wear in. Take all looseness out of the bearing, but be careful not to get the cap on too tight. That would make any bearing heat.

Keep all dirt out of the bearing. Be careful. Be patient. Don't hurry. Give plenty of time for wearing the bearing in. Follow the above directions to the letter. And you will have no trouble whatever.

**High-Geared Farming**

"Efficiency" is the biggest word in the dictionary of 1915. In agriculture the term takes on a broad significance. It means conserving strength; doing things in the most direct and economical way;

## Built, Not Thrown Together



A Fairbanks-Morse engine always works at its rated horse power. If you buy a 7 h.p. engine from us that engine will develop seven horse power—with least possible cost for fuel—as long as you wish to run it.

We are manufacturers, not jobbers. Every piece of a Fairbanks-Morse engine is made in our factory, by expert artisans, of the finest materials, and every finished engine is tested to the limit.

**The Fairbanks-Morse Name Has Reliable Fame**

You can buy a Fairbanks-Morse engine on time, on terms to suit your convenience. That is one way we have of showing confidence in our product.

Made in	7 h. p.	Terms Price	\$250	F. O. B.
4 sizes:	5 h. p.	Terms Price	165	Winnipeg
	2½ h. p.	Terms Price	100	
	1 h. p.	Terms Price	60	

**Sold on terms to suit your convenience. Five per cent. off for cash.**

Before you forget, fill in and mail this Coupon to us. We will send you FREE a copy "Power on the Farm," a book every farmer should own and read.

**The Canadian Fairbanks-Morse Co. Ltd.**  
SASKATOON WINNIPEG CALGARY

THE CANADIAN FAIRBANKS-MORSE CO., Limited  
 Winnipeg  
 Send me a copy of your FREE book, "Power on the Farm."  
 Name \_\_\_\_\_ Address \_\_\_\_\_

You saw this advertisement in this magazine. Don't forget to say so when writing.

quality and time; saving steps; cutting out lost motion; eliminating the wastes; making every lick count; using more machinery and less hand labor.

China is the oldest agricultural nation in the world. The average farm of 2.6 acres supports a family of nine persons besides producing a surplus of food for the towns and cities. Almost all the work is done by hand—much of it by women. It is hardly necessary to add that the Chinese exist only by the most prodigious toil. Long hours, severe labor, no luxuries and no leisure make up their standard of living.

In younger Europe the peasantry also work hard; much of the farm work is done by hand and woman is always a conspicuous figure in the fields. But they use horse power to some extent and conditions are not quite so slavish as in the Orient.

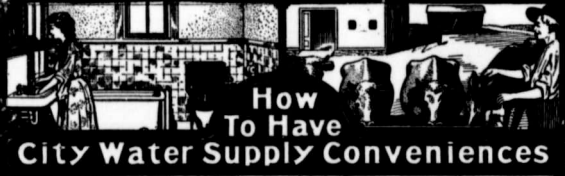
Crossing the Atlantic we find that in New England and the Southern States the common practice is to do field work with one horse or one mule, although occasionally two horses are seen.

In the western half of the corn belt the usual custom is to use a two-horse team. West of the Mississippi River four-horse teams are more in evidence. As we go further west, the farms are larger and labor becomes more difficult to secure. These two facts account largely for the use of more power.

A four-horse outfit can be operated as economically on a forty-acre farm as a two-horse team. Even in a ten-acre field four horses abreast can be handled almost as easily as two and they will do twice the work at the same cost for labor.

It is hard to understand why a farmer will continue to plow and

## How To Have City Water Supply Conveniences



**DO YOU want all the conveniences a city water supply would give you? Running water in your bathroom? In the kitchen? For the lawn? Garden? Barn? Watering Troughs? You can have an abundance of water under strong pressure, for any desired connections, if you install the**

**Kewanee System of Water Supply**

With the Kewanee System, the tank is located in the cellar or buried in the ground, and the water is delivered by air pressure. No elevated or attic tank to leak, freeze, overflow or collapse. Water can be pumped by hand, gasoline engine, electric and other dependable forms of power. Kewanee Pumping Machinery, used in complete Kewanee Systems, is as far ahead of ordinary pumping rigs, as Kewanee Tanks are ahead of leaky attic tanks. Complete Kewanee Systems cost less than you think. Over 20,000 Kewanee Systems in successful operation.

For sale by  
**THE JAMES BALLANTYNE CO. LIMITED**  
P.O. Box 127  
Wall Street and Richards Avenue, WINNIPEG, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.

disk with two horses when he can double his personal output by adding two animals. Probably he feels that he cannot afford to keep the extra team for the small amount of work they can be used for. Here is where the tractor beats the horse. The ideal tractor is at once flexible and discontinuous in its efficiency. It will develop as much or as little power as is needed at a corresponding cost for fuel, and when not in use it consumes nothing but storage room.

It was only a short time ago when the man who was brave enough to ride a sulky plow was hooted at by his neighbors as lazy or a sissy. To-day the hoot is the other way around. He carries a "lazy man's load" who will deliberately tire himself out by walking, when he might as well ride, save his vitality and go to the evening meal in condition to enjoy life and be an inspiration to others. Furthermore, it is no economy of time, money or

# MAX

**THRESHER'S WAGON TANK**



Made of 20-Gauge Galvanized Steel  
Two 18-Gauge Splash Boards

**Sizes 3x2x8  
3x2x10**

**THE MOST SUBSTANTIAL TANK ON THE MARKET**  
WRITE TO-DAY FOR PRICES

**Winnipeg Ceiling and Roofing Co. Ltd.**  
P.O. Box 3006 C.T., Winnipeg, Man.

Name this magazine when writing advertisers

strength to use up human energy in gruelling tasks which leave the farmer no nerve force with which to think or plan. The mind is supreme and good management is the basis of all success, but a tired body means a tired brain, and healthy thought is not created by a tired mind. Even the hired man who sells his muscle is worth more to his employer when he is not compelled to use up his strength walking all day in the soft ground. Horse power is cheaper than man power.

More horse power out in front and less man power in the rear is the keynote of high-pressure farming. Quoting a homely expression from the "Hoosier Schoolmaster": "Git a-plenty while you're a-gittin' says I."

It is probable that mechanical power will be made so nearly perfect that within a few years some form of gas tractor will crowd the horse to the smaller and poorer

farms. At present the large tractors are too expensive and too heavy for medium-sized farms, but the nearly-perfect general purpose farm tractor is on the way, and just as horse feed is cheaper than bacon and eggs, so will gasoline prove to be cheaper than oats and hay for the generation of power.

The man who uses high-gear methods is farthest from the Chinaman who plants his wheat by hand, harvests it by hand, threshes it by hand, ekes out a bare subsistence on the simplest fare and gets out of life just about as much joy as a mule

**The Kodak on the Farm**

We have received a copy of one of the most captivating booklets it has ever been our privilege to handle illustrating something of the remarkable photographic effects which can be obtained nowadays by ordinary intelligence and care at little cost from the wonderful "Kodak" lines.

The subjects are entirely from the farm and farm home life, are of strong human interest, and the atmosphere, clearness of detail and grouping leave nothing whatever to be desired. We are using a "Kodak" ourselves all the time, and the results are never disappointing except in such cases as we can directly trace to our own stupidity or carelessness.

Here's a mint of satisfaction in taking and preserving these records of our daily life and associations which could be obtained in no other way. They write history in a way that beggars the best that language and type can do, and crystallize memories that one would willingly perpetuate at any cost.

**An Open Letter**

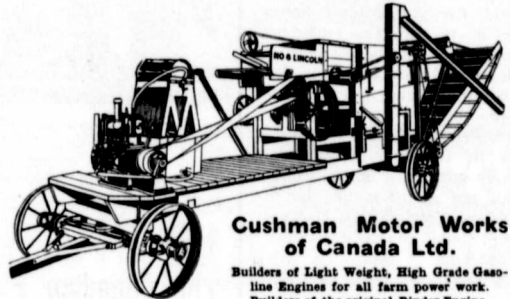
To "The Canadian Thresherman and Farmer."

We shall be glad if you can find space before closing to inform your readers that owing to the unexpected demand made upon us for our "Manitoba Universal Farm Tractor," we have found it necessary to arrange for larger manufacturing facilities. We have therefore transferred our business to the Western Steel and Iron Company whose large and finely equipped plant at Elmwood we feel sure will do ample justice to the biggest call that may be made upon it. For the future, the Western Steel and Iron Company will take care of all orders and shipments, and from all past experience of this firm, your interested readers may count on a perfect service.

We are, yours truly,  
The Manitoba Universal  
Tractor Co., Winnipeg.

**Cushman No. 8  
Lincoln Combination Thresher**

EQUIPPED WITH THE FAMOUS  
CUSHMAN 2 CYLINDER 8 H.P. ENGINE



**Cushman Motor Works  
of Canada Ltd.**

Builders of Light Weight, High Grade Gasoline Engines for all farm power work.  
Builders of the original Binder Engine.

EXCLUSIVE SELLING AGENTS

For Fanning Mills—Smut and Picking Machines—Vacuum Washing Machines—Lincoln Grinders—Lincoln Saws—Incubators—Universal Hoists—Automatic Cream Separators—Champion Cream Separators—Portable Grain Elevators—Wagner Hardware Specialties—Mountaineer and Little Giant Neck Yoke Centers.

286 Princess Street

Winnipeg, Man.

You saw this advertisement in this magazine. Don't forget to say so when writing.



**EQUITY  
THRESHER  
BELTING**

At Unprecedented Prices

We have contracted with a large and reliable firm of manufacturers on an advantageous basis. These prices are an example of the benefits of co-operation. Compare with other quotations, and remember ours are freight paid to your station.

PRICES, FREIGHT PAID, to any station in Sask.

ENDLESS CANVAS BELTS		
Width	Fly	Length
6	4	120
6	4	150
7	4	120
7	4	150
8	4	120
8	4	150
9	4	120
9	4	150
6	5	120
6	5	150
7	5	120
7	5	150
8	5	120
8	5	150
9	5	120
9	5	150
6	6	150
7	6	120
7	6	150
8	6	120
8	6	150
9	6	120
9	6	150

Write for prices of leather and rubber belting.



THE  
SASKATCHEWAN GRAIN  
GROWERS' ASSOCIATION  
J. B. MUSSELMAN, Central Secretary  
MOOSE JAW, Sask.

**DELTA 2-Cell  
Electric Lantern**

A REALLY HIGH GRADE LANTERN built from the ground up out of the best materials by highest grade workmanship to specifications made by the best electric lantern designers in the country.

**\$3.00**

prepaid without batteries

Batteries may be had from your dealer or from ourselves direct

Some of our batteries now in use in gas engine or auto will run this lantern

The ideal light for threshing outfits and stables. Also for deliverymen, inspectors, Autoists, Watchmen, Teamsters, etc., etc.

Throws big spot light 200 feet



The "DELTA" is 7 1/2 inches high and weighs 16-oz. without battery. Provided with both Bail and Grip Handles, heavy convex-concave lens, bull's-eye effect. Reflector of phosphor bronze—triple silver-plated and polished to a mirror finish.

**AN ABSOLUTELY SAFE LIGHT**  
This lantern will replace the oil lantern in all of its uses where fire risk is a serious item

**Houston & Co. Ltd.**  
12 Cumberland Bldg., WINNIPEG

**Live Poultry Wanted**



Write us for quotations on LIVE HENS, SPRING CHICKENS, ROOSTERS, YOUNG and OLD DUCKS, GEESE or TURKEYS

Highest Prices Paid. Prompt returns Guaranteed. Crates sent on request.

References: Canadian Thresherman and Farmer, Winnipeg

**Golden Star Fruit & Produce Co.**  
91 Lusted Street WINNIPEG

**LIVE OLD HENS WANTED**

Write us for quotations on HENS, DUCKS, ROOSTERS, TURKEYS and SPRING CHICKEN.

Top market prices paid. We pay cash as soon as shipment is received. Crates sent on request.

References: Canadian Bank of Commerce

**Royal Produce & Trading Co.**  
97 Aikens Street, WINNIPEG

Twelve Months of this Magazine for One Dollar



**A Unique Farm Lantern**

We gladly direct the notice of our readers to an inexpensive novelty in the shape of an electric lantern specially designed for use in the stable, around threshing outfits, by autorists, etc. Particulars and illustration will be found on another page in the advertisement of Houston and Co., Limited, of Winnipeg. "Safety First" is the strong feature, but it offers many points of convenience and efficiency which are sure to create a big market for it among readers of "The Canadian Thresherman and Farmer."

**A Fine Recruit for the Sow Thistle War**

We have seen a new device, simple and wonderfully effective, for the handling of summer-fallow, which we feel to be of sufficient importance to warrant a strong suggestion on our part to the readers of "The Canadian Thresherman and Farmer" that they should also see it or get in touch with its inventor—Mr. O. Murk, of Winnipeg.

Whether overridden by weed pests or not, the probability is that the reader is at least within the infected radius of some unfortunate or criminally careless neighbor against whose neglect he must everlastingly protect himself. This new implement is a weed killer pure and simple. Roughly, it consists of a triangular hollow knife, with a plow shaped point, bending back in arrow shape to a base of six feet. That is to say, it cuts a swath of weed crop six feet wide at any desired depth in the seed bed. It is carried on a lightly constructed but very strong four-wheeled steel frame, with levers fore and aft to raise or lower it to any depth.

The driver sits behind and operates his two or four-horse team just as he would an ordinary gang plow or harrow cart. While we say "new," the implement is new to Western Canada, but it has already been tested by Manitoba farmers of long experience on their own farms, and pronounced a perfect success. Further, the inventor, Mr. Murk, has farmed since boyhood in the United States, and his implement is the outcome of his own thought and experience in extensive agricultural practice. He is about to issue a hand-book on soil culture, the proof sheets of which we have seen and can say that they contain information and advice of exceptional value. It is not the outcome of studying other men's written stories, but is compiled from established facts, dug out of his long and successful career in the work of raising crops.

We hope in another issue to deal at greater length with Mr. Murk's eradicator. Meanwhile we refer our readers to his announcement on another page, and have pleasure in adding a strong recommendation to our friends to thoroughly investigate it.

**As Deputy Minister of Agriculture**

As we go to press, the information has been made public by the Hon. Valentine Winkler, Minister of Agriculture that one of "Manitoba's own" has been appointed to the important position of Deputy Minister. In the words of the announcement: "To fill the position of deputy minister, we have secured, I am glad to say A. J. McMillan, of 'The Nor'-West Farmer', an honor graduate of the



A. J. McMillan

Manitoba Agricultural College and one of the most popular and efficient young agriculturists in the West."

We hasten to congratulate the Department (and incidentally "Archie") on this appointment. He is all that the official announcement says of him. We have known and followed him since he graduated with honors shortly after he "sat" for the picture which will illustrate this little appreciation of our friend.

It says more for him than any flattering terms we can employ that he should provide once again the exception to the old adage that "a prophet is not without honor save in his own country." It is very gratifying indeed to find that the men are not yet all dead who can rise to an appreciation of a man's worth even if he happens to have been reared in the home circle. With a profound contempt for that prejudice which will go to the ends of the earth to find "a man," we have the conviction that if the Honorable Minister had ransacked any other sphere of agriculture to discover a suitable henchman, he could not have found one who more richly merits his complete confidence.

The "Sawyer" Brand



is the very best of ENDLESS THRESHER BELTS that skill, experience and the highest grade of canvas can produce in a belt.

The SAWYER'S popularity was made and is maintained solely because of its splendid service and the fact that it IS what it is SAID to be. It makes good every promise.

The Sawyer Improved Stitched Canvas Endless Belt is built of heavier duck than other belts. It has a double sewed taped lap and is stronger at the lap than elsewhere. It has a reinforced edge, affording protection against fraying. It is stitched in rows one-quarter inch apart with the exception of the splice which is double stitched in rows one-eighth inch apart.

**THE "SAWYER" REINFORCED EDGES ARE PROOF AGAINST ALL RAGGING FROM WINDSTAKES OR DEFECTIVE ALIGNMENT BETWEEN MACHINES**

Look for the Brand

**"SAWYER"**

and BE SURE

**IF YOUR DEALER DOES NOT HANDLE THE "SAWYER" GOODS WRITE TO US DIRECT NOW FOR AN INCLUSIVE GUARANTEE AGAINST THRESHING TROUBLES**

**E. B. PLEWES CO.**  
WINNIPEG

Everlasting

may be fitly applied to the "BRONCO" brand of Oak-tanned Leather Belting, because with ordinary care it will outlast the machinery to which it is harnessed. For all practical purposes, because of its extraordinary quality of material and workmanship, it is everlasting.

THE "BRONCO" BRAND

IS WATERPROOF

MADE FROM Prime Oak Leather

Splices Stitched with Wax Thread

LOCK STITCHING MACHINE Better by far than the Advertisized "Best"



IS SUNPROOF

TANNED BY Expert Oak LeatherTanners

They are Waterproof Splices

THAT WILL NOT OPEN

It is a Flawless High Grade Belt

Perfect High Grade Material

and the highest paid skilled workmanship are the only constituents employed in the manufacture of the "BRONCO." If your dealer does not handle this brand, write us direct and state your probable requirements.

**E. B. Plewes Co., Winnipeg**

# Blasting Out Stumps

By HARRY THOMPSON

The time which the blasting of stumps can be done most economically is when the soil is well filled with moisture. At this time the water fills the air spaces and the stumps leave the earth more easily. The saving is very apparent in loose sandy soil. Stumps in suc. soils should never be blasted when the soil is dry.

In all but exceptional cases of stumping, it is better to use powder of a strength equal to 20 to 30 per cent nitro glycerine powder, rather than higher explosives. Powders of the above grades are found to give as good results at less expense than the higher grades.

No man should attempt to use powder without first thoroughly familiarizing himself with the best methods of handling the explosive that he intends using. This can be done by observing others at work, by reading directions furnished by the manufacturer, or the Dominion department of agriculture bulletins upon the subject.

In order to get results when blasting stumps, it is necessary to place the powder at the point where the maximum power will be exerted upon the stump. To do this is not always an easy matter, and it can be learned only by experience where to place the charge and to estimate exactly the amount of powder to use under a given stump. Therooting system and size of stump, as well as the soil and subsoil, must be taken into consideration when placing the charge.

The hole in which the powder is to be placed may be made in several different ways, depending upon the kind of soil, rooting system and size of stump. All stumps except those having a tap-root are blasted by placing the explosive in the earth beneath the stump. For small sized stumps that do not require more than one stick of powder, the hole may be made with an ordinary crowbar. For larger stumps an auger of from two to three inches in diameter is used, while holes under the largest stumps are often dug with bar and shovel. The making of the holes is the most important as well as the most laborious part of the work. The auger should be started at a point a short distance from the body of the stump between the two largest roots, and the hole should be bored at an angle of 45 deg. or more with the horizontal, until it reaches a point of from four to eight inches beyond the center of the stump. The charge should be placed beyond the centre of the

stump rather than in front of it. From observation it has been noted that the force of the charge is directed more toward the side from which it is loaded, and if any part of the stump is left in the ground it is the opposite side. For this reason in order to get good results it is necessary to place the charge slightly beyond the center of the stump.

After the hole has been completed and is in the proper place, the amount of powder decided upon is poured in; if a nitro-glycerine powder is being used it is compacted by means of a wooden tamping stick, but a chlorate powder is never tamped. The primer is placed on the charge. It consists of a blasting cap crimped upon the proper length of fuse and imbedded in a small piece of a stick of powder when using nitro-glycerine powder; but only the cap and fuse are used when other powders are used.

The caps used to detonate the powder are very sensitive and should be handled with care. While they are innocent looking, they are very powerful and should be kept out of the hands of children and others who do not know what they are handling.

After the primer is placed on the charge, fine soil to a depth of three or four inches is sifted upon it and packed lightly, after which the earth can be shoveled in and packed solidly by means of the wooden tamping stick. The tamping should continue until the surface of the ground is reached. When the tamping has been completed, the charge may be fired. If the ground is wet or cold the blast should be fired soon after loading. If neither of these conditions is found it can be left until convenient. The fuse is usually lighted by a match, but often some other form of lighter is used, as a red hot iron rod or a short length of fuse.

The success of the shot depends upon the position of the charge and the quality and amount of explosive used. If either of the above is not correct the blast will be only partially successful.

The objections that are offered against the use of explosives in land clearing are that they are dangerous, the use of some kinds cause headache, they are too expensive. Men experienced in this work have reduced these objections to the minimum. In many sections, however, the cost of explosives is prohibitive.

The cost can be reduced to some extent by co-operative buying of car load lots.



## Daylight on Tires

**This reveals why Goodyear Made-in-Canada Tires have won top-place in four years.**

Yet men expect much of the top-place tire. They look for a super-tire in it. Any seeming fault, due to mishap or misuse, becomes a defect in this glare.

But men have tested Goodyears and rival tires on opposite wheels. And tire for tire—in town or over country roads—Goodyears have averaged best. And so last year men bought in Canada as many Goodyear tires as there were cars.

**How to Judge**  
Who is wrong—the Goodyear user, whose



choice is confirmed by some thousands of others, or the man who still assumes that another tire is better? Isn't best average service, as proved by Goodyear supremacy, the right way to judge a tire?

### Lower Prices

On February 15th Goodyear made the third big price reduction in two years. The three total 37%.

Yet the tires are constantly bettered. In five costly ways—each exclusive to Goodyear—our Fortified Tires excel any other tire built.

They mean for you tire content. They mean most for your money, because of our big output. For your own sake, try them. Any dealer can supply you.

**The Goodyear Tire & Rubber Co. of Canada, Limited**

Makers of Truck, Motorcycle, Carriage and Bicycle Tires, and Rubber Belts, Hose and Packing  
Head Office, Toronto, Ontario Factory, Bowmanville, Ontario

The Goodyear Tire & Rubber Co. of Canada, Limited, has no connection with any other Canadian company using the Goodyear name (115)

## HIGHEST GRADE THRESHERS SUPPLIES

Send us your order direct from this advertisement, we have no agents All our goods are sold direct to the farmer.

### EVERY BELT IS GUARANTEED

150 feet, 8 in. x 5 Ply, only \$49.50	120 ft., 8 in. x 5-ply \$42.50	150 feet 7 in. x 4-ply only \$36.50
80 ft., 6 in. x 4-ply \$18.25	120 ft., 7 in. x 4-ply \$34.50	Full weight 32 of duck, the very best canvas belt manufactured to suit the requirements of Western Canadian Threshermen.
100 ft., 7 in. x 4-ply 26.00	150 ft., 7 in. x 4-ply 46.50	
100 ft., 8 in. x 4-ply 30.00	150 ft., 8 in. x 4-ply 49.50	
100 ft., 8 ft. x 5-ply 38.00	150 ft., 8 in. x 5-ply 63.50	
120 ft., 7 in. x 4-ply 29.50	150 ft., 8 in. x 6-ply 66.00	
120 ft., 7 in. x 5-ply 37.50	160 ft., 8 in. x 5-ply 77.00	
120 ft., 8 in. x 4-ply 34.00	160 ft., 9 in. x 5-ply 77.00	

### YELLOW JACKET SUCTION HOSE

Same grade as sold by all leading supply houses.  
Length of 30 ft. \$7.25  
Length of 35 ft. \$9.00



### BEST OAK TAN OUT LACING



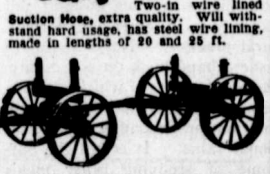
No. 2x47—Made from the very best oak tan leather possible to procure, put up in packages of 1 lb. each in sizes 1/4, 1/2 and 3/4 inch.  
Price per lb. Lace leather in sizes 6 to 8 lbs., price per lb. \$1.20

### LOW DOWN WHEEL

No. 1 with wheels 28 and 30 in. \$17.50  
No. 2 with wheels 26 and 32 in. \$29.50  
All tires are 4 in. wide, 3/8 in. thick, 3 1/2 in. x 10 in. arm.

### ACME LOW DOWN TANK PUMP \$5.75

Double acting, draws water on each stroke of lever, has 5 inch suction, fitted for 2 inch discharge. The equal of any tank pump made. Price includes complete fittings, as shown in illustration. We furnish Two-in wire lined Suction Hose, extra quality. Will withstand hard usage, has steel wire lining, made in lengths of 20 and 25 ft.



We can furnish you anything you require in threshers supplies. Leather, Rubber Beltings, Packings and Oils. If you haven't a copy of our catalog—send for one to-day.

**C. S. Judson Co. Ltd. Winnipeg, Canada**



## Now is the time when you need a Red River Special Outfit.

A great big crop and a short season in which to thresh it.

The Red River Special will beat out the grain and all that the Big Cylinder can thresh.

It is the only thresher having the combination of the Big Cylinder, the Man Behind the Gun, the Beating Shakers, the Adjustable Chaffer and all else that insures the taking the Grain out of the straw by force.

The Nichols-Shepard Steam Tractor has more good features than any other built. They are all set forth and described in our Catalogue.

The Oil-Gas Tractor will drive a thresher with ample power and just as steadily as a steam engine.

Get the Red River Special and Save the Farmer's Thresh Bill.

Write us for particulars. Send for Catalogue.

### NICHOLS & SHEPARD CO.

*(In Continuous Business Since 1848)*

Builders of Red River Special Threshers, Wind Stackers, Feeders, Steam Traction Engines and Oil-Gas Tractors

BATTLE CREEK, MICH.

BRANCH HOUSES (With Full Stock of Repairs) At

Fargo, N. Dak.	Minneapolis, Minn.	Billings, Mont.	Regina, Sask.	Lincoln, Nebr.	Winnipeg, Manitoba	Madison, Wis.	Des Moines, Iowa
Kansas City, Mo.	Nashville, Tenn.	Indianapolis, Ind.	Peoria, Ill.	Geo. H. Gallagher Co., Spokane, Wash.	Nichols-Shepard Sales Co., Dallas, Tex.		
		Consolidated Wagon & Machine Co., Salt Lake City, Utah.		Nichols-Shepard Sales Co., Dallas, Houston, Texas.			

# What Science Does For Farm Crops

By HARRY SNYDER  
Professor of Chemistry, College of Agriculture of the University of Minnesota  
Continued from page 20 August issue

Mature heavy-weight seeds, free from fungus and bacterial diseases, invariably produce crops that are the healthiest, largest yielding, and of the highest commercial grade. The yield of wheat has been increased two or three bushels per acre by simply screening out the light-weight seeds. Heavy-weight seeds have reached a higher state of development, and contain germs of greater vitality and more active physiological properties than light-weight seeds. They contain, too, a larger amount of reserve plant-food for the use of the plantlet, enabling it to become stronger before it is compelled to subsist entirely upon the food derived from the soil. This additional advantage in start is often manifest throughout the life of the plant.

In addition to weight and vitality of the germ, seeds possess other characteristics—as, early or late maturing, or a tendency to contain the maximum or minimum amounts of certain compounds, as starch or gluten. These properties are, to a high degree, inherent in the seed, and are reproduced in the offspring. The physical characteristics of seeds—as, hard or soft—generally indicate the character as glutenous or starchy. From the appearance of the seeds it is possible, between certain limits, to pick out glutenous and starchy kernels capable of transmitting the same individuality to succeeding crops. From an apparently uniform lot of seed the crop will contain two distinct types, one starchy and the other glutenous, the glutenous kernels differing from the starchy by containing from one to five per cent more gluten proteins. Each seed has an individuality, and it is by studying the individual characteristics—as, larger yield, stiffer straw, early maturity, and more glutenous character—that the resultant crop is improved. Often some of these characteristics are to a certain degree antagonistic, and an improvement in one direction may be followed by a loss of some desirable quality.

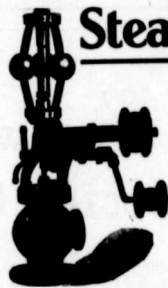
To secure direct results the cerealist often resorts to cross-breeding of varieties. To illustrate, in the Canadian Northwest an early maturing variety of spring wheat is desired. Such a one is secured by crossing Fife wheat with Ladoga, and, as a

result, a wheat known as the Preston is secured which has the desirable qualities of the late maturing parent with the early maturing habit of the other parent. In the breeding of plants many interesting peculiarities develop. Part of the progeny will resemble one parent and part another, and occasionally a new characteristic—as in the case of wheat, a beard, which was a peculiarity, probably, of an ancestor—will make its appearance. By careful selection of the parent stock in plant-breeding, as in animal breeding, certain characteristics can be intensified and more firmly fixed, while other and less desirable ones can in part be eliminated.

The general principles of heredity formulated by Mendel give much promise in the way of crop improvement through more systematic methods of breeding. It is believed by many biologists that Mendel's law offers in part a solution to some of the perplexing problems in plant and animal improvement. It is too early, however, to predict what benefits can reasonably be expected from its application. This law attempts to reduce to a mathematical basis the characteristics of the progeny of plants and animals; a certain percentage having the individual characteristics of each parent, and a certain percentage the blended characteristics of both parents. It is not too much to expect that the proposed law with modifications do much to place the science of plant-breeding upon a rational basis.

In the case of corn, careful selection of seed has resulted in the production of plants which have a tendency to produce an additional ear, thereby increasing the yield ten to twenty-five per cent. Also ears of larger size and more uniform character are secured by breeding and selecting the seed-corn. One of the best examples of the improvement of a crop by selection and breeding is the sugar beet, which has been developed from the common stock of garden beets that contain only a small amount of saccharine material and are unsuitable for the manufacture of sugar, until high grade beets containing sixteen to eighteen per cent of sugar are secured.

As a result of the study of seeds, their requirements are better known. In many instances



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Equipped with

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THE GOVERNOR WITHOUT JOINTS

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FITTED TO EVERY BUILD OF ENGINE

Patent Ball Ranger Speed Changer Supplied on all Genuine Pickering Governors. Will increase speed 50% or more.

**The Pickering Governor Co.**

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Mr. THRESHERMAN:

If anything breaks or is worn out on your threshing machine or traction engine have it welded. Your time is valuable and we are at your service. Tell us your troubles. Send the broken parts to us or ask us to come to your place. No waste of time and no trouble to us. We are the pioneers of the process. We are experts and guarantee our work. Lowest prices.

L'AIR LIQUIDE SOCIETY, 325 William Ave., Winnipeg, Man.

Large manufacturers of Oxygen and Welding Plants  
Ask for information and newest catalogue.

**Fire Proof Lightning Proof READY TO PUT TOGETHER**

**Ready Made Buildings**

"I put it up myself"

You can save the time and money it would cost to figure out and plan good out-buildings. Dealing with us, you can. You can order a building the exact size you want and we have it ready to put on the cars—a rigid fire-proof building that will never cost a cent for repairs. It reaches you ready to put up, and if you are any way handy with tools, you can make a good job of it. The frame members and the corrugated iron are cut to fit. The windows are mounted in metal ready to nail in place. The doors are fitted with all hardware and bird-proof track. They cover the whole side of the building and pass each other on the track. Catalogue sent FREE to readers of this paper.

The Metal Shingle & Siding Company, Limited, Winnipeg, Man.

## Threshing Machine For Sale

FOR SALE, by private bargain, a Great West Thresher (with 32 in. cylinder, 56 in. body) with a four cylinder Sawyer-Massey 45 horse power Traction Gasoline Engine. In First Class condition, only purchased a year ago. Administrators must realize in order to wind up estate. No reasonable offer refused. On view at farm WJ of section 3, 3, 18, West of 1st., between Ninga and Kilarney, Man.

For full particulars apply to  
**THE STANDARD TRUSTS COMPANY, Administrators**  
346 Main Street, WINNIPEG

## Well Drills

For Drilling  
**WELLS or BLAST-HOLES**

Built to stand up under heavy work. Most economical and rapid drills made. Styles and sizes for all purposes, with or without power.

Write for Circular  
**WILLIAMS BROS.**  
426 West State Street, Ithaca, N.Y.

## THE REGINA MECHANICS

S. A. SLANEY F. W. THOMAS  
We are in a position to undertake any kind of machine repairs, cast iron welding, and every description of welding. Send us your broken cylinders, crank cases, connecting rods, bull pinions, etc. In fact—whatever the nature of your breakage—

WE CAN FIX IT UP QUICKLY  
Write us in any case to  
1826 Scarth St. REGINA



# MOGUL ENGINE GANG PLOWS

### INDEPENDENT LEVERS

Each bottom can be instantly adjusted for depth, independently of the others. Outside bottoms can be raised if necessary. Inside bottom can be run shallow in opening up a land. Any bottom can be raised to clear an obstacle. Note how the levers point to the center.

### CONE COUPLINGS

The beam to frame couplings have cone bearings which make it possible to take up all lost motion due to wear. They hinge freely but permit no loose play. Spreaders are also adjustable.

### PIN BREAK

Should the point of a bottom strike an obstacle, the break pin simply shears off, allowing the bottom to swing free. It is only a matter of a few moments to insert a new pin, and the plowing proceeds.

### BOTTOMS

The different types of P & O bottoms are interchangeable. These bottoms are built in our own factory for our own plows. As poor bottoms can ruin the reputation of an otherwise good plow, we see to it that every bottom that leaves our factory is perfect. We know how our reputation for honest plow building was earned, and guard it jealously.

### FRAME

One of the secrets of the strength of P & O Engine Plows. Built of heavy angle iron and strong as a bridge.

### ADJUSTMENTS

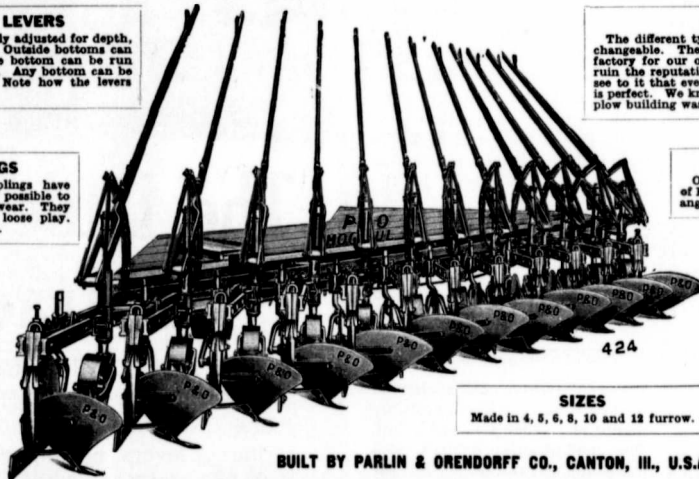
Every adjustment for suction, bearing, etc., provided for and easy to make. It doesn't require an expert to secure good work with a Mogul.

### SIZES

Made in 4, 5, 6, 8, 10 and 12 furrow.

### SPACING BLOCKS

Every bottom cuts exactly 14 inches—no more, no less. The spacing blocks between the beams insure absolutely uniformity of furrow width.



BUILT BY PARLIN & ORENDORFF CO., CANTON, ILL., U.S.A.

## INTERNATIONAL HARVESTER CO. OF CANADA, LTD. SOLE AGENTS FOR CANADA

Winnipeg Brandon Regina Saskatoon Yorkton North Battleford Estevan Calgary Edmonton Lethbridge

You saw this advertisement in this magazine. Don't forget to say so when writing.

the vitality of the crop is unnecessarily lowered through storage of the seed in poorly ventilated rooms and bins. The life process of the seed goes on to a certain extent even during storage. There is a slight activity of the cells, resulting in the production of carbon dioxide. This might be called vegetable respiration. When this ceases death and decay ensue. With the seed it is either a state of life or death. There is no absolutely dormant period in seed life.

While the selection and breeding of seeds has done much, and is destined to do more for the improvement of crops, plant-breeding alone will not produce the results that can be secured through the judicious feeding of crops coupled with seed improvement. Feeding of crops is too frequently neglected. A larger supply of plant-food is the crying need of many soils, and low yields and poor quality of crops are more frequently due to lack of food than to any other cause except adverse climatic conditions.

There is a close relationship between soil and crop. The improvement of the one is dependent upon the upbuilding of the other. Half-starved, struggling plants that fail to mature a reasonable seed crop are of too frequent occurrence. In some in-

stances lack of tillage rather than lack of plant-food is the cause of restricted growth. But tillage alone, important as it is, fails to maintain the fertility of the soil and to produce maximum crops. Tillage and fertilizers both have their place in crop production and plant improvement, and neither can take the place of the other. It is when tillage and fertilizers are judiciously combined that the best results are secured. The role in plant nutrition of certain elements—as, nitrogen, phosphorus, potassium, and calcium—is so well established that the fertilizing of soils to secure maximum crops has become a reasonably well-grounded science. It bears to crop production the same relationship as the science of animal nutrition bears to animal production.

The quality of wheat is greatly influenced by the fertility of the soil. In some experiments with soils that were deficient in available plant-food the addition of fertilizers increased not only the yield of wheat, but also improved the bread-making qualities of the flour made from that wheat. Larger, plumper, and sounder kernels were produced when there was a liberal supply of plant-food in the soil. Better and more nutritious bread can, as a rule, be

secured by good methods of tillage and the use of fertilizers. Spring wheat grown upon worn-out soil yielding ten bushels per acre was found to contain from ten to thirteen per cent of glutenous compounds, while wheat grown upon adjoining plots well fertilized yielded twenty-four bushels per acre, and contained from twelve to fifteen per cent of gluten. The composition and character of a crop are largely dependent upon food-supply, and crop improvement is mainly secured through feeding and breeding. Plants, like animals, must be reasonably well fed in order to reach their maximum perfection.

It is not consistent with the

scope of this paper to exhaustively discuss the part which each science has taken in the improvement of crops. In addition, however, to the sciences of botany, bacteriology, animal biology, physics, and chemistry, the benefits from which have been briefly alluded to, there are also others that have taken an important part in crop betterment. No one science is paramount. The apparently indirect influence of some of the sciences is in reality of much importance. For example, the regulation of the water-supply by irrigation and drainage, which is primarily a problem of engineering, is an important factor influencing the composition and

## Johnston's Granary Handy. Rigid. Safe.

Protect your grain from fire, lightning and rodents. Set up a Johnston's Granary—metal covered and tight as a drum. The grain can't bulge the walls. You can place it where it will be handiest; and move it from place to place if necessary.

Grains cannot heat or mildew. A 14-inch galvanized ventilator provides plenty of air. Johnston's Granary is fitted with tension bolts hold the walls against bulging. The door is iron covered. Inside there is a secret door to hold the grain. The sections of the roof hook together and offer a solid metal resistance to wind, water and snow.

Write TO-DAY.

**METAL DOOR—LOCKED JOINTS**

Johnston's Granary is protected from 4-legged thieves and from fire by galvanized iron walls with locked joints. Iron bands with tension bolts hold the walls against bulging. The door is iron covered. Inside there is a secret door to hold the grain. The sections of the roof hook together and offer a solid metal resistance to wind, water and snow.

**DINNER GRAIN UNLOADER.**

Can be used anywhere on the farm. Send for literature and prices. The Metal Shingle & Sliding Company, Limited. Winnipeg, Man.



commercial value of crops. In the case of wheat, excessive amounts of water produce large yields of starchy wheat, while the amount of gluten is increased by supplying the requisite amount of water at the right time and avoiding an excess.

The geological study of soils has also been of benefit in crop production. A knowledge of the history of a soil is of value, for the kind of rock materials out of which it has been produced, together with the agencies that have taken part in its formation and distribution, are important factors in modifying the character of crops. All this knowledge relating to the improvement of farm crops and other agricultural subjects, secured by scientists in their

laboratories and experimental fields, is disseminated in the form of bulletins, and distributed, without cost, by the agricultural experiment stations of the various States.

There are two distinct phases of the problem of crop improvement. The first is the acquisition of new facts with the view of enlarging the knowledge relating to the subject. It is this quest of knowledge and desire for discovery that is so keenly enjoyed by the true scientist. The second phase is the application of the knowledge to some useful purpose. This is the educational side of the question. While only a few can engage in scientific inquiry, all may benefit by the results obtained.

Questions and Answers

Q. Will you please give me all the information you can in regard to an electric plant of miniature lamps? Will the coil of a make and break gas engine increase the voltage or amperage? I have been using three cells of dry battery for a three candle power lamp. I connected it to the battery on my engine and it made a brighter light by passing through the coil than through the battery alone but I feared the lamp might be burned out. Would three cells of battery connected up with a coil light a four candle power lamp to full power? If not, how many cells would it take and could gravity wet cells be used? Are they of the same voltage and amperage as dry cells? What make of lamps would you advise? Would it be better to connect the cells in multiple or in series?

A. The make and break coil mentioned in your question has only one winding of high inductance but not necessarily high resistance. Direct current will flow through this coil continuously and on breaking the inductive kick is what causes the ignition spark. When you connected your lamp in series with this current, the coil acted as a simple resistance low enough so that the light was brighter using the five cells which your outfit requires, than on a straight three cell circuit. This, you understand, was in spite of, not because of, the presence of the coil. The light would have burned much brighter had the coil been removed.

Whether or not three dry cells will light a four candle power lamp to full power depends entirely on the voltage of the lamp. Three dry cells when new will give a voltage slightly under four and a half. As they are used, the

voltage decreases until at the end of their useful life it will probably be not more than two and a half. The candle power realized from this range will also decrease at the same time. As a general proposition, we would not advise the use of four candle power lamps on a single set of cells, for the reason that the current drain will be so heavy that the cells will be exhausted in a short time. A four candle power tungsten lamp will consume not less than four watts and since three dry cells will furnish about four volts, the current consumption will be one ampere. This drain is entirely too high for economical use in dry cells. Taking, however, the case of a four candle power, six volt lamp, the current consumption will be four divided by six, equals two-thirds of an ampere. Now, one-fourth of an ampere is about as much current as a single set of dry cells can economically furnish, but if we use three such sets in multiple it will reduce this current drain to two-ninths of an ampere per cell, which is well within the limit. The result of a large number of experiments have shown that two sets of cells connected in multiple will give approximately five times the life of one set.

Gravity cells are of the same voltage and amperage as dry cells. When new they show a voltage of from .9 to .95 as against 1.4 to 1.5 for dry cells. Although designed for closed circuit work, the allowable current drain on a gravity cell is very much smaller than that for dry cells. Such a battery would not give you much, if any, better returns than the dry cells you are using. There are other types of wet cells, however, that are much superior to the gravity cell.



The Little Devil Oil Tractor

The Little Devil motor is free from claptrops. Has no cams, cam shafts or gears, no push rods, no valve stems, springs or levers, no "flippers" of any kind. Just two simple cylinders with nothing but the pistons, connecting rods and crank shaft, moving in or about them. Ask us to tell you all about it.

The Little Devil drive wheel is simply wonderful. Built with Hart-Parr Hold Fast lugs, it grips the ground like a horse's hoofs and will work in a muddy field, where no other tractor dares to venture. You can't make a Little Devil slip.

The Little Devil runs on common kerosene

It is in a class by itself. Ask us why.

We are the largest exclusive oil tractor builders in the world. Have been building them for fourteen years and are long past the experimental stage. Our factory in Charles City, Iowa, represents an investment of several millions of dollars. Every dollar of our investment and every year of our experience is back of every tractor we build. Why should you take any chance in buying a tractor? It isn't necessary.

Just send us your name and address and mention this paper. We'll tell you a lot of interesting things about the Little Devil tractor.

HART-PARR CO., 331 Lawler Street, Charles City, Iowa



# Quality without Qualification

is woven into every square inch of the "LION" brand Rubber Belting and the "MAPLE LEAF" Endless Thresher Belt. This fact as a continuous feature of our factory's output has secured for these brands the widest popularity, the biggest and steadily growing sale of any Belting made. Our watchword is **Quality**, and we challenge the world with our



**Lion Brand**

Rubber Belt

OR THE

**Maple Leaf**

Endless Thresher Belt



You can get them from any thresher company doing business in Canada. They cost a little more than other fabrics that are a big risk from the day they are used in any power transmission, but we guarantee our goods against all disappointments from slippage or breaking. They are the "guards" that will never betray their trust under any pressure—at threshing time or at any time.

**Gutta Percha and Rubber Limited,**

NOT IN ANY TRUST OR COMBINE

Winnipeg, Fort William, Regina, Saskatoon and Calgary

**MIXED FARMING IN WESTERN CANADA**

Continued from page 12

and to raise colts. A mare can raise a colt and do a great deal of work besides. Horses are, and for a good many years have been, high enough in price to make the raising of colts attractive financially. While prices are lower now than a few years ago they are still high enough and are probably on a more permanent basis than when they soared. While horse prices must always have their ups and downs, it is safe to say that the man who raises good ones can always sell at a profitable price. Certainly there is no prospect of low horse prices for a good many years, if one may judge by present indications. Probably the greatest handicap to colt raising at the present time is the disease known as joint-ill. This makes its appearance in very young foals and is fatal in a very large percentage of cases. Veterinary authorities tell us that this is due to bacteria which gain entrance to the colt's system through the navel shortly after birth. Cleanliness and disinfection of the colt's navel are consequently the means of prevention. By following the methods prescribed by veterinary authorities the fatality from this disease can be very greatly reduced.

Another obstacle to colt raising

is the general practice of having colts come in the spring. This means that the mare foals and has the colt to nurse during seed time, one of the busiest times of the year. As a result, many mares that would otherwise be bred are kept from it because their work is needed on the drill, and many others foal and have to go right back on the drill again and the foal gets indigestion from an overfeed of milk from an overheated mother and dies, or keeps himself thin and undersized in trying to keep up with his mother as she works. I believe that it would be a good idea to breed mares for autumn foaling. The mare's time could then be easily spared for nursing the colt without interfering with farm work. Fall born colts do quite well where they are raised, and there does not seem to be any good reason why there should not be more of them.

**Kind of Horse to Raise**

I am strongly of the opinion that the draft horse is the horse to raise. He is the horse that is always saleable, and the bigger he is the easier he is to sell. The light horse is an unknown quantity; for one good one, a person is likely to get a good many second raters and culls, and it takes a very small blemish to make them culls. Light horses are needed in the country, to be sure, but there

are generally enough enthusiasts to raise them because they love them, even if those who are studying the profit side of the question all go in for the heavy draft.

Some people advocate breeding a general purpose or agricultural type of horse. It is true that this type of horse is required in large numbers, but there always seems to be plenty of them. They come, not as the result of intelligent breeding, but as accidents, misfits, and from the crossing of varying types. There is no breed commonly bred in Western Canada that purports to be either general purpose or agricultural. Consequently it is practically impossible to try intelligently to breed these types. By trying to breed draft horses, we shall attain plenty of agricultural horses which are simply undersized drafters. These will supply our own farm needs, and any real drafters that we are able to produce can be sold at premium prices for city drays and other heavy work.

**Milking Records of Pure Bred Cows**

Nine years ago the Live Stock Branch of the Federal Department of Agriculture, in co-operation with certain record associations representing breeds of

dairy cattle, began to record the performance of pure bred milking cows. Each record association agreed upon a standard of yield for cows of its respective breed to qualify for registration, while the Live Stock Commissioner formulated regulations under which the tests were to be carried out. At the end of each year a report of the work has been issued, containing a list of the animals that qualified for registration during the year, their breed, age, ownership, milking period, production of milk and fat and such other information as might reasonably be looked for in an official report. Each year the work has increased until the seventh report, just issued, contains no less than 152 pages of information. During the year, 413 cows qualified for registration, including 196 Holsteins, 123 Ayrshires, 35 Jerseys, 9 Guernseys, 14 French Canadians and 36 Shorthorns. The highest records made were: Shorthorn, 15,535 lbs. milk, 540 lbs. fat; French Canadian, 10,767 lbs. milk, 453 lbs. fat; Guernsey, 11,445 lbs. milk, 520 lbs. fat; Holstein, 23,717 lbs. milk, 834 lbs. fat; Jersey, 15,211 lbs. milk, 754 lbs. fat; Ayrshire, 16,696 lbs. milk, 729 lbs. fat.

Copies of the report may be had free from the Publications Branch of the Department of Agriculture at Ottawa.

# HOW TO SAVE GRAIN AT THE SEPARATOR

**G**RAIN saved is money saved because grain in Western Canada at least is real currency not one whit less than the gold coinage of the Dominion. The wastage of grain from "shelling" and from the parasitic birds is as nothing to what is often lost through ineffective machinery. This fact and its remedy has long exercised the brains of inventive genius until we are getting near the point at which one might say that scarcely a single kernel of good grain is spirited away into the straw pile or into any other than the "pile" that is being transported to the market.

The wind-stacker is now such an old friend, it is not needful to speak of it in detail. Every thresherman or farmer who threshes his own grain realizes the advantage of having one attached to the separator. Its utility has been settled by the wide popularity it has earned, no less than ninety-five per cent of all the threshing machines sold in the United States and Canada having wind-stackers attached before leaving the factory.

From the evolution of the wind-stacker has come the old geared stacker, then the gearless, the latter being recognized as the most modern and effective stacker until the objections to it and all its predecessors has brought into the field a device that knocks the bottom out of all else in grain-saving machinery.

Since 1895 the Russell Wind Stacker Company of Indianapolis, Indiana, has been exclusively engaged in the manufacture of wind-stacker attachments for any make or size of separator, beaver, clover huller or corn shredder, new or old, wood or steel. These are made of the very best material, completed and finished ready to be adjusted to the machine at the home of the purchaser.

Since one ounce of experience is worth a ton of all else without it, the long experience of this company which has been entirely devoted to this one thing gives them a unique right to be heard on the subject. The wonderful opportunity this experience opens up to observation with a view to improving at every stage cannot be lightly regarded and it has been warmly appreciated by the multitude of hard-headed practical threshermen and farmers who have followed with intense interest the many new features and improvements which the Russell

Wind Stacker Company have introduced from time to time in their progress towards a stacker that may be pronounced humanly perfect.

In the spring of 1913 the Sharpe grain saving wind stacker was brought to the attention of the Russell Wind Stacker Co. by the Indiana Manufacturing Co. (who own and control the wind stacker patents) and under which the Russell Wind Stacker Company is a licensee. This device — the last word on the subject—was invented by J. K. Sharpe, who has

wind stacker. It filled a long felt need in the threshing machine world as there had not previously existed a threshing machine which was automatically adjusted to every phase of the many conditions it had to fulfil that would effectually prevent the slightest wastage of grain.

This company at once proceeded to thoroughly test the Sharpe device, not merely on paper but by actual sales to practical threshermen. In the one season of 1914 the Russell Wind Stacker Co. sold the Sharpe grain saving

in which they had sold the grain-saving stacker last year.

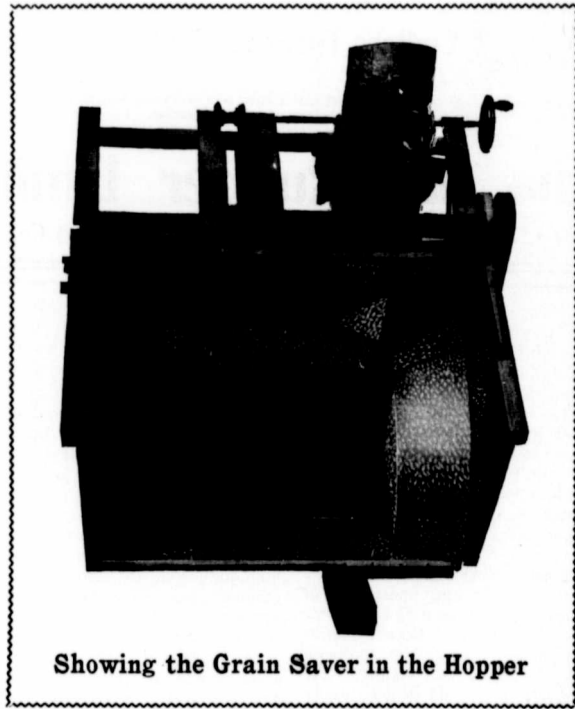
The Sharpe grain saving wind stacker is mechanically correct, scientific and has unlimited capacity. The back-lash, which has always been troublesome and objectionable, has been eliminated. This is accomplished by the specially constructed fan drum, which is offset at the point of air compression, so that it is relieved of the surplus air at this point by means of an auxiliary blast pipe, which runs underneath the hopper.

This pipe is provided with an air distributing nozzle which enters the hopper near the grates or guides, forming a grain trap, and distributes the air blast constantly over the trap, which is located in the bottom of the hopper. By this blast loose grains and unthreshed heads are winnowed from the straw and chaff and caught in the trap to be returned mechanically to the separator and re-cleaned and saved, while the straw and chaff goes into the fan as usual. This blast pipe is provided with a screen located on the inside of the drum at a point where the pipe is inserted, which prevents the pipe from choking.

Such in brief are the rough details of the Sharpe device, but mere descriptive matter on such a subject can give nothing like an adequate idea of what the combination means at work in the actual business of threshing the grain. Its remarkable results have rivetted the attention of many thousands of interested and thoroughly practical observers and its economic points can scarcely be overstated.

Some of the largest manufacturers of threshing machinery in the States have found it necessary to furnish the Sharpe grain saving wind stacker on account of the heavy demands made upon them by customers. The Russell Wind Stacker Co. is in position to furnish this stacker for new or old machines, and it would be to the interest of every thresherman who is really sincere in his economical ideas of threshing, to investigate it. It stands guard over faulty adjustments of the separator, bad conditions of grain and careless pitching, and saves the grain which has heretofore been lost in the straw pile.

It is not so much what a man "makes" as what he saves that counts in the race for success. With a "Russell" he both makes and saves.



Showing the Grain Saver in the Hopper

devoted the greater part of his life to experimenting in the United States and in other countries with a view to bringing the wind stacker to the very highest point of development. He has succeeded beyond the most sanguine expectations and the result which the Russell Wind Stacker Company are now seeking to bring to the notice of the grain-growing world is felt to be an abundant reward, apart from its financial recompense, for all the labor and thought bestowed upon it by Mr. Sharpe.

The Russell Wind Stacker Co. were quick to recognize the merits of the Sharpe grain saving

wind-stacker in seventeen grain growing states in the Union, attaching them to twenty-six different makes of machines with a success the remarkable character of which is evidenced by the very large number of unsolicited and highly appreciative testimonials they have received from leading men who had purchased and used this stacker.

As indicating the demand for this fine new grain saver, the Russell Wind Stacker Company report that already the trade for 1915 has doubled and in some quarters trebled all previous record, and that many fresh orders continue to come in from localities

# Is the Grain Worth Saving?

## WHY NOT INVESTIGATE THE **Sharpe Grain Saving Wind Stacker**

It has been TESTED and TRIED and  
NOT FOUND WANTING

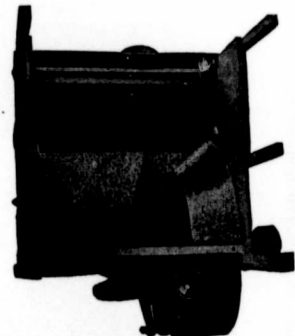
Manufactured for ANY MAKE or SIZE of SEPARATOR, NEW or OLD, WOOD or STEEL

### **AND WE GUARANTEE IT**



Showing how Sharpe Grain Saving Stacker is driven

HUNDREDS have bought them and ARE SATISFIED that this stacker SAVES THE GRAIN the Separator Wastes



Showing how the saved grain is delivered back to the threshing machine

THE BEST is NONE TOO GOOD. It is the STACKER OF THE FUTURE, and it COSTS YOU NO MORE THAN AN ORDINARY WIND STACKER

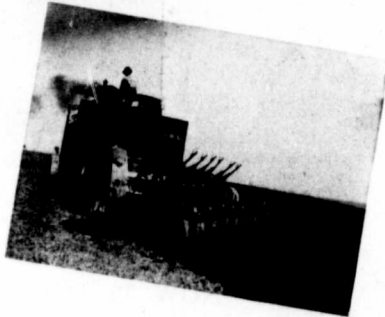
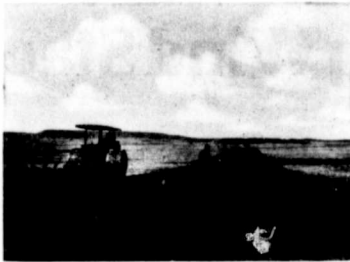


Showing grates in hopper where grain is trapped

NOW IS THE TIME TO SEND US YOUR ORDER. Every Threshing Machine NEEDS ONE, because they **WILL NOT** SAVE ALL THE GRAIN ALL THE TIME

*Write*  
**Russell Wind Stacker Company**  
**INDIANAPOLIS, Indiana**

# Keep Your Tractor Busy



**D**ON'T let your tractor stand idle. There are a hundred and one ways you can add to your season's profit by keeping busy.

Besides plowing there are many operations, such as hauling, road work, logging, stump pulling, filling the silo. Then with the addition of a CASE Husker-Shredder and Corn Sheller or CASE Baling Press you are sure to swell your income.

The Husker-Shredder should be included as part of your equipment. That is if you want to increase your revenue. It is a safe and well constructed machine made to separate and clean the corn and reduce stalks, blades and husks to stover, shelling a minimum percentage of corn.

CASE Corn Shellers are equipped with a patented adjusting lever. This permits the operator to adjust the cylinder to all kinds of corn. There are a good many jobs in the neighborhood for you if you are equipped with a CASE Husker-Shredder and Corn Sheller.

Bale more tons with a CASE Baling Press. The large feeder opening makes fast work a certainty. The gears are all made of Ferro Steel which is the same as that furnished in CASE Tractors. They come in sizes of 14 x 18 inches, with a capacity of 3½ to 5 tons per hour, and 17 x 22, with a capacity of 4 to 6 tons per hour. You can't go wrong with CASE.



Catalogs giving detailed information will be mailed at your request.

**J. I. CASE T. M. COMPANY, Inc.**

741-791 State Street

RACINE, WIS., U. S. A

Canadian Branches: Toronto, Winnipeg, Saskatoon, Regina and Calgary



# Wise Farmers Buy CASE Tractors

**Y**OU can't make a safer investment for your farm than a CASE Tractor. It makes no difference what size your farm. There's one to suit your acreage.

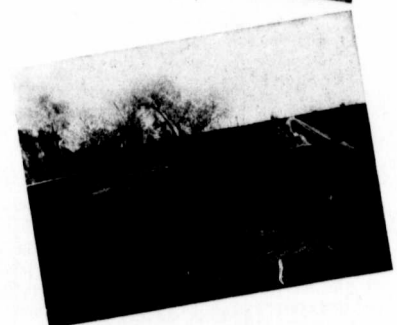
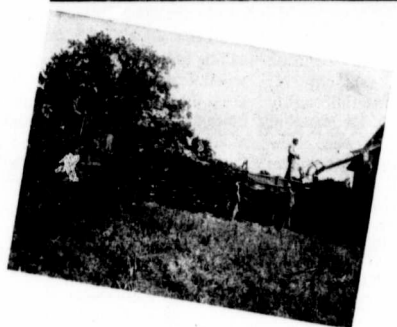
CASE Tractors are no experiment. Twenty years have been spent in perfecting them. Today wise farmers insist upon CASE, because CASE construction means sturdiness and long life. They are simple in design. And if you are tractor wise you know what this means.

Take for instance the lubrication of the motor. The important working parts are lubricated by means of a force feed oiler which insures both perfect and economical lubrication. Numerous tractor tests have proven this system the most practical. It is an essential feature to the life of your tractor. Yet, it is just one instance of how carefully we build.

To give the details of CASE Simplicity is impossible in this limited space. However, a request will bring you definite information showing why farmers in all parts of the world are choosing CASE Tractors. A postcard brings it.



CASE Gas Tractors come in sizes of 10-20, 12-25 and 20-40, 30-60 Gas and Oil. Steam range in size from 30 to 110 H. P.



**J. I. CASE T. M. COMPANY, Inc.**  
741-791 State Street

RACINE, WIS., U. S. A.

Canadian Branches: Toronto, Winnipeg, Saskatoon, Regina and Calgary



**COMMON-SENSE  
ICE-HOUSE**

**Satisfactory and Economical  
Results Secured by a Tested Plan**

**A** N ice-house that will keep ice! And that is so reasonable in cost as to be within the means often of thousands who would put up ice if they only knew how to keep it in to the summer months! Such an ice-house was designed some years ago by Dr. Edward Wheelock, of Rochester, New York, and is now giving complete satisfaction on more than two hundred dairy farms around that city. It has, in addition, been thoroughly tested by the Health Department of the City of Rochester, New York. From an ice-house on the grounds of the Municipal Hospital ice was taken in August that had on it half-frozen snow, just as it was harvested in mid-winter. In no case has an ice-house constructed as hereinafter described failed to keep ice through the season.

The plan of this ice-house is very much like that of the Irishman's overcoat, which he said would keep the cold out in winter and the warmth out in summer. In other words, non-conductivity of heat by the material in which the ice is packed is the essential feature of ice-keeping. The model ice-house will keep ice because it is so constructed that the sun and wind, playing over and around the ice-house, convert the outer layer of saw-dust in which the ice is packed into a dry non-conducting covering.

A house 12x20x12 feet will hold about seventy tons of ice and will carry it over the season with a loss in shrinkage not to exceed five per cent, if the ice, when packed, is not much less than ten inches thick. For an ice-house of these dimensions the lumber will cost approximately \$65.00, nails \$2.15 and spikes \$1.50. A shingled instead of a battened roof would add about \$2.00 to the cost.

High, well-drained ground should be selected as the site for the ice-house. If, however, the only available location should be on wet ground, trenches for the foundation may be dug, and a drain laid. The space about the foundation should then be filled in with broken stones and sand, so that warm air will be prevented from travelling along the drain

and melting the ice. A further precaution might be added by protecting the outlet of the drain so as to prevent entirely the circulation of air in it. Whatever the condition of the soil may be, it is imperative that sun and wind shall have free access to the house. The more of each, the better. Both have drying power, and the ice keeps, as will be shown, because a dry, non-conducting layer of sawdust is constantly between it and the outer atmosphere. Neither this nor any other house will keep ice if it is shaded and protected from the wind.

The foundation may be of brick, wood or cement, provided it has good drainage. On the foundation erect 2x4-inch joists ten inches apart. On the **inside** of the joists nail six-inch hemlock boards laid horizontally, with half-inch cracks



all around between the boards. The roof should be half-pitched and may be either battened or shingled. The gables should be left open wide enough to allow thorough circulation. If the roof overhangs enough to keep the rain out, the gables may be left entirely open. The house has no floor other than the soil or a layer of stones if it is desirable to improve the drainage. At one end of the house leave an opening for putting in the ice. This should extend from the ground to the level of the saddle. As the ice is put in, this opening is to be laid up with common hemlock boards.

At one side of the house build a lean-to approximately 6x8x6 feet, into which the sawdust may be thrown, to dry for future use. In the wall of the ice-house against which the lean-to is built leave an opening so that the excess sawdust may be shoveled into the lean-to as the ice is removed. Not more than two feet of sawdust

**No FEED SHORTAGE**



threatens a single district in Western Canada for the fall and winter of 1915-16. 1915 has been a year of abundance in every corner where man has done his part.

**What are you doing to make the most of what Nature has done?**

Do you know that a

**"MAGNET"  
Cream Separator**

is the best bit of dairy machinery that was ever designed and constructed for the conservation of Butter Fat?

**The Clean  
SKIMMER**

It is not the lowest priced machine made but it is the best value in any Cream Separator known. Quality, Character and the highest possible efficiency is first guaranteed by the severest tests, then a modest profit to the manufacturer is added over bare cost of material and construction.

The "Magnet" is made in Canada by Canadian engineers who have first of all gained their experience on Canadian dairy farms in all essentials to a separating machine that fits it perfectly and economically to every requirement. The result is "The Magnet"—a separator that more than fulfils the last promise made in its name.

We will easily prove what we say by showing you the MAGNET in your own dairy. The design and construction of the machine is what has compelled us to double the output of our factory this year.

**The Petrie Mfg. Co. Ltd.**

Head Office and Factory: HAMILTON, ONT.

Winnipeg, Calgary, Regina, Vancouver, Montreal, St. John, Edmonton, Lethbridge.



**Summer Holiday Trips**



**EASTERN CANADA UNITED STATES**

Toronto, Niagara Falls, New York, Boston, Montreal, Etc.

Combined

**RAIL AND FRESH WATER CRUISES**

Exquisitely appointed trains and veritable palaces on water, insuring comfort and rest to the pleasure seeker.

**SUMMER SERVICE STARTS** with first train from Winnipeg Saturday, June 19, at 10.30 p.m. and every Tuesday, Thursday and Saturday thereafter, connecting at Fort William with SS. "Noronic," "Euronic" and "Hamonic" respectively, and boat special from Sarnia. **DIRECT CONNECTIONS—BOTH DIRECTIONS.**

**DAY TRAIN from FORT WILLIAM** leaves immediately after arrival of steamer

See the Scenic Wonders of Western Ontario  
(The Nibigami District.)

SIDE  
TRIPS

**LOWEST Excursion FARES**

LIBERAL  
STOP-OVERS

Your patronage is earnestly solicited. Literature furnished. Itineraries arranged.

**W. J. QUINLAN**

District Passenger Agent, Winnipeg, Man.



**FURS! HIDES! WOOL!**

If you want quickest returns and most money for your furs, hides, wool, etc., ship them to

**FRANK MASSIN** Brandon, Man.

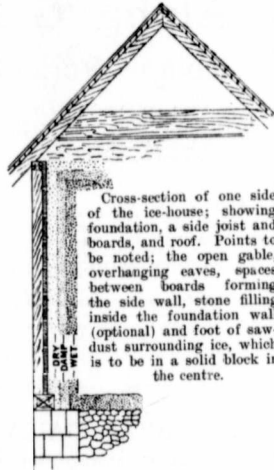
Write for prices and shipping tags.

should be on top of the ice at any time. In filling the house with ice this opening should be closed by boards in the same way as the opening where the ice is put in. This room for storing and drying sawdust is one of the most important features of the model ice-house.

When ready to harvest the ice-crop, cover the bottom of the house with eighteen inches of clean litter or short shavings, similar to horse-bedding. Put the ice in, one layer at a time, taking care not to place one cake directly upon another; the joints must be broken so that they do not come opposite each other. The ice must be in a solid block, so that any tendency to melt will have no crevice to follow. Leave at least twelve inches of space all around between the block of ice and the walls of the ice-house. As each layer of ice is put down, fill this space with clean, dry sawdust, tightly rammed in. When the house is filled to within a foot of the saddle or hip, cover the whole mass of ice with two feet of sawdust. Do these things, and you will have ice on the hottest and latest day of summer—unless you use it up.

Summed up, the salient points in the construction of the model ice-house are as follows: It is cheap. It can be built by any one capable of handling tools. If the soil is wet, it must have a foundation, drained with loose stones into a blind drain. It must not have a drain-pipe opening into it, for then the warm air will pass up

through the drain and melt the ice. The upper part of the house must be well ventilated. The crevices between the boards must be half an inch wide. The layer of sawdust between the ice and the walls of the ice-house must be at least twelve inches thick. The layer of sawdust next the ice will be wet, the middle layer damp



and the outer layer dry. By ventilating the upper part of the ice-house, draining the lower part, and drying the outer layer of sawdust through half-inch cracks in the boards, the ice is kept from melting.

Finally: do not build the ice-house in a sheltered place. Put it in the sun.—George W. Goler, M.D., in "Good Housekeeping."

Practical Pointers for Farm Hands  
(Continued from page 35 August issue)

173. In cold weather, blanket your horses as soon as you stop and fasten them on. It is the first two minutes that chill your horses, especially if they are very warm.

174. In working colts, remember that they are like children—have to be shown over and over again. They should not be expected to learn their business the first year, and always get over a tongue right or wait for their turn to be unhitched, or stand perfectly still in the field and not turn around to see what you are doing. You must exercise patience and good judgment and not spoil them. Be one of the few hired men who are allowed to handle the young horses. You are worth more money.

175. Never set a lantern on the ground in the barn under any circumstances. Get a strap and tie it where you want it, if there is no nail for it. This foolish habit has in all probability set more barns

on fire than all other causes combined. A wire stretched overhead with snaps sliding on it is best for most occasions.

176. Don't mend a harness with nails or tacks. They are almost sure to pierce the horse in time and probably will not be noticed until a bad wound has been inflicted.

177. Watch the blinkers on the bridles. Sometimes the stays get wet and hard and bent up so as to hold the blinkers over the eyes. Sometimes one gets bent back, and that pulls the other one over the eye on its side. When your horse acts as if he were blind and goes stumbling along feeling for his footing and falling into holes, maybe the blinkers are to blame. You know a horse's eyes look out sideways.

178. When you rake the dandy brush with the curry comb to clean it, draw the comb toward you. The bristles of the brush spring back and scatter the dust

GRAND PRIZE  
PANAMA-PACIFIC EXPOSITION

Awarded to

DE LAVAL  
CREAM  
SEPARATORS

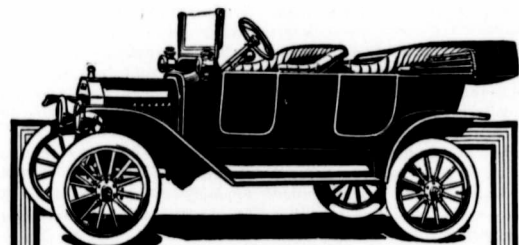
as the Highest Award has been at every International Exposition since the invention of the Centrifugal Cream Separator in 1878.

And likewise as at all previous expositions, all higher dairy product awards at San Francisco have been made to users of the De Laval machines.

DE LAVAL DAIRY SUPPLY CO., Ltd.  
Montreal Peterboro Winnipeg Vancouver

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

You saw this advertisement in this magazine. Don't forget to say so when writing.



"MADE IN CANADA"

Ford Touring Car  
Price \$530

Ford Runabout  
Price \$480

Ford Town Car  
Price \$780

The above prices f. o. b. Ford, Ont., effective Aug. 2, 1915. No speedometer included in this year's equipment, otherwise cars fully equipped. Cars on display and sale at any branch manager, or write Ford Motor Co., Ford, Ont.

WRITE FOR CATALOG B



You saw this advertisement in this magazine. Don't forget to say so when writing.



in the opposite direction. Watch closely and see. And yet some men have curried horses all their lives and have always raked the brush away from them and covered themselves with dust.

179. If a horse objects to being curried, practise on him at the close of his day's work when he is tired. Most horses like to have the neck rubbed. Commence there and work back.

180. Look out for runaways while closing gates, especially if you have a colt in the team. When spring work is starting some of the old horses are worse than colts about running. Running away is a bad habit. If a horse runs away once he is very apt to try it again. After a few runaways some horses can never be trusted again. When the team is not hitched to anything, you can very easily turn them around and have them face you while you are closing the gate, but you cannot turn a wagon or piece of farm machinery. The best plan is to set a convenient post and attach two or three hitching ropes with snaps ready to hold the bits of the most restless horses in the team. This is the absolutely safe method, and would save the value of many a fine colt in his breaking. After a few trials, your team will stand to this post without being snapped up. The post should be out of the way to one side and far enough from the gate to accommodate the longest piece of machinery. Be sure and figure on that.

181. When you tie a fractious horse to a wagon, put the halter rope or tie strap around the rim of one wheel and also around the step or through a ring in the standard or something solid about the box or gears so as to prevent the wagon from being pulled ahead or back. If tied to either the wheel or the box alone, the wagon can be drawn about unless there is a break and it is set tight.

182. When you see a nail coming out or a board coming off about the place, don't leave it for the boss to fix. Get the hammer and fix it yourself. It will score one for you, and you will get to be a boss that much sooner.

183. Help to keep the tools and supplies in place, whether you are the one who took them out or not. If you bring in a pail of grease or a wrench left out by some one else you shall receive your reward. Some men will not do a tap not positively required of them, and then wonder why they are not kept the second year.

184. Be a real help-mate and you will be appreciated and enjoy life the more. If you see a fence wire down, and it would take too much time to fix it up yourself, mention it to the boss so that proper repairs can be made before the stock gets out or a favorite animal injured.

185. A mule will usually lie still when he gets in a tangle and let you unfasten his harness and pull his feet out if necessary, but look out for a horse. When you have him only partly extricated he invariably gives a plunge or begins struggling to help himself out. It requires the greatest caution to keep from getting hurt yourself. In the case of a horse being tangled in his harness or fence wire or anything of the kind, it is best to have some one hold his head down so that he can't struggle until you get ready for him to get up. If you are alone, look out for his feet for he will lie as still as a kitten until you begin to trust him, and then he will surprise you with a four-footed scramble, and you will be under and he on top before you know it.

186. Don't let lines drag on the ground in the field. Tie the ends up or tie them in a knot to keep them from touching the ground. In dry weather the ground will wear them as thin as paper at the ends and be of little use. Of course in wet weather the dirt sticks to them and protects them.

187. The women folk always brag of the man who wears an over jacket when he carries the horses. It should be left in the barn. If you curry horses in your regular suit, it is impossible to prevent the dust and hairs from being carried into the house and being communicated to the butter, the gravy, the coffee, the wash basin and what-not.

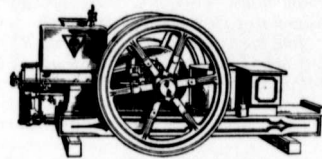
188. If your hair comes out, have your own comb for other people's sake. If their hair comes out, have your own comb for your own sake. Don't be a common guy, willing to throw in with anybody. Be particular for your own sake and you will be esteemed accordingly.

189. The wagon spring seat is made to perch on the edge of the side boards of the wagon box. I have never seen a spring seat broken while it was in its place, but the minute you take it off to use it on the bottom of the box, or on the ground, or in a hay rack, then there is danger of it swaying sidewise and breaking the bolts which hold the seat board to the springs.

190. When a wagon or other implement is to stand unused for any length of time, place a stick or piece of board under the end of the tongue to keep it off the ground and prevent its rotting.

191. Don't talk of your difficulties in the morning. Both you and your boss are most irritable in the morning. Take it later in the day, when all hands and the cook are sailing with steady keel. It is a fact that nine-tenths of all disputes in every line of business occur in the forenoon.

192. Key up your patience for



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

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

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

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

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

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

### DE LAVAL DAIRY SUPPLY CO., Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.  
Sole distributors in Canada of the famous De Laval Cream Separators. Manufacturers of Ideal Green Feed Silos.  
Catalogues of any of our lines mailed upon request.

WINNIPEG VANCOUVER MONTREAL PETERBORO

You saw this advertisement in this magazine. Don't forget to say so when writing.

## Cushman Light Weight Engine Saves a Team on the Binder

Fits any Binder



This is the one successful binder engine. Thousands are in use every harvest. Engine drives sickle and all machinery. Since horses have only to pull machine, two horses will easily handle 8-ft. binder in heavy grain. In a wet harvest Cushman Engine saves the crop, as it keeps sickle going when bull wheel slips—it never clogs.

## After Harvest Does All Farm Work Throttle Governed—Sizes 4 to 20 H.P.

Cushman Engines are very light weight and easy to move around from job to job, yet are even more steady-running, quiet and dependable than most heavy engines, because of Throttle Governor, perfect balance, and almost no friction nor vibration. 4 H.P., weighs only 190 lbs.—167 lbs., when stripped for binder; 8 H.P. weighs only 320 lbs., and 20 H.P. only 1200 lbs. The simple Throttle Governor releases just enough fuel to take care of the load at any moment, thus avoiding the fast and slow speeds at which most engines run.

While Cushman Engines are only about one-fourth the weight, per horsepower, of other engines, they will deliver as much or more steady, reliable power, per rated horsepower, than any other farm engine. Forced water cooling system prevents overheating. Equipped with Schebler Carburetor and Friction Clutch Pulley. May be run at any speed. Moving parts enclosed and run in bath of oil.

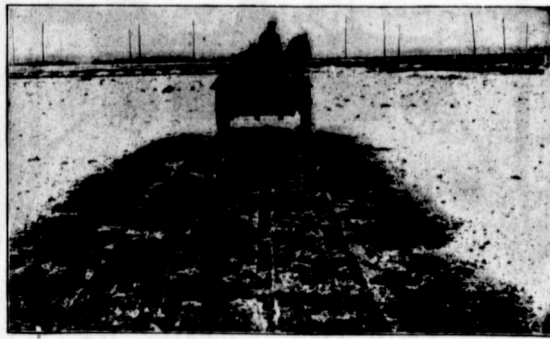
E. W. Gasser, Sidney, Ill., says: "With a Cushman I cut 10 acres more a day with less horses. A binder will last 3 or 4 years longer with this engine." Cushman Engines are not cheap engines, but they are cheap in the long run.

Ask for free Engine Book  
CUSHMAN MOTOR WORKS OF CANADA  
Builders of Light Weight Engines for Farm and Binder Use, Distributors of Reliable Power-driven Machines, such as Grinders, Saws, Fanning Mills, Washing Machines, etc.  
286 Princess Street, Winnipeg, Manitoba



You saw this advertisement in this magazine. Don't forget to say so when writing.





## A Deering or McCormick Spreader will be the Best Investment for You

**M**OST machines handle crops—the manure spreader produces crops." There is a lot of food for thought in that sentence. When you have crops ready, you need machines for the harvesting, but before you can have crops you must have fertile soil.

Your yields depend on how well you fertilize the soil.

In the choice of a spreader—your crop producer—you cannot be too careful. Avoid all chance of going wrong by choosing an **International Harvester** spreader—either a **Deering** or a **McCormick**.

**Deering** and **McCormick** spreaders are built from careful designs based on rigorous field tests; strength in every part makes them last for years; they can be had with an attachment spreading 8 feet wide or more; they are low for easy loading; narrow for easy handling in yard, stable and field.

Go to the **I H C** local agent and study the **International Harvester** spreader he sells. If you don't know who he is, write the nearest branch house for information and for catalogue. Don't buy until you have seen a **Deering** or a **McCormick** spreader.

### International Harvester Company of Canada, Ltd.

BRANCH HOUSES Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Hamilton, Ont., Lethbridge, Alta., London, Ont., Montreal, P.Q., N. Battleford, Sask., Ottawa, Ont., Quebec, Que., Regina, Sask., Saskatoon, Sask., St. John, N.B., Winnipeg, Man., Yorkton, Sask.,

the beginning of the day's work. Your horses are not so docile as later in the day, your nerves are not so steady, and this accounts for the fact that a large percentage of careless breakdowns, quarrels, runaways, crooked driving, the forgetting of important things and almost every trouble you can think of occur before nine a.m. The superintendent of a large manufacturing concern once said that fully nine-tenths of the resignations of his employees were handed in before nine o'clock in the morning, and that a large number were withdrawn before the end of the same day. So if any one scolds you in the morning, don't lay it up against him. He may repent before night and he will think more of you than ever if you walk away looking pleasant.

193. Don't be a tattler. Many a hired man has been fired because he was like a phonograph. Everything that was talked into him was talked out again. All the family affairs became known all over the neighborhood. Don't be of the phonograph kind, if you want to be a success. You must necessarily hear many things not intended for your ears, but no one will care if you don't blab.

194. Some hired men never tell any family secrets until they get mad and leave, and then they tell everything they ever heard.

That is a puppy trick. That is worse than stealing. You are giving away something you never had any right to. Keep your honor even if you did get mad. No one will have confidence in such a man. Who knows who will be the next victim of his fiery tongue.

195. Keep a taut line; a horse should be broken or taught to drive upon the bit. No man ever ploughed a straight furrow with a loose line.

196. If the lines bother by catching under the tongue, buckle a strap to one ring of the neckyoke. After the horses are hitched, pass the strap through the ring on the end of the pole and snap it to the other neckyoke ring.

197. Give your horses ample bedding; straw is cheap. How would you like to sleep on a stone or earth floor on a couple of inches of straw? Make the bed a foot deep.

198. Always groom horses well at night; an hour is little enough to spend on a four-horse team. Horses groomed thoroughly at night will only need a brisk brush-over in the morning and they will rest better.

199. Always water your horses the last thing at night. Many a horse stands all night with a manger full of feed because it is too thirsty to eat.

200. Never water immediately after feeding grain; this washes the grain through the stomach in an undigested state and is apt to cause colic.

### The Farm Engineer

In these days of intensive farming methods, more machinery and less muscle is the essential need. To meet this requirement it is necessary that the farmer equip himself with machinery knowledge and be able to apply it intelligently.

Skilled labor is employed in the construction of all farm machinery in use to-day; especially is this true of tractors and gas engines, the principal factor in the development of power farming. While every effort has been made by mechanical engineers and skilled mechanics to make the power farming machinery so simple in operation that a child can operate them, they have not yet been brought to the "fool proof" stage of perfection.

A railroad locomotive engineer is permitted to run an engine only after several years apprenticeship and study. While the farm tractor, a locomotive, in a sense, is not as complicated a piece of machinery as the railroad locomotive, it requires some degree of intelligence in its operation. The

man or boy who operates it should have some idea of the common principles of mechanics.

To meet this need of the farmer of to-day, many of the agricultural colleges are giving special courses in traction engineering, including a thorough study of the gasoline and oil engines.

The work these colleges are doing is intensely practical. Instruction is given with actual machines in operation before the student. With nearly all kinds of machines available, the student has the opportunity to familiarize himself with as many types of engines as he would probably come in contact with in his lifetime. Various parts of the engine are discussed and their functions explained by experienced lecturers, and the student, by practise and intelligent explanation, learns the fundamental principles of farm engineering. In a few years a gasoline engine or tractor will be found on every farm. To supply men who are capable of operating them is the primary object of the colleges in extending their efforts to developing the farm engineer.

### HOW TO PLAY THE PIANO OR ORGAN IN ONE HOUR

A Detroit musician has invented a new method by which any little child or grown person can learn to play in one hour in their own home. Three sheets will be sent absolutely free to any person addressing a postal card to A. S. Keller, 926 A. Trussed Concrete Bldg. Detroit, Mich.—Advt.

How Debtors and Creditors may Co-operate

"How can a debtor make satisfactory arrangements with his creditors when the money he has to distribute is less than the amount he is expected to pay?" Many farmers and other debtors who were unfortunate last year will seek an answer to this or a similar question this year.

DEBTORS AND CREDITORS ARE PARTNERS

Every man who gives credit to another whether it be in the form of a threshing machine, lumber, horses, cash, houses, groceries, land, seed, grain or other commodities becomes through such transactions and to the extent of the credit a partner with the debtor. And the partnership imposes responsibilities on each party. It implies co-operation for the purpose of earning enough to enable the "active" partner (the debtor), to buy out in time the interest of the "silent" partner (the creditor). Creditors have for years been forming such partnerships with farmers in Saskatchewan and it is perhaps not surprising that some of the partners on both sides should have misunderstood their relations or have failed to discharge the partnership obligations. When the situation is understood clearly and the responsibilities are faced fairly the results of the partnership will be more satisfactorily to all concerned.

Above are the opening paragraphs of an exceptionally well-written pamphlet on this all-important subject which is being issued by the Saskatchewan Department of Agriculture. We regret we cannot spare the space to print in full, but add the concluding paragraphs with the advice that every implement dealer or manufacturer, as well as their numerous debtors, would do well to get it and study it:

"Implement companies tell us that they are compelled by the aggressiveness of their competitors to keep an efficient collection staff in order to get 'their share' of the annual crop proceeds, but would be perfectly agreeable to taking 'their share' when debtors cannot pay all, although until methods change they cannot expect to get 'their share' unless they go after it. The collection agency is a big expense to the companies which they would gladly save, and certainly no farmer would urge them to keep collectors in the field.

"What is the solution? Could debtors in their dealings bring about an improvement by distributing their revenue among

their creditors on an equitable basis so that each one would get a fair share? By adopting such a practice and establishing a reputation for fairness and reliability, might not farmers who do so reasonably expect that in a year or two they would cease to be visited by the special collector? 'Dishonest through force of circumstance,' is a phrase sometimes used by creditors, but it merely means, 'Forced by special collectors to give some creditor a preference to which he is not entitled and unable by circumstances to pay the others what he would like to pay them.' Many a man has got into costly difficulty with his other creditors or his loan company because he was too much influenced by an expert at collecting and paid one creditor more than he could spare without treating others unfairly.

"Mutual confidence is necessary, and if there be dishonest debtors, and some think there are a few, they cannot expect to escape attention except by acting so wisely and fairly as to restore confidence. So long as people buy on credit they will have notes to pay in the fall, but could not much of the present difficulty be avoided by being frank with creditors, by laying full and correct information before them regarding assets and the proposed distribution of revenue, and by following unswervingly a fair and equitable plan of paying creditors from the resources at one's disposal? The more this is done, the sooner will 'co-operation' replace 'competition' in collection methods."

METHODS OF HANDING MANURE

Next to drainage, the manure problem is of greatest importance to the farmer. When thinking of manure for our land we are apt to think of it as only refuse from our barns and stables and of our straw piles. But this is a great source of fertility, which is often largely wasted, if allowed to lay out in the weather.

The stable manure should remain under cover until it can be taken to the fields and spread as hauled. This has been our practice for a number of years and the longer we have practised that plan the better we like it. Our farm is rather rolling and the subsoil is a close-grained gravelly clay but we find that even on that type of soil the plan of spreading as it is taken to the

By reason of the changing shape when in motion this tire cleans itself of all mud and slime.

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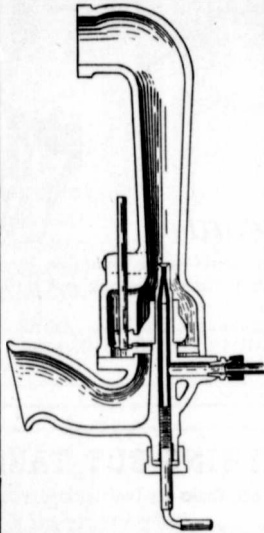
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As the Gasoline enters the Carburetor it is entirely surrounded by a current of air moving at a very high velocity, breaking the Gasoline up into an extremely fine spray or mist and mixing it thoroughly with the air. Thus, the mixture is a mechanical one and does not depend upon vaporizing the Gasoline, and for this reason a perfect mixture can be secured in cold weather and the Engine started without difficulty in any kind of weather.

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AGENCIES EVERYWHERE



Stationary,  
Portable or  
Semi-Portable.

1½ to 20 H. P.

Hopper Cooled  
or Tank Cooled.

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field gives splendid results. One place on the farm was found a bare, gravelly hillside, no vegetation of any kind growing upon it. It was some twenty rods long and four rods in width. It was our first experience with such a condition and we began five years ago to apply stable manure once or twice a year at the rate of five spreader loads to the acre with the result that last year the bare spot was well covered with clover and timothy. This year the field will be in corn and we expect to get a crop from it. At first thought one might think that the rains would wash the manure from such a slope but it has proven otherwise. On that farm as well as the home farm which is level, we clean our stables twice during the winter and spread as hauled regardless of frozen ground and snow.

There is one benefit to be derived from the use of stable manure which, I believe, we often overlook, and that is, the mulching value—its value as a covering for the soil. It also is our practice to put our manure on the sod land for corn which is the only kind of land we plant to corn, spreading the manure as far in advance of the plow as possible. A few years ago we covered some three acres of a field with the straw from an old unused straw stack quite heavily. It so happened that I bought some land adjoining and in arranging the fields, it was necessary to leave that particular field to lay over a year. The result was that on the part of the field where the

straw was put and laid from August until the second spring following, made the best corn in the field. We then had no scale, but the yield was estimated from 90 to 100 bushels per acre. I have since become so much in favor of allowing the stable manure to lie as long as possible that we put no manure on our land intended for corn later than the 1st of February. All manure taken to the fields after that date is spread upon the stubble and young grass which is intended for pasture the following summer.

I know of farmers who will delay the spring plowing to get their stables cleaned and the manure out on the land intended for corn. If these men would compare the results from using this covering as long as possible, even more than a year with that taken from the stables and at once turned under they would change their practice. When I began this practice, my wife thought that I was doing without the benefit of the manure for a whole year. But one would be astonished at the growth the grass makes through this splendid covering and how well it resists dry weather. We have covered ten acres of pasture land since 1st of February, and have some 125 loads yet to get out this summer when we have the time. But instead of doing without the use of manure for a year we are getting full value in the grass crop and getting our next year's land in excellent shape for corn.

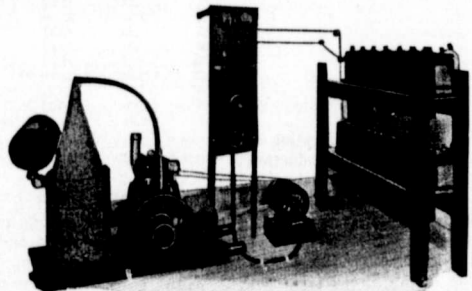
### LEACHING

"Why is leaching of manure under the eaves of the barn more wasteful than the same manure leached in the field where the liquid escapes down the streams? I believe that both methods are wrong and that the manure shed is the only correct way to handle manure."

There is a decided difference between the leaching of the manure in the field and allowing it to wash away, under the eaves of the barn, although as suggested,

both methods could be improved. At the barn, the manure is invariably piled up under the eaves and catches not only the water that would otherwise fall on it but the barn roof gathers up much more and pours out on it. As this water slowly percolates through the three or four feet of manure it comes out fairly laden with the farmer's high-priced fertilizers and every bit of it is carried away beyond recovery or soaks into the ground where only the weeds get the

## CUSHMAN STORAGE BATTERY ELECTRIC LIGHT PLANTS



Engine shown in illustration is our 4 h.p. size, throttle governed and equipped with Schebler carburetor, ensuring steady, quiet operation of engine. Same engine can be used for grinding, sawing, etc., or on any grain binder for which we can supply full attachments.

### CUSHMAN MOTOR WORKS OF CANADA, Limited

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You saw this advertisement in this magazine. Don't forget to say so when writing.



benefit of it. None of it gets back to the field where it belongs.

But when the manure is hauled directly to the field, the plant food that is leached out during the rains is practically all retained in the soil unless the surface is rolling and is inclined to wash. Very little actual plant food is leached out of the soil by the soil water and carried away in the under-drains. Another point comes up, however, which the inquirer doubtless had in mind. There is indeed great danger of losing the value of the manure by surface drainage, if the surface is rolling and the water is permitted to run off rapidly. Here is where the greatest danger lies in hauling the manure to the field as it is made.

In such cases if the manure cannot be spread on level ground, it had much better be protected in some way at the barn. No well organized farm should attempt to do business without making adequate provisions for taking care of the manure. A manure pit or shed should be just as essential and necessary as the corn crib or hay mow.

**Sensible Summer-Fallow**

The Indian Head station, though by no means in the driest part of Canada, has for years led in advocating summer-fallowing liberally "to accumulate two years' moisture for one year's crop." Early rightly-tilled summer-fallow at this station, when the writer was there, showed as high as 35 bushels of wheat to the acre, while right alongside it yielded less than ten on land cropped the year before. Still more striking differences were made at some of the substations, and the one great gospel we heard from Indian Head and from there all over Western Canada, was dry farming by summer-fallowing one-third to one-half the land under cultivation. As a rule the man who tried to get around this failed to get much of a crop. To be sure there were exceptions to this certain seasons, and in certain slightly more moist sections, but they were exceptions, one year with another, in these parts even.

**Average Acre Values of Prairie Provinces' Field Crops**

The figures in the following table are derived from the Census and Statistics Monthly for December, 1914 and January, 1915.

Profits per acre for 1914 will vary with the cost of production, yield and market price.

**Average Yields and Values Per Acre of Field Crops for the Prairie Provinces in 1914 and Some Profits Per Acre, 1913.**

Crops	Ave. yield acre bus.	Ave. price per bus.	Ave. value per acre	Profits per acre 1913
Fall wheat	18.40	\$. 96	\$17.66	4.53
Spring wheat	16.50	1.13	18.64	2.15
Oats	30.26	.45	13.62	.88
Barley	21.63	.52	11.25	.76
Flax	7.50	1.05	7.87	1.48
Rye	20.97	.74	15.52	
Peas	17.25	1.47	25.36	
Mixed grains	25.25	.49	12.37	
Potatoes	130.09	.81	105.37	
Turnips and other roots	257.65	.62	159.74	
Hay and clover	1.57	8.09	12.70	
Fodder corn	3.74	4.87	18.21	
Sugar beets	6.00	5.00	30.00	
Alfalfa	2.47	13.21	32.63	

These figures are interesting in considering increased production for 1915. The cost of production includes the cost of preparation, seed, seeding, cultivation of crop, harvesting, threshing, wear and tear of implements and rental value of land. Preparation includes the cost of applying manure (if any). The value of the manure is counted as off-set by the by-products, straw, fibre, stalks.

Figures are not available for the profits per acre of the heavier yielding crops as potatoes, roots, etc., but their high values should not lead the farmer to overlook their increased cost of production.

**Not Satisfied**

The clerk was at a loss, and the floor-walker minced up and took a part in the conversation.

"Now, how about my money back?" demanded the red-faced lady.

"We return money when cases so justify. What is it—ribbons, shoes?"

"Now; it's a book."

"Has the book been read?"

"Of course."

"Um. We can't return money on books, you know."

The red-faced lady grew purple.



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Make your written records more valuable by illustrating them with Kodak pictures of stock and buildings and crops and orchards.

Illustrated booklet "Kodak on the Farm," free at your dealer's, or by mail

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**WE MAKE NOTHING BUT TANKS**

We have made nothing but Tanks for twenty-three years



If there was a better way of making tanks than the way we are making them don't you think we would be making them that way? We have made these Thresherman's Wagon Tanks for eighteen years and have made and sold thousands of them. We guarantee them to last so long that you will be ashamed to ask for a new one when yours wears out or goes wrong.

Made of 20-gauge GALVANIZED STEEL, thoroughly braaced.

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Depth	Width	Length	Weight	Capacity	Price
2 ft.	3 ft.	10 ft.	335 lbs.	12 Bbls.	\$35.00
2 1/2 ft.	3 ft.	10 ft.	385 lbs.	16 Bbls.	\$42.00

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for an economical threshing and for safe grain storage, you need a thoroughly good Portable Granary

Saves you labor **"Eastlake"** Portable Corrugated Steel Granary Saves you money

meets every requirement of the Western Grain Grower.

Norman N. Ferguson, of Abernethy, Sask., says: "I have the 'Eastlake' set up. It went together fine. It is a dandy piece of workmanship."

- Note these many excellent features:
- Filled from any side. Two unloading Chutes with pad-locked cut-offs. Two Pressed Steel Doors. Machine-made throughout. Interchangeable and removable side and roof sections. No cast-iron used anywhere.
- Not expensive. Write for complete illustrated circular.



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HEAD OFFICE: WAWANESA, MAN.

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Amount of Insurance in force Dec. 31st, 1914 845,000,000.00

Assets over Liabilities 9710,000.00

THE NUMBER OF FARMERS INSURED, 31st Dec. 1914, 87,576

The Largest [Farmers Mutual Fire] Insurance Company in Canada.

We prepay charges to your nearest station on Outer Garments shown in our Prepay Catalogue



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# EATON'S

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**THE T. EATON CO. LIMITED CANADA WINNIPEG**

You get selection, service and satisfaction in dealing with **EATON'S**



Winnipeg, Sept. 6th, 1915.

The crop of 1914 with its fine prices toward the winter's end and its big slump in prices, when stocks were really small, is now a memory. Old wheat is no longer enquired for, though in ordinary years old wheat is at a big premium usually late into September, the new crop is high in grade and engrosses the attention of all the West. The farmer's jubilation in his great yield of high grade grain is almost surpassed in degree by the Western business man's gratification. The biggest crop by far in our history is being safely garnered, despite a season of freakish weather with little heat and frequent frosts. Western Canada has done herself proud as "the Granary of the Empire."

But the drastic drop in all the grain markets of North America has, just at the beginning of marketing, brought home to the thoughtful farmer the fact that his grain markets are restricted and easily warped by the professional speculator. Europe played the part of an indifferent buyer and joined in selling down all North American markets. Quite confident of getting all she needs from the huge surplus of North America, she may follow her advantage further, always skilfully holding up that well-worked bugaboo "the early opening of the Dardanelles." So, growers must give special study to marketing carefully and as leisurely as possible, holding over till mid-winter or later, as great a quantity as they can. All Farmers' Organizations have joined in a statement to this end.

Lake and Ocean boat space are both scarce, and high prices rule and likely will be higher as the movement gets heavier. Rates of exchange have recently been very adverse to our prices, in fact last week the discount amounted to as much as ten cents per bushel against us. This, it is hoped will be cured by the establishment of huge credits by Great Britain in the U.S.A. Another serious break in exchange rates when crop movement is heavy might bring a very serious drop in all American markets.

Estimates of the big crop by experts range from 222,184,071 bushels, in the case of the Free Press, to about 250,000,000 bushels by others. An average of

20 bushels would make the latter estimate.

Hail damage in Saskatchewan was only 56 per cent of that of last year. Harvesting has been hurried during the most favorable weather and the movement of about 500 cars per day past Winnipeg shows that much threshing has already been done. The grade is remarkably high, for instance, on September 3rd, out of a total of 374 cars inspected, there were 14 cars of No. 1 Hard and 217 cars of No. 1 Nor. With the railways keen to make earnings after a lean year, and given fair threshing weather, the movement will likely be very heavy, and consequently prices forced unduly low. For the next three weeks, farmers would do well to sell on track as soon as cars are loaded, hence forestalling a probable drop in the market while en route.

To September 1st the movement of the American Winter wheat crop was hardly half what it was last year, owing to continued rains. The American Spring wheat crop is relatively as much greater than that of 1914 as is ours greater than our last crop. So with three big crops to ship in the next few months, ocean boat space will be scarce. The Canadian Government is taking steps to get a large number of vessels into the grain trade. The United Kingdom will require about as much wheat as last year, France about 80,000,000, Italy about as much wheat as last year.

Holland, Scandinavia, Switzerland, Spain and Portugal in excess of last year. Reserves of old crop in all these countries are light. The crop in Greece is only 60 per cent that of last year, Southern Russia has a good crop, but of course none of that is available for Western Europe until the Straits are opened. Should the Allies succeed in this great enterprise, all markets would likely have sharp sinking spells. Yet, if our Western farmers would put out what they absolutely must this fall, the market would likely soon steady, but at present a steady lowering trend of prices seem inevitable.

**Coarse Grains**

A few farmers early got their barley sold to arrive. Yet, ere fifty cars of new barley had passed Winnipeg, the markets were down about 16c. The great wave



**Good  
Premiums  
Still**



**Get our bids  
on Barley**

The recent showery weather has retarded the grain movement, and hence good premiums may still be had. Phone or wire us for bids on track or to arrive. We have helped hundreds already to secure better prices and can help you.



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ESTABLISHED 1914

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We shall be glad upon application to send you free the "Winnipeg Grain Trade News and Produce Record," containing the closing prices for all cash and future grains, also live stock market news. Personal attention given to all shipments, grading rechecked, and settlements forwarded promptly.

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of temperance sentiment which has swept Canada, and to a less extent the U.S.A., and the harvesting of large crops of barley on both sides of the line have brought barley down sharply until now, it is only a feed proposition. The narrowness of the market since the recent Order-in-Council, prohibiting exports to any European country, save any one of our Allies, indicate lower prices for barley.

Oats have probably gone low enough, though ocean freight congestion may bring lower prices when the movement gets heavy. The crop is large and of good quality. In some districts, considerable frost damage was done.

Yet, Ontario and Quebec have big crops of oats and barley, though some have not been well saved, and Eastern demand will be slow for some months. Farmers should store at home till January, all possible oats and barley. The oat crop in the U.S.A. is large.

Flax

This seed seems too low in price. The Free Press estimates the crop in Western Canada as 6,645,370 bushels, a comparatively small crop. The American Northwest hopes to thresh about 14,000,000 bushels. Taking seed out of this, the amount for crushing is not burdensome, and flax should improve in price ere long.

Very Important Information to the Farmers of Manitoba Saskatchewan and Alberta

Since the date of our last letter to you regarding flax, the weather for the maturing of your crops has been all that could be desired over the greater portion of the provinces, resulting in estimates being made by experts of a large increase over previous years. Within the last two weeks several things have transpired to unduly depress the price of wheat. First, the decline in the price of sterling exchange, which in itself counts for several cents per bushel decline. Second, the prospects of the opening of the Dardanelles. Third, high freight rates across the ocean, which, we figure, will later on get down to more normal conditions. Fourth, the extreme anxiety of farmers to rush their grain forward and have it sold, which is practically the greatest depressing influence in both Canada and the United States.

If the farmers would remember that the four chief reasons given above can be entirely altered in a day, they would not be so anxious to sell their grain on a declining market and at such low prices. This war is still going on and the devastation in the countries at war, no matter what is said to the contrary, is still very great, and we claim this war is yet a long way off being settled. We know that vessel owners are demanding ridiculously high freight prices across the ocean which will not be granted, and they will have to reduce their rate several cents per bushel before much business will result, which will be added to the price of wheat. This hue and cry about the danger of the submarines is simply a tempest in a teapot, and could be compared favorably with a wreck on the C.P.R. in which a few box cars are destroyed. If the Dardanelles are opened in the near future, we do not consider this a bearish feature, as all the railways, which in time of peace are inadequate to the handling of grain, are at present being used to their fullest capacity in the handling of troops. This argument is freely used by speculators to depress prices, especially when farmers begin to rush their grain to market. The decline of the sterling exchange is nothing more or less than the manipulation of large financiers of the continent to further depress prices. It is wonderful how all these arguments being put out now to depress prices can be changed to help advanced prices when the parties interested are ready. We would strongly advise farmers not to rush their grain to market, but if they have got to ship their wheat forward to terminal elevators it is not necessary for them to sell at once, because almost any commission firm can make them big advances against each carlot.

In conclusion, we would say to the farmers not to pay any attention to reports circulated throughout the country to depress prices, as there is generally not a word of truth in the bulk of these reports. We claim that the great fear of lower prices takes hold of us all, which is one of the strongest features in depressing prices, and there is absolutely no reason for this fear, and we must try to guard against it.

If you entrust your grain to us you can rest assured we will handle it to the best of our ability, and will give you good advances on each car, and we will try to figure the situation out so that your grain will not be sold at ridiculously low prices.

Just a word about flaxseed. We have no reason yet for changing our minds. Keep it back in your granaries. You will make from \$1.00 to \$1.50 per bushel more than present values by holding, and this advance may come sooner than you expect. We might just say that there is very little flaxseed in this country, and what there is all badly frosted.

If you are on the G.T.P. or the C.P.R., bill your grain to Fort William, Ontario, and if on the C.N.R., to Port Arthur, Ontario. Advise McBean Bros., Winnipeg, Man. We will always check up the grading and weighing.

P.S.—It has just been reported that a large percentage of the winter wheat being shipped from the United States to Europe is arriving there in bad condition, due to excessive rains, and it will be wise for farmers to remember this item, because there are millions and millions of bushels of the same kind of wheat still in the United States which they are trying to get sold and shipped before it rots. This will be a strong bullish influence in advancing prices later on.

McBEAN BROS.

September 7, 1915 Grain Exchange, Winnipeg, Man.

Managing the Pig Crop

Ways Which Help to Make Good Hogs

By EDWIN HOUSTON

(Address given at the August annual meeting of the Texas Swine Breeders' association.)

THERE are two features of pork production that are of the most importance, and that, if thoroughly mastered, will nearly always assure success in the fine art of hog raising. They are "Pig Management" and "Feeds and Feeding." Either one of these questions could be used as the subject for a whole library.

The physical condition of the sow at the time she has been bred and during the period of pregnancy is most vital to the health and vigor of the future litter. This is usually a time, too, in a sow's life that is neglected and when nearly any kind of feed and care is considered good enough for her. Part of this is neglect, caused, no doubt, by the general teachings of hog men, that when a sow is too fat she will not raise the best pigs. This is so, all right, but it is also true that when she is too thin she will not do her best or even when she is carrying the right amount of flesh, but when that flesh is not of the right kind. I mean by this, when the meat carried is composed of too large a percentage of fat and not enough muscle.

Keep the Sow Gaining

The successful litters are usually had from those sows that are rather thin at the time of breeding and are gradually gaining in condition and continue to gain until farrowing. These gains should be made while the sow is in a pasture where she can take plenty of exercise and should be made from feeds that have a reasonable amount of protein in them, and, if possible, succulent feeds.

What should be carefully avoided is to feed and handle the pregnant sow so as either to make

her lazy and fat, or to let her get thin and unthrifty. The first condition will cause the loss of many pigs by overlaying and the second will tend to prevent a large enough milk flow. When either too thin or too fat the pigs will not be born with enough vitality to carry the largest number through the weaning stage and when the sow is in either of these undesirable conditions the pigs are much more apt to have scours, sore mouth or some other of the troubles that little pigs are heir to.

At Farrowing Time

It will be well worth your while to give the sow just a little extra care and attention just before she farrows. If she is in the right physical condition at this time she will be active, with plenty of flesh on her but not much fat, and if you can put her in a green lot with an individual hog house in it, there is every chance that she will do the very best that her breeding and individuality calls for. Some sows, no matter how carefully handled, have a tendency to get constipated before farrowing, but a little epsom salts given in the slop for a few successive feedings will put them right again.

Many of the pig losses occur while the sow is farrowing. It follows, then, that, if carefully watched at this time, she will save more pigs. Don't let yourself or anything else disturb her or irritate her in any way, as this may be disastrous.

Perhaps you have had a sow get away in the pasture and make her own nest and farrow without your help or attention and, if the weather was fair, you might have been surprised to find that she saved every pig farrowed. Rarely

YOUR BARNs WILL LAST

many years longer than ordinary brick, wood or plaster—coated structures can possibly do if they are protected by POWDRPAINT

NOW is the time to protect your buildings and all property exposed to weather-wear.



is supplied in powder form and NEEDS NO OIL. It is used with WATER ONLY and the cost is only one-fourth of oil-paint.

We guarantee, and this publication guarantees, perfect satisfaction, and that POWDRPAINT will do all that is claimed for it at a saving as above stated. As an inducement we will send a 25-lb. box (making 6 gallons, and covering 1,800 square feet) for \$5.50, carriage paid to nearest railway station, during September and October. Colors: Rich Red, Green, White, Stone and Slate.

HOME COMFORTS CO. 323 Garry St. Phone Main 390 WINNIPEG

YOUR "VOTE AND INTEREST" respectfully solicited for the "Canadian Thresherman and Farmer"

will one be overlaid under such conditions.

**Why Pigs are Lost**

For a sow to kill her own pigs, either by eating them or by overlaying them, is against the laws of nature, to say the least, and can only happen by man-made, artificial environment and one not suited to her natural habits of life. Men are compelled to put swine under artificial conditions in order to make them the more profitable, but it is well to do this without breaking any fundamental natural laws of hog life. Most pigs are lost by lack of an understanding of these laws and the resulting unintentional abuse of the sow and litter.

Take the breeding life of a wild sow, for instance. She is first bred when nearly mature but still putting on flesh, and if she is fortunate in her foraging she will be in rather high condition when farrowing time comes, but will still be active and alert. She makes her own nest on the ground in some secluded spot and stays with her litter for the first few days very closely and her main sustenance is water. As the litter grows older she gradually forages for more food and when the pigs have gotten larger still they go out of the nests with her and begin to eat what she eats. Not until the pigs are eating well and are not dependent on her does she wean them. At weaning time she is very thin. Nevertheless, she will be usually bred again as soon as she finds enough food so that she can pick up in flesh and then, if the woods are provident, she will be in rather good shape by the time the litter arrives.

Of course, we can improve greatly on the profitableness of the wild hog and on the number of pigs farrowed. We don't let our sows fight with wild animals for the lives of their young, nor should we let them suffer for food as the wild usually do, but many a farmer can take lessons from a wild sow on pig management.

**The Individual Hog House**

The individual hog house is the best at farrowing time because it isolates the sow from other hogs and makes her less nervous and restless. Unless very wet, the ground is the best floor and unless the weather is very cold no more bedding is required than the sow can gather herself about the lot.

Many breeders contend that guard rails should be nailed around the farrowing house on the theory that when a sow overlays her pigs she mashes them against the side of the house. Personally, I believe guard rails are worthless and the pigs that I have found overlaid were killed in the middle of the floor. I attribute the trouble of overlaying almost entirely to an improper condition of

the sow, though it can sometimes happen on account of an uneven floor, too much bedding, extreme cold or just from a careless, no-good sow.

**At Weaning Time**

Weaning time is stunting time. If you get runts this is usually when they are made. Three mistakes are usually responsible.

First mistake, weaning too young. Pigs should never be weaned while they are heavily dependent on their mother's milk and too young may mean six weeks or three months, depending entirely on how you have trained them to eat.

Second mistake, giving the pigs unsuitable foods just before and just after weaning. The ration at this time should be very digestible, as nourishing as possible and of a kind pigs will eat greedily.

Third mistake, changing the range of the pigs at the same time you take their mother away from them. They are very restless anyway and unless they have old known feeding places to go to they are not as likely to thrive.

In conclusion let me say that many runts can be rejuvenated by simply putting the min separate pen from their larger mates and giving a little extra food and attention.

**Deep Furrow Holds Season's Rain**

By Charles Cristadoro

If you furrow your land twelve inches deep, plowing or say discing shallow at first, before the rain, and then after the first rain driving the plow-share deeply into the moist soil, you open the mouth of the earth to abundantly drink from the clouds. And the rain fills furrow and gravity takes it far down into the earth, there to be stored for future use. The saying that, "What goes up must come down," is reversed, for what water goes down in the earth must come up again or it will be of no service to the plant roots. So we start in and trap the moisture from the clouds, and once in the



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At a Price You Will Never Get Them Again

We bought all that was left of a large Rubber Manufacturer's 1914 Belts at a very low figure for spot cash.

These belts were all guaranteed in 1914, but owing ONLY to the ridiculously low figure, are not guaranteed at this special price. If you want a guaranteed Belt, see our catalog.

Limited quantity only, order at once. Please state, if we are sold out of the size you want, if you will take any other size. State first, second and third choice.

**SPECIAL REDUCED PRICE ON RUBBER BELTS**  
NOTE THE PRICE ORDER AT ONCE

Length	Width	Ply	Price	Length	Width	Ply	Price
100 feet	7 inches	4	\$19.00	120 feet	8 inches	5	\$36.40
120 feet	7 inches	4	22.90	150 feet	8 inches	5	45.50
150 feet	7 inches	4	29.75	150 feet	8 inches	6	54.60
150 feet	7 inches	5	39.30	100 feet	8 inches	4	21.80
120 feet	8 inches	4	27.05	150 feet	9 inches	5	51.10
150 feet	8 inches	4	31.95	150 feet	9 inches	6	60.75
160 feet	8 inches	4	34.85	160 feet	9 inches	6	64.40

Examine them on arrival, and if found not satisfactory, ship them right back and we will immediately refund money, including the freight charges.

Signed H. R. HAWKEY & CO.

Write for Catalogue

**Water Tanks, \$23.50** Including Two Bunks While They Last



These tanks are made of 2 x 3 inch spruce with three oak cross cleats, 2 x 3, on top, and two oak cleats, 2 x 3, on each side of the top, into which are fastened four half inch steel rods which band the body together. 36 in. wide, 26 in. high, 14 ft. long.

Order these at once, as we have only a few on hand, and cannot supply any more when our present stock is exhausted. Price, including bunks, while they last, only \$23.50

EVERY SIZE **REMEMBER!** IT PAYS TO BUY THE **HAWKEY PLOW SHARE** EVERY MAKE

TELL YOUR NEIGHBORS WITH THE **RED LABEL** IT'S A GUARANTEE NOTE OUR LAP WELD WE SHIP DAILY ANY DEFECTIVE SHARES REPLACED WE SHIP DAILY

OUR SHARES WEAR & LAST LONGER

WRITE FOR CATALOGUE **H. R. HAWKEY & CO.** WINNIPEG MANITOBA

ground, the trick, the science of good farming is to bring it up again so far as the root influence, and stop it there. Thus far and

no further. The thirsty air blowing over the fields wants it, and were a crust formed upon the surface through capillary attraction, would soon draw it away. So if a crop is to be put in after plowing (and summer following be not employed, we start capillary attraction by subsurface packing the earth around the seed drilled in. The packed earth connects with the wet earth below, and thus a continuity is established, a capillary conduit established with the water stored below. The seed moist earth, when drilling follows, subsurface packing is snugged into firm, now having insured



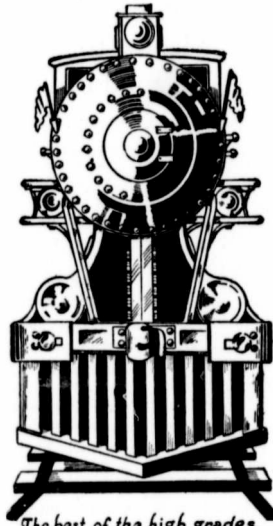
Students Butchering—Manitoba Agricultural College. All meat used at the College is slaughtered and dressed on the Premises

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The best of the high grades.

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Solid Comfort

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McDermot Avenue, at Kate Street

Winnipeg, Manitoba

the capillary uptrend of the moisture from the underlying stores, the next point is to see that the grain gets the free benefit of such moisture, and we accomplish that when we break the further capillary action by the mulching of the surface.

And we do more than that, especially if we harrow the soil once or twice, even after the grain is up, we destroy weed life and when we do that we prevent the water-sucking and transpiring roots and growth from dividing the stored moisture with the grain roots below. Hot winds and weeds will turn a sodden field wet six feet down, into a patch of desert land as dry as dust in an incredibly short period of time. When a wise farmer harvests his grain he will follow at once with the disc and harrow and freshly break and his ground to retain, keep stored, any surplus moisture that was left unused in the ground after the crop was matured and harvested. That's economic, scientific and successful farming—the economic conservation of the unused moisture in the soil.

If the land is to be summer fallowed the subsurface packing may be dispensed with, perhaps to the greater benefit along the lines of soil bacterization. When we open up the earth by plowing and mulch the surface the land does not lie idle by any means, even if it is summer fallowed and a crop be not drilled in. Bacterization,



Studying the Operations of Gas Engines—Manitoba Agricultural College

the combined result of moisture, earth, humus and warm air goes on, in other words a plant food factory is kept in first class running order. The following from the London "Globe" illustrates the meaning of soil bacterization: "Professor W. B. Bottomley, in a lecture recently delivered at the Royal Botanic Gardens, said that

a clod of earth might seem to have no romance in it, but it was one of the most wonderful things imaginable. The soil was alive, it was a living machine, where microbes so small that 10,000,000 to 100,000,000 were contained in enough earth to cover a halfpenny were working together in a systematic way. They could not be

seen and were only known by their work, and the greatest benefactors to the human race were those who promoted their activities. The wise gardener looked after their well being, for without them there would be no plant life and no human life, since all nutriment was drawn from the soil."



### HAVE YOU A CHRISTIANSEN HARROW OR PACKER

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See your dealer or \$10.00 or \$18.00 order direct for . . .

You are losing priceless time and many dollars while you are not handling this Indispensable to a Perfect Seed Bed. We have satisfied 12,000 farmers, we can satisfy you. Lay the foundation for your next crop. Every acre you plow this fall will yield from 2 to 6 bushels more if our attachment is on your plow. One filling in our axles lubricates for the entire season.

"The Christiansen Subsurface Packer attached to a gang plow should be on every farm."—Campbell's Scientific Farmer.

"I consider this attachment one of the most useful implements on the farm. No plowing, unless under special conditions, should be done in the West without this equipment."—Seager Wheeler, Rosthern, Sask.

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IN submitting his annual report for 1914, the Principal of Manitoba Agricultural College closes with the following paragraph:

"I desire to place on record my appreciation of the fine character of the young men and women who have enrolled as students. Physically, intellectually, and morally, I consider they are above the average of young people of similar age to be found elsewhere. It is noticeable that the education of those entering as first year students is gradually showing a higher standard, and being, for the most part, the sons and daughters of the pioneers of this western country, they come to us with a splendid determination to overcome difficulties and to make use of every department of the institution in improving and better fitting themselves for their life's work. As a result the conduct of the student body is good, and it is comparatively easy to maintain discipline within the College halls."

Coming from a land of universities, colleges and seminaries of all sorts it is a matter of the profoundest satisfaction not only to have such a high testimony written over the student body of our Western youth, but to be able from the closest intimacy of the past ten years to be able to substantiate it without one qualifying sentence.

Principal Black also pays a generous tribute to the character and ability of his teaching staff to which (speaking again from personal observation) we say that no encomium was ever more fairly and squarely earned.

The body and the soul of any institution are the men and women who run it—no less the struggling student with his text book and pencil than the professor of degrees and ponderous intellectual equipment. If bricks and mortar, cantilevers, cupolas and classroom furnishings were the main thing in an educational institution, surely Manitoba Agricultural College is second only to some other thing of its kind,

# What Manitoba Agricultural College Means to Western Canada

## A Message to Young Men and Young Women

which has yet to be designed and built.

The accompanying pictures do all that is needful to supplement what is common knowledge as to the magnificent scale on which the shell of our farmer's college has been conceived and carried out. We will not dwell on what are purely architectural details, either in terms of praise or censure except to say that if the governing body responsible for them started out with the feeling that nothing which brains could conceive or money might buy in bricks, mortar and classroom furniture, can be too good for the sons and daughters of the farms, that governing body is entitled to the fullest credit.

But no "governing body" can purchase a monopoly in character and brains. Judging by the salaries offered when vacancies have occurred, and the number of supremely able men and women who have created these vacancies in response to the overtures of other institutions with their own idea of enterprise, our M.A.C. governing body has never yet made a serious effort to establish a premium on character and real educational genius.

It has been one of the greatest privileges of our life to have come in touch, more or less intimately, with the men and women of the M.A.C. faculty almost from the day on which the doors of the old home of undying memories were opened on the banks of the Assiniboine. Without a single exception we have found them men and women whose sterling character not only commands the highest esteem, but is a perennial source of inspiration, particularly to the young folks who are brought in touch with them.

In many cases they have given abundant proof of exceptional scholastic attainments and teaching ability, and it has occasioned feelings of the deepest regret

when we have learned that one and another of these have "resigned" in order to avail themselves of opportunities presenting something better in tangible acknowledgment of their services.

In the annual report already referred to we note that Principal Black expresses the same regret, and adds: "As this is the second time that serious losses have occurred in both those departments (animal husbandry and agronomy) and for practically the same reason in every case, it seems necessary that a change be made in our policy which will enable us to hold strong men when they have become sufficiently familiar with conditions in this country to render really valuable service. If important departments in this college are to continue to be training grounds for men for positions elsewhere, we undoubtedly will be great losers both in the losing of men and in the instability thus created in our staffs."

No one, however inexperienced in the conduct of an educational institution, can fail to endorse this very mild protest, which is really the only one we would seriously place on record while contemplating the future of the college.

The last weakness of any of these teachers whom we have been privileged to know and to follow in their educational work would be a tendency toward the mercenary habit of mind, to think that their worth and services could be tabulated on a scale of dollars and cents. Speaking from close personal observation they were first, second and last impelled by an inborn desire to "impart." Their stock-in-trade is knowledge carefully specialised. It has filled them with a satisfaction known only to that being who is born with an insatiable heart-hunger for more information. As he gets it, the desire to impart it cannot be restrained, and in some men and women the

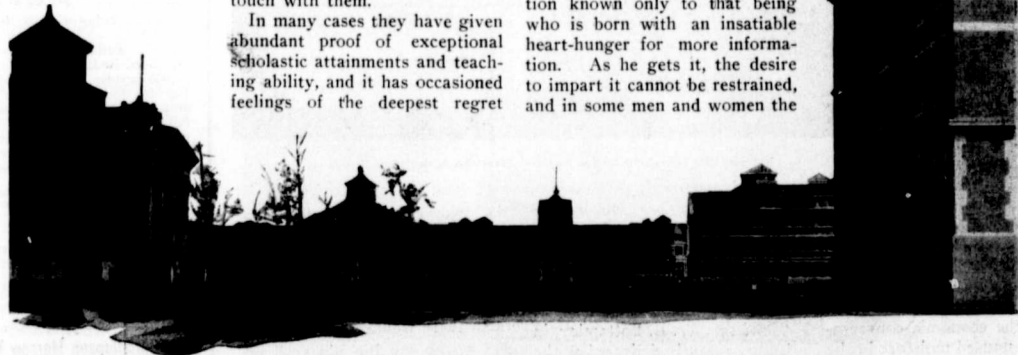
enthusiasm it begets reaches that degree of intensity known as "white heat."

That is largely the disposition of the teaching staff of Manitoba Agricultural College, and that so many of them have stuck to the institution almost if not altogether since its inception is not due to the policy of the "governing body" in its salary appropriations but in spite of it. While good men are not to be baited and corralled by dollars, in these days not even a parish dominie can lightly regard the subject of the national currency. The old "dominie" was never classed among the business men of his community, but to-day the teacher who is found wanting in business habits is considered a fool to every interest beginning with his own.

In point of value to society, there is an eternity of difference between the schoolmaster and the usurer, and if there is one employee of society more than another that commands its first thought and its most generous recognition it is the schoolmaster. If there is one servant of the state more than another who should never find it necessary to remind his paymasters of what is "coming to him," it is the educator of the nation's young hope.

Manitoba Agricultural College—the permanent, living organism, not the set of buildings that may be moved at the caprice of mere politicians—is an institution operated by "men of education, enlightenment and character" for the training of more men (and women) of education, enlightenment and character.

Acres of type are in existence describing in magnificent periods



Administration Building

Auditorium and Dining Hall

JUST AFTER CONSTRUCTION  
Students' Residence

Agricultural Engineering

Physics and Chemistry

certain "elevations," interior decorations, floor space, seating accommodation for people and breeding pens for pigs and poultry, but we have not yet seen one decent appreciation in these newspapers of the real heart and soul of the business which is simply this, that the young men and women of the Manitoba farms are far more concerned about and attracted by the character and personality of the living associations of the place than its "dead environment" even if it represents the very last thing in comfortable lodgings, immaculate cooking, perfect sanitation and a cheerful outlook.

The "reason" for such a college and its special code of education is that "agriculture is the basic industry, and the success of all enterprises which contribute to the upbuilding of a new nation is dependent upon the extent to which the resources of the soil are utilized and developed." This is the college "creed," so to speak, and it is lived out in every feature of ground work and new departure in the course—never forgetting that the young men and women under training have a home life to be cultivated no less than the business interests of their great outdoor profession.

Besides the unique facilities for gaining special knowledge in every department of agriculture which the college does afford, it aims from the outset of every student's career to make a man of him in every respect—able to take his place and do honor to it in any public sphere. Quoting from Professor Sproule: "Considerable time is given to this work (that of training for public speaking in the 'English' course) because we believe it most desirable that farmers be able to discuss intelligently and forcefully on the platform leading questions of the day, and to take their place in the legislatures of our country."

Professor Sproule's department also provides for a course in farm book-keeping to first-year students; a course in rural economics to second year, one in general history to third year, and one in civics and constitutional history to fourth year men. A magazine (entirely conducted by the students) is regularly published, and practically the same work in English is taken with the young women that is mapped out for the men through the successive "years" of residence at college.

Not the least remarkable work which is being accomplished by the college is through its provisions for the young women stu-

dents. This department presents a most gratifying record, and the arrangements outlined in the new 1915-16 calendar are on a particularly generous scale.

We strongly urge upon every reader who desires to make the most of his or her life in the splendid vocation of farming and in the household economy of farm-life to write to the college for a copy of this calendar. We say without reserve to every parent and guardian that to give their young people the advantage of a course at the M.A.C. is to give them the most perfect equipment for success that you can give them. To withhold it is to incur a responsibility that we should not care to carry if we could get rid of it at any personal sacrifice.

Since the people of Manitoba through their representatives of that day inaugurated and completed the transfer of the college to these buildings, a new governing body has been entrusted with the administration of its affairs. It is expected of this body that it will see to it that nothing shall be spared in talent, experience, energy and high character on the part of the teaching staff to fulfil the highest ideals and purpose of the institution.

This new administrative body has "come in" at a most propitious moment of our national life. It has the advantage of all the "hits and misses" of its predecessors to draw from in deciding as to what will do and what will not do. It has witnessed the utter collapse of a boasted "civilization" both in Europe and in Manitoba that will "paint a moral" for all time in the world's future.

They have been rudely awakened to the fact that "kulture" has had the bottom knocked out of it forever in so far as kulture stood for the ascendancy of mere intellectual craft. This body has scarcely started in yet, but its clean record, resting as it does on the acknowledged heart-qualities and rich experience of the men composing it encourages the belief that a new day has dawned for Manitoba—for the "true interest, the chief strength, the real power" in one of its greatest assets—its own College of Agriculture.


**Good Reason**

Bystander: "But I don't see you questioning the umpire's decisions. Isn't that rather unusual?"

Chimmie: "Huh! When de umpire owns de only bat, ball and glove and mask in de neighborhood?"

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No other Sewn Cotton Belt shows such a record. Specify "Dreadnaught" and obtain the best and cheapest. We have the following sizes and quantities left.

Quantity	ft. in.	Quantity	ft. in.
31	100 x 8 x 4 ply.	7	120 x 9 x 5 ply.
27	150 x 8 x 4 ply.	3	150 x 9 x 5 ply.
1	140 x 7 x 5 ply.	2	160 x 9 x 5 ply.
120	150 x 7 x 5 ply.	1	140 x 9 x 6 ply.
210	150 x 8 x 5 ply.	3	150 x 9 x 6 ply.
15	100 x 8 x 5 ply.		

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**WINNIPEG TORONTO OTTAWA LIMITED**

## Wheat \$1.50 a Bushel

is a practical certainty before Spring, and the Farmer who has it on hand will reap the benefit.

Last year's crop fluctuated over 75c. a bushel on speculation pressure without regard to actual supply and demand, because the bulk of the crop was in the hands or under the control of "Big Interests."

To dictate the market the Farmer should have more than the sound of his voice to gain attention, he should have the WHEAT. Every Farm, no matter what size, should have a

### Permanent Granary

Our "Unit System" of Granary building accommodates itself to any capacity, from one bin of 600 bushels, to any desired number of bins of the same size.

Odd number of bins arranged in single rows.

Even number in double row with 8 ft. inclosed passage between.

Let us know what capacity you want and will immediately submit plan and quotation on the material.

This is the time to put them up if you do it at once as they are rapidly erected and you know now how much you can reserve.

## THE WESTERN METAL PRODUCTS CO.

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Every Share guaranteed first class in every respect

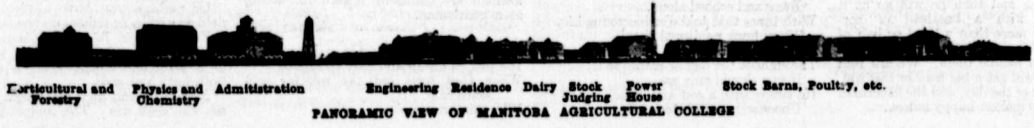
12-in Shares - each \$2.00		<b>PLOWS</b>	
13-in Shares - each \$2.25		Gang Plows	Sully Plows
14-in. \$2.25 (16in. \$2.50)		<b>\$65.00</b>	<b>\$45.00</b>

### GASOLINE ENGINES FOR THE FARM

1 1/2 H.P.	\$38.50
2 H.P.	45.00
3 H.P.	130.00
7 H.P.	155.00

Give numbers and letters stamped on Share and name of Plow—we do the rest.

**The Canadian Stover Gasoline Engine Co., Ltd.**  
BRANDON, MANITOBA



Corticultural and Forestry    Physics and Chemistry    Administration    Engineering Residence Dairy Stock Poultry, etc.    Stock Barns, Foultry, etc.  
**PANORAMIC VIEW OF MANITOBA AGRICULTURAL COLLEGE**

# OUR YOUNG CONDUCTED BY Cousin Doris. FOLK

## Girls' Cozy Corner

### The Foolish Bee

Listen children! while I tell  
A sad but simple story,  
A foolish bee, one summer morn,  
Lit on a morning glory  
So gay he looked, so fine he felt  
All dressed in black and yellow,  
He walked right into honey-hall,  
The dashing, greedy fellow!  
And straightway he began to sip  
As tho' to stay all summer!  
What cared he for work or hive,  
This dandy lazy hummer.

He robbed the flower of its sweets  
And dozed there all the morning;  
"Tho he knew the flower would close  
He heeded not a warning.  
A gentle zephyr passing by  
Looked in and saw him dozing  
And tried in vain to shake him out—  
She saw the flower was closing.

"Ah well," she sighed, A worthless drone  
No time for melancholy.  
And waiting on she left him there  
A victim to his folly,  
The flower closed and shut him in,  
Poor silly, drunken fellow!  
And thus he died, a worthless bug  
All dressed in black and yellow.

Mrs. E.C.R.

Will the girls read the prize offer in the Boys' Department?

### A Curious Fishing Scheme

By Betrice M. Parker

What would you think if you were paddling slowly and leisurely down the river on your vacation and came to some people fishing with birds? Yes, I mean it—fishing with birds! This is a fact; there is at least one country in this world of ours where people fish with birds tied to the ends of their fish poles. That seems curious enough, doesn't it!

In China the cormorants are thus used. These birds are very intelligent and allow their owners to the cords to their legs and straps around their necks. In this way the birds can neither escape nor swallow any fish that they catch.

Long rowboats with side platforms for the birds to rest upon will convey to the fishing grounds half a dozen fishermen and perhaps three times that number of birds. The birds that are not being used are seated on the side platforms; they like to take a certain amount of time for rest and cannot be forced to hunt fish when they do not feel like it. On the other hand, if the birds that are not working take it into their little heads that they, too would like to do some fishing, there is quite a commotion until they are allowed to go into the water.

Each fisherman holds a long pole with which he guides the bird, the cord attached to the bird being fastened to the end of the pole. When a fish is caught the cormorant is drawn to the side of the boat and the fish is taken away from him. In order to keep his courage up, however, he is given a fish or portions thrown aside after cleaning the fish. This satisfies him for a short time and he will rest on the platform until his desires lead him to more hunting and then he will go at it again. So, with a boatload of cormorants not more than a third or half of them are fishing at any one time and it is very easy to handle them. We are told that a boat will get a big load in this way in the course of the day, and the fisherman goes home to market happy indeed.

### Making Money at School

By H. H. Shepard

Two girls in Illinois, belong to a school garden club. During last summer they made \$132.65 growing parsley, onions, radishes, and asters. Their products were sold on the near-by city market. Their parents allowed them to keep and use the money they realized.

These girls are 12 and 14, respectively. Besides making \$132.65 each, they each won a \$50 silver cup for doing the best garden work in their school garden club.

Both girls worked together and marketed their crops in common during the summer, dividing the money equally; hence each at the end of the season had the same amount of cash. Each has started a bank account, to which she proposes to add this summer through growing and selling more garden crops.

In the same club to which these girls belong there are 30 girls and boys, ranging in ages from 10 to 14 years.

The smallest crop any member grew and sold for cash last summer amounted to \$6.90, while the largest amounted to \$165.31, the latter being made by a 12-year-old boy growing onions as a single crop.

One girl member of the club, 12 years old, made \$133.90 growing onions as a single crop. The 30 members of the school garden club grew and marketed vegetables and flowers to the amount of \$1,376.25.

The boys and girls belonging to this garden club live in a gardening district near a city where vegetables and flowers are in demand. Only a few of them grew flowers for sale. The vegetables they grew and sold consisted of radishes, onions, parsley, beans, carrots, lettuce, tomatoes, beets, sweet corn, peppers, cucumbers, cabbage and celery. Nearly all of these boys and girls have started bank accounts of their own. They have their own check books, make and sign their own checks, and use the money for themselves as grown-up men and women.

They are taught in their school how to grow and market garden crops as well as how to make and use money wisely. Their education is practical. They are learning how to do things worth while, and learning the value of dollars.

## Canadian Boys' Camp

### The Whistling Farmer Boy

I've heard the greatest masters play

The greatest masters' art,

I've heard the greatest orchestras

Perform their sweetest part;

Pianos, bands and violins

Have added to my joy,

But none can equal in my mind,

The whistling farmer boy.

There's music in the warbling birds,

There's music in the breeze,

There's music in the brook's murmur,

There's music in the trees;

There's music in the beetle's buzz,

And in the maiden coy,

But none can cheer my heart just like

The whistling farmer boy.

I've heard him at the morning's dawn,

When rising from his cot,

Whistling a tune that sweetly told

His joyous, happy lot.

Kitchen and halls, woodshed and barn

Rang and echoed aloud,

With tunes that told o'er his young life,

There hung no dismal cloud.

Throughout the day of manly toil,

If you should only ask,

He labors with a zest and smile,

Unconscious of his task,

## By Our Unsurpassed Mail Order Methods WE GUARANTEE TO SATISFY YOU

When remittance accompanies your order, goods are shipped, carrying charges prepaid, the same day.

If merchandise is not satisfactory return at our expense. Remember we handle only

## HIGHEST GRADE FURS

Following are examples taken from our catalogue, write for it, it is free.

### BEAVER COATS

Ladies' Fine Beaver Coats. New loose fitting style made extra soft and light ..... **250.00**

### HUDSON SEAL COATS

Hudson Seal Coats. Newest designs. Trimmed best quality Alaska Sable ..... **200.00**

### HUDSON CONEY COATS

Hudson Coney Coats 45 in. long. New flare styles, lined soft fancy Bengaline ..... **76.50**

### MINK SET

Mink Set including Pillow Muff with tails and animal shaped neckscarf. Set for ..... **42.30**

### RED FOX SET

Red Fox Sets trimmed with natural heads and tails. Muffs edged with shirring of best silk. Set at **45.00**

### HUDSON CONEY SETS

Hudson Coney Sets including new style round or pillow shaped muffs and fancy neckscarfs. Sets for ..... **19.80**

## Fairweather & Co., Limited

297-299 Portage Ave.

Toronto

WINNIPEG

Montreal

You saw this advertisement in this magazine. Don't forget to say so when writing.

And when in darkness nature sleeps,  
And others rest enjoy,  
You can hear across hill and plain,  
The whistling farmer boy.

And oh! if we, the aged ones,  
Could so happily meet  
The tasks that fate brings to our hands,  
Bitter lives would be sweet;  
And when by heavy burdens pressed,  
If we'd only employ  
His spirit, we'd be happy, too, like  
The whistling farmer boy.  
— Noel Johnson.

It always pays to be a gentleman, there is no doubt about that. An instance comes to our notice of where a waiter in a restaurant was courteous to a homesick Englishman. Some time afterward the waiter was surprised to receive notice that the Englishman had died and left him \$70,000. It is rarely that good manners and kind acts are thus materially rewarded but the respect and good will of one's fellow-men are sufficient reward for acting as a gentleman.

"Taint no use to grumble and complain,  
It's just as cheap and easy to rejoice,  
When God sorts out the weather and sends rain,  
Why rain's my choice.

### Prize Offer Open Another Month

First—How many can describe the flags of different nations? Just now we should be familiar with the flags of nations.

To the boy who sends in a description of the most flags I will send a dollar. This offer is also to girls.

Second—Boys and girls are cultivating gardens this year. I will send a dollar to the boy who sends in the best description of his garden. The same prize is open to girls.

Third—How many have a camera? It may be that on your place or near by, there is some curiosity of nature, a cave, a queerly shaped rock, a picturesque river, or, it maybe, some relic of former days such as an old fort, a monument. Get a good picture of these. Write out whatever facts you can ascertain about the photograph and mail it.

Or perhaps you have a picture of a field or garden or animal on the farm.

For the most interesting photo taken by the sender of the photo I will give as a prize one dollar. This is open to both boys and girls.

Now boys and girls get busy. Let us see who shall win. The competition will



close 30th of October, and the prizes will be sent as soon as the work is published. Send all communication to P. R. H., 983 Grosvenor Ave., Winnipeg. Let us have a bright and interesting department for next month.

Best wishes to all.

Cousin Doris.

**The Breaking Plow**

Nixon Waterman, in Success.  
I am the plow that turns the sod  
That has lain for a thousand years;  
Where the prairie's wind-tossed flowers  
nod  
And the wolf her wild cub rears.  
I come, and in my wake, like rain,  
Is scattered the golden seed;  
I change the leagues of lonely plain  
To fruitful gardens and fields of grain  
For men and their hungry breed.

I greet the earth in its rosy morn,  
I am first to stir the soil,  
I bring the glory of wheat and corn  
For the crowning of those who toil;  
I am civilization's seal and sign,  
Yea, I am the mighty pen  
That writes the sod with a pledge divine,  
A promise to pay with bread and wine  
For the sweat of honest men.

I am the end of things that were  
And the birth of things to be,  
My coming makes the earth to stir  
With a new and strange decree;  
After its slumbers, deep and long,  
I waken the drowsy sod,  
And sow my furrow with lifts of song  
To gladden the heart of the mighty throng  
Slow feeling the way to God.

A thousand summers the prairie rose  
Has gladdened the hermit bee,  
A thousand winters the drifting snows  
Have whitened the grassy sea;  
Before me curls the wavering smoke  
Of the Indian's smoldering fire,  
Behind me rise—as it God who spoke  
At the toil-enchanted hammer's stroke?  
The town and the glittering spire.

I give the soil to the one who does,  
For the joy of him and his,  
I rouse the slumbering world that was  
To the diligent world that is;  
Oh! Seer with vision that looks away  
A thousand long years from now  
The marvelous nation your eyes survey  
Was born of the purpose that here, to-day,  
Is guiding the breaking-plow.

**Morgan's Fondness for Dogs**

The late J. Pierpont Morgan was very fond of all dogs and had a just appreciation of their admirable qualities. He is reported to have said on a certain occasion, "Perhaps if men had four legs and could bark they would be more truthful and less treacherous."

The abuse or cruel treatment of a dog by any one always aroused his indignation. Some years ago a handsome collie belonging to a neighbor in New York was run over by a vehicle on Madison avenue while Mr. Morgan was crossing the street. A crowd had collected in a few minutes near the wounded animal when a policeman rushed to the scene and, drawing his revolver, was in the act of shooting the injured dog, when Mr. Morgan raised his arm and called out in a loud voice: "Put up that pistol, the dog is only slightly injured." The officer obeyed orders at once and walked away. Mr. Morgan then called a young man in the crowd and handing him a bank bill, said: "Carry that dog to Mr. So and So's residence."

It is needless to say that the dog recovered and the owner was very grateful for the humane act; but some weeks afterwards imagine the surprise of the great philanthropist to receive an official notice from the S. P. C. A. informing him that he had been elected an honorary member of that body as a recognition of his kindness to animals.

**The Whip**

I looked around and saw a man carrying under his arm a number of small whips. He was surrounded by a group of boys who, not having money to purchase, were looking on with wistful eyes.

Curious to ascertain whether the man could earn a livelihood in this occupation, I watched him for nearly an hour, at the end of which time he had already sold six

**The Old Reliable**



**Over 40 Years in Business**      **90,000 Satisfied Customers**

**Established 1875**  
MEANS TO YOU

**Honesty, Quality, Service**

Over 40 years of exceptional service to the musical public, and 90,000 satisfied customers, is a combination that proves beyond any question that the Doherty Piano Company, Limited, has earned the highest reputation for Honesty. Honesty in business methods—honesty in goods—honesty in prices.

**When we announce a Bargain Sale, as we are now doing in our REAL CLEARANCE SALE**

of **Pianos, Player Pianos and Phonographs**, we back it up with our prestige. This means that our offerings are **REAL BARGAINS**—high class instruments—the best materials, and not merely a clearing out of old and time-worn stocks.

**Below are a few of our Splendid Bargains:**

<p><b>Pianos</b> Regular Prices—\$350, \$375, \$400, \$425, \$450, \$500. <b>SPECIAL CLEARING PRICES</b>—\$85, \$125, \$150, \$165, \$189, \$198, \$205, \$225, \$235, \$245, \$272, \$285, \$300, \$315, \$325.</p>	<p><b>Player Pianos</b> Regular Prices—\$650, \$700, \$800, \$850. <b>SPECIAL CLEARING PRICES</b>—\$275, \$325, \$375, \$425, \$475.</p>
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**Phonographs**  
Regular \$35 up to \$600. **SPECIAL CLEARING PRICE—\$15 and up.**

Never before have we been in a position to offer such reductions. Sale closes September 30th, so act now while the opportunity is yours. Mail us the coupon to-day. We want to make it pleasant for you to deal with us and pleasant to remember us, and to this end satisfaction is guaranteed or money refunded.

**SPECIAL NOTICE**

On all cash paid when purchasing we will allow you a discount of 10 per cent, and in addition to this we will give free a beautiful stool to match with each piano. There will be no charge for packing or cartage, and the purchaser of each piano is entitled to a Certificate of Scholarship for a two-years' course in music by correspondence.

If you expect to buy a piano or phonograph this year—next year—ever expect to buy one—now is the time to get it. This sale closes September 30th. If you act—you must act quickly.

**ADDRESS MAIL ORDER DEPARTMENT**

**Doherty Piano Co., Limited**  
324 Donald Street, Winnipeg



**COUPON**

Doherty Piano Company, Limited, 324 Donald Street, Winnipeg, Man.

Please send me, without any obligation on my part, list of pianos, player pianos, and phonographs, offered at your clearance sale, with prices and terms. I saw your advertisement in Winnipeg Canadian Thresherman and Farmer.

Name .....

Address .....



The first was purchased by a woman o pleasing appearance for a little boy about two years old, whose first employment of it was in striking his mother.

Another child, walking with his nurse, also bought one and immediately began to whip a little stray dog that was looking for its master.

Another, rather older than the others, after making a similar purchase, laid it on the back of some sheep which a butcher's boy was driving to a slaughter-house. A fourth quickly forced a poor cat to take refuge in the shop from which she had just ventured. The fifth, a bad-looking fellow, bargained for one, and then refused to buy it because it would not give sufficient pain.

I was disgusted with the cruelty, and was just turning away when I saw a kind-looking man, who was holding a little boy

by the hand, stop to purchase one, but a sign from me made him change his purpose. He passed on and I followed him.

"Sir," said I, "excuse the liberty I have taken. I think you have done well not to place a whip in your little boy's hand lest it should have produced in him a love of giving pain to which, judging from his face, he is as yet a stranger."

"Look," I continued, as we approached the end of the street, which made a rapid descent, "at those two wretched horses, which can hardly keep their footing on the slippery pavement—see how cruelly the driver is flogging them. You may be sure their driver had a whip for his first toy."

"You are right," he said.

"Yes," said I, "a man, naturally harsh and cruel, becomes still more so by his

education. He begins as a boy by flogging his wooden horse, and afterwards flogs the real horse and all the animals under his power."

"I am resolved," said he, "never again to place a whip in the hands of a child."

A little stream had lost its way  
Amid the grass and fern;  
A passing stranger scooped a well,  
Where weary men might turn;  
He walled it in, and hung with care  
A ladle at the brink;  
He thought not of the deed he did,  
But judged that all might drink,  
He passed again, and lo! the well,  
By summer never dried,  
Had cooled ten thousand parching tongues,  
And saved a life beside.

—Charles Mackay

# OUR WOMEN FOLK

CONDUCTED BY  
PEARL RICHMOND HAMILTON

Nature, so far as in her lies,  
Imitates God, and turns her face  
To every land beneath the skies,  
Counts nothing that she meets with base,  
But lives and loves in every place.  
Tennyson.

It was Alice Carey who said:  
"Look for goodness, look for gladness,  
You will find it all the while;  
If you bring a smiling visage  
To the glass, you meet a smile."

The light of friendship is like the light  
of phosphorus, seen when all around is  
dark.—Crowell.

Complain! when God has been so good to  
me,  
And when His blessings with my days in-  
crease,  
Giving for every day of misery  
A recompense of tranquil days of peace:  
Even as the morning, with her smiles and  
light,  
Is over-payment for the weary night.  
—Phoebe Carey.

He who is boasting of his ancestors is  
like the potato plant: the best part of it is  
down in the ground.

We are told to let our lights shine in  
this world, that others may see our good  
works and derive some enjoyment also.

A bright sunny face always wins con-  
fidence.

## Home Economics

### Miami

The officers of the Miami H.E.S. went to Roland by auto on Saturday, July 17th, and conducted the Roland H.E.S. meeting. The meeting was opened by singing "The Maple Leaf For Ever," after which the sec-treas., Miss Bowman, read the correspondence, which was duly discussed. Miss Sep, 1st vice-pres., then gave a valuable paper on the food value of cheese. Some discussion followed, which brought out the facts that cheese was a substitute for beef, eggs, fish, fowl, etc. Then followed the appointing of committees as follows: programme, social, finance and refreshment, the ladies for each committee being equally chosen from those of the town and farm. Mrs. Kerr then gave an excellent paper on the care of young turkeys, which was well received. After this, new members names were taken and every lady joined except those who were visitors from other towns. This made the total membership thirty-nine. Mrs. McNevin then read a paper on the relation between the home and school and, judging by the applause, this paper greatly pleased the Roland ladies. Over 45 ladies were present and the meeting was very lively and thoroughly enjoyable. After singing God Save the King, dainty refreshments were served by the Roland ladies. This brought to a close a real pleasant and beneficial meeting of the H.E.S.—The Miami H.E.S. served meals on 8th July, Fair Day, and the receipts at the door amounted to \$53.10 which goes towards the upkeep of our Rest Room.

### Home and School

By Mrs. A. McNevin, Pres. of Miami H.E.S.

These two are linked together by innumerable associations; they stand side by side in our earliest recollections and it is side by side, shoulder to shoulder, that

those institutions should face their foe: Ignorance with her brood of attendant evils.

United, the home and school may do much, in the words of Arnold, "to make an intelligent being more intelligent," and "to make the right prevail." Standing aloof from each other—nay, as they are too often, opposed to each other—each must fail to accomplish its part in producing men and women of the highest type, fitted to carry on the world's work, physical, mental and moral.

The unsympathetic attitude of teachers toward parents and of parents towards teachers, which too often prevails, is due to causes which have long ceased to exist. In the old world in olden times the peasant children were taught by teachers who had the privilege of a liberal education and who sometimes looked with a contemptuous pity upon people who understood neither Latin nor Greek. They emphasized the necessity for obedience on the part of the ignorant masses, of subjection to the authority of the wise among whom they, of course, numbered themselves. The peasant children, bright and intelligent in regard to other things than books, resented this "I-know-it-all attitude" on the part of the teacher and often doubted if book-learning gave much power to do what was required of the laborer in the field or in the workshop.

Here in Canada other causes contributed to the antagonism between the teacher and the taught. Before free schools were established, there was in Canada no real class of teachers. The teachers were derelicts from other professions, maimed soldiers often too much addicted to drink, clergymen whose habits forbade their wearing the gown, doctors no longer able to practise.

The discrepancy between the moral lessons presented to the pupils in school and the conduct of the teachers was too glaring. Children have a keen eye for hypocrisy, half-drunken men have some of the characteristics of the brute and the rod was applied without mercy and without discretion. Some of the prejudices created by those past ages still linger among us.

It is for you and me to do our part in consigning them to the limbo of the past, where they belong with the burning of witches, the rack and the thumb-screw. We live in a better day.

The Canadian teachers are of your own class, your sons and daughters in whom you renew your youth. The object they set before them is not mere outward submission to the authority of the Church or the State. Children are not taught that one of the main things in life is to pull one's forelock to the squire or curtsy to the clergyman.

The avowed object of our education is to aid in evolving intelligent pure-hearted men and women, fitted to play a worthy part among that most honorable of all classes—the world's efficient workers in all kinds of honest endeavor.

Western teachers are not a permanent class. Young ladies spend from three to five years teaching and pass on to make way for others. It follows that our teachers are mostly young and inexperienced. It is by no means an unmixed evil. Youth is the period of enthusiasm, of high hopes and lofty ideals. Mab, it has been said, is a compound of "mad and marble," and the madstains often show more plainly as we advance along the pathway of life. Patience, unflinching cheerfulness, and a love for little children are often better than years of practical experience in the schoolroom. Some old bachelor has said, "Women are but grown-up children." Make life pleasant for your young teacher and you will seldom miss your reward in better service.

I shall say little of what is commonly considered the ordinary work of the schools as laid down in the program of studies and shall only refer to the great work the Western schools are accomplishing as a melting pot through which the foreign element passes in becoming good Canadians. Here the teacher needs assistance. The narrow-minded men and women who speak contemptuously of our foreign-born population as dagoes, freezers, etc. give wrong impressions to their children and retard the good work which should be done in making those strangers feel that this is indeed their own country.


The home can aid the school in matters of discipline. If Johnny hears his teacher spoken of as a stuck-up thing who puts all she gets into clothes, and does not earn half what she gets, Johnny will likely make trouble in school. In helping the teacher you help yourself. Don't expect a young and inexperienced girl to control your boys and girls unless you do so yourself. A word of commendation costs little and is often more effective than censure. No sacrifice is too great to make in order that our sons and daughters—the men and women of the near future—may be wiser and better than we are. Many unlovely children cling to the skirts of ignorance and none of us is wise in all things. We cannot hand over to anyone the responsibility of training our children, any more than we can hire a man to say our prayers or regulate our thoughts. Teacher and parent must work together and the chief responsibility must rest upon the parent.

Each village, each rural community, has its own spirit, its own special characteristics, and it is well that it should be so. It is its endless variety which gives zest to life. One district is pre-eminent for outdoor sports, another for music, a third for public speaking, and so on. When our teacher can aid us in these things we should avail ourselves of their services as far as possible. Teachers, however, are transient, the community spirit is permanent, and we must find those among ourselves public-spirited enough to carry on the work ourselves. No teacher is an all-round expert, but with proper encouragement the lady teacher can usually be depended upon to aid some form of work or amusement which will benefit the community.

The women of the community should take an active interest in the school library as well as in all the sources from which their children draw supplies of reading material. Your daughter walks arm in arm with the spirit of the book in which she is absorbed. See that the reading matter be clean and wholesome. Beautiful surroundings often lead us to beautiful thoughts. We should use our influence to have our school rooms not only well heated, well lighted and well ventilated, but attractive. We need not be busy-bodies, but we may and should take an active interest in the school life of our children. The school of the future will be a community centre, the most attractive spot in the district and one which all will regard with honest pride. Teachers will be better educated and have special training for social service. Our posterity will respect the teacher and will be satisfied with nothing less than the best. Each school will have a public assembly room large enough to accommodate all the people of the district. We shall in time really believe that mind and soul are more important than the body and that a thoroughbred child is worthy of more care than a thoroughbred horse. We shall yet really believe—and our belief shall influence our actions—that the mind is as worthy of care and cultivation as the body; that not in lands, nor in gold, "not in much cattle," but in our boys and girls lies our hope for a bright future.

### Shoal Lake H.E.S.

The Shoal Lake H.E.S. was organized in May, when Miss Crawford gave a demonstration on cooking in the Town Hall and started our society, with the following officers: Pres. Mrs. J. M. Cameron; vice-pres., Mrs. Matheson, Mrs. J. D. McLean; sec-treas., Mrs. H. Sykes. We have three committees, viz.: program, membership and room com-



## Book-Marks

Daintily Hand-Colored

Pretty Heads by a Well-Known Artist Looped Ribbon at the top, with flowing ends at the bottom—Gold, Purple or Turquoise Blue.

Just the thing to mark your place in an interesting book, and add to the charm of reading the spirit of fine pictures.

You can have one sent to you, without charge other than a two-cent stamp to cover postage and mailing expenses, by sending your name and address to us, mentioning The Canadian Thresherman and Farmer.

## D. R. DINGWALL

LIMITED

Jewellers and Diamond Merchants WINNIPEG

mittee and have now thirty-six members on the list.

Papers are given each month by different members. In June our topics were: Cold Dishes for Hot Days—1st, Cold Meats, Meat Rolls, Meat Pies and Jellied Chicken, Mrs. W. Stevenson. 2nd, Fruit Salad, Mrs. F. Dobbs. 3rd, Marshmallow Pudding, Mrs. I. D. McLain.

After that were given two papers: 1st, Prevention of Flies, Mrs. Stalker. 2nd, Home and Its Influence, Mrs. Markle.

In July our topics were: 1st, Preserving of Eggs, Mrs. S. Stevenson. 2nd, Preserving of Fruits, Mrs. Macdonald. 3rd, A paper on Woman's Suffrage, contributed by Mrs. Robertson and read by Mrs. Matheson.

For the large Grain Growers' picnic in July the room committee provided a rest tent in the show grounds with seats and ice water. It was much appreciated by the visiting ladies and children.

The secretary of the Shoal Lake society makes this very kind request: "Do you know of any district in Manitoba where the farmer's wives and families are in need of clothes? We might be able to send a barrel as we have done so in connection with our church work and the I.O.D.E."

**Portage la Prairie**

Aug. 10, 1915

My dear madam:— Meeting opened by singing "The Maple Leaf For Ever."

President then called for minutes of last meeting which were read and adopted after which the treasurer reported an expenditure of \$147.50, leaving 50c in the till.

Mrs. Taylor then gave the report of the social committee followed by Mrs. McKenzie who gave report of programme committee after which Mrs. McKenzie read the report of the Burnside H.E.S. given in the Canadian Thresherman. It proved most interesting.

At this point Miss Gribb gave an instrumental which was much appreciated; Mrs. Y. B. Millar followed with a paper on canning and preserving which was very instructive, after which the subject was fully discussed.

Mrs. J. D. McKenzie then read a paper from the College asking what courses and demonstrations proved most successful and it was decided to ask for a three weeks' course in woodwork for boys, also to ask for a once-a-week for five weeks' cooking class.

The meeting then closed by singing, "God Save the King."

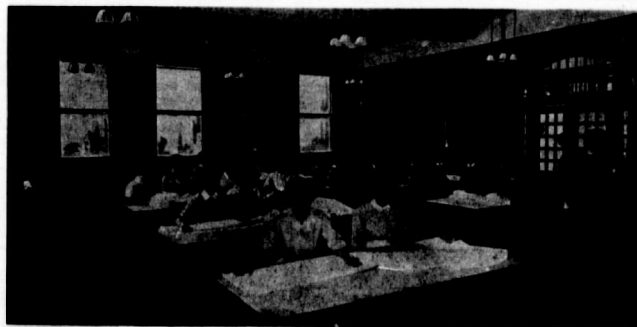
Yours truly,  
Kate Brydon, cor. sec.

**Manitou**

Aug. 7, 1915.

The Manitou H.E.S. met in the Rest Room to-day for the regular August meeting. After the routine business was over, a discussion was held as to the best way of collecting both money and work in aid of the Red Cross Society, many good suggestions were offered it being finally decided to make our September meeting a Red Cross Day. Every member is asked to bring a pair of socks and at our meetings hereafter a collection will be taken, which will be used in buying supplies for the members to make up.

Miss Moore read an instructive paper on Art. She dealt particularly with Art in the home as applied to pictures, draperies and furnishings, and the great art of



A Class in Dressmaking—Manitoba Agricultural College

The Thresherman's Appetite  
Deserves The Best You Can  
Give Him

**PURITY FLOUR**

"More Bread and Better Bread"

You saw this advertisement in this magazine. Don't forget to say so when writing.

making a home a place of peace, happiness and contentment, and not merely a shelter where we eat and sleep, getting away from it as much as possible to find pleasure elsewhere.

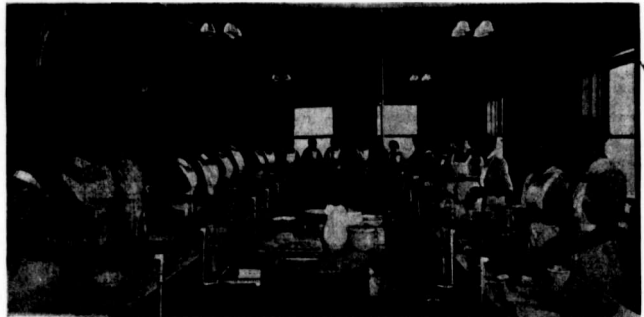
We will hold our future meetings in the Orange Hall for the Rest Room is used so much by the women and children of the locality, it seems unfair to take it for our own use. A dainty lunch was served by the committee in charge, and this meeting closed with the National anthem.

Lilian M. Gulllain.

**Emerson**

The Emerson H.E.S. (like most of the others) is working earnestly for the soldiers. Our monthly meetings are being regularly held and we have had enjoyable meetings although our program has frequently been omitted for discussion on the Red Cross work and the cutting and giving out of material for garments, etc., for the laddies at the front.

Our Society held a Red Cross Tea in March. (This may have been reported



First Year Cooking Class at Work—Manitoba Agricultural College

earlier.) The proceeds were \$134, \$100 being forwarded immediately and \$34 kept for to purchase material. In June we canvassed the town and vicinity meeting with a generous response. Some \$200 being collected, \$100 of this being at once sent to Headquarters and the remainder retained for working purposes. Our Society (besides the blankets previously reported) have made up the following articles: 24 surgical shirts, 20 helmets, 23 scarves, 5 pair socks, 17 pairs pyjamas, 24 gray flannel night shirts, 24 white flannel night shirts, 29 khaki service shirts.

We are now working on more shirts and knitting. On Sock Day 167 pairs of socks were collected by the Society. We recently had a visit from Miss Kate Crawford, which was enjoyed by the members. She gave us a practical demonstration of how to prepare three attractive and nourishing dishes. We hope to have her soon again to address the Society.

E. E. R. Sec.

**Wawanesa**

The Home Economics Society of the Wawanesa has been very busy during the summer

and sincerely regret that a report has not been sent to The Thresherman at an earlier date.

At the regular meeting in April it was decided to ask the members and those interested in the Society for donations of old linen with which to make hospital supplies. It was also decided to charge ten cents for tea thereafter and the proceeds to be used to buy material to make hospital supplies at our meetings. Already the collections have amounted to \$8.40.

The May meeting was a huge success, a number of the younger girls becoming interested with the result that sixteen of them joined, increasing our membership to fifty. A large box of hospital supplies was sent to the St. John Ambulance Association the following week and another box after the June meeting. Altogether we have sent: 3,000 mouth wipes, 1,000 wash cloths, 300 handkerchiefs, 80 slings, 58 bandages, 10 pillow slips, 5 pairs socks, 3 scarves, 4 pairs wristlets, 24 hot water bottle covers and 12 surgical gowns.

On the 8th of July a Patriotic Garden party was held and proved most successful. The society clearing \$138, a business meeting was held afterwards and \$55 voted to the Wawanesa branch of the Red Cross Society, \$55 voted to the St. John Ambulance Association and \$21 to be evenly



divided between The Free Press, Telegram and Tribune to be sent to the hospitals for the boys at the front.

Hazel M. McKenzie, sec-treas.

**Hartney**

The regular monthly meeting of the Hartney H.E.S. met in the emporium of the Town Hall, Friday afternoon at 3 o'clock with a small attendance owing to the busy season for the farmers' wives—harvest being in full swing.

As the roll was called each member responded to her name by giving a recipe. This proved of great interest to the ladies.

Miss Sutton rendered a humorous reading entitled "The Village Dressmaker," which all enjoyed.

Those present enjoyed the meeting very much, although hardly a representative meeting, so few being present.

O. M. H.

**Have You Signed the Petition?**

The women of Manitoba are signing a petition to present to the government for the Franchise. The following posters are being circulated through the Province. I trust every woman reader of this page who lives in Manitoba will sign this petition. Send to Mrs. F. J. Dixon, 694 Sherbrooke Street, Winnipeg, for the petition forms.

**MANITOBA WOMEN! ATTENTION! MARCH!**

By Lillian Beynon Thomas

Right! Left! To Citizenship! To the Ballot Box! To the Power to Protect Your Homes and Children

**DO MANITOBA WOMEN WANT THE FRANCHISE?**

Do Manitoba women want a legal claim to the clothes they wear—to the homes they have worked to make—to the children they have brought into the world?

Then every woman in Manitoba should work now. All political parties have declared that they favor giving women the franchise, but they desire to be shown that the women themselves wish it. Petition forms are being circulated, for adult women to sign, to show that they wish the franchise.

Get a petition form now, and see that every woman in your district signs it. No woman who wishes to see the women enfranchised can afford to be idle. Mrs. F. J. Dixon, 694 Sherbrooke Street, Winnipeg, will send you the petition forms if you send her a card stating the number you wish. Each petition form holds thirty names.

The Political Equality League, The Grain Growers' Association, The Women's Christian Temperance Union are all helping to circulate these petitions. Give these societies a helping hand, if there is one in your district. If there is not, get a petition form and circulate it yourself.

**OUR MOTTO: MANITOBA FIRST**

Issued by The Political Equality League of Manitoba

**VOTES FOR WOMEN!**

**EQUALITY JUSTICE**  
Why Manitoba Women want to Vote

By Winona Flett Dixon

**BECAUSE** we believe in representative government, of the people, for the people, by the people—and **WOMEN ARE PEOPLE.**

**BECAUSE** we believe just government rests upon the consent of the governed. Women have to obey the laws, and suffer the full penalty for breaking them, therefore, they should have an equal voice with men in the making of the laws they have to obey.

**BECAUSE** we believe taxation without representation is tyranny. Women are taxed, yet are not permitted to say how they wish this money spent.

**BECAUSE** enfranchising women will quicken their civic sense, and bring into public life a humanitarian element which will work for better conditions in the home, in the school, in the factory, in society.

If YOU Don't Want a Vote for Yourself, Sign the Petition for Those Who Do

Issued by The Political Equality League of Manitoba.

**Mother's Corner**

**A Mother Prayer**

By Marian Kepperley

Lord, fill my heart with a deep desire To know Thee better still; That through me this dear child of mine May sweetly know Thy will.

I would not hide from her dear eyes The sunshine of Thy face; And that she, too, may know Thee well, Oh grant me fuller grace.

**The Wanderer**

To think I should have sought for God In every corner of this sod—

Among the everlasting hills,

Along the trails of mountain rills;—

In valleys radiantly gay,

Beneath the trees betrothed to May;—

Beside the sea-enamored strand,

Across the desert's burning sand;—

In crowded mart and quiet glen,

In all the many walks of men,—

To turn, at length, unconceived,

And find Him through a little child!

**Amusing Baby**

The following letter from Mrs. E. W. B., who has two tiny boys of two and three years, says that with her work and the children she sometimes finds her hands pretty full, but that her babies are well worth it. "I used to find a very simple plan most helpful in amusing the restless little chaps when the dishes must be done or the baking got out of the way. When baby was only just able to sit up I used to put the 'bunny blanket' in his bathtub (just a tin foot-tub) put him in it propped up with pillows, and set it on the table, where he was contented as long as he worked there. Now, he simply sits on the table while I work and the older one sits on a high stool. I give baby a cup or spoon to play with and he is as happy as a king—happier than most kings at present! I suppose someone will say, 'Why not put him in his carriage or high chair?' But that does not content him as well, it is too commonplace; it is the novelty of being up high with mother that is half the fun. I have found it easy to teach the little fingers to let things alone. Being a mother is one long tax of one's ingenuity, and it takes patience, time and more patience to keep the babies happy and contented."

The following is a prayer she teaches her little boys and which she wants to share with other mothers:

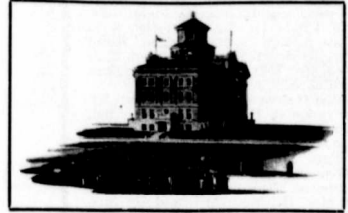
"Lord, we thank Thee for the night  
And the blessed morning light;  
For rest and food and loving care."

**The Child's Reading**

It is a great blessing to a child to like to read, and parents should do all in their power to stimulate the desire to read when they find their children lacking in it. Most children like to have stories told to them. If the child learns to enjoy being read to he will be likely to want to read his favorite stories when he becomes able to read.

If the mother whose children show no tendency to read has a task on her hands, that they may be led to enjoy reading because of the rich treasures it gives them access to, so also has the mother whose children are born readers, a task to perform. The born reader will read. He will find an opportunity, he will find reading matter, and the problem before the mother is to see that only suitable reading matter is placed in his hands. He gets his ideas of life very largely from his

**Manitoba Agricultural College**



**OPEN FOR FIRST YEAR STUDENTS OCT. 26th**

**P**REPARE YOURSELF for the Highest Efficiency in your Profession by spending a winter here. The Course in Agriculture for young men includes in its First Year: Farm Crops, Live Stock Judging, Dairying, Gas Engineering, Blacksmithing, Carpentering, Horticulture, Physics, Farm Book-keeping, Soils, Business English, Platform Speaking.

The Course in Home Economics covers such subjects as Cooking, Food Values, Millinery, Dressmaking, Physical Culture, Designing, English, Household Accounts.

Modern Classrooms and Laboratories.

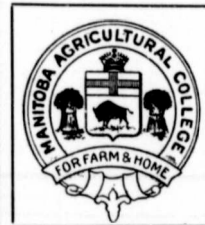
Comfortable Students' Residence to accommodate 550.

Separate Gymnasiums and Swimming Pools.

Sitting Rooms, Recreation Grounds, etc.

Send for the Calendar.

**W. J. BLACK, President**



reading, therefore the kind of literature he reads is of the greatest importance.

I once heard a woman of middle age remark that she attributed many of her mistakes in life to the fact that in her girlhood she read many trashy novels. She was one of a large family of children, and her busy mother often knew nothing about what she was reading. Many times books and stories fell into her hands which she had better never have read. From these books she derived many of her theories of life, and following these theories in her actions when she grew older she often came to grief. The mother who fails to keep close watch on her children's reading will afterward learn that she has made a serious mistake.

The mother should read with her children. They delight in having her know and enjoy the stories they love, and she can help them to see their beauties more clearly. She can learn a lesson by a few timely questions or suggestions. If she talks over the problems of the boys and girls in the story with her children they may find it easier to bring their own problems to her. Thus through the child's reading the mother may often win his good comradeship, and she can see that the ideals which she wishes him to form are brought before him. Fortunate is the boy or girl whose watchful mother supervises the reading and supplies them with books and papers which afford wholesome mental food.

D. S.

**Baby's Food**

Mothers are always glad to know of a really good and reliable Infant's food, and one that may be safely recommended is Savory and Moore's. This food is made by the old-established and well-known firm, Savory and Moore, chemists to The

King, of New Bond Street, London, Eng.

It has been in general use for upwards of half a century, and it is already well-known throughout the Dominion, where many mothers are bringing up children on it with excellent results. The record of Savory and Moore's Food is one which in fact it would be very hard to beat, and it has found great favour, not only with the public, but with the medical and nursing professions. Full particulars regarding it, and much useful information on the care of infants will be found in a little book, entitled "The Baby," which will be mailed FREE to all who apply for it to Savory and Moore, P.O. Box 1601, Montreal.

**Promises—Kept and Broken**

The statement, "His word is as good as his bond," made by those who through long-time acquaintance or business dealings, are in a position to know, is one of the highest compliments that can be paid an individual. If this feeling is shared by his young friends, the man's opportunity for influencing for good will be unending. On the other hand, the unkept promise to the child may mark the beginning of his lack of faith in people generally, and his failure to realize the necessity for keeping his own word unbroken.

If there were no reason for keeping one's promise to children other than precluding the pain of disappointment, this habit should be carefully nurtured and developed. But the greater sin of being responsible for the careless life of one whose trust has been shattered, should make it imperative that we diligently guard our statements and see to it that none is made which we do not intend to fulfill—especially when it is made to one of limited years and experience, and whose life is a composite of the influences with which he comes in contact.

**RED ROSE TEA "is good tea"**

**A BIG EDUCATIONAL COURSE ON WHEELS**

The better farming trains operated over the lines of the railways in the Prairie Provinces, appear to be meeting with a considerable measure of success and provincial agricultural authorities are convinced that the work so carried on will result in the spread of better agricultural practices throughout the country.

When such a lecture train completed its itinerary over the lines of the Canadian Northern in Saskatchewan recently, a compilation of statistics showed that, in all, 10,464 persons had boarded the cars at the various stopping places, thirty-four in number, and that of this total, approximately forty-five hundred were men, thirty-five hundred women and the remainder children. The weather was unfavorable most of the time. At some of the points when lectures were given rain fell continually and a great many people were unable to attend on account of the conditions of the roads. The Saskatchewan government representatives expressed themselves as greatly pleased with the attention given the train under the circumstances.

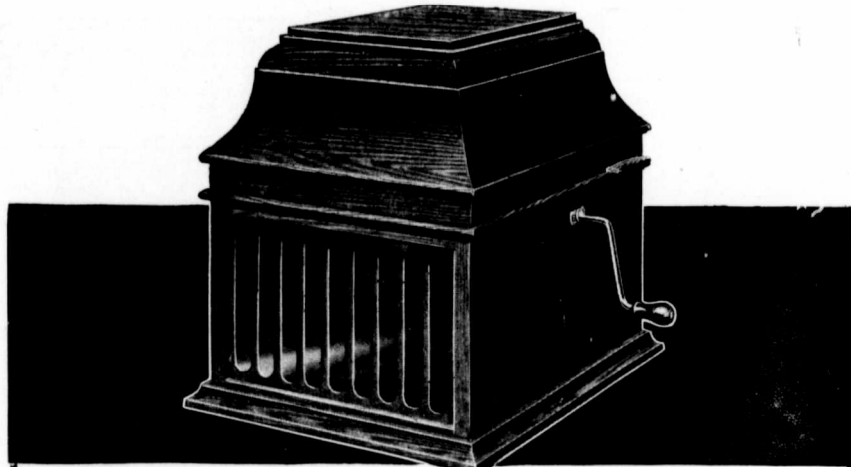
The Canadian Northern Railway train was made up of standard sleeping and dining cars, a nursing car, household science car, model farm car, crop production car, boy's and girl's car, colonist car, refrigerator car, and a water car. Designation streamers were attached to the outside of the cars with lettering in letters large enough to be easily read, and when the train stopped at a station there was no confusion among the people. The children gravitated naturally to the "Boy's and Girl's" car, where lantern slides of various birds and insects were thrown on the screen and their good and bad habits explained. The older people, bent on more serious matters, were accordingly enabled to give close attention to the lectures in the other cars.

The "Crop Production Car" contained samples, mounted, of flax, oats, alfalfa, western rye grass, wheat, millet, peas, barley, broom, grass and clover. There were also illustrations of alfalfa in rows, of alfalfa seed cutting, alfalfa for seed, classes of barley, sample of corn, classes of wheat. There also were descriptive charts illustrative of experiments of cropping fallowed land during a dry year as against the plowing fallow when land is free from grass and other perennial plants; early as against late fall cultivation; effect of harrowing on yield of wheat; wheat yields on stubble land; alfalfa for forage and seed; influence of tillage on 1914 wheat yields; times of seeding concerning heavy and light seeding in wet and dry seasons; effect of packing for second crop of wheat; effect of harrowing on fall-cultivated land, and charts showing relative increase in production under different soil cultivation.

The Model Farm car, contained section of barn showing method of bracing, sheep barn, cow stall, pig pen, split log drag, fence, home-made cattle stanchion, photos of all kinds of stock and mountings of soil products. This car also contained the poultry section, showing model of portable poultry house, photographs of the different kinds of fowls, Saskatchewan trap nest, fattening crate, feed hopper for use on range; oats sprouter, hen coop, Cornell trap nest, Newmaine trap nest, result of experiments showing the effect of water glass and lime water on egg preservation, complete surgical outfit for operating on fowls and sample of proper food for fowls. In addition, the literature was in this car, and printed matter pertaining to agriculture was freely distributed.

The Nursery Car was equipped with sand boxes, toys and made up beds. This car was also a valuable addition to the train; mothers were able to leave their children in car and attend lectures without the usual annoyance.

The chief speakers included: The Hon. W. W. Matherwell, Minister of Agriculture, Regina; A. F. Mantle, Deputy Minister of Agriculture, Regina; W. W. Thompson, Director Co-Operative Organization Department, Agriculture,



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**YES**—the great New Edison with the new Diamond Stylus reproducer and your choice of all the brand new Diamond Amberol Records will be sent you on **free trial without a penny down**. The **finest**, the **best** that money can buy at very, very much less than the price at which imitations of the genuine Edison are offered—**a rock-bottom offer direct from us**.

## Mr. Edison's Own The Genuine New Edison Phonograph

Among all his wonderful inventions his phonograph is Mr. Edison's pet and hobby. He worked for years striving to produce the most perfect phonograph. At last he has produced this new model, and now it will be sent to you on a startling offer. **Read:**

### Rock-Bottom Direct Offer Entertain Your Friends

If you wish to keep Mr. Edison's superb new instrument, send us only \$1.00 after the free trial. Pay the balance on the easiest kind of monthly payments. Think of it—a \$1.00 payment, and a few dollars a month to get this brand new style outfit—the Diamond Stylus reproducer, the musical quality—the same Diamond Amberol Records—all the musical results of the highest price outfits—yes, the greatest value for \$1.00 down, balance on **easiest monthly terms**. Convince yourself—a free trial first! No money down C.O.D., not one cent to pay unless you **choose** to keep the instrument.

Hear all the latest up-to-date song hits of the big cities. Laugh until the tears stream down your face from laughing at the funniest of minstrel shows. Entertain your family and your friends with everything from Grand Opera to Comic Vaudeville—then if you choose, send it back.

To F. K. Babson  
Edison Phonograph Distributors  
Dept. 7856 355 Portage Ave.  
Winnipeg, Man.  
Gentlemen: Please send me your New Edison Catalog and full particulars of your free trial offer on the new model Edison Phonograph.

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Your name and address on a postal or a letter (or just the coupon) is enough. No obligation in asking for the catalog. Get this offer—**while this offer lasts**. Fill out coupon today—now.

**F. K. BABSON, Edison Phonograph Distributors**  
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Name.....  
Address.....

Regina; Professor John Bracken, Charge Field Husbandry, Agricultural College, Saskatoon, Saskatchewan; F. H. Reed, Ex. Representative Dom. Seed Branch, Regina; A. Phillips, Representing Poultry Husbandry, Department of Agriculture, Rosthern, Saskatchewan; P. Stewart, District Representative, Ontario Department of Agriculture, Kenora, Ont.; Mrs. Jean Archibald, Professor Household Science, Saskatoon, and Miss E. Thompson, Lecturer on care of children, Saskatoon.

The lectures usually required three hours in each town, and longer in some cases, owing to the late arrival of some of the visitors. The usual procedure was to keep the car closed for a few minutes after arrival, and until the people had gathered, when the cars would be opened and the audience dis-

tributed. Mr. Reed was generally the first speaker and lectured on the crop production and other points of field husbandry, followed by Prof. Bracken who dealt with soil cultivation. Mr. Mooney lectured on the eradication of obnoxious weeds. The Hon. Mr. Motherwell dealt with general farming conditions. Mr. Stewart spoke on stock-raising and dairying and at several points gave demonstrations of milk testing. Mr. A. Fawcett looked after the Model Farm Car, and answered questions regarding building matters. Mr. Phillips lectured on poultry raising and egg preservation and at the principal points gave demonstrations of the killing, plucking and preparing of chickens for market. Mrs. Archibald lectured on Household Science and gave demonstrations in cooking.

#### Only a Dog

"Only a dog!"—And yet a dog is the truest of all friends, the most forgiving, the most generous.

He will go with his master anywhere, and if fairly treated is always happiest at his side.

He would live with him in poverty and suffering rather than in luxury without him.

Whether of high breeding, and his value counted by the hundreds, or the weakest half-starved cur that roams the city's streets, the faithful, loving heart is the same.

You cannot give the poor outcast the least kindness—a crust of bread, a dipper of water, even a pat and a kind word—without awaking a gratitude that brightens his eye and changes his whole aspect.

Mrs. Mary Johnson.

**A New Mail Order Jewelry Market**

We have pleasure in directing the notice of our readers to the announcement in this issue of a new departure in the mail order method of supply to the farm homes of Canada. Louis Jacobs & Co., Ltd., of Winnipeg, are issuing a finely illustrated catalogue of high class jewellery, watches, silverware, plated goods, cut glass, cutlery, etc., containing some fine examples of a very large stock, in every case representing what appears to be excellent value. The catalogue speaks for itself. We are glad to bear testimony to the respectability and financial standing of this firm and to point out that it seeks to deal with its correspondents on the only satisfactory basis on which any trustworthy business house can carry on a mail order connection, viz.: perfect satisfaction or the money remitted for goods will be refunded.

The catalogue will be sent free to any request and charges are prepaid on all goods ordered from it.

"And all that makes the world so fair,  
Help us to do the things we should;  
To be to others kind and good,  
In all we do and all we say,  
To grow more loving every day."

Notice.—The booklet "Helps for Expectant Mothers," will be sent free to any wife who requests it. Address P. R. H., 983 Grovenor Ave., Winnipeg.

**RECIPES**

The following method for canning vegetables I have taken from The Delinctor, as I believe many women would like to can their vegetables if they could learn of a reliable method.

**A New Way to Can Vegetables  
The Cold-Pack Method is Not  
Difficult, and it Succeeds**

By Mae McGuire-Telford

Any woman can preserve vegetables as successfully as fruits. But the process is not the same; a little more time and labor are necessary. The difficulty in former days arose because the cause of fermentation was not well known, so the remedy could not be applied with certainty.

Vegetables in general contain very little of the acids that discourage bacteria; on the other hand, they contain large amounts of protein, the food most hospitable to bacteria. Moreover, the bacteria always present in corn, beans, and other vegetables have a peculiar life-history that makes them extremely resistant to heat. Under favorable conditions they live and multiply as other similar growths, but under unfavorable conditions they form thick-walled bodies called spores, which are able to retain their vitality even if boiled for hours.

**The Little Spores Work Havoc**

It was these spores that worked havoc in the jars of our mothers and grandmothers. Long-continued boiling of the vegetable to be canned failed to kill all present; the few or many that escaped sooner or later later developed into bacteria in the jars, and then multiplication was so rapid as to spoil all the contents.

Although the spores are able to resist the temperature of boiling water for a long time, the bacteria that develop from them can not. Therefore the problem of recent investigators has been to devise a means of making the spores develop into bacteria at canning time, and then to kill these bacteria by boiling. Fortunately a certain means of doing this has been discovered. It was found that boiling does not kill the spores; in fact, it stimulates them so that they develop into bacteria within twenty-four or forty-eight hours.

Hence the method now used with complete success in canning vegetables of all kinds in the home without special apparatus is to boil the vegetable for an hour to kill all bacteria present and to stimulate the spores; then to seal the jars and let them stand for twenty-four hours so the spores may develop into easily killed bacteria; and finally to boil the vegetable again for an hour to kill the new crop. Generally the boiling is repeated on the third day to make sure that no spores escape. This method of canning can be used with certainty by any housewife who will observe ordinary cleanliness and follow simple directions.

The method is known by various names. Because the vegetable is put into the jars cold before cooking it is coming to be called the "cold-pack" method. It is perhaps best illustrated with corn, so directions for canning corn are here given in detail:

**The Cold-Pack Method in Canning Corn**

Use the best grade of sweet corn. Select ears that are not too hard, and do the canning as soon as possible after the ears are pulled from the stalk; the percentage of sugar is low in hard ears and in ears that have been pulled for some time. Remove the husks and silks; if this work is done carefully, it will not be necessary to wash the corn unless worms are present. Cut and scrape the corn from the cobs with a sharp knife in order to get all the nutriment possible. Salt the corn slightly; ordinarily a teaspoonful of salt to a quart of corn is sufficient.

Have glass jars ready; these are the best, because they can be cleaned more easily than any other kind, and also more thoroughly. Pack the jars full of corn, fill them to the top with cold water, put the covers in place loosely without the rubbers, stand the jars in the wash-boiler on a false bottom of cloth or shingles, surround them with a few inches of water, put the cover on the boiler loosely, and steam the jars and their contents for an hour by boiling the water. Then put the rubbers on the jars and seal them.

After twenty-four hours loosen the covers so they fit loosely and again boil the water for an hour. Seal the jars and allow them to stand for another twenty-four hours. Then unseal them, put new rubbers of good quality in place, screw on the covers loosely, and steam the jars the third time for an hour. Screw the covers on tight while the jars are still hot, and the corn will certainly keep; moreover, its flavor is excellent.

**Easy Devices to Lessen Labor**

This method at first thought seems rather troublesome, but the amount of work can be materially reduced by a simple device. The jars need not be removed from the boiler each day; all necessary work can be done without this operation and the boiler and its contents allowed to stand. If good rubbers are used, no change need be made; but long heating causes the cheaper kinds to crack, so that the jars can not be sealed tight enough to shut out bacteria. Of course the covers must be loosened each time the jars are steamed, as otherwise the expansion allowed to cause an explosion. Other vegetables, usually canned in the same manner as corn, are usually canned in the same manner. Details differ somewhat, and the method of preparing the vegetables for the jars varies; but the method of sterilization is substantially the same for all vegetables except tomatoes.

Many vegetables are improved if blanched before canning; blanching sets the color of green vegetables, removes bacteria and undesirable substances, and in many cases improves the taste. To blanch a vegetable that has been prepared for the jars, place it in some kind of open vessel (preferably a woven-wire basket), plunge it into boiling water or live steam from one to five minutes, and cool it at once by dipping it in cold water or pouring cold water over it.

**To Can Lima Beans**

Shell the beans, blanch them four or five minutes, cool them, and pack them into jars. Fill the jars with cold water and steam them for an hour on three different days as in canning corn. It is important to hurry the process after shelling the beans, as Lima beans lose their delicate flavor if allowed to stand after shelling.

**To Can String-Beans**

Select young and tender beans; those allowed to harden before canning are tough and stringy when served. String them, break them into short lengths, blanch them for two minutes, cool them at once, and pack them into jars. Fill each jar to overflowing with cold water, add a teaspoonful of salt for each quart, and sterilize the beans for an hour on three different days as in canning corn.

**To Can Peas**

Select young peas, shell them, blanch them until the skins wrinkle slightly, pack into jars, cover with cold water, and steam for an hour on three different days as in canning corn.

**Canning Beets**

Select young beets, cut off the leaves so about an inch of stem remains, and wash the beets carefully so as not to

**RECORD CROP**  
of Exceptional Values

WITH the assurance that they are dealing with a RELIABLE HOUSE, that is: a "SATISFACTION-OR-MONEY-REFUNDED" house, MARKETING BY MAIL to the farmer citizen of Canada is the only possible means of keeping in regular touch with the latest products in quality goods of any sort at reasonable prices. In



No. 11. Solid Gold, 14kt. Showy Tiffany, set with genuine diamond, each \$25.

**Quality Diamonds  
Jewellery, Fancy  
Goods of All Kinds**

We are in a position to offer a service in QUALITY AND VALUE unsurpassed if not unequalled by any other mail order house in Canada. Who are we? For nearly ten years our manager has been engaged in the Mail Order Department of the T. EATON CO., WINNIPEG, but having a desire to strike out for himself, has co-operated with one of the largest wholesale buyers in Winnipeg.



With the very strongest financial backing and the further guarantee of this paper

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tells the rest of our story. Send for a copy at once. ONE PRICE FOR ALL—CHARGES ALL PREPAID—SATISFACTION, OR MONEY REFUNDED.

CUPS AND MEDALS FOR ATHLETIC ASSOCIATIONS A SPECIALTY

**LOUIS JACOB CO., LTD.**

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SOMETHING NEW IN  
WORK GLOVES

**"Casey Jones"**

The DOLLAR GLOVE, made from good-wearing chrome-tanned horsehide

**LOOKS LIKE SILK  
FEELS LIKE KID  
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EVERY PAIR GUARANTEED

You have enjoyed the Song—now try a pair of **CASEY JONES—THE DOLLAR GLOVE**—and get glove satisfaction.

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WINNIPEG



bruise the skin. Cook them until they are tender enough for table use, drain, and cover with cold water. Push off the skins, place the beets in jars, and steam for an hour. Fill the jars to overflowing with boiling water and seal them at once. A little sugar may be added if desired.

**Canned Cauliflower**

Separate a head of cauliflower into flowerets and stand it head downward in a pan of cold salted water. Examine it carefully to see that there are no concealed insects. Blanch it for three or four minutes and then put it into jars, crowding it as close as possible without crushing it. Cover it with boiling water, salt it slightly, and steam it for an hour on three successive days as in canning corn.

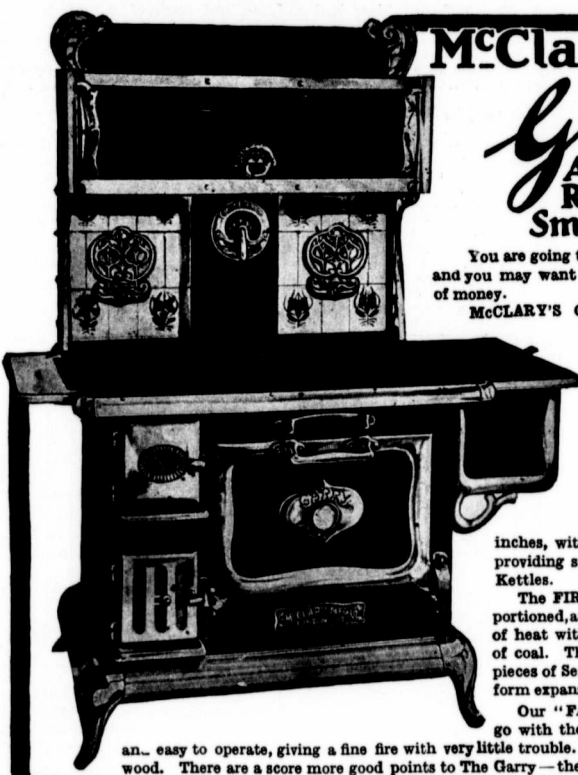
**Tomatoes Are Easy**

The one vegetable that is easy to can is the tomato. The trouble that housewives have in canning tomatoes is entirely needless, as they contain so much acid and so little proteid that bacteria have little opportunity to cause trouble if the canner does her part intelligently. The trouble nearly always results because tomatoes beginning to spoil are used, or because an attempt is made to preserve fully ripened tomatoes. If decay has already begun, the bacteria that cause fermentation in the jars are present in large numbers, and some of the spores are almost sure to escape unless heat is applied for a long time. The amount of acid is small in fully ripened tomatoes.

For canning, select sound tomatoes the least bit underripe. Wash them, seal them for an instant, cool them, remove the skins, and pack them whole into the jars. Add a level tablespoonful of salt to each quart, but no water. Steam the jars twenty-five minutes and then seal them.

Bacteria flourish in warm, damp, dark places, and find cool, dry, light surroundings unfavorable. Therefore the best place for storage, as far as fermentation alone is concerned, is the lightest place in the house. Strong light, however, causes the natural color to fade, and sometimes brings about undesirable chemical changes; with the exception of tomatoes, the flavor is seldom appreciably affected, but fading makes the contents less attractive.

**An Ant Trap.**—Procure a large sponge, wash it well and press it dry, which will leave the cells quite open. Then sprinkle over it some fine white sugar and place it where the ants are most troublesome. They will soon collect upon the sponge and take up their abodes in the cells. It is only necessary to dip the sponge in scalding water, to wash out dead ants by the thousands. Put on more sugar, and set the trap for a new haul. This process will soon clear the house and yard of every ant, uncle and progeny.



**McClary's Garry**  
Steel Range  
A Big Range at a Small Price:

You are going to buy a new Range this fall, and you may want to spend a limited amount of money.

McCLARY'S GARRY is surely the biggest value for the least money that you have ever seen.

The EXTRA LARGE OVEN, 20x20x13 1/4, amply provides for baking day.

The THERMOMETER you see in the Oven Door is accurate.

Notice the extra large POLISHED TOP, thirty-six by twenty-seven inches, with six No. 9 Cooking Holes, providing so much room for Pots and Kettles.

The FIRE BOX is scientifically proportioned, and gives the greatest amount of heat with the smallest consumption of coal. The linings are made in nine pieces of Semi-Steel, fitted to allow uniform expansion and contraction.

Our "FAMOUS" DUPLEX GRATES go with the Garry. Strong, durable,

and easy to operate, giving a fine fire with very little trouble. Easily reversed to use wood. There are a score more good points to The Garry—the neat but handsome nickelled parts, so easy to keep clean; the HIGH CLOSET and the RESERVOIR—but space won't permit us to more than mention them here, so we want you to write us for full particulars and prices and the name of your nearest McClary dealer.

Fill out the Coupon NOW and get a STOVE CATALOG and HOUSEHOLD GUIDE FREE.

**McClary's**  
LONDON TORONTO MONTREAL WINNIPEG VANCOUVER ST. JOHN HAMILTON CALGARY

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Questionnaire see on FREE COPY \_\_\_\_\_  
of our CATALOG and HOUSEHOLD GUIDE.

You saw this advertisement in this magazine. Don't forget to say so when writing.

**Our Home Made Knitted Woollens**  
(A Story of unusual interest to the Farm Folks)

What an amazing quantity of woolen fabrics are worn threadbare by the people of Canada! What an astonishingly small proportion of the wool—that finest of all raw material for the clothing of human flesh is grown in the Dominion of Canada! And yet there is nothing in "animal husbandry" which can be carried on with less risk and greater profit on most of our Canadian farms than the business of sheep raising. Some friends we know are making a fine "side line" of it, but they are not the type of men who have time to spare in advertising their performances. One worthy friend a few years back netted a sum in clear profit from a small flock of "Leicesters" sufficient to send two members of his family on an extended trip to Europe—all the way from their farm home in Western Manitoba and back again. The sheep paid for the trip as well as a few "things" the young ladies bought in London and Paris!

This, however, is neither a wool-raising nor a "hair-raising" story but a few plain facts which demonstrate in a remarkable way what we could do for ourselves—how wonderfully self-contained this great country of ours might become by a little foresight and com-

mon-sense handling of our own resources.

If our farmer-friends, their wives

which make our extreme winter not only tolerable but transforming an otherwise unsupportable atmosphere into the most delightful and invigorating climate on earth, they would never again buy an "imported" garment. They would conceive an affection for the mutton-sheep which no pet-lamb ever enjoyed in the poetry books or out of them.

As we write, Winnipeg alone of our Canadian manufacturing centres has a pay-roll of unsuspected textile industries that is really astonishing—partic-

ularly in view of the fact that it has practically all sprung up during the past decade—most of it in less than five years. One of the most striking of these comparatively new hives of industry is the Northland Knitting Company's big factory on Arlington Street—an entirely new building, carefully designed for the special purpose it is fulfilling.

According to the season, anything from three-score to two or three hundred "hands" are employed by this one firm, in the manufacture of knitted woolen garments such as sweaters and sweater coats, gloves, mitts, toques, etc.

The writer has spent many years in a Scotch woolen factory in handling and purchasing the raw material from the sheep's back, going through the entire process of "sorting" the fleeces, scouring, dyeing, teasing, carding, spinning, weaving and finishing the yarn or fabric. He recently had the privilege of making a "top-to-bottom" inspection of the Northland Knitting Company's plant, and if from no other point of view than that of a loyal Canadian, the opportunity was one he would not have passed over in favor of anything else he knows of in manufacturing interest.

The only regrettable feature was the fact that this enterprising firm is compelled to import so great a proportion of its yarns, but this is tempered by the circumstance that these have all been purchased from another partner of the Empire. They are for the greater part from Scotland and the atmosphere of such renowned centres as Alloa, Galashiels and Hawick is redolent in the Northland Factory.


But the time is ripe now when we ought to be spinning our own yarns.



Finishing Department of Sweater Factory

and young folks could see being done almost "at home" in manufacturing some of those creature comforts

ularly in view of the fact that it has practically all sprung up during the past decade—most of it in less than five



**HOLDER OF THE GOLD MEDAL IN CANADA**

**BECAUSE OF THE Superior Character OF OUR DENTAL WORK**

Every detail of extracting and fitting is effected without pain or bungling. Any one who has been treated by us will state without qualification that what they had apprehended as a painful experience was attended by nothing but pleasure and comfort from net to last.

**Our Prices are moderate and we guarantee Perfect Satisfaction**

Languages spoken: English, French, German, Danish, Norwegian, Swedish, Polish, Russian, Ruthenian, Galician, Bohemian, Icelandic.

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For the Boys and Girls

To be clothed correctly is of vital importance to your children.

**PURE WOOL WEAR** prevents chills and lays the foundation of health. Clothe your Boys and Girls with **JAEGER** throughout.

Combinations, Vests, Pants, Drawers, Knitted Suits, Sweaters, Caps, Gloves, Stockings, etc., etc.

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An immense area of the most fertile land in Western Canada for sale at low prices and easy terms, ranging from \$11.00 to \$50.00 for farm lands with ample rainfall—irrigated lands from \$35.00. Terms—One-Twentieth down, balance within twenty years. In irrigation districts, loan for farm buildings, etc., up to \$2,000, also repayable in twenty years—interest only 6 per cent. Here is your opportunity to increase your farm holdings by getting adjoining land, or secure your friends as neighbors.

For literature and particulars apply to  
**F. W. RUSSELL**, Land Agent, Desk 15,  
Department of Natural Resources, C. P. R.,  
Winnipeg.

from our own flocks. There is, however, the satisfaction that these yarns imported from the land of the Cheviots are of the very finest quality and strength that can be manufactured by human skill from carefully selected wool.

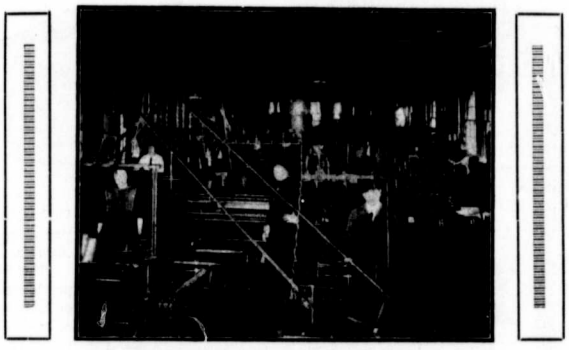
When we price one of these articles—a comfortable, close-fitting artistically woven "sweater" or one of the "Northland" woollen leather-protected gloves or mitts at any country store, we marvel at the low price and wonder how on earth it can be sold over the counter at the money, having regard to all it has "come through"—starting with the raw material at say thirty cents a pound.

But when you see how brains have command of every detail in the long and intricate process in the Northland

the least touch of thoughtfulness on the part of the management is a spacious dining room provided for the employees in which light cooking at meal hours can be indulged in by those of them who may live at an inconvenient distance.

There is no "secret process" in this institution. Any visitor of the "Thresherman" visiting Winnipeg is cordially invited to inspect every nook and corner. All that is necessary in the way of passport is to ask for Mr. Harvey the courteous Secretary-Treasurer and say you are a subscriber to "The Canadian Thresherman and Farmer."

The "Northland" brand is, in short, the product of the enterprise of a few Canadian business men who would rather have the satisfaction of accepting a reasonable dividend on their



Section of Knitting Mill showing Power Machines

Factory—the remarkable division and specializing of labor, the problem is no longer a distracting one. Women folks for the greater part are employed as it is essentially women's work of a type that neither wears nor worries. The wonderful weaving looms and knitting machines are the very last models of the kind employed in any factory. They save human labor to the vanishing point while they operate with all the delicacy and far more than the precision and speed of the human fingers. In short, while there is nothing "rushed," there is nothing wasted in this human beehive where all are working—"unhasting yet unresting," harmoniously and happily under the healthiest possible conditions.

We give a couple of illustrations of this home industry but mere photographic illustration cannot adequately describe the lofty and splendidly sunlit work rooms and the perfect system arranged for the health and comfort of the workers in winter or summer. Not

invested capital than sink it in thousands of acres to be held up at a ransom and realized only, it may be, when they are in their graves. They would rather have the joy of providing remunerative and healthy employment for as many hundreds of Canadian citizens as the demand for their product can provide for. What are you doing to encourage this home industry—not from the mere sentimental impulse but to save money, to increase the number of our employed citizens and to lift this great self-supporting country beyond the caprice of war and industrial strife at points upon which we have hitherto depended for so much of our supplies.

A visit to such an institution as the "Northland Knitting Factory" would send any one away with the determination never again to buy an imported garment while one could be had with all the quality of the imported idea, at no greater cost, and with the added satisfaction of having been made by those who are practically of our own household.

**How our Citizen Soldiers are treated by the State**

As considerable doubt exists—particularly in the minds of the mothers and wives of our boys who are now being called from every hamlet and home as to the conditions of service with the colors, I am reproducing the following authoritative statement which, to say the least, casts no unfavorable reflection on the thoughtfulness and fair-minded disposition of those who have formulated the scale of pay and pensions for our soldier heroes and their dependents.

P. R. H.

Invalided Canadian soldiers and prisoners of war receive pay until they are pronounced fit to return to their civil occupations, or if permanently injured, until pensioned, according to J. W. Borden, paymaster-general of the militia council.

It is further announced that the British government is arranging through the United States ambassador at Berlin, for the issue of one mark a week to all Canadian prisoners of war, as well as all British. This is to be part of the men's

pay, the balance due them to be paid at the end of the war, or as soon as they regain their freedom.

Dependents of these men are, of course, still receiving the monthly separation allowance, and also any pay which had been assigned them by the men prior to imprisonment.

Mr. Borden adds that an official report from the ambassador has just been received by the British government respecting treatment by the Germans of British prisoners. According to this, prisoners are well fed, housed, and clothed. The wounded and sick are treated in hospitals the same as German soldiers, and when prisoners are required to work they are paid a trivial amount.


**Takes Time to Investigate**

Recruiting officers continue to receive complaints from wives whose husbands have enlisted for overseas that they have received no money from the government or from their husbands since enlistment. It takes about six weeks or two months for Ottawa to complete the

**A SPECIALLY LOW PRICE ON YOUR NEW LAMP NOW**

You will need a new lamp this fall. When you get it be sure it is the best you can buy—A "WONDER." This lamp is made by the oldest rural lamp manufacturer in Ontario. It is sold on its merits alone, with an absolute guarantee to give perfect satisfaction or your money back.

It has a very pleasing appearance, gives a strong, steady pure white light which is very easy on the eyes. You can turn it on or off just like city gas, and



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Investigate this style of home lighting before deciding upon any system. This is a very superior article and at the special summer rates now prevailing, you can save a large percentage of the cost you will find necessary later in the fall.

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Ask us about this proposition. You will be under no obligation, and you will find our literature very interesting. Will you mail the coupon?

**Maclaren Light Co.**  
Merrickville, Ont.  
Please send me FREE full particulars of your Wonder Lamp, also Special Name Address Prov. C.T.

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**USES ONE ORDINARY DRY BATTERY**

Without Battery	\$2.00
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The remarkably beautiful tone of the Mason & Risch Piano, perfectly balanced throughout the entire keyboard; its even and responsive touch, which adequately meets the highest technical demands; and the grace and beauty of the instrument as an example of artistic craftsmanship; these qualities make the Mason & Risch Piano an Art Piano of the first order, "The Best Piano Built."

 **WRITE TO-DAY FOR BOOKLETS.**

**MASON & RISCH LIMITED**  
 302 PORTAGE AVENUE, WINNIPEG

**A**T this time, when the Investment situation presents so important an issue, no small interest attaches to the following statement by the Management in one of the publications of The Great-West Life Assurance Co.:

"The investments of the Company as a whole were never in a more satisfactory position than they are to-day. We find it now a matter of supreme gratification that the investment policy of the Company has always been directed towards mortgages on real estate, especially on farm properties. Contrary to the general experience, we now find that the security back of our investments has been rather increased than diminished on account of the war conditions, this fact being due, of course, to the increased value which has accrued to all farm products."

SECURE THE BENEFIT OF THESE EXCELLENT INVESTMENTS BY  
 INSURING IN

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HEAD OFFICE - - WINNIPEG

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MAIN ST. AND BANNATYNE AVE. WINNIPEG

necessary inquiries and begin the payment of separation allowances, which, however, date from the day of the husband's enlistment. In some cases it has been found the wife has never communicated with Ottawa, though directed to do so by her husband, and in other cases it is apparent the husband has been misleading his wife as to the pay he receives. The latter trouble is more often met with in the earlier stages of the husband's enlistment, before he has gone to camp.

Every wife should know that a private in the Canadian expeditionary force receives \$1 a day and 10 cents field allowance. Besides this, he is clothed, equipped, and fed by the government. Till he has gone to camp he receives 75 cents daily for his meals. Every married man is compelled to allow his wife half of his day's pay, and should allow her far more, as he has no expenses save for tobacco, if he smokes. In addition, the government pays the wife \$20 a month separation allowance from the date of the husband's enlistment. No allowance is made by the government for children, but their welfare is looked after by the Canadian Patriotic fund, who will allow 10 cents, 15 cents, or 25 cents a day for each child, according to age, and bring the wife's monthly income up to \$45 including her separation allowance and other earnings, but not the money allowed her by her husband from his pay.

**Permission to Marry**  
 Only men who obtain permission to marry from their commanding officer at the time of enlistment, and marry within 20 days thereafter, are entitled to a separation allowance for their wives.

**Rates of Pension**  
 Private soldiers totally disabled in action will receive \$264 a year. If totally disabled not in action, but on active service, or materially disabled in action, the pension will be \$192. Soldiers materially disabled on active service will receive \$132. A small degree of incapacity will earn a pension of \$75 a year. In addition to the above, a totally incapacitated soldier may draw \$11 a month for his wife and \$5 a month for each child.

The widow of a private soldier is entitled to a pension of \$22 a month and \$5 a month for each child under 15, the pension to cease on her re-marriage, though she is eligible for a gratuity of two years' pension. A widowed mother whose only son was her sole support and unmarried shall receive \$22 a month. Orphans may be paid \$10 a month. Pensions shall take effect from the day following that on which the death of the husband occurred.

**Soldiers Discharged**  
 Men returning from overseas discharged medically unfit from the service are expected to report at the office of the assistant director of medical service, in the Fort Osborne barracks. Up to the present there are quite a number of men who have not done so, and the military authorities are now making the request that they report. In many cases it is largely to the man's advantage that they should call, as in some instances there are arrears of pay due them; in other cases it may be necessary that they should receive medical attention or be placed in a convalescent home, and all these things will be attended to if the men report themselves.

**"It Is Time That This Man  
 Should Fall"**

"The last great struggle of imperialism to dominate the world ended a hundred years ago to-day, and the anniversary sees the struggle of another imperialism for the same purpose," says the New York Times.

"Whatever difference there is in the two is in favor of Napoleon, at least from the American viewpoint. He was an autocrat, but he bore in mind the principles of the French Revolution, and where he conquered he established a despotism tempered by a regard for individual welfare and equality. The German imperialism creates a mechanical State whose purpose is not freedom or

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 Chases Dirt

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 Write to the Cudahy Packing Co., Toronto  
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All "ARLINGTON COLLARS" are good, but our CHALLENGE BRAND is the best

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REALLY DELIGHTFUL  
THE DAINTY MINT-COVERED CANDY-COATED CHEWING GUM

**Make a Corner Gony**

Collect the Cushion Cover Coupons in every 5, 10 and 25 cent Chiclet Package.

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**A Palate Pleaser**



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Size of Roll Films	Developing per roll of 6 Exposures	Unmounted Prints per doz.	Mounted Prints per doz.
2 1/2 x 3 1/2	10c.	35c.	45c.
2 1/4 x 4 1/4			
3 1/2 x 3 1/2			
3 1/2 x 4 1/2	15	40	70
3 1/2 x 5 1/2	20	50	75
4 x 5 1/2	35	80	1.25
4 1/2 x 5 1/2	40	80	1.40

The above prices are for glossy surface unless otherwise stated. Work returned to you within 24 hours from receipt.

SEND US A TRIAL ORDER TO-DAY

**Steele Mitchell, Limited**  
WINNIPEG, MAN.

equality but efficiency, the efficiency to be governed by the State machine.

"The world Napoleonised would have been a sorry sight; but there would have been some compensations. There would have been some freedom of scope. The citizens as well as the soldier would have carried a marshal's baton in his knapsack. The men of the Revolution, those who survived, still surrounded Napoleon, and he had not forgotten all their ideals. But the world Kaiserised would be a world out and trimmed to one design, reduced to one dead level; it would have in it the worst of what men fear in State Socialism, with the blighting difference that in theory at least State Socialism would be directed by the people, and Kaiserism would govern its world from above.

"It was time that this vast man should fall," says Hugo. "He vexed God." It is time that this Frankenstein monster, this soulless, deadly machine of deadly efficiency, should fall. It must not make waste paper of Magna Charta, the Declaration of Independence, and the Bill of Rights.

"The two terrors are alike in nothing but their aim. The domination of Napoleon came out of a struggle for liberty, and was an incident in universal history; the attempted domination of Kaiserism is a deliberate and long-prepared blow struck at the liberty of the world. It was the failure, the momentary failure only, of the great effort for French liberty, begun in 1789, that bred Napoleon; he passed, and French liberty was born again after the reaction.

"But Kaiserism was deliberately bred in a long era of peace, not in a convulsion, and its conspiracy against the liberty of man was born of a merciless philosophy, the philosophy of national egotism. June 18, 1815, saw the end of the first imperialism; June 18, 1915, sees the world fighting to save itself from the second."

**The Ordeal of Hooge—Bringing it Home**

"Looking at the faces of the men who were at Hooge I found it hard to realize that they had been through an ordeal beyond the imagination of old historians of war who write of human courage and endurance," writes Mr. Philip Gibbs in the Chronicle. "A battalion of those who took part in the attack which regained our lost ground and something more had come out of the trenches, and were now resting.

"Some of them will no doubt be recommended for high rewards of valour. History will write of them as heroes, though to me they seemed but ordinary young men, who had not found time to shave as usual and looked very tired.

"It was the officer, with most humorous eyes and a jaunty way with him, who first introduced me to the men who could tell me all about the 'scrap,' as he called it. But it was the colonel who traced out the general idea of the action (drawing maps with the end of his stick on the floor of a wooden hut), and who pronounced the moral significance of the business.

"As far as my own experience goes," he said—and it goes a long way, from the retreat from Mons—it is the first time our artillery has done all that we could hope, and a bit more. Certainly, as far as my personal impressions go, it was the first time I have heard such an intense and prolonged bombardment.

"Our gunners seemed to have a real good supply of ammunition, and this made us feel cheerful. They prepared the way magnificently for our infantry attack, and I am convinced that if we could keep on like that we should have the enemy "beat." They have been fighting this war on chemistry and machinery. Man for man they can't face us. If our guns can go on supporting us in the same way, we shall have them at our mercy."

"Some of the tales of the men who had been incredible except that I heard them from soldiers who told the truth that lives on the lips of men who have seen very close into the face of death. "It is, for instance, difficult to believe



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The old lead packets filled the bill—but had several drawbacks. Every housewife knows them. Easily torn—liable to puncture and rust—only custom made them acceptable.  
The new "BLUE RIBBON" wrapper is a perfect packing for tea. Strong, clean, handy, dust-proof, impervious to moisture. In short

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If none of our 200 Western Branches is near your home, mail us the cheques or cash you receive, with your Passbook, and we will return it with the Deposit credited. Then you can pay your bills by cheque, which we will honor, or if you want the cash yourself send us a cheque in your own favor and we will forward the money by return mail.

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We don't ask you to pay us a cent until you have used this wonderful modern light in your own home ten days—we even prepay transportation charges. You may return it at our expense if not perfectly satisfied after putting it to every possible test for 10 nights. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests at 33 leading Universities and Government Bureau of Standards show it

**Burns 70 Hours on One Gallon**

common coal oil, and gives more than twice as much light as the best round wick open flame lamp. No odor, smoke or noise, simple, clean, no pressure, won't explode. Several million people already enjoying this powerful, white, steady light, nearest to sunlight. Guaranteed.

**\$1000 Will Be Given** to the person who shows us an oil lamp equal to the new Aladdin (details of offer given in our circular.) Would we dare make such a challenge if there were the slightest doubt as to the merit of the Aladdin? We want one near us as much as you do, especially to whom we can refer customers. Be the first and get our special introductory offer under which you get your own lamp free for showing it to a few neighbors and sending in their orders. Write quick for 10-Day Absolutely Free Trial. Just say, "Show me how I can get a strong white light from coal oil, without risking a cent." Address our nearest office.

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We furnish capital to respectable men to get started. Ask for our distributor's plan, and learn how to make big money in unoccupied territories. Samples sent for 10 days FREE TRIAL.



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The air of perfect happiness and contentment of babies brought up on Savory & Moore's Food is constantly a subject of remark. This is simply because it is so easily digested, so nourishing and satisfying, in fact an ideal food for babies in every way.

Get a tin of Savory & Moore's Food to-day from your Stores, and note how eagerly baby will take it, and what marked improvement and steady progress will follow its use.

**MOTHER'S GUIDE FREE**

Savory & Moore's little Book "The Baby," is full of useful and reliable information on Infant Management. It is just what a young mother requires, and will prove invaluable in the home. A Free Copy may be obtained on application to Savory & Moore, P.O. Box 1601, Montreal.

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Very Pliable, Extra Strong Not Affected by Heat or Cold NONE BETTER In 1 lb. packages \$1.20 by mail. Also sold in sides. Get our prices

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BRANDON, MAN.  
Ship Us Your Hides, Best Prices

—yet true—that amidst all this tumult and terror of noise one German prisoner was taken as he sat very calmly in his dug-out reading a book of religious meditation through gold-rimmed spectacles. Perhaps it was the man—I only guess—in whose pocket-book was found a letter to his wife saying, 'The position here is hellish, and death is certain. I only pray that it may come soon.'

"A major had his side-pocket blown away and for a moment believed that he had been mortally wounded. But the shell-burst had missed him by some part of an inch. His servant was carrying a bag on his head when a shell blew the bag to bits and off the head beneath it, safe and sound. So death dodges men and selects its victims in a freakish way."

**Germany's Moral Handicap**

"Discussions about the responsibility for beginning the war have been dying out of late," says the New York Nation. "But one thing we can never too much insist upon, because it goes to the roots of national morality and of civilization itself. We mean the crushing moral handicap which Germany took upon herself by her conduct towards Belgium. This she has never been able to overcome.

"Germans themselves admit this. They now perceive that the immense moral revulsion which shook the whole world when Belgium was trampled by German armies had an effect very like that of making the Allies a present of a million armed men.

"Thus we have at least one great sentiment, having to do with law and right, which has persisted steadfast all through the war. It has been a manifestation of the soul of goodness in things evil. We need not despair of the future so long as the heart of man continues to thrill over Belgium's wrongs, and so long as the consensus of civilized nations outside the belligerents, is that no ending of the war ought to be thought of which will not make the Belgians again independent and free.

"That attainment is not yet in sight. It may have to be won by force of arms, or it is possible that it may come through mediation and diplomatic negotiations, supported as these would be by the demand of the German Social-Democrats that no annexations be made as a result of the war.

"When it came to moral or intellectual indictment, surely no man more than Burke himself showed that that was not impossible. Right or wrong, his denunciation of the spirit which pervaded France during the Terror was as sweeping and as scathing as the power of eloquence could make it.

"To pass judgment upon individual Germans—to assume that we in their place would individually be better—might truly be presumptuous; but it is not presumptuous to declare that somehow or other a spirit evil and intolerable has gained such possession of those who control the destinies of Germany as to make her national conduct—in the large, and terribly often in detail—an abomination in the sight of all the nations.

"If the inflexible backing up of Austria in a demand so arrogant and an attitude so unyielding as to make the desolation of this war a certainty be a crime; if the violation of Belgium in cynical disregard of treaty obligations be a crime; if the punishment of the Belgian people for resisting this aggression, executed with calculated ruthlessness of the most appalling kind, be a crime; if the slaughter of non-combatants on the Lusitania in defiance of the dearest mandates of international law be a crime—what attitude is it possible for us to take towards the country guilty of these offences except that of indignant condemnation?"

As the Bryce Committee says: "This is not the only case that history records in which a false theory, disguising itself as loyalty to a State or to a Church, has perverted the conception of Duty and become a source of danger to the world."

**GILLETT'S LYE EATS DIRT**

THE BEST CLEANSER AND DISINFECTANT KNOWN. USED FOR SOFTENING WATER—FOR MAKING SOAP. REMOVES GREASE AND CRUST FROM FRYING AND ROASTING PANS. REFUSE SUBSTITUTES.

MADE IN CANADA  
**E.W. GILLETT CO. LTD.**  
TORONTO ONT.  
WINNIPEG MONTREAL

**Prune Jelly**

Procure nice, large prunes and soak them over night in cold water. In the morning add just sufficient water to cover, and simmer gently on the back of the stove until they are soft. From time to time add as much water as has evaporated. Remove the prunes from the fire, take out

the pits, and press through a sieve. Sweeten with from one to two teaspoonfuls of molasses to each pint of prune pulp. Return to the fire and cook until the mixture is thick enough to make a tender jelly when cold. This should take about half an hour. It will have to be watched that it does not scorch.

**FROM THE ORIENT TO YOUR TEA-TABLE**

THE FRAGRANT AROMA SECURE IN THE SAFETY OF THE SEALED

**"SALADA" PACKAGE**



**How Much Do You Spend For Coal?**

Figure what it would save you if you could save one ton in every seven.

**Saves one ton in Seven.**

The Hecla Furnace has a patented steel-ribbed fire pot that means a big increase in the amount of heat you get from the coal—a big decrease in the amount that is wasted up the chimney

The Hecla Grate, with its independent, triangular bars enables you to clean out all the ashes without wasting any of the good coals—another saving. The large circular water pan of the Hecla gives plenty of moisture throughout the whole house.

**Absolutely Gas & Dust-Tight**

Every joint where gas or dust might leak into the warm air chamber and so on into the house is guaranteed forever, absolutely tight in a Hecla Furnace. Our patented "Fused-Joints" can never be loosened by the action of the heat.

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Our booklet "Comfort & Health" will give you some valuable points about heating and furnaces.

**Use the Coupon**

**Clare Bros. Western Ltd.**  
WINNIPEG, MAN.

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4 C Send me your "Booklet—" COMFORT AND HEALTH"  
Name \_\_\_\_\_ Address \_\_\_\_\_



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Dept. C, Winnipeg  
Galt Bldg.

**MONEY BACK GUARANTEE**

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### SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

**T**HE sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. Applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the District. Entry by proxy may be made at any Dominion Lands Agency (but not Sub-Agency), on certain conditions.

**Duties**—Six months residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, on certain conditions. A habitable house is required except where residence is performed in the vicinity.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre.

**Duties**—Six months residence in each of three years after earning homestead patent; also 50 acres extra cultivation. Pre-emption patent may be obtained as soon as homestead patent, on certain conditions.

A settler who has exhausted his homestead right may take a purchased homestead in certain districts. Price \$3.00 per acre. **Duties**—Must reside six months in each of three years, cultivate 50 acres and erect a house worth \$300.

The area of cultivation is subject to reduction in case of rough, stony or sandy land. Live stock may be substituted for cultivation under certain conditions.

W. W. GORY, C.M.G.,

Deputy of the Minister of the Interior. N.B.—Unauthorized publication of this advertisement will not be paid for.—64388.



Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Five cents a word for each insertion.

### BARGAINS.

One 30 H.P. double undermounted Avery engine, with Alberta and Saskatchewan boiler. This engine has been repaired and fixed up in first class shape. Can be seen at our Regina warehouse at any time.  
One 30 H.P. undermounted Avery engine, with regular boiler, repaired and fixed up in first class shape. This would make a dandy threshing engine. Can be seen at our Regina warehouse at any time.  
One 40 H.P. undermounted Avery engine, with regular boiler, revolving axle, repaired and in first class shape. This engine has been used but very little, and can be seen at our Winnipeg warehouse at any time.  
One 18 H.P. double undermounted Avery engine, coal burner, is in first class shape at our Regina warehouse.  
One 32 x 54 Avery separator, only been out 20 days, and is in first class shape. Can be seen at our Regina warehouse at any time.  
One 36 x 60 Avery separator, complete with feeder, weigher, wind stacker; has only been out 30 days. Has been repaired and repainted, looks like new. Can be seen at our Regina warehouse at any time.  
One 42 x 70 Avery separator, run 28 days, has been repaired, repainted and overhauled, and is in first class shape. Can be seen at our Winnipeg warehouse at any time.

We also have a few second-hand, both Avery and Cocksbutt, plows, in different sizes, from 8 to 10 bottoms.  
If you are interested in second-hand goods, and none of the above suit you, let us hear from you, stating just what you want, and we feel sure that we can fix you out all right.

**CANADIAN AVERY COMPANY, LTD.**  
Winnipeg and Regina.

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**LIST OF RE-BUILT, SECOND-HAND MACHINERY AT OUR WINNIPEG BRANCH**  
Steam Engines  
110 H.P. Simple Traction Engine ..... \$2,700  
80 H.P. Simple Traction Engine ..... 2,400  
75 H.P. Simple Traction Engine ..... 1,475  
60 H.P. Simple Traction Engine ..... 1,000  
45 H.P. Simple Portable Engine ..... 450  
Gas and Oil Engines  
20-40 Gas Traction Engine. Price..... \$1,450  
30-60 Gas Traction Engine. Price..... 1,950  
Steel Separators  
36 x 58 Steel Separator. Price..... \$ 850  
32 x 54 Steel Separator. Price..... 780  
28 x 50 Steel Separator. Price..... 545  
24 x 42 Steel Separator. Price..... 500  
18 x 36 Steel Separator. Price..... 475  
All Separators complete with Feeders, Gears, Level Stacks, Grain Handlers, Belts.  
The above machinery has been repaired and repainted in our own shop and is in first class shape. For further particulars apply,  
**J. I. CASE THRESHING MACHINE CO.,**  
Princess and James St.,  
Winnipeg, Manitoba.

**FOR SALE**—25 H.P. steam tractor in A1 shape. Would take part trade in horses. H. Peterkin, Winton Hill, Sask.  
**FARMS WANTED**—We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property. Free. American Investment Association, 15 Palace Bldg., Minneapolis, Minn.  
**POSITION WANTED** by two experienced men as engineer and fireman on threshing outfit in Edmonton district. Ed. Powers, Hotel Yale, Vancouver, B.C.  
**WANTED**—Second-hand Sawyer-Massey Eclipse separator with sack tally and straw carrier complete. In good order. Allens, Lawton, Alta.  
**MEN WANTED** in this and adjoining counties to show samples and distribute circulars for Canada's largest cut-rate grocery chain. Sample case free. Position will pay \$20 weekly. The Co-operative Union, Windsor, Ontario.  
**ONE 10-FURROW** 14 in. Cocksbutt engine gear, both stubble and breaker bottoms, also gang sheaf loader, only run ten days, in good shape. R. A. Brodie, Pierson, Man.  
**FOR SALE**—One J. I. Case steel separator, size 32 x 54; practically good as new. One J. I. Case 15 h.p. steam engine, old. Write E. D. Nicholson, Bathgate P.O., Alberta.  
**FOR SALE** or trade for stock, one twenty Stewart American Abel engine in good condition. Address Patterson Bros., Birnie, Man.  
**POWER OUTFIT**—20 H.P. Fairbanks-Morse gasoline engine, mounted on trucks, in first-class condition, and 12-inch feed grinder. Cheap for cash or will consider trade for smaller outfit or live stock. B. M. Pauls, Daysland, Alta.  
**FOR SALE**—One 32-inch Hawkeye self-feeder for sale cheap. Apply, Corona Lumber Co., Portage la Prairie, Man.

### FOR SALE.

We have on hand at present a very full line of Rebuilt and Second-hand Engines and Separators. Send now our offering at attractive prices. Write as fully what you are thinking of buying, when we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully reworked and look exactly like new. If you write at once we are sure to have the size you almost want.

**SAWYER-MASSEY COMPANY, LIMITED.**  
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**ACRYL-CRYTLENE WELDING**—Save your cracked or broken castings from the scrap heap. We weld cylinders, crank shafts, pistons, levers, etc., retain original form and strength at a small cost. Metal added to worn-out parts. All work guaranteed. The Masjioba Welding & Manufacturing Co., 624 Princess Street, Winnipeg.

**CASH**—If you want to sell your threshing machine or other property, any kind, anywhere write us. We bring buyers and sellers together, regardless of distance. Buyers located free. Established 1893. Northwestern Business Agency, Minneapolis, Minn.

**MOTOR CYCLES**—New and second-hand. Cleveland wheels, made in Canada. Repairs for any kind of wheel or motorcycle, tires, pumps, horns and all accessories. Wash or retail at Hall's, 1734 Cornwall St., Regina, Sask.

**WANTED**—To hear from owner of good farm or unimproved land for sale. H. L. Downing, 106 Palace Bldg., Minneapolis, Minn.

**WANTED**—To hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

**SECOND-HAND MACHINERY FOR SALE**—A fairly complete assortment of thoroughly rebuilt second-hand gas and steam engines and separators. Any person interested apply for prices and descriptions to The J. I. Case Threshing Machine Co., Regina, Sask.

**FOR SALE**—Stewart Sheaf Loader in good condition, been used only 2 seasons. Price \$300.00. Apply I. Ferguson, Guelph, Sask.

**FOR SALE**—Farm, 640 acres. Near Craik, Sask. Canada. Very nice and well cultivated, fair improvements and as nice a section of land as there is in Canada. Not a knoll or pot hole on the entire section. Must sell you. Cash price \$25 per acre. Address E. E. Bain, Downers Grove, Ill.

**33 in. by 52 in. Farquhar Separator**—Cleanest and fastest thresher built. We have always stocked heavily on this size of machine, a large number of being sold with our 90-40 Oil Tractors. This year, our Eastern factory is so busily engaged on government contracts, they cannot supply us with this particular size of engine. Consequently our stock of 33 in. by 52 in. Separators is too large. For a limited time you can take advantage of the situation by purchasing one of these excellent separators at a discount of 20 per cent less than regular prices. Write to-day for full information and try to get in on this snap.  
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**HARNESSES**—You want it good, don't you?—As poor harness is dear at any price. Send now for my free Catalogue A. It shows you 35 styles of the "Square Deal" Brand which is known from one side of the West to the other for its quality and is sold direct to you. The man who uses it—No agents. Thos. McKnight, Winnipeg, Canada.

**FOR SALE**—Complete threshing and plowing outfit in good order cheap. Dissolving partnership. Address Bluet Bros., Brock, Sask.

**WANTED**—Second-hand separator from 22 to 30 inch cylinder with feeder weigher and blower. Jas. Groppie, Friedenstal, Alta.

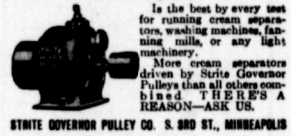
**ONE AVERY OUTFIT COMPLETE**—42 x 70 separator, 30 H.P. under mounted engine, two water tanks, pump and all connections will be sold cheap. In first class order. R. A. Bevan, Pierson.

**FOR SALE**—Business chance, a snap. A good going lumber business, saw mill and camps fully equipped for immediate use. Selling lumber, saw and shingle business of \$6,000 per year at a good profit. Price \$2,600 cash. Reason for selling, dissolving of partnership. For full particulars write, J. T. Johansson & Sons, Bergen, Alta.

**FOR RENT, SHARE OR CASH**—Large farm in central Alberta, 800 acres broken, with full equipment of modern power threshing machinery. Address: Caswell Bros., Cherokee, Ia.

**WANTED**—Information regarding good threshing machine for sale. R. G. List, Minneapolis.

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FOR RICH AND POWER USE  
Are built with a patented cog gear head. This construction reduces the power required to operate almost one half. Valves are of the most improved type, located on top of the pump, each under an individual cap, which makes them easy to get at in case of repair. These and many other special features make Myers Tank Pump favorites with threshermen, farmers and ranchmen.  
Write us for book let describing these and other Myers Pumps, and ask for the name of the Myers dealer in your town.  
**F. E. MYERS & BRO.**  
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THE Rumely lines of threshing outfits are so favorably known to Canadian threshermen and farmers that they need no introduction. Rumely, Advance, and Gear-Scott machines have without question proved themselves to be dependable money makers.

The point now is that we are in a better position than ever to take care of rush and late orders from any of our three branches. Our stock of separators, tractors and engines is complete and of the right sizes to meet practically any demand.

Service means most to you these days, and we are in a position to give the best and most prompt--night or day.

## Separators You Can Depend Upon

No matter which of our separators is your choice, you will get a machine with big capacity for its size—and better, one that can be absolutely depended upon. Heavy smooth-running cylinders on all our machines completely thresh the grain from the heads. Ample grate surface makes fast and thorough separation sure.

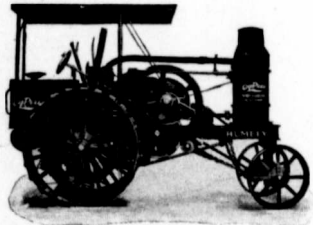
We have separators from 18 in. to 40 in. cylinders, and we can equip any separator just the way you want it.

## For The Other End Of The Belt

No better or more reliable power can be had for running your separator than a Rumely OilPull or GasPull tractor. And we have a size to handle any size separator of our make, or any other.

In the way of steam engines we can meet any demand. All are economical in the use of fuel and water and can be equipped to burn coal, wood, or straw.

### THE OILPULL



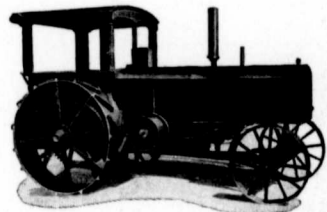
Rumely OilPull Tractor

The Rumely OilPull burns kerosene and other cheap fuels at all loads and at any kind of work—tractive or belt.

It is throttle-governed—regulating as close as the best steam engine. The OilPull furnishes smooth, steady power regardless of the load it is pulling.

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Three sizes—15-30, 25-45, 30-60 horse power.



Rumely GasPull Tractor

### THE GASPULL



Rumely Ideal Separator

The Rumely GasPull is a gasoline tractor—an all around machine to meet the various power needs of the average farm—tractive or belt.

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It has a low platform and convenient arrangement of levers. It steers like an automobile and is equipped with a safety cranking device.

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For Threshing Machinery, Husker—Shredders and Corn  
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