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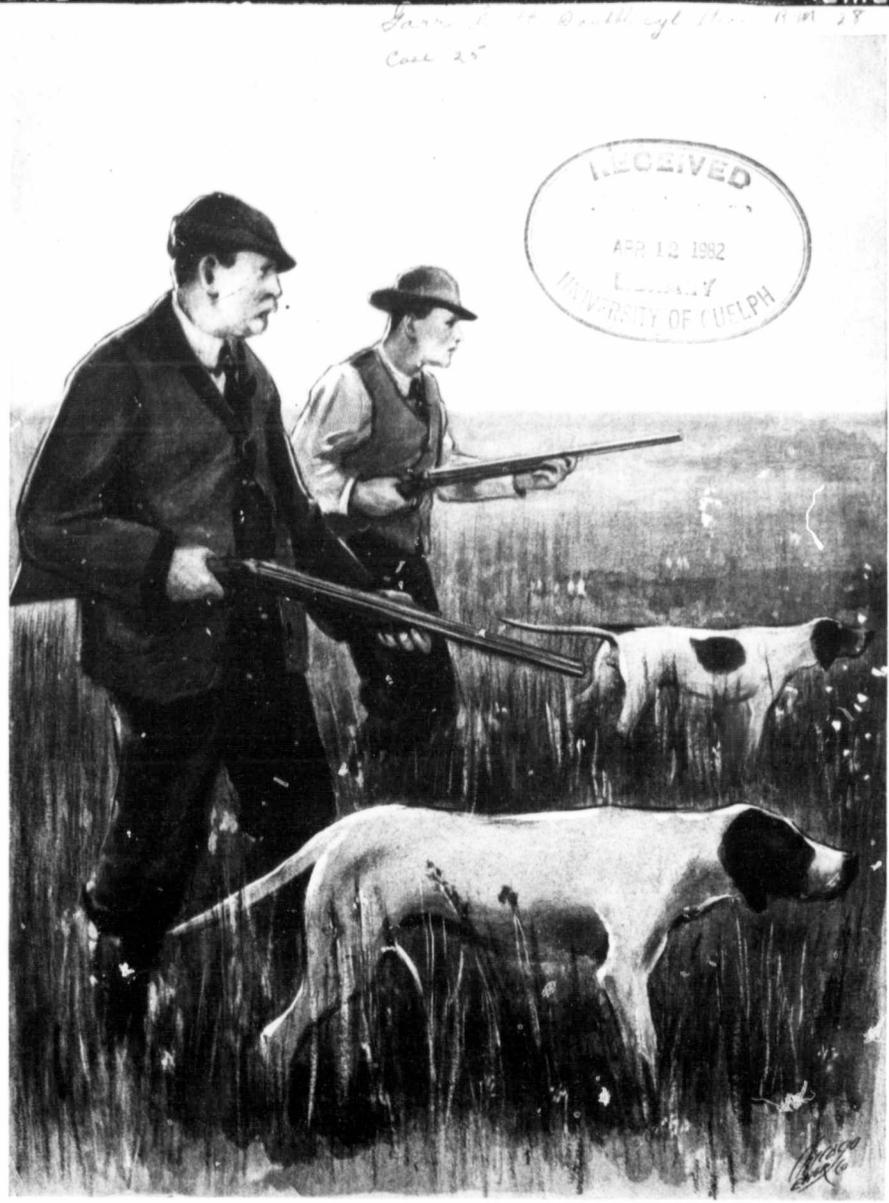
# THE CANADIAN THRESHERMAN and FARMER

CANADA'S FARM MACHINERY MAGAZINE  
WINNIPEG · CANADA

OCTOBER, 1911

*Journal of the Agricultural Society of Canada  
Case 25*

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E.H. Heath COMPANY Publishers

# Handy Sizes John Deere Engine Gangs

A Convenient Size for Every Job.

You need not own a big ranch to get all the benefits of engine plowing.

The four and six-bottom John Deere Engine Gangs are adapted for use with small oil or low power steam tractors, and make engine plowing practical and profitable for those who are farming limited areas.

One of these will give you all the advantages the big rancher has in saving money on his plowing bill.

The outfit here illustrated is doing more than four men could do with teams and single bottom plows.



Four, Six, Eight, Ten, Twelve or Fourteen Bottoms  
Plows assembled in pairs—One lever for each pair—Frame mounted on wheels

The plows of the gang take care of themselves except when it is necessary to raise and lower in turning. Flies and hot weather do not worry the engine, which will work 24 hours a day without fatigue.

John Deere Engine Gangs have strong bridge-like steel frames, to which the plows are attached in pairs. Each pair is free to move up or down so that the bottoms rise to pass obstructions, then immediately drop and work. Any kind of plowing can be done, as the beams will carry any style of stubble or breaker bottom.

Mr. Thresherman, you can double the earning power of your engine by getting one of our engine gangs

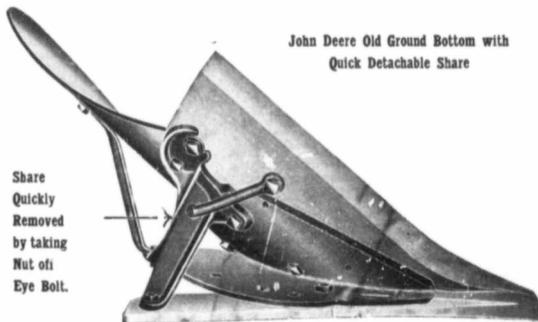
Remember—John Deere Engine Gangs are sold complete, ready to hitch to any style of tractor.

## Quick Detachable Shares

A lot of valuable time is lost in changing shares on an ordinary engine plow. Ours are equipped so that they can be changed in one-fifth of the time usually required for other makes.

Each share is removed by taking off one nut, which is easy to get at, instead of the usual four nuts, inconveniently located.

## Examine The Illustration



John Deere Old Ground Bottom with Quick Detachable Share

## On all John Deere Engine Plows

another advantage is that the one eye bolt holds the share more securely than when bolted to frog in the old way.

Think of saving 80 per cent. of time ordinarily required to change shares!

What does this figure out at in one season's plowing?

Save your Time and Bank the Money

# Light Draft John Deere Gang Plow

## HOW TO SELECT A PLOW. THE RULE OF FOUR.

Plow quality does not improve with age.

An inferior plow does poorer work, is harder to pull, and costs more for repairs every year it is in use.

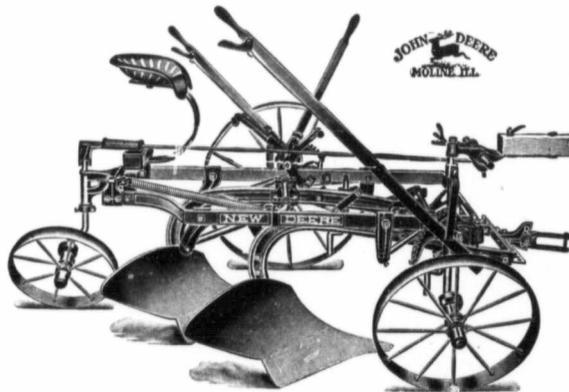
Because certain things about a plow cannot be changed for the better after you buy it, care and study before buying, is important.

Judging the real worth of a plow is not difficult if four things are kept in mind.

**First**—Quality of work.  
**Second**—Ease of management.

**Third**—Lightness of draft.

**Fourth**—Strength and durability.



## WHY THESE FOUR QUALITIES ARE THE TEST.

**First**—Nothing takes the place of good work. Unless a plow does perfect work you cannot afford to own it, no matter what the price.

**Second**—Have regard for your own comfort—that pays. Get a plow that is easy to ride, and that can be operated with little effort on your part.

**Third**—Never work horses harder than necessary. Horseflesh and horsefeed cost money. An extra one-eighth horse-power added to the draft will cost you the price of a plow—very soon.

**Fourth**—Repairs are expensive—a good plow lasts longer than a poor one.

## The Light Draft New Deere—Why it Pulls Easy

Consider five things when judging the draft of a plow. **First**—the shape of the bottom. **Second**—Material out of which it is made. **Third**—Equal weight on all the wheels. **Fourth**—Proper adjustments. **Fifth**—Staunchness of the plow.

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# JOHN DEERE PLOW COMPANY, LTD.

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# ATTENTION



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Our Grinder line consists of the famous RAPID EASY and GOOD LUCK GRINDERS

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 Grinders  
 Straw Cutters  
 Wood Saws  
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 Horse Powers

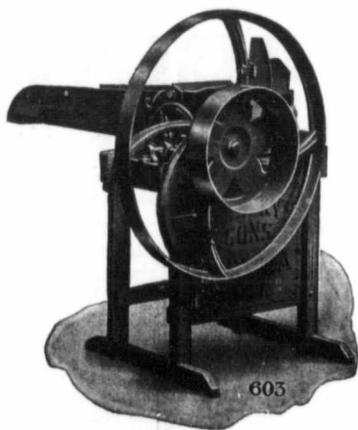


**Good Luck Power and Grinder**

Specially Adapted to Farmers' Work  
 Construction and Finish PERFECT.  
 THOUSANDS in use and giving highest satisfaction.

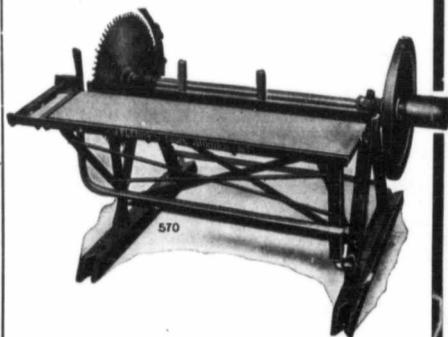
The best is cheapest; an INFERIOR machine is DEAR at ANY PRICE.  
 YOU want only the best.

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 IN  
 EVERY RESPECT



**FLEURY'S STRAW CUTTER**

Seven different styles and sizes for hand, belt and horse power; with or without carrier or blower.



**Circular Saw Machine No. 3**

Length between saw and fly-wheel 4 feet 4 1/2 inches. Size of pulley, which has fully turned face, 5 inch diameter by 7 inch face. Saw of any diameter from 22 to 30 inches can be supplied

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# STYLISH - COMFORTABLE - STRONG

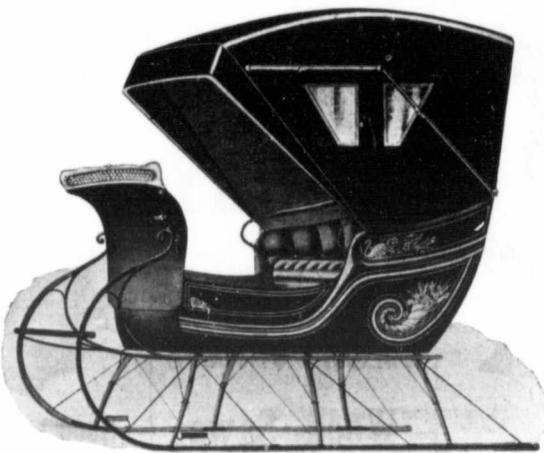
Winter has its own luxuries  
and the most luxurious  
of them all is a—

## BROCKVILLE CUTTER

Among other outstanding  
points of merit and difference  
between this famous carriage  
and others like it are:

GEARS—XXX Hickory  
Knees and beams. Steel  
braces and steel channel shoes.

Shifting rod on detachable  
bar shafts.



NICKEL PLATING ON BRASS—GUARANTEED NOT TO RUST

For comfort, elegance and  
speed in winter travelling,  
no horse vehicle will  
ever surpass a—

## BROCKVILLE CUTTER

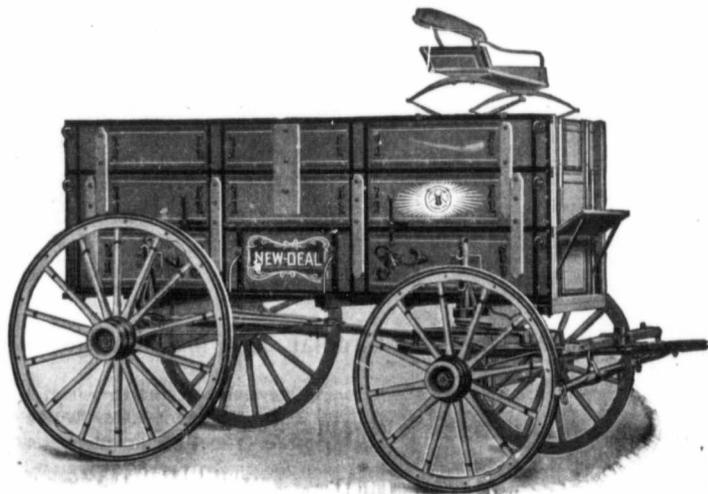
Made of the finest quality  
of material by the best skill  
engaged in this great industry.

The BODIES are of: White  
ash frames. Three ply dash,  
back and side panels. Panels  
glued and screwed to frame.

**TRIMMING**—Best grade plush or wool-dyed cloth. Spring backs (removable). Spring cushions

Don't purchase a cutter until you have seen the "Brockville" or have obtained our literature giving fullest details. It will PAY to get this knowledge if you are contemplating the purchase of a cutter. The BROCKVILLE CUTTERS have no rivals for quality, style, comfort and value.

# NEW DEAL WAGON



## POINTS

- Made of high-grade, seasoned lumber.
- Has **double collar** skeins—dust proof—holding grease longer than other makes.
- Skeins are heavier, bell is longer and larger, taking more axle. Has **rivetted** grain cleats (not nailed or screwed).
- Bottom of box is reinforced both front and rear. Has clipped gear both front and rear.
- Box is made **flax tight**.
- Spring seat with 3-leaf springs (not single leaf). Steel bolster stake plates on sides of box.
- Neck yoke 48 inches long (not 42 inches).
- Has trussed tongue. Cannot break or warp.
- Provided with channel iron reach which is practically indestructible.
- Is extra well painted, striped and finished.
- Possesses many other distinctive features of merit, and taking it all round is

**The Best Wagon Going For Hard Work and Long Life**

# JOHN DEERE PLOW COMPANY, LTD.

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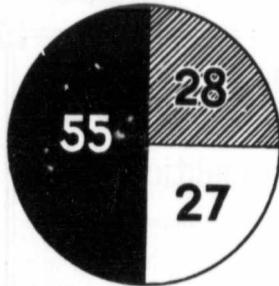
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**S**OME time ago we tried a test for our own satisfaction as well as yours. We got in contact with 110 threshermen from Maine to California, asking them what jack they were using. Fifty-five of them answered that they were using our Jacks, twenty-eight were using other makes and twenty-seven had none at all.

With such overwhelming results you can't very well doubt the good judgment of your fellow threshermen.

Sold through Dealers  
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**Barth Mfg. Co.**  
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## Lunkenheimer Pop-Safety Valves

**Do not waste steam as they relieve the over pressure only**

They can be regulated to reduce the pressure only one pound, if such close regulation is desired. The improved construction of the valves prevents chattering and sticking and adjustment of the pop and pressure can be made from the outside of the valve.

**Lunkenheimer Pop-Safety Valves have full relieving capacity and are positive in operation.**

Either brass or iron body valves can be had, and they are made in all standard sizes for working pressures up to 250 pounds.

Write for Catalogue J. Your Local Dealer can furnish them, if not, write us.

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Largest Manufacturers of  
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32 Dearborn St., cor. Lake  
LONDON, S.E., 35 St. Dover St.**



## Just a Little Talk with the Men who Make No. 1 Hard

This is a bad season for the thresherman. In the first place the grain was late in maturing, which delayed the harvest. In the second place the wet weather has made it exceedingly difficult to thresh. The man with the new outfit or who has his outfit in good repair will not notice these things so much, but the man whose rig is old will undoubtedly experience his share of the difficulties. The wet weather will also materially eat into the thresherman's profits. It is necessary with a modern outfit to have a big crew and in a great many cases this crew has to be paid whether they are idle or whether they are not, which will entail considerable expense on the man running the outfit.

The threshing business is one very difficult to adjust. The threshing season is short at the best and the work must be done at the proper time or not done at all. Much depends on the weather man and if he be unfavorably disposed the lot of the thresherman is by no means easy and his losses are likely to be in excess of profits.

The thresherman is a man that we must have. There is no use in raising a crop unless we can turn it into a marketable product and it requires the agency of the threshing machine to do this.

It would seem that some provision could be made whereby the thresherman at all times would be assured of a competence. He is entitled to it. He works harder than any living man during the threshing season and his business cares and worries are by no means few. The outfit with which he does his work involves a considerable amount of expense and he has but few days in which to make it earn a revenue.

Why would it not be a good proposition to have all outfits up to the standard. They, in a sense, belong to the public anyhow, because the public needs them. This being true, let the thresherman be paid according to the condition of the grain and the weather. If everything be right, the thresherman can make money, but if things go wrong, he can lose a lot of it.

In the old days of the horse power rig, outside conditions did not matter so much. The amount tied up in a threshing outfit was small and if the outfit itself never turned a wheel the attendant expense in the way of interest charges etc. were small. But with a modern threshing outfit that runs up into the thousand of dollars the matter is entirely different. If the outfit is obliged to lie idle, the interest charge that is piling up is considerable. It is probably this thing more than anything else that is increasing the popularity of the small threshing outfit. Two or three farmers get together and buy a rig in which to do their own threshing. If the weather be unfavorable, they can get their own grain threshed any-how, and if the weather conditions be normal they can thresh for a few of their neighbors and earn a little money on the side.

It is fair to assume that as the years go by and as traction cultivation becomes more and more popular the individual threshing outfit will grow more and more into popularity.

In the mean time, however, that doesn't solve the problem of the man who is losing money in the threshing game. Such men are deserving of sympathy. They are filling a public need. They are the men that are entitled to consideration when it comes to the payment of bills.



## I'm the Early Riser's Friend

I'm for the farmer who believes in the advice of old Ben Franklin: "Plow deep while sluggards sleep."

I'm for the farms whose owners want big yields.

I'm for hard-to-get-up farm hands. I'm to get them in the fields on time.

I keep watch-time. I am reliable and lasting.

There's not another clock that's made like me or that's as good.

Price? \$3.00. Yes, but I am worth it. See me at your dealer's. You'll say so, too.

Be "first in the field" every morning. Get the farm hands out first, too. Depend on me—

## BIG BEN

Care of WESTERN CLOCK CO., La Salle, Ill.

If your dealer doesn't sell me I'll come duty prepaid on receipt of \$3.00.

### "BIG BEN"

Sent on receipt of price **\$3.00** Established 1875  
On Sale by **ANDREWS & CO. LTD., Jewellers**  
Special Agents, 420 Main St., Winnipeg

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# You Want Machines That Make Good, In the Field, in Regular Work, under Regular Conditions

You cannot judge by the work a certain engine or machine may happen to do upon some special occasion. You must look further than that.

You must consider the machine as a whole, not one or two points, in which, at some particular time it may have appeared to excel.

You must consider the actual work an engine has done in the past, and what it is capable of doing season after season.

You must consider the experience at the back of the firm building that machine.

You must consider the service that firm is able to give you.

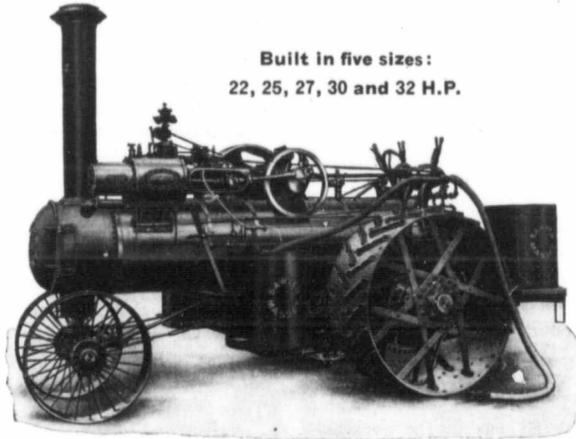
You must consider the kind of deal you are making from every standpoint.

**"SAWYER-MASSEY COMPANY HAVE 75 YEARS EXPERIENCE."**

Large and  
Handy  
Water Tanks

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Used Instead  
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Built in five sizes:  
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Steering Wheel  
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All Levers  
Convenient  
and Handy  
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Operator

**Sawyer-Massey Machines, under actual Field Working Conditions, uphold their own Reputation.**

**Sawyer-Massey Machine Owners and Operators uphold the Sawyer-Massey Reputation, for a Fair Deal always, under all circumstances.**

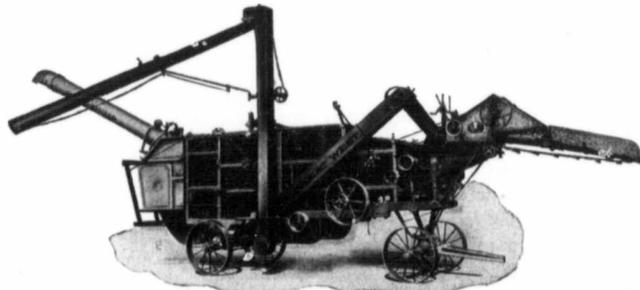
Strong,  
Well Braced  
Front Axle.

Swings Clear  
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No Reach to  
Break.

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Braced.

Can't Pull Out.



Adjustable End  
Shake Shoe.

Throw of Decks  
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Wheels Have  
Sufficiently  
Wide Tires  
with  
Strong Spokes  
and Axles.

"Great West" built in seven sizes. "Daisy" in two sizes. "Eclipse" in one size

For you a Sawyer-Massey Plowing and Threshing Outfit will win profit and prestige.

It has earned substantial profits for others, and made them the leading threshermen of their districts. Sawyer-Massey Machines will do the same for you. You get the jobs—there is always plenty of work for the man with a Sawyer-Massey Outfit.

We have the largest engine and threshing machine plant in Canada. We can satisfy you, because we build machines to suit the various conditions of this country.

If you have land to plow, or grain to thresh, it will pay you to have it done by Sawyer-Massey Machines.

WRITE FOR FULL PARTICULARS

# SAWYER-MASSEY CO.

Union Bank Building, Winnipeg, Man.

LIMITED



THE CANADIAN THRESHERMAN AND FARMER

Vol. XVI.

WINNIPEG, CANADA, OCTOBER, 1911.

No. 10.

"Given Half a Section of Land in Manitoba with Twenty Acres Broken; Lay out a Three Years' Programme as to Cultivation and Equipment of this Half Section."

By K. W. Gordon, Third Year Student at the Manitoba Agricultural College.

All who have ever had the ambition to own and operate a farm have often in their spare moments discussed with themselves the plans they might follow, the ideas they might put into execution, and the methods which they might employ in the management of a farm if they only had the means to enable them to purchase a suitable piece of land. As a natural result of three years' residence in Manitoba in the employment of different farmers, thoughts similar to the above have often passed through my mind and I welcome this opportunity of giving them a more tangible form.

In attempting to give a detailed account of the work to be done, the crops which might be raised, and the revenue which would probably be received from half a section of land in three years, we must first have clearly in mind the conditions under which the start was made. The factors which govern the scale on which operations are to be carried on are: the age and health of the party engaged in the work, whether he be married or single, and the capital on hand. Besides these, there must also be taken into

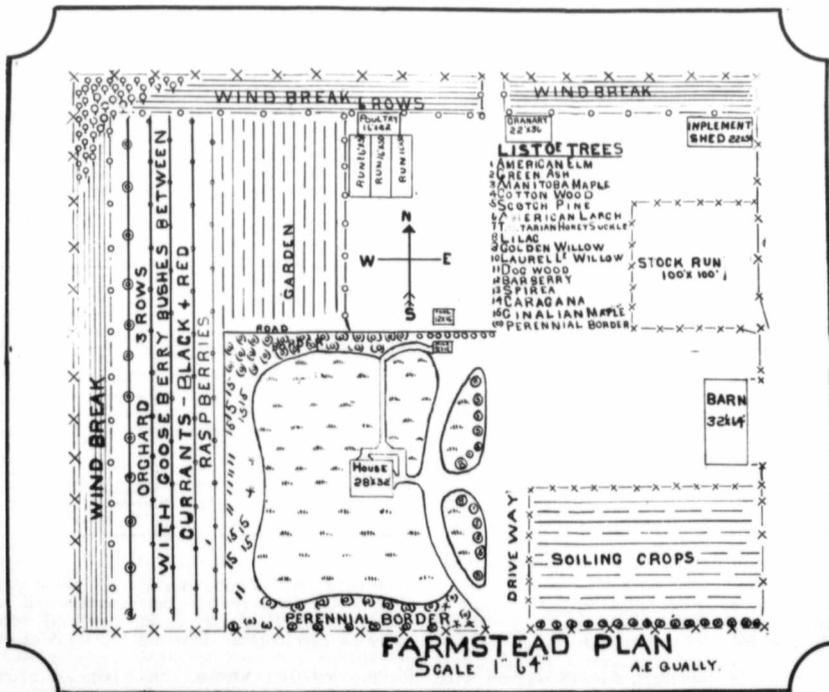
account the conditions of the land, whether clear of obstructions or more or less covered with bluffs, stones, or swamps, the nature of the soil, the climatic conditions of the locality, the progressiveness of the neighborhood on which is dependent to a certain extent the value of the land. It will be necessary to answer all the above questions at the outset.

In the first place, I am a young bachelor, twenty-one years of age, strong and health-

thy, and have been given the south half of a school section three miles from Youill, a small flag station on the Portage-Neepawa line of the Canadian Northern Railway. The land is just west of the fertile Portage Plains, the soil varying from a loam to a sandy loam. The whole half section is arable, the only obstructions being an occasional stone. These are for the most part too large to be easily removed but may be plowed around with

little difficulty. There is no harmful alkali in the soil and though the district has occasionally been visited by hailstorms, these are not of frequent occurrence. The neighbors are sociable and willing to co-operate among each other for the improvement of their district, and here let me insert, that few realize how much this means to the new settler and to what extent the prosperity of a locality is affected by the friendly relations between the

members of a community. Co-operation on a small scale among neighboring farmers would assist then in obtaining in car load lots, special feed for their stock, as bran or shorts, lumber, fence posts, etc., and thus by buying in large quantities reduce expense. Special machinery which one man would not feel himself justified in purchasing could also be secured for their smaller crops, such as potatoes and corn. With regard to capital, I have \$3,000 in cash and would borrow \$2,000. Interest at the rate of 6 per cent. per annum will be charged on my total invested capital of \$5,000, as well as on the total value of the land, which at the



rate of \$25 per acre is \$8,000. I intend to give an account of the operations which would be carried on each year on the half section described above, under the conditions which have been given. I do not intend to go into the superfluous detail since it is impossible to state exactly what all the ex-

ing, good building paper and drop siding attached to 2 ins. by 4 ins. studs, the roof would be shingled and there would be a door at each end of the building. I would take up my abode at one end and have a stable stall or two fitted up as a temporary granary. As soon as the condition of the soil per-

Hay can be obtained in a large swamp, covering several sections, situated about 7 miles north of Youill. It would be necessary to camp near the swamp until we were finished haying, only bringing home sufficient to last the horses until freeze up.

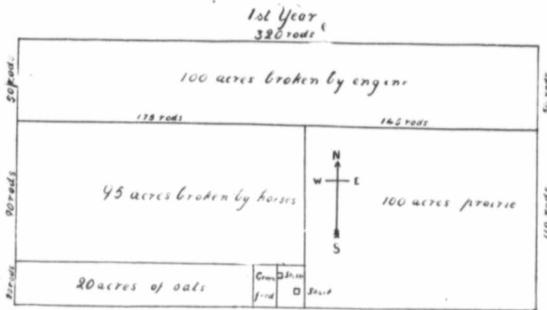
A shack would have to be built before winter and I would fetch the lumber and commence building as soon as we returned from haying, my man meanwhile could commence to backset the breaking. If time permitted, I would endeavor to dig a well during the first summer, for fetching water half a mile (as I would have to do) would mean time partially wasted. If, however, it were found impossible to do this, it could quite profitably be delayed until winter set in.

The small crop of 20 acres would hardly justify the purchase of a binder the first year and I am sure it would be easy to obtain the loan of one for a day, or a couple of nights, if need be. The cutting, stooking and stacking of the oats would not occupy much of my valuable time, nor would the harvesting of the small patch

a good store of firewood, bring home my hay, build a portable granary, and secure some good, clean seed wheat. It would be necessary to obtain another two teams of horses, for which I would be on the look-out. Thus, with average luck, I would hope to spend my first twelve months on a farm of my own.

First Year's Account.

|   | Dr. \$ | Cr. \$ |
|---|--------|--------|
| By cash on hand .....                       |        | 3000   |
| Loan .....                                  |        | 2000   |
| To two teams of horses and harness .....    | 1080   |        |
| " Lumber, etc., for shack and stable .....  | 500    |        |
| " First payment on wagon .....              | 50     |        |
| " First payment on gang plow .....          | 40     |        |
| " First payment on drill .....              | 80     |        |
| " One set of harrows .....                  | 25     |        |
| " 300 bus. feed oats at 30 cents .....      | 90     |        |
| " 5 loads of hay .....                      | 40     |        |
| " 40 bus. seed oats .....                   | 5      |        |
| " 10 bus. potatoes .....                    | 5      |        |
| " First payment on rake and mower .....     | 50     |        |
| " 100 acres broken and back-set .....       | 500    |        |
| " Twine .....                               | 20     |        |
| " Threshing 1000 bus. oats at 5 cents ..... | 50     |        |
| " Sleighs .....                             | 25     |        |
| " Wages, 1 man for 3 months .....           | 105    |        |
| " 1 team and set harness .....              | 540    |        |
| " 240 bus. seed wheat .....                 | 240    |        |
| " Lumber for granary .....                  | 100    |        |
| " Groceries and dry goods .....             | 300    |        |
| " Interest on \$8000, value of land .....   | 480    |        |
| " Interest on \$5000, capital .....         | 300    |        |
|   | \$4640 | \$5000 |
| To cash on hand .....                       |        | 360    |
|   | \$5000 | \$5000 |



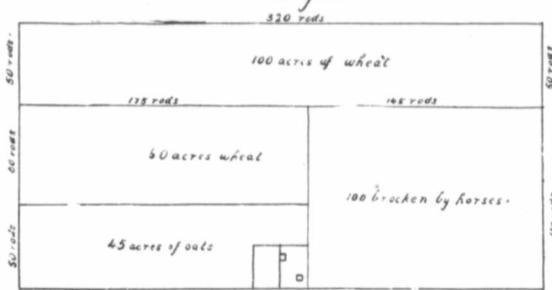
penses on a farm would be, during three years, or how each day was occupied. At the end of each fiscal year an account will be given of the expenditure and income during the previous twelve months as well as a plan of the farm.

First Year.

Success, for which all are struggling, depends almost entirely on hard work, perseverance and optimism. Having this axiom in mind and determining not to be found wanting in any one of these essentials to prosperity, I would during my first summer especially strive to do as much as endurance and reason would permit. Towards this end, I would make an early start in the spring. During the previous winter I would have been on the look-out for a good team of heavy draft mares and also for a team of geldings. Their weight should not be under 1,600 lbs. each, for they would be expected to do a lot of work the first summer. Having purchased my horses and a wagon, I would be ready to start operations about the fifteenth of March and could obtain temporary accommodation for myself and horses with a neighbor, half a mile from my farm. The first day would be employed in hauling lumber for my stable and also in obtaining wood for fuel purposes. This latter would have to be drawn eight miles, so a supply large enough to last till the next fall would be necessary. I would then hastily put up my stable, so as to have some shelter for my horses and myself. Feed, in the shape of oats and hay would have to be obtained as well as certain necessary household articles, including a stove, crockery, table, chairs, etc. The size of the stable would be twenty-four by sixteen feet, in which it would be possible to keep twelve head of stock. The sides of the stable would consist of shiplap sheath-

mitted, I would sow some good clean seed oats on the 20 acres that were already broken on the half section. For this purpose I would have to purchase a seed drill and a set of har-

2nd Year



rows, and at the same time, I would invest in a good, strong 14-inch gang plow, with stubble and breaker bottoms, for I intend to break my sod with a double furrow plow, as all the breaking I ever did in that district was done with four horses and an Emerson gang. The shears have to be kept sharp and the work done early, before the soil becomes too dry and hard. I would strive to break a hundred acres, which should be accomplished with comparative ease if a shallow furrow slice is turned over. My intention would be to backset in the fall all that was broken in the spring, for it appears that the best results are obtained when new land is treated in this manner. I would also engage a power plowing outfit to break and backset a hundred acres for me.

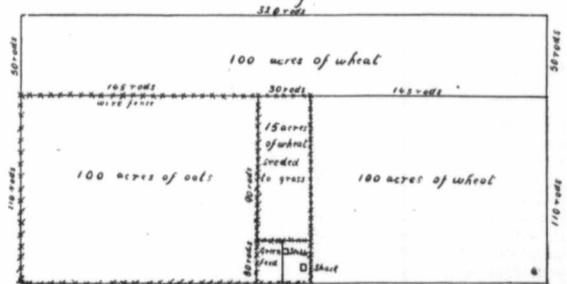
Towards the end of June I would hire a man to assist me in putting up enough hay to feed my horses till the next summer; this should not take more than two or three weeks.

of potatoes, which had been planted in the spring take very long. Thus, I would have a long fall in which to prepare the 220 acres, which would now be broken, for the seed to be

Second Year.

In many cases whenever the first thrilling sensation or the first delightful experience of a new project has come and gone, interest in the enterprise commences to wane; but not so with farming; interest in this fascinating occupation increases rather than diminishes, for there are always opportunities for extension and experiment. Thus, with the opening up of a new season, my ambitious determination, and desire, would be more marked than when I commenced operations.

3rd Year



sown early the following spring. From the 20 acres of oats 800 to 1,000 bushels could easily be expected, which would provide me with seed and feed for the following season. During the winter I would lay by

I would engage a man for the season and together we would sow 160 acres of wheat and 50 acres of oats. We should be ready to start to turn over the last 100 acres of prairie about the middle of May. By the



time this was accomplished the haying season would again be calling us to the swamp. We would, as before, camp close to the scene of action, and, having prepared another winter's supply of hay, hasten home. Owing to the increased acreage in, it might not be possible to backset all of the hundred acres, but as much as possible would be replowed; any that might be left, would be given two more strokes of the disk harrows. I would purchase an eight foot binder and endeavor to keep it working as many hours each day as possible, during the harvest season, for which purpose the teams would be changed once every day. Another man would need to be hired to help with the stooking, for it is poor management to try and save money at this season of the year through not employing sufficient labor.

There being several farmers in the district who possess threshing outfits, it would not be difficult to have the grain threshed from the stook as soon as it was ready. Two more portable granaries would need to be built, each capable of holding 1,200 to 1,300 bushels. If possible I would load two cars with wheat at Youill siding and store the rest. With average weather conditions, a crop of about thirty bushels of wheat per acre could be expected off the new land. Having a larger harvest season, the possibilities of doing very much fall plowing would not be very great and yet with two gang plows a hundred acres might readily be turned over.

My second winter would be spent similarly to my first with the exception that I would have some wheat, the great paying crop, to haul to town, and with the first returns for the money and labor expended, my spirits would rise and I would look forward with delight to the next season.

Second Year's Account.

|  | Dr. \$ | Cr. \$ |
|--|--------|--------|
| By cash on hand .....                          |        | 360    |
| To one team and harness ..                     | 440    |        |
| " One gang plow .....                          | 80     |        |
| " Second repayment on plow .....               | 40     |        |
| " Second repayment on drill .....              | 65     |        |
| " Second repayment on waggon .....             | 40     |        |
| " Second repayment on mower .....              | 40     |        |
| " One binder .....                             | 175    |        |
| " One disk harrow .....                        | 60     |        |
| " One waggon .....                             | 90     |        |
| " Lumber for two portable granaries .....      | 200    |        |
| " Twine .....                                  | 65     |        |
| " Threshing 4800 bus. wheat, 2250 bus. oats .. | 400    |        |
| " One man's wages for 7 months .....           | 220    |        |
| " One man's wages for 1 month .....            | 50     |        |
| " One set sleighs .....                        | 25     |        |
| " Groceries and dry goods ..                   | 250    |        |
| " Interest on value of land, \$8000 .....      | 480    |        |
| " Interest on capital, \$5000 .....            | 300    |        |
| By 4400 bus. wheat sold at 80 cents .....      |        | 3520   |
| To repayment of loan .....                     | 500    |        |
| " Cash on hand .....                           | 360    |        |
|  | \$3880 | \$3880 |

Third Year.

With the return of spring, all nature revives and is glad. As soon as the warm rays of the sun commence to thaw the snow so long held in winter's cold embrace, a feeling of restlessness seizes hold of all who live and work close to nature. On the farm everything is got in readiness for that rush which commences whenever the veil permits.

For my third summer's work I would again engage a man for the season. It would be necessary to particularly hasten our work this spring as we would have the whole farm to sow down—220 acres of wheat and 100 acres of oats, and probably some spring plowing to do as well. I believe that the whole half section would be sown before the first of June for having no heavy work for the horses during the summer they could endure a little extra urging in the spring. On a strip, fifteen to 20 acres in extent, lying directly north of the barn yard I would sow (with wheat as a nurse crop) a good grass mixture. This would serve me as a pasture in future years.

Having all my land under cultivation, I would each year follow a systematic plan for the improvement of the homestead and would commence by fencing that part of the farm which I intended to summer-fallow the following season. This I would continue until I had divided the land into three fields of a hundred acres each, leaving twenty acres in the centre for pasture and farm yard.

With this plan in view, I would during my third summer fence the south-west hundred acres, along with the twenty-acre strip which was sown to grass in the spring. As will be seen from the diagram, the pasture would connect with each of the three hundred-acre fields, and thus in the three year rotation, which I would follow, the stock would always be allowed to roam over the summer-fallow, packing it down and keeping down many weeds which might spring up. My rotation for several years at any rate would be: Summer-fallow, followed by wheat, followed by oats and barley, after which I would summer-fallow again. My reason for adopting this system, is because there is little doubt, that the limiting factor in crop production is moisture, and by repeated fallowing this can be preserved, while the essential plant nutrients may be restored by manuring.

Having finished the fencing and having taken the annual trip to the hay swamp, we would again be ready to command harvest operations. Another binder would probably have to be purchased and a man engaged for the stooking. One of the teamsters would also assist with the stooking from

time to time. The grain would again be threshed from the stook and probably two cars loaded with wheat, directly from the separator, as well as one car of oats. The remainder of the grain would be stored in the portable granaries.

The hundred acres which would be sown to wheat the next spring would have to be plowed in the fall, besides as much of the oat land as possible. The winter would probably be spent like the two previous winters in hauling wheat to town and bringing home firewood and hay.

You might wonder why I have not mentioned cattle or pigs at all? It is because during my first two years I would not have any. The main object at the outset is to get quick returns for the money invested and nothing will accomplish this so well as wheat sown on virgin prairie. In the fall of my third season I would invest in two pure-bred shorthorn heifers of some milking strain and in the following spring some pigs would be purchased. These would form the nucleus for a live stock department which in later years would, I hope, assist in raising the profits of the farm.

The above is the three years program which I would endeavor to work out if I had the opportunity. It may appear to be too theoretical but I am convinced that with the three essentials to success which I mentioned at the outset and average conditions, the proposition could be solved in practice as well as it appears to be solved on paper.

Third Year's Accounts.

|  | Dr. \$ | Cr. \$ |
|--|--------|--------|
| By cash on hand .....                                |        | 360    |
| To one binder .....                                  | 175    |        |
| " Twine .....  | 103    |        |
| " Threshing 6300 bus. wheat and 4500 bus. oats ..... | 530    |        |
| " Grass seed .....                                   | 50     |        |
| " Lumber for one granary .....                       | 100    |        |
| " Two heifers .....                                  | 100    |        |
| " Wire and post for fencing .....                    | 140    |        |
| " One man's wages for 7 months .....                 | 250    |        |
| " One man's wages for 2 months .....                 | 90     |        |
| " Groceries and dry goods ..                         | 300    |        |
| " Interest on value of land .....                    | 480    |        |
| " Interest on capital invested, \$4500 .....         | 270    |        |
| By sale of 5100 bus. of wheat .....                  |        | 4080   |
| " Sale of 2500 bus. oats, at 30 cents .....          |        | 750    |
| To repayment of loan with interest .....             | 1830   |        |
| " Cash on hand .....                                 | 775    |        |
|  | \$8190 | \$8190 |

Inventory.

|  |         |
|--|---------|
| At the commencement of my operations I had                               |         |
| Land to the value of .....   | \$8000  |
| Cash .....   | 3000    |
| Cash on loan to the value of ..  | 2000    |
| Total .....  | \$13000 |
| At the end of the third year I possessed                                 |         |
| 3200 acres land to the value of ..                                       | \$8000  |
| 3 horses valued at .....   | 1500    |
| 2 cows valued at .....   | 100     |
| Implement valued at \$1080, with 20 per cent. off for depreciation ..... | 864     |

|  |         |
|--|---------|
| Building valued at \$900, with 20 per cent. off for depreciation ..... | 720     |
| Fence valued at .....  | 180     |
| Seed wheat and oats valued at ..                                       | 130     |
| Three years' interest on invested capital .....                        | 1600    |
| Harness, tools, etc., valued .....                                     | 150     |
| Cash in hand .....   | 775     |
| Total .....  | \$15590 |

The Doctrine of Taking Things Easy.

By the Rev. A. K. Boyd, of Scotland. Let me briefly sum up my philosophy of getting on in the world. It is this: A wise man will not set his heart on getting on and will not push very much to get on. It is not worth while to push. The whole machinery that tends to earthly success is so capricious and uncertain in its action that no man can count upon it, and no wise man will. A chance word, a look, the turning of a straw, may make your success or mar it.

A man meets you in the street and asks: "Who is the man for such a place?" great or small. You suddenly think of somebody and say: "He is the man," and the thing is settled. A hundred poor fellows are disappointed. You did not know about them or their names did not occur to you. You put your hand into a hat and drew out a name. You stuck a hook into your memory and this name came out. And that has made the man's fortune.

It is not worth while to push or scheme or dodge for worldly success. If we do not do so, we shall succeed exactly as well, and we shall save ourselves much that is wearisome and degrading.

What We May Fret About.

As school boys, we fret — because we are compelled to go to school—or because, perhaps, we cannot go.

As beginners in business, we worry—because we are not older — because we work too many hours.

As full-fledged business men, we worry—because we are not younger — because there are not more hours in which to work.

And so it goes. To worry is human — a part of every man's life.

But as we grow, we see that the worries of yesterday crowd ed out those of the day before— only to be crowded out, themselves, by those of to-day. And we realize that the worries of the past have not been real troubles at all, but supposed ones.

So since we must fret, let us make fretting helpful — productive of new ideas and plans. Since we must worry, let us not worry ourselves into idleness and hopelessness, but into initiative and accomplishment.

# The Starting of a Farm and Programme for First Three Years

A. E. QUALLY, 4th year student Manitoba Agricultural College

It is beyond the average would-be farmer to start an 'Ideal Farm' in three years due to the capital involved for such an undertaking. As capital is the main feature in starting a farm for the beginner, the 'Ideal Farm' can only be followed so far as the capital will reach. On the other hand a plan of buildings, fields, etc., can be

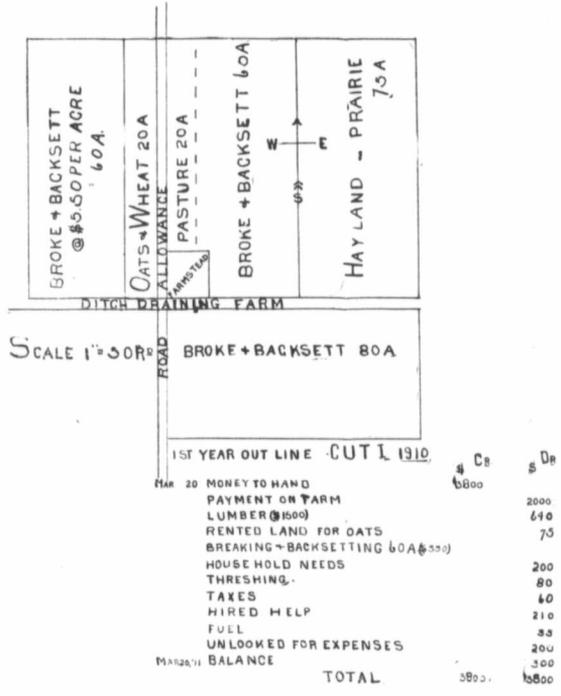
payment is two thousand dollars. The remainder to be paid in yearly payments of one thousand or over with the interest (6%). The farm is purchased March twentieth, nineteen ten. The second payment falls due to be paid the twentieth of November, nineteen eleven.

Twenty acres of this farm is

two years, thus enabling one to farm on a regulated and paying basis. Owning a half section of land fit to be cultivated and farming a quarter section of it may be compared to a person owning eight horses and working only four of them. The general outline plan of the first year's work, together with money involved, will be given in cut. 1. One of the items is written "Unlooked for expenses." By this is meant that unforeseen difficulties are not within every enterprise and more so in farming than any other work or call of life. These difficulties unlooked for have to be coped with to the best ability of the farmer and an allowance is made which will likely meet these difficulties. Enough hay is obtained for the stock to feed in the winter and the following summer from the unbroken land. During the summer and fall season driving fence posts, hauling stones, fuel and numerous other jobs might well be mentioned, but this work can not be worked out theoretically as some would be led to think. Work of this kind has to be done at times when the farmer sees fit to do it.

work, but those which relate to maintaining or increasing the fertility of the soil. Aside from the usual arguments in favor of producing something of a variety of crops on a farm, such as that this practice reduces the risks of the farmer, since it is not probable that all will not be poor in yield or low in price, it also distributes the work throughout the year. The crops to be used in rotation will have to be selected with reference to the ease with which they can be grown, labor involved, market value and too many other factors. By about the beginning of the third or fourth year this plan of rotation can be put into practice and the benefits derived from such a course will at once be fully recognized. This plan is followed in the farmstead plan after the plan has been worked out by alternating the garden with the soiling crops, putting in patches of clover, and in many other ways that cannot be thought out but have to be solved by surrounding circumstances.

In regards to the farmstead plan it is not the intention to have this plan finished by the end of the third year. It is a plan whereby when any improvements are to be made on the farm there

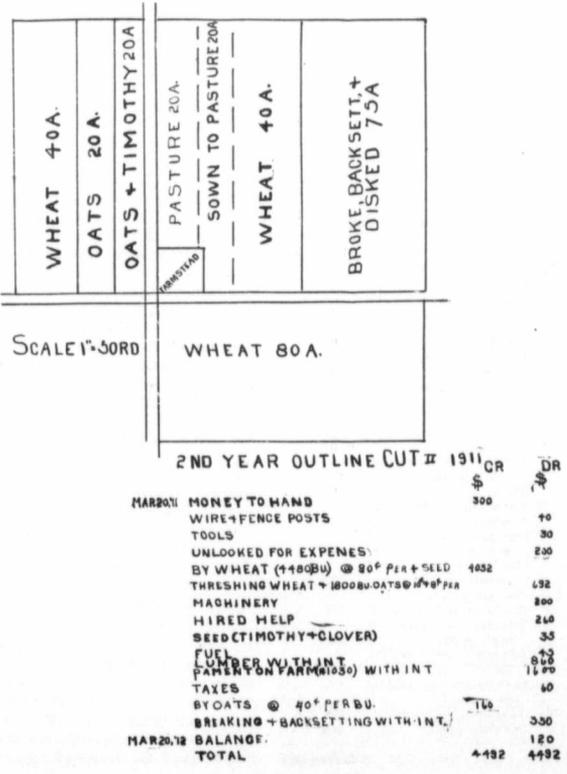


given which, if followed, will lead not only to a convenient, comfortable, well-paying farm, but one that is economical in its first cost. This plan does not necessarily need to be finished in one or three years, as it can extend over an indefinite number of years. The plans will consist of the general lay of the land, the position and operation of each field, farmstead plan, and the expenditure and income each year.

The beginner's possessions or capital consist of three thousand eight hundred dollars, eight horses, six head of cattle, three swine, poultry, hay, oats, tools machinery to handle a farm of half a section, and household effects. The farm to be purchased comprises three hundred and twenty acres of rich, heavy Red River loam, that is situated twenty-five miles west of Winnipeg on the Canadian Northern and two miles from a station. The cost of this farm is twenty-five dollars an acre, amounting to eight thousand dollars. The cash

ready to put into crop. Oats and wheat are sown on this twenty acres for seed the following year. Fifty acres of stubble land is rented from a neighbor at one dollar and fifty cents an acre, which is plowed, harrowed and sown to oats for feed the following year. While the spring work, consisting of plowing, etc., is being done with six of the horses by hired help, the other two horses are used to transport lumber to build a house and barn. These buildings are erected by the owner and one man, costing with lumber, help and other material needed, fifteen hundred dollars. A granary, with a capacity for a thousand bushels of grain, is the only building on the farm at the time of purchasing. A gasoline engine is hired to break and backset sixty acres at five dollars and fifty cents an acre. The farmer breaks, backsets and dises one hundred and sixty acres besides dicing the sixty acres hired broke and backset. It is the aim to break all the farm in the first

It is the intention to follow some line of rotation, not only for the immediate profit of the farm



will be some order or plan that can be followed. The preparation the first year of this plan would include the cultivation of the soil for trees and garden for the second year. A fence around the grounds and such buildings as has been previously been outlined could be a few of the preparations the first year. The wind break would be the first planting to be done in the forestry line. The second and third years other trees could be planted such as: fruit trees, orchard, raspberries, borders, etc. The second year a poultry building with runs, tool house, and milk house would be built. The implement shed could be built either in the third or fourth year, whichever year was most suitable.

The winter months are used in doing the hauling of hay, ice, fuel and the general chores to be done in the winter to lessen the work as much as possible for the forthcoming summer.

The plan to be followed in the field the second year is outlined as far as possible in Cut II. (2 year outline). The space marked 'sown to pasture 20 A' is left until after spring work and then cultivated thoroughly and sown down with a mixture of grasses. These grasses consist of Blue grass (Kentucky and Canadian), Western Rye, Red top and White Clover. This pasture is fenced in the latter part of the summer and used to a slight extent that fall. Twenty acres of timothy is sown with twenty acres of oats on the old land after being well cultivated. This will partially serve for hay the third and fourth years. It is then broken up and again used for wheat. Hay for this year is obtained by renting eighty acres of hayland two miles distant at 25 cents an acre. The fall plowing is done with five horses on a twelve-inch gang plow and three horses on a fourteen inch sulky plow. The oat field of forty acres in area is not plowed till the spring when it is then plowed as deep as possible and worked up thoroughly and sown to oats. This gives the oats a start over any weeds that might be in the soil and it gives the oats sufficient moisture to at once start when planted. Discing after

the binder or early shallow fall plowing to start the weeds is a plan to be followed as far as possible and then deep plowing later in the fall or in the spring.

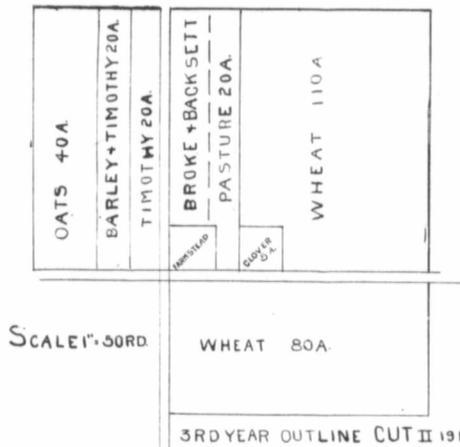
The winter months of the second winter are spent in the same manner as the first winter, viz.: Preparing in every way possible for the coming summer by hauling feed, wood, ice, etc., besides doing the general farm work of looking after the stock.

In outlining the plan for the third summer, it will be found as per 'Cut III.' that the farm is all utilized. The five acres of clover sown is 'Common Red' and sown as a test plot for horse and cattle feed. If it proves successful more will be sown the fifth and sixth years. The pasture that is broken will be sown to wheat the following year and well cultivated the next year and sown to pas-

ture. The oat field will be summer-fallowed the following year and the year after sown to wheat with a mixture of timothy. Part of the wheat land will be summer-fallowed and sown to oats, thus decreasing the amount of acreage the fourth and fifth years, but it is far better to have a large acreage in the first years to thus rid oneself of the large interest that is piling up on the money that is owed on the farm. It will be noticed that the household necessities are far less the third year than the first. It is figured that by this time the cows and chickens on the farm should very nearly pay for all things required by the house. More time can be spent this year in fixing up the 'farmstead' and this is done by putting in a concrete foundation under the house and a cellar. Trees will be planted according

to specifications as far as possible to follow. The garden and soiling crops will have to be sown according to the needs which can better be figured out when the actual conditions are present.

In concluding this essay, a few remarks might be mentioned to clear certain things already stated. Weeds are always a source of evil to be guarded against by very careful tillage and using clean seed. This is accomplished by first breaking shallow and backsetting deep, thus producing a suitable seed bed for the crop. The weeds do not have a chance to start in the spring due to the good start the crop has over weeds, if there should happen to be any present. Using clean seed and treating for smut every year prevents the deterioration of the seed and also helps in keeping the soil free from weeds. The weeds to be feared are the perennial sow thistle, Canada thistle and wild oats. The latter can be guarded against by using clean seed, crushed oats and good cultivation. The first two can be guarded against by these factors also, but, besides these factors, it seems necessary to summer-fallow ever so often. Deep and early fall plowing will have the same effect as summer-fallowing but on a smaller scale, hence it is found necessary to use extra power in order to plow deep in the fall. Sowing to permanent pasture, clover or timothy has been found to be a good remedy to check and kill out the weeds and where this is done summer-fallowing is not essential. Mixed farming is carried on only to a limited extent at the start of the farm, but a herd is built up of dairy cattle and the raising of colts as the years go on that will require mixed farming to a larger extent every year.



| 3RD YEAR OUTLINE CUT II 1912 |  | CR          | DR          |
|------------------------------|--|-------------|-------------|
|                              |  | \$          | \$          |
| MAR 20, 12                   | MONEY TO HAND                                  | 120         |             |
|                              | HAYLAND 1911 @ .42                             |             | 40          |
|                              | TREE   |             | 10          |
|                              | GROceries                                      |             | 40          |
|                              | BY WHEAT @ 200 BU @ 20 + BU SEED @ .90 @ 4000' |             |             |
|                              | THRASHING WHEAT, OATS + BARLEY                 | 1650        |             |
|                              | LUMBER FOR POULTRY @ 1311                      | 500         |             |
|                              | UNEXPECTED EXPENSES                            | 200         |             |
|                              | FUEL   | 45          |             |
|                              | HIRED HELP                                     | 250         |             |
|                              | BY OATS @ 200 BU + BARLEY (300 BU)             | 800         |             |
|                              | TAXES  | 60          |             |
|                              | PAYMENT ON FARM @ 2000 WITH INT                | 2300        |             |
|                              | BALANCE  | 180         |             |
|                              | <b>TOTAL</b>                                   | <b>4450</b> | <b>4450</b> |

**INVENTORY.**

| March 20th, 1912              | Cr. \$       | Dr. \$       |
|-------------------------------|--------------|--------------|
| Money to hand                 | 120          |              |
| Debt on farm                  |              | 3000         |
| Value of farm                 | 12000        |              |
| Seed grain and feed           | 700          |              |
| Live stock (plus increase)    | 2400         |              |
| Machinery (less depreciation) | 500          |              |
| Household effects             | 700          |              |
| To net worth                  |              | 13420        |
| <b>Total</b>                  | <b>16420</b> | <b>16420</b> |

**The Time To Work.**

The old theory that one hour of sleep before midnight is worth two hours after may be at the bottom of the newest theory of effective work. At any rate, Professor Victor Hallopeau, of the Paris Academy of Medicine, says that the best intellectual work can be accomplished between midnight and dawn. His explanation follows:

The true secret of long-continued, valuable brain work is to cut the night in two. The scholar, the inventor, the financier, the literary creator, should be asleep every night by 10, to wake again at, say, 2 in the morning. Three hours' work,

from 2 to 5, in the absolute tranquility of the silent hours, should mean the revealing of new powers, new possibilities, a wealth of ideas undreamed of under the prevailing system.

From 5 to 8 or 8.30 sleep again. Take up again the day's work; the brain will still be saturated with the mental fruits of the night-vigil, there will be no effort in putting into practice or carrying further what was planned or begun those few hours before.

The habit may be hard to acquire, but mechanical means of waking at first will induce the predisposition.

Loti has long had the habit of

so working and declares his best thoughts, his clearest intellectual vision, his choicest phrases, come to him when he works fresh from sleep, with the world still in dreamland about him.

With such authority to rest upon, there is no reason to doubt that ambitious students will quickly increase the demand for midnight oil.

Many a man who boasts of being conservative simply lacks in courage.

With practical ability combine foresight and imagination.

When you fail it is usually safe to blame yourself alone; besides, such a conclusion will tend to spur you on to greater efforts.

The secret of getting what is wanted is found in moving forward continuously. For all things desired lie on ahead.

The man who has faith and confidence in himself always applies his talents more fully and more effectively.

Aim at greater results with less work. Most people work too much. We all need more time for play.



## The Canadian Thresherman and Farmer

CANADA'S FARM MACHINERY MAGAZINE

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PRESIDENT AND MANAGER  
**E. W. HAMILTON**  
SECRETARY  
**F. C. BRAY**  
TREASURER

"Everything begins and ends with the soil."



# READ READ READ READ READ READ

**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 be made to us in writing with proofs, 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."

**B**Y the time this issue reaches our readers the breath of winter will have given its warning. Not that it will be here for some considerable time, but it has sounded its note of warning to become prepared. It means that within the next month that the winter quarters for the stock must be gotten into shape in order that they may be snug and comfortable during the long winter months. It means that the crops must be gathered into the cellar. It means that the farm machinery must be gathered from the four corners of the several fields and housed properly in order that next spring they may still be things of beauty and joys to work with rather than rusted out contraptions that produce few results other than cuss words. It means that to a certain extent the winter's supply of provisions must be purchased as well as the winter stock of clothing. And last but not least, it means that the winter supply of reading matter must be laid in.

The long cold evenings of a Western Canadian winter are admirable times for study and thought. Is there any more pleasing sight or is it possible to find any more happy surroundings than that which contains the farmer's

We have another big thing in store for you, which will begin with our November issue, if it can possibly be arranged, and we promise it to you not later than December. This feature of our magazine will continue for about two years, and while we are not at liberty to tell you just what it is at the present time you can take it from us that it will be just about the best thing that we have ever published.

Now as to your part in the matter. We are not going to run a guessing competition during the coming winter. We have put on three of these competitions during the past three years and we have enjoyed them immensely. It has enabled us to add a large increase to our circulation, which in turn has enabled us to give you a bigger and better paper. We want circulation more than we ever wanted it before. We would like to have our magazine go into every farmer's home in Western Canada. We do not force it upon you, but require you to pay in advance as we feel that a thing to be appreciated must be something that you want and for which you are willing to pay. We feel that we are giving you a magazine that is worth a great deal more than what we ask for it. As a matter of fact it costs us nearly 15c a copy for every copy that goes out of our office, which would make the paper \$1.80 per year, and you get it for a dollar. There are reasons why we can do this, but we need not go into them here. It is sufficient for you to know that you are getting that much value for such a low price.

We want your subscription and we want it badly. You learn to love your horses or your farm by working with them or on it constantly. Each becomes an old friend to you. It is the same with the farm magazine. You cannot learn to know it properly simply by being a subscriber for one year. You want it to come to you month by month year after year and in the case of the Canadian Thresherman and Farmer you soon come to look for the pink wrapper as you come to look for your three meals per day. You in time begin to feel that you know its editors and while you may not always agree with their statements or their methods you yearn for what they have to say and the monthly visit of the magazine is as the visit of the old friend. We would like to meet you all and talk matters over but since this is impossible give us the opportunity of talking to you each month. We can only do this by your not allowing that subscription to expire.

Now don't let that subscription expire. We know that a dollar is a dollar, that it will buy a great many things. It will help to purchase shoes for the children. It will help to pay for that plow that you bought last spring. It will purchase snoking tobacco that will last for a considerable time. It will do a whole lot of other things, but at the same time don't forget the amount of instruction and enjoyment that you will get out of a year's subscription to The Canadian Thresherman and Farmer.

We are giving you just as good a magazine as we know how. We are giving you just as good value for your money as it is possible for us to give. If our efforts meet with your approval, the best way you can show it is to come back and renew that subscription. Don't neglect it, don't let it expire. Remember we positively discontinue all subscriptions unless renewed.

family circle on a winter's evening, each and every one well supplied with a stock of books and magazines.

Resting from the summer's labors, to him who has a desire of bettering himself and of acquiring knowledge that belongs by right to every man, the winter evening on a Western Canadian farm furnishes an opportunity for gratifying the soul's desire and of developing a broader and better class of citizenship.

Chief among the farmer's winter reading should be the farm magazine, and chief among this class of reading we believe is The Canadian Thresherman and Farmer.

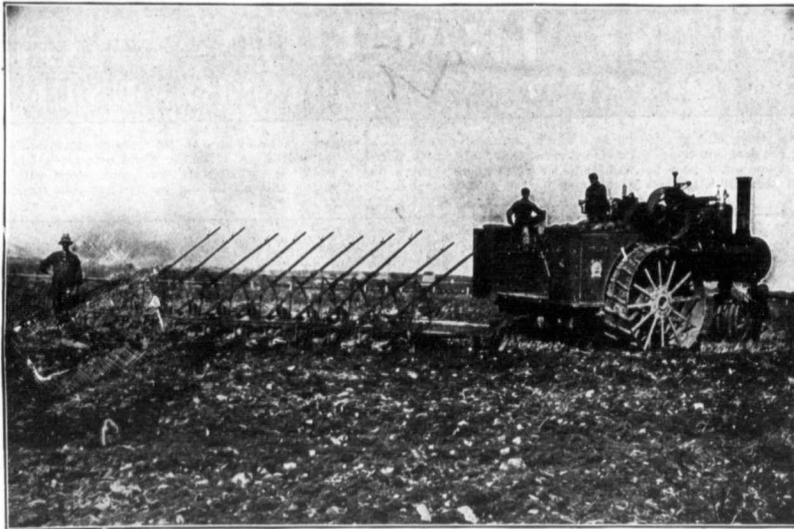
We are attempting to give you a little more than a so-called farm paper. We are attempting to give you a magazine. Outside we decorate it with a nicely designed colored cover. On the inside we use a quality of paper that ranks with the best, and typographically the printer does his utmost. We wonder just how far our readers have ever realized what we have done for them in the way of making our magazine pleasing. In the first place the matter is arranged according to departments. We realize that it is an impossibility to produce a magazine, each and every page of which would be interesting to every member of the household. Father and the boys are interested in the mechanical side of it. The steam engine, the gas engine, the various farmers' experiences, articles on the soil, traction cultivation, etc. etc. all furnish an abundance of good, clean, wholesome reading matter, instructive and satisfying. The Woman's department (if letters of appreciation be any indication) convince us that we have thousands of women readers throughout the West who are our very best friends. Our boys and girls are not neglected and we know that they appreciate their own department from the numerous letters that we receive. Then there is the Magazine Section. We promise you some big things in this department during the coming year. We have employed a special editor to handle this particular work, and as he is a man well fitted for the purpose, he will give you some good things during the coming twelve-month.

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# GASOLINE TRACTION ENGINES

## A DEPARTMENT FOR THE USER

We want every owner of a gas tractor in Western Canada to give us his experience. The owners of gas tractors to-day are in a sense pioneers. They are working out the data and compiling a record of work done that both manufacturer and farmer alike the world over are watching with intense interest. Don't keep what you know under your hat, but let us have a story of your gas tractor work. We will reward every such story with a copy of "Plain Gas Engine Sense," one of the best handbooks we know of on the gasoline engine. Don't neglect this matter but let us have your experience at once.—(Editor.)

### Traction Cultivation in Earnest.

We purchased a Hart-Parr gasoline engine in the spring of 1909 principally for breaking purposes. In the same year we broke 1200 acres and plowed about 340 acres of stubble, 320 acres of this being breaking on our own premises. We received \$4.00 per acre for breaking. While there is some profit in this work, I don't think there is as much as one might imagine as there is considerable expense attached to it.

I had four men hired with which we ran the engine day and night, one man doing the cooking, drawing the oil, water, etc., and two of the men running one shift of twelve hours and another man and I taking the other shift, changing about each week.

Our engine is rated at 22 tractive horse power and 45 brake and we handle with it a six bottom Cockshutt breaker. When the soil is in perfect condition for breaking we can handle the six, but as a rule we only draw five and occasionally this past summer when it was very dry we only pulled four, which, when considering the nature of the soil in this district, is very fine, as I think the engine is doing the work of 22 horses as per the rating. By running the engine day and night we were able to plow from 15 to 25 acres on an average of about 20 acres per day.

This year, having purchased another section of land, making in all two sections, we did no outside work.

In the spring we disced and harrowed 320 acres with the engine, using nine discs and a set of harrows. We weighted these discs with two sacks of earth, and set them in full depth, having the discs set so that they overlapped each other; thus double discing the ground and leaving it in a perfectly level condition ready for the drills. We had two four-horse teams and two drills following this sowing oats and in this way prepared and seeded 40 acres a day.

We have all inthrow Bissel discs. We put a 4 inch x 6 inch timber on draw bar of engine, supporting it on each outside of platform, cut tongue off of disc No. 1 and fastened with clevis as

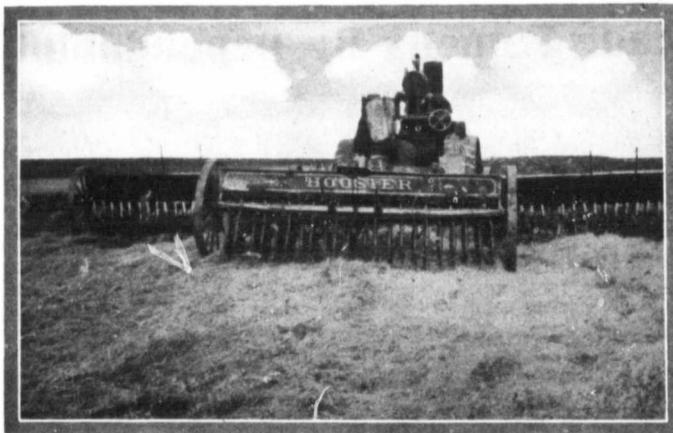
close to engine as possible. Then fastened disc No. 2 about four feet to the left of disc No. 1 so that its center will be about the outside of No. 1 and about 1/2 tongue's length from double tree. Fasten No. 3 same as 2 only to the right of No. 1 and full length of tongue from double tree. No. 4 to be placed same position relative to No. 2 as No. 2 is to No. 1 and a little longer hitch than No. 3. No. 5 to have the same position relative to No. 3 as No. 3 has to No. 1 and a little longer hitch than No. 4. Harrows to be drawn as close to rear disc as possible fastened with two chains reaching back from engine. This gives the discs ample room between each other to keep them from interfering when turning. Our engine handles this load with perfect ease. In fact this

full power of the engine. This was much easier on the engine than plowing, as only about half the engine is in operation and the parts with the most wear are not being used.

When breaking we use about 80 gallons of engine kerosene, about 4 gallons of gasoline and 20 gallons of water per twenty-four hours. When threshing we use considerably less per hour than plowing.

We consider this mode of farming much more economical than with horse power as it would take a great number of horses to do the work of an engine, especially in the rush of seeding when by hiring two extra men the engine can be operated 24 hours per day.

J. H. McNally,  
Regina, Sask.



Hart-Parr and a trio of Hoosiers doing a seeding stunt.

spring we intend putting on six discs.

We then put the engine to breaking, running day and night, following with one four-horse team on a scrubber and another four-horse team on a drill sowing flax. The flax put in in this way yielded us ten bushels per acre, for which we received \$2.50 per bu., bringing us more than the average crop of wheat and with much less expense. We put in as much flax in this way as time would allow and then broke the balance of the land which we intend to disc up in the spring and put in flax.

We did about 40 days' threshing this fall, running a 32-54 Case separator, which we consider too small as never under any condition did we come near using the

the plows. In stubble plowing I managed the outfit myself and put the man at work with the horses.

On an average I used about 18 gallons of gasoline a day. Gasoline here cost me 30c. a gallon, which brought my fuel bill to about \$2.40 a day. With a good day's run we could break about six acres a day and in stubble I could turn over twelve acres a day.

We used about two barrels of water a day in hot weather and about a barrel and a half a day in the fall.

Plowing is certainly a good deal harder on an engine than threshing. I wore one set of bull pinions out on my engine this season. The gears are all open and the dust has free access to them. That is all the repairs I had in one season and otherwise the engine is as good as new.

The cost of breaking amounts to about \$1.50 per acre and in stubble about 60c. an acre. I consider it much cheaper power for plowing than horses but it will not do all kinds of work. Crops were very heavy here and the engine will not travel fast enough to operate the binders properly.

Yours sincerely,  
R. E. Johnstone,  
Benito, Man.

### A Good One.

We own a 40 h. p. Flour City plowing engine, purchased last spring. Although we didn't get as much work done with it during the summer as we would have liked, taken altogether I believe I could call the season's work satisfactory. I never saw a Flour City engine till ours arrived at the station, and I expected some trouble and had some too. The engine arrived about two weeks ahead of the expert and as we were anxious to get to work I put the engine together and run it home six miles. I rigged a hitch and attached five 16 x 16 discs and a 24 ft. drag behind and as there was no gasoline to be had, settled down to wait, as good naturedly as possible.

The expert arrived first. He said the engine must be a dandy to run with the magneto connected the way it was. I told him it had been running all right for me, but he could change it if

### Uses 18 Gallons of Gasoline per Day.

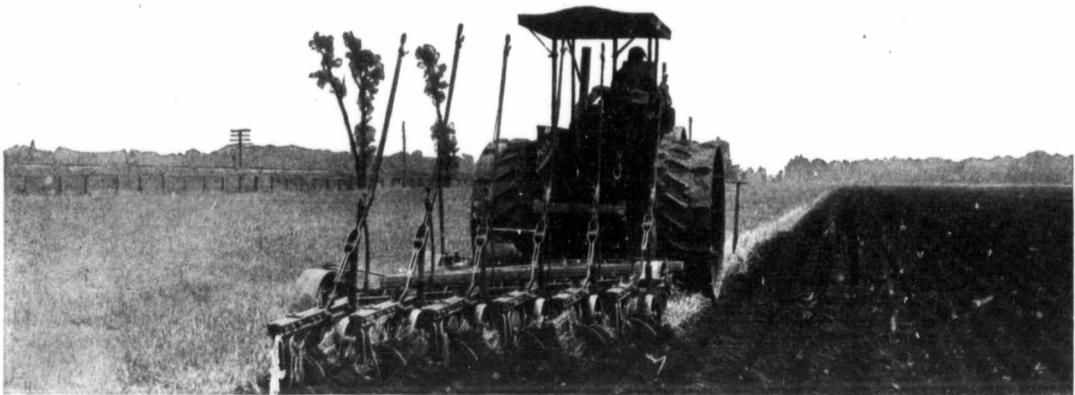
I own and operate a 15 horse power International Harvester single cylinder gasoline engine. I only bought the engine a year ago, so cannot give you much information as I was a novice and had a good many things to learn.

I pulled three fourteen-inch furrows in prairie and four furrows and harrows in stubble. When I say this I mean on the level. Sometimes we only pulled two furrows in prairie because of hills. I pulled four in stubble right through, but had to throw off the harrows for some lands. I did not have the regular engine gang, but used the ordinary gang plows.

In breaking sod I employed one man beside myself to attend to

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he liked. So he fixed it up to suit himself and made it spin awhile until he was satisfied it was working properly and then started for the field. He got about a hundred yards when one cylinder refused to work and on examination one of the cams that works the intake valve was found broken. He waited two weeks for a new cam and the cam and gasoline came the same day.

Then we disced and dragged about 300 acres at the rate of 60 acres per day. Double disced and dragged at one operation. Then we melted out a crank box. The crank boxes in a Flour City are babbitted. We, however, couldn't find the cause. We finished discing and then started to wait for the plow, waited about a week and the plow came. The stubble bottoms only came with the plow. We only had a few acres of stubble to plow, so I concluded after we got home to look into the trouble with the "cranks." We couldn't get an expert and there was nobody else in the neighborhood that knew as much about the engine as I did. I found out in about half a day. The oil pipe in the sight feed circulation was clogged. The wonder was we didn't melt out all the cranks. That stopped the crank trouble.

I hitched to the plow then and started into a piece of stubble ground. But I couldn't get the power out of the engine to pull more than eight plows and packer. It would run slow and hang up on the grades. I couldn't get an expert. Well, I finished the stubble and then waited for the breaker bottoms. It was nearly June before they came. Then I hitched to the plow and began to break. The same trouble, short of power. However, I plowed about 200 acres with the engine running poorly, when I began to get desperate and thinking possibly the valves were the cause of all the trouble, I concluded I would find out. I set all the valves to my notion and started up. Wonder of wonders, it went off with eight plows as if there was nothing behind. We went around the field as my plowman said "like a scared rabbit."

The next day I pulled the eight fourteen-inch plows a half mile with the plows six inches deep in the sod. We plowed in all about 375 acres, double disced and dragged nearly 500 acres and when harvest came I got four Hansman binder hitches and cut about 600 acres of wheat, drawing four binders.

When discing sod I used two drags, pulling 16 x 16 discs and five section lever harrow behind and one five section drag teeth up behind that again. That makes a splendid combination and when we got through the ground was nearly as smooth as old land. The discing and harvesting was very light work for the engine. I can pull six binders easily I am sure.

When discing we used about 40 gallons of gasoline to each sixty acres; harvesting, about 40 gallons to 50 acres and breaking

prairie 2 1/4 gallons per acre; stubble plowing with packer behind about the same. I didn't keep as close tab on fuel when we were summer fallowing.

I have a ten-bottom John Deere engine gang and I must say the work done is excellent, either breaking or stubble. I have a 12 foot Fulton sub-surface packer that I hang on behind for stubble plowing. When I get through the field looks like a garden and is firm. Once over with the drag and you can't tell where the furrows lay.

It takes two men to operate the engine and plows. I ran the engine alone part of the time when discing, but it is best to have two along I find. We used from two to four barrels of water a day and one hour a day with man and team providing the gasoline takes care of the fuel and water problem.

Operating expenses plowing 20 acres per day are as follows:—  
 45 gallons of gasoline  
 at 28c. .... \$12.60  
 Engineer ..... 4.00  
 Plowman ..... 2.00  
 Hauling fuel and water 1.00  
 Oil and grease ..... 1.75  
 Board ..... 2.00  
 \$23.35

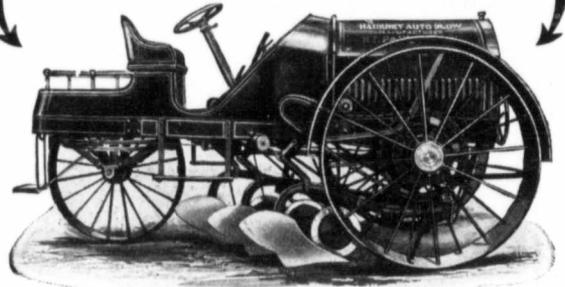
That makes \$1.15 1/8 per acre. I am not figuring depreciation, as I have no idea how long the engine would last. The discing would figure out about 36 1/2 c. per acre, using the same figures as above with the exception of our using only 40 gallons of gasoline instead of 45 per day.

The binder hitches worked very well. We could handle the short grain this year about as well with the engine as we could with horses.

We bought an Aultman & Taylor 36 x 64 separator and did some threshing. I must say the engine did its work very well. There are a few minor improvements that might be made and I understand the company is putting most of them on this year.

As for hitches. The Flour City people furnish a bar nine feet long, but that in itself is not much use for hitching on any number of implements. I took a 4 x 6 plank 18 feet long and bolted strap iron on the front side to strengthen it, then bolted the nine foot iron bar, furnished with the engine, to that and bolted it to the engine. Then attach three discs with short tongue to the plank and two discs with long tongue midway between the outer and inside disc hitch at each end. Use eye bolts through the draw bar and clevis in end of tongue. I used short tongue discs behind and bolted one inch iron rods for tongues to reach to the draw bar, so that if they caught on the front discs in turning they would not break and they were bent many times too. It is an easy matter to catch them with a pry and straighten them again. To hitch drags behind I used two

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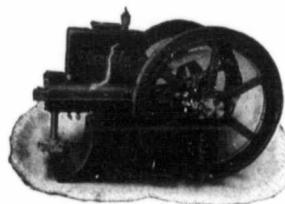
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log chains and hitched one on each end of the draw bar and back over the discs and to two places on the draw bar of the drag. I had very little trouble with this hitch. Other machinery as well as drills could be hitched similarly.

If the engine happened to have a centre draw bar, wheels could be put on the ends of this 18 foot plank bar and by using an A frame to the centre hitch on the engine it would serve the same purpose as when bolted rigidly on to the rear of the engine. The 18 foot plank would need to be heavier than 4 inch x 6 inch, or by using more iron the 4 x 6 might do. The same principle would apply to a longer or shorter hitch. In attaching discs there should be at least a foot space between them and they should be zigzagged about a foot also to keep from gathering track between them when the stubble is long or damp. By zigzagged I mean one ahead of the other like drill holes. I have had trash gather in this way until the discs would lock and slide.

As you will gather from the foregoing, I have had some experience with gasoline engines. Before getting the Flour City I ran a 20 h. p. I.H.C. engine two years threshing and grinding feed besides having other experience. The high speed engines certainly have their virtues as well as their faults. The power is very smooth and regular and in traction work I can run very

slowly and get nearly full power from the engine and it is as easy on the gears as steam.

Yours respectfully,

C. D. Lesley,

Elbow, Sask.

### Low Cost Breaking.

A vision of the great agricultural possibilities of the Canadian North-west leads ambitious men of scientific temperament to devise the most practical methods for tilling the largest possible areas. The scarcity of labor, the great amount of power needed to do the desired work at the proper time, and the cost of maintenance for the many months of idleness during the year, makes necessary a method wherein these obstacles can be eliminated as nearly as possible.

A study of the methods and conditions of extensive farming in Western Canada for one season has convinced me that the most profitable methods are those using the most concentrated form of power obtainable. Horse power must be fed and cared for the year round. One man must be employed for each four horses. With steam power, the scarcity of water in a new country, the horses necessary to haul the same and the high cost of coal (or the high cost of labor used in firing straw if straw is used in lieu of coal) and the labor necessary for hauling coal and water as well as for firing the engine, the expense of maintenance is very high.

These difficulties are greatly reduced with the use of a successful gasoline engine. With a

thirty horse power engine one man can do the same amount of work that six men could do with horses or four men with steam. The cost of maintenance while not in use is negligible. While in use the cost for gasoline and lubricating oil will not exceed the cost of coal. Another advantage of a gasoline engine is that it can be used not only for breaking, but also for tilling the soil, seeding and harvesting the crop, due to the fact that a gasoline engine if properly constructed is light but powerful!

Having satisfied myself that gasoline power was the power for me for extensive farming I set about to find the engine constructed to meet the needs of this kind of work.

Under any heavy variable load such as breaking, a four cylinder

Continued on Page 70

## OILDAG

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Deflocculated Acheson-Graphite  
--DAG--and oil

Graphite does not dissolve in any liquid or break under pressure, and these qualities, added to the unctuous softness and purity together with its non-coalescing nature, makes Acheson-graphite ideal for lubrication purposes.

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Oildag is this Deflocculated Acheson-Graphite suspended in oil, where it neither floats or sinks, but is evenly distributed throughout. Oildag will flow anywhere the oil alone will go.

Mr. Robert A. Ross, E.E., of Ross & Holgate, Consulting and Supervising Engineers, Montreal, after running a 1910 Model T Ford car with Oildag, in reply to an anxious inquirer, wrote the following letter:

A. B. Grove, Esq., Airdrie, Alberta.

Dear Sir.—Referring to yours of May 8th with reference to Oildag, I would state that the Ford Company warned me against its use, but being an electrical man, I reasoned it out for myself and came to the conclusion that, while a graphite was a conductor and if used alone would short circuit the magneto, oil was an insulator and that each small molecule of graphite was surrounded by a sphere of oil, so that in effect no short-circuiting could take place, and this has been proved in my case and doubtless in others. I may say my car is of the model of 1910, with the magneto in the oil bath. I do not think you need be alarmed on this score. Yours very truly, (Signed) R. A. ROSS.

May 13th, 1911.

WRITE FOR OILDAG BOOKLET 77B

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## Course in Gas Engineering

This Course will consist of a series of practical talks on the theory and practice of the gas, gasoline and oil engine. They will be simple, illustrated when necessary, and of such a nature that the gas engine owner may easily adapt them to his daily engine work.

### LESSON XII.

D. O. Barrett.

The question for calculating the compression was shown to be which resolves to—

Formula (a) is the one which is most convenient to use by substituting all the values and solving. However, this is a somewhat lengthy process and involves the use of logarithms, with which the majority of people are not familiar. A much simpler form is (b). The quantity  $(V+v)/v$ , will be recognized as the "compression or volume ratio." In the same manner, 'p' divided by 'P' will be designated

stroke, then from the curve the pressure ratio will be 6.3 times the absolute pressure at the end of the suction stroke.

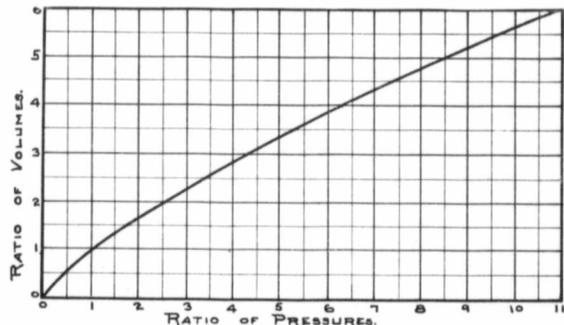
In order to demonstrate the practical use to which the curve may be put, let us take a concrete example:—On an engine having a bore of 9 in. and a stroke of 14 in. the compression was found to be 65 pounds gauge, suitable for gasoline. It is desired to increase the compression to 90 pounds gauge so that it may be economically operated on gas.

The engine has a mechanically operated admission valve, and we shall assume an absolute pressure at the end of the suction stroke 13.5 pounds. The absolute compression pressure is  $65 + 14.17$ , or 79.7 pounds. The pressure ratio, then, is 79.7 divided by 13.5, or 5.9. Turning to the table and locating 5.9 on the horizontal line we follow perpendicularly up to the curve and then draw a horizontal line to the left and we find that the volume ratio corresponding is 3.8. Repeating for the higher compression pressure we have:  $90 + 14.7$  divided by 13.5, 7.75 as the pressure ratio. From the curve again the corresponding volume ratio is found to be 4.7. The compression space must now be reduced in the engine until the existing volume ratio shall be raised from 3.8 to 4.7.

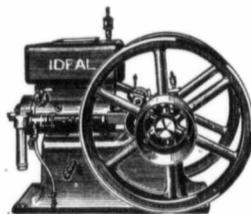
Now the volume of the cylinder swept by the piston is equal to the area of the 9 in. piston multiplied by the stroke 14 in., or 63.62 times 14 = 890.7 cubic inches. Then  $v + 890.7$  divided by  $v = 3.8$  or  $3.8v - v = 2.8v = 890.7$ ; then  $v = 890.7$  divided by 2.8 or 318 cubic inches. This gives the volume of the existing clearance space. In the same manner determine the volume of the clearance space corresponding to the desired compression. Here  $v + 890.7$  divided by  $v = 4.7$ , or  $4.7v - v = 3.7v = 890.7$ ; then  $v = 241$  cubic inches. The space must then be reduced from 318 cubic inches to 241, or about one-fourth of the original volume, 77 cubic inches. The area of the piston is 63.6 square inches, so that the distance by which the

as the "pressure ratio," or the ratio of the pressure at the end of the compression stroke to that at the end of the suction stroke. To facilitate the use of this formula the curve has been derived directly from it and, having the volume ratio, the pressure ratio may be obtained from it in a few seconds, with no calculations whatever.

Distances measured vertically represent the volume ratios, while those measured horizontally represent the pressure ratios. Suppose the volume at the end of the suction stroke was four times that at the end of the compression



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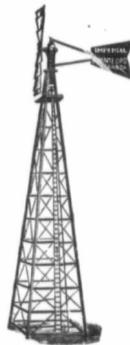
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piston should be set back into the cylinder is 77 divided by 63.6, or 1.21 inches, about 1 7/32 in.

In most cases this may be conveniently done by inserting a plate of the required thickness between the crank end of the connecting rod and the brass. This, of course, will require longer studs. Sometimes it is preferable to have a cast iron plate turned to the diameter of the cylinder and then fastened to the head of the piston. This should be done by means of studs screwed into the piston and not by cap screws. The plate should be counterbored for the nuts on the studs, and pins should be driven in, or else the studs riveted over to prevent the nuts working loose. Before adding a plate it should be ascertained if there is a sufficient amount of space directly back of the piston to allow for the addition. Putting a plate between brass and rod pushes the piston itself back, and will oftentimes cause the last ring to move back enough to spring out into the counterbore of the cylinder. In this case the plate on the end of the piston would have to be used. It is well to turn the engine over by hand after making any alterations of this kind. The engine should be turned at least two revolutions or through a complete cycle as the movement of the valves inward may be sufficient to strike the head of the piston.

Let us assume an engine of 7 in. bore and 10 in. stroke; to

determine the compression. There were no pockets in the clearance space, the valves being in the head, so that the cylinder bore extended back to the head. The distances from the piston at the end of the stroke to the head was 3 in. The area of a 7 in. circle is 38.5 square inches, so that the volume swept by the piston was 385 cubic inches. The volume

of the clearance space was 38.5 times 3, or 115.5 cubic inches, the volume ratio was, therefore, 385 ÷ 115.5 divided by 115.5, or 4.33. From the curve, the pressure ratio corresponding is found to be 7. The absolute compression will then be 7 times 13.5, or 94.5 pounds. Subtracting 14.7 to get the gauge pressure we have practically 80 pounds.

The maximum pressure developed in the cylinder by the combustion of the gases at the end of the compression stroke cannot be as readily calculated as the pressure of compression. One reason for this is that this maximum pressure is controlled by conditions not dependent upon the design of the engine. The quality of the mixture and the time of ignition are the controlling factors, and in very few cases in actual practice do we find these two working together under the most advantageous conditions. A little change in the quality of the mixture or variation in the time of ignition quite materially affects the pressure developed.

After the spark occurs in the cylinder there is a slight lapse of time before the maximum pressure is reached. With a piston speed of 600 feet per minute. Tookey states that the spark should occur about 3/100 of a second before the piston reaches the rear dead center.

The above table taken from Poole gives the average pressure rise produced in the cylinder by combustion for gas, gasoline and kerosene. By referring to the curve the pressure ratios may be found corresponding to the volume ratios, and will probably be more convenient for general use. The average maximum pressure found in practice varies from 250 to 300 pounds absolute the pres-

**PROBABLE MEAN EFFECT. PRESS.**  
 (Poole, "The Gas Engine").

| FUEL USED.                      | H.P. OF ENGINE. | COMPRESSION PRESSURE LB. PER SQ. IN., ABSOLUTE. |    |    |     |     |     |     |     |
|---------------------------------|-----------------|---|----|----|-----|-----|-----|-----|-----|
|                                 |                 | 65  | 75 | 85 | 100 | 115 | 130 | 145 | 160 |
| GASOLINE VAPOR.                 | 5               | 70  | 75 | 80 | 85  |     |     |     |     |
|                                 | 10              | 75  | 80 | 85 | 90  |     |     |     |     |
|                                 | 25              | 80  | 85 | 90 | 90  |     |     |     |     |
|                                 | 50              | 85  | 90 | 95 | 95  |     |     |     |     |
| KEROSENE SPRAY.                 | 5               | 50  | 55 | 60 | 65  | 70  |     |     |     |
|                                 | 10              | 55  | 60 | 65 | 70  | 75  |     |     |     |
|                                 | 25              | 60  | 65 | 70 | 75  | 80  |     |     |     |
|                                 | 50              | 65  | 70 | 75 | 80  | 85  |     |     |     |
| NATURAL AND ILLUMINATING GASES. | 5               | 60  | 65 | 70 | 75  |     |     |     |     |
|                                 | 10              | 60  | 65 | 70 | 75  |     |     |     |     |
|                                 | 25              | 65  | 70 | 75 | 80  | 85  |     |     |     |
|                                 | 50              | 70  | 75 | 80 | 90  | 90  |     |     |     |
|                                 | 100             | 75  | 80 | 85 | 90  | 95  | 100 |     |     |
|                                 | 250             | 80  | 85 | 90 | 95  | 100 | 105 |     |     |
| SUCTION PRODUCER GAS.           | 500             |   |    | 95 | 100 | 105 | 110 |     |     |
|                                 | 10              |   |    |    | 55  | 60  | 65  |     |     |
|                                 | 25              |   |    |    | 60  | 65  | 70  | 75  |     |
|                                 | 50              |   |    |    | 65  | 70  | 75  | 80  | 80  |
|                                 | 100             |   |    |    | 70  | 75  | 80  | 85  | 85  |
|                                 | 250             |   |    |    | 75  | 80  | 85  | 90  | 90  |
| 500                             |                 |   |    | 80 | 85  | 90  | 90  | 90  |     |

## Questions and Answers For Gas Engine Operators

This is a department for gas engine operators similar to that which we have so successfully carried on for the past few years for those interested in steam. We invite your questions and will give them our best attention. Just tell us your troubles or ask us about any point upon which you desire information. We have secured the services of a competent expert who can handle gas engine queries intelligently and to the complete satisfaction of all concerned.

**S. L. B.** I have been experting on an engine for a fellow but seem to be up against it, she runs all right as far as that goes but it smokes terribly and of course develops no power. Have tried different grades of gasoline, it is timed right, fair compression and a good spark and have adjusted throttle from too little to too much gasoline, but still she smokes, so please publish some remedy in your magazine.

**A.** If we were experting that engine we should suspect either too much lubricating oil or a leaky exhaust valve or possibly both. The fact that it develops no power points to some leak and it is possible that the exhaust valve seat is cracked that lets out a good part of the explosive force before combustion is fairly completed. If too much lubricating oil is used the piston should be removed and the explosive chamber washed out clean with gasoline. The cylinder rings and their grooves should also be thoroughly cleaned and then the entire piston surface may be brushed over with a first grade of regular gas engine oil. We, of course, assume that you are correct in your statement that the engine is properly timed as to valves, spark, etc., and that the spark is strong enough to ignite every charge it takes. If the exhaust valve is cracked a new one must be put in, and if the seat is simply corroded then it should be ground to a perfect seat. If the compression pressure is low, not over 20 or 30 lbs., it would develop but little power.

**J. E. D.** Which is the cheaper in the long run, to run an engine on 6 dry batteries or to put in 8 or 10? Will 8 or 10 batteries run enough longer to pay for the extra batteries put in?

**A.** Six will give sufficiently current strength to make a good spark and since age alone deteriorates a dry cell we question whether it is policy to use 8 or 10 cells at the same time unless divided into two sets and their service alternated.

**H. B.** Will you please answer the following questions?

1. What is the difference in power in a 25 horse power automobile engine and a 25 horse power steam threshing engine, if any?

2. Is the exhaust valve opened against any pressure in the cylinder on a hit and miss gas engine? If so, then it must be some waste of power through the exhaust.

3. Could not a thermo-electric battery be devised and used to ignite gas charges in a gasoline engine? The exhaust could probably be used to heat the battery, or has it been tried?

**A.** If the maximum power capacity of a steam engine were only 25 horse power and an automobile engine could deliver 25 h. p. as its maximum capacity then there would be no difference. Steam power has greater flexibility than gasoline power by reason of increased boiler pressure to be had at the will of the operator. A so-called 25 h. p. steam threshing engine in good condition with a strong and efficient boiler behind it may readily be crowded up to 50 h. p. capacity. This can not be done with a gasoline engine because it will seldom in its best condition develop or deliver power beyond its rated capacity and there is no way to run up the power pressure.

2. Yes, the valve is opened against from 30 to 40 pounds pressure ordinarily. Some power must necessarily be wasted by reason of this.

3. Possibly. Nothing seems impossible in this age. We do not know of its having been tried. If you are familiar with thermo-electric current sources you might invent a valuable adjunct, a revolutionizer as it were, by means of the exhaust heat.

**E. B. H.** Will you please answer the following questions?

1. What is the power of a 5 x 5 double opposed engine running at 1,000 r.p.m. at 800?

2. Can this engine be run on kerosene if equipped with kerosene carbureter?

3. Does an engine need a water mixer so as to draw in a spray of water when run on kerosene?

4. Would it not assist the evaporation of the charge of mixture to have a pipe on air intake of carbureter so as to draw hot air from around exhaust pipe?

5. Will this engine run a threshing machine as steady as a slow speed engine that has fly wheels and of same power?

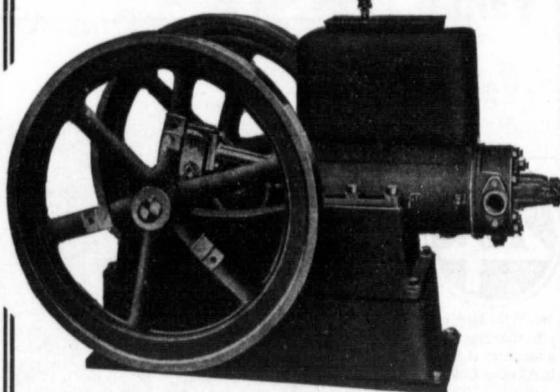
**A.** Approximately 15 and 12 h. p. respectively.

2. We think so.

3. Not necessarily, but it is considered an advantage by many operators.

4. Yes, it is of advantage.

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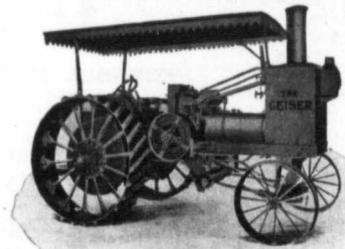
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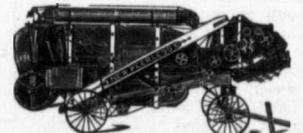
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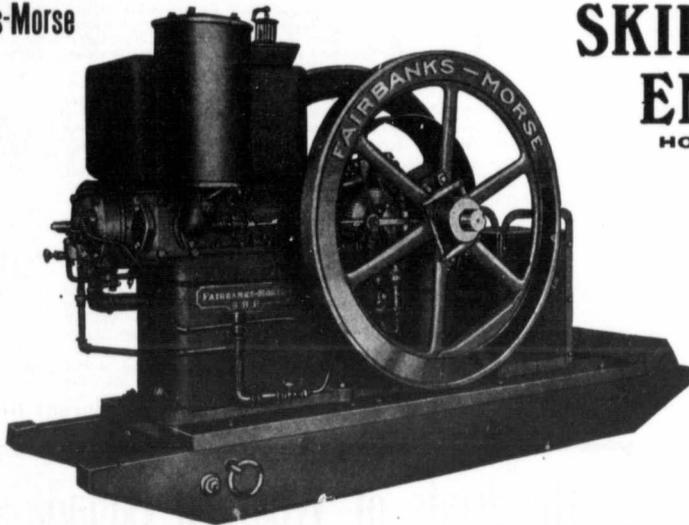
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5. Yes, if it carried of sufficient weight to gather momentum from the surplus energy.

**W. K.** I have a 14 h. p. gasoline engine that always blows the packing out of the cylinder head. It has 6 bolts in head and I prepare packing as well as I can and soak in linseed oil and draw nuts up occasionally. I have tried both common and wire woven packing. A friend told me there is a way of rusting on a packing, is that true? Will be obliged for any information you can give me. The Canadian Thresherman is a great help to me. I have both advanced and retarded spark, but no relief.

**A.** Cut a gasket to fit from a common thin sheet of asbestos. Then soak it well in a salamoniac solution, in proportion of one pound to the gallon of water. Scrape bright both faces of the cylinder and head, and put in the packing, draw up tight and let stand 48 hours, then run the engine for five or ten minutes without any water and draw nuts tight when hot and let stand another day or two. This oftentimes makes an excellent rust joint.

**H. E. D.** Does it hurt gasoline engines to pull them to their full capacity and to what extent, if any?

2. What is the horse power of an engine with  $5\frac{1}{2}$  in. bore, 8 in.

stroke and good compression running at 450 r.p.m. and 500 r.p.m.?

3. Does a hopper jacket engine use more or less gasoline than a tank cooler engine?

**A.** An engine pulling to its utmost capacity continually, has a much greater strain on it than one that pulls its load easily and with some reserve power. Consequently it would wear out sooner than one working under a moderate load.

2. Approximately 7 h. p., at 450 r.p.m.; at 500 r.p.m.  $7\frac{1}{2}$  h. p.

3. No reason why a hopper jacket engine should use more gasoline than a tank cooler engine as far as the cooling apparatus affects the fuel consumption. Other things being equal the operator ought to be able to develop the same power on either engine with a like quantity of gasoline.

**H. S.** What size of bore would be needed in this engine to make it a 16 h.p. Stroke 14 in., speed 350 r.p.m.?

2. How large must port be of intake and exhaust valves?

3. How much compression space must be allowed to work on a low compression basis?

4. How heavy and high must fly wheels be?

5. How much lubricating oil does cylinder of an engine need, how many drops a minute does a large cylinder need more than a small one, how many drops to engine with bore 12 in., stroke 20 in.?

6. Will a 10 h.p. gas engine pull as much as a 10 h. p. steam engine?

7. Why are mica washers used on an igniter, would not iron do?

**A.**  $7\frac{1}{2}$  inches.

2. Intake valve diameter 2.7 in. Exhaust valve diameter 3 in.

3.  $4\frac{1}{2}$  in. if no valve pockets to consider.

4. 700 to 800 lbs. each, for single cylinder engine.

5. It depends on the kind of oil, the condition of the cylinder, heat retained, and a great deal on the operator. From 5 to 20 drops per minute ought to lubricate the average size piston readily.

6. Yes as much as a 10 h.p. steam engine at a given steam pressure.

7. Mica is a non-conductor of electricity and therefore an insulator. Iron is a conductor and therefore will not serve the purpose.

**A. V. P.** The water jacket on my cylinder looks rusty and I have tried several things but all fail to take the rust off. Would like to know what I can do for it.

**A.** No doubt the deposit in your engine water jacket is partly lime. The hot oil process has proven very effective in some instances and may be used where there is objection to the use of the acid process. It is used as follows: Draw water from cylinder, plug lower ports and fill

with mineral lubricating oil, then run the engine till the oil in the jacket gets boiling hot, let stand over night, heat again to boiling point next morning by running the engine then drain off the hot oil, put in water and run the engine for several hours till the engine is gradually cooled off, then stop engine and draw off all sediment and flush out clean with water.

**W. H. R.** What would be the b.h.p. of a four cycle 7 x 7-inch two cylinder opposed gas engine running at 450 r.p.m., also at 900 r.p.m.?

2. What h. p. would the same engine develop with a 10-inch bore and stroke?

3. Would an engine be suitable for heavy farm tractor work running at a speed of 900 r.p.m., would not such a speed soon wear the engine out?

4. Would a 20 h. p. automobile style of boiler furnish steam for an ordinary 15 h. p. stationary steam engine with an 8-inch bore and 10-inch stroke, speed 200 r.p.m.?

5. If the drive wheels of a tractor were increased in size from four feet in diameter to eight feet in diameter and geared from the rim of the wheel would this give the tractor any more power or the engine any

Continued on page 69

## The Gasoline Traction Engine

By Roy W. Barker.

The gasoline traction engine is a live subject for the pen, and one that is drawing its share of attention from the public mind of to-day. Although it has come to stay, its possibilities and the purposes for which it will be used in the next few years can hardly be taken in by the average mind.

Of course it has its enemies and wise doubters as usual, who cannot see any future for the gasoline traction. In this age of progressiveness we will soon see nearly all hauling done with the gasoline traction engine. When one gets aboard ship for the old country to-day, he gets his daily papers on board from day to day caught by the electric receiver. With the advent of free alcohol we have in the gasoline traction engine one of the greatest and cheapest motive powers on earth. However, if we go back a little to old-time prices of gasoline and kerosene, it still comes cheaper than steam and is just as reliable, perhaps more so.

I am going to speak of the type known as oil-cooled kerosene or alcohol traction engines. From what conclusions I have drawn on this subject, I could not buy any other, as there is nothing to freeze about them. I am not going to ridicule its competitors, the traction steam engines, because we all know what they have done in relieving the poor horse of his burden in the past. They most certainly have been a grand success. Everything has its day, so let us again consider the gas traction engine and see why they are the coming engine of to-day. First, because they cut the expense of operation down one half, and are so simple in construction that any intelligent person can operate them very successfully any place. Seeing is believing. I saw a gas traction engine at Fargo, North Dakota; the operator said he could pull any old thing. The yardmaster said: "Pull up that string of loaded cars." He did it much to the surprise of everyone. Again near Gardner, I saw a man with the same make of engine pulling two triple gang plows at an expense for oil of six dollars for twenty acres of plowed land; now he was plowing for one-half the usual cost.

The farmer of to-day does his business with his check book, the rural mail and the telephone. Isolation is no longer the bugbear of his existence; he rides while doing his work, reads his daily papers at the close of day, or gossips over the telephone with his neighbors.

Another great advantage is that we are becoming independent of the hired man, and in these days when it is almost impossible to secure good and competent help this is a feature that must be con-

sidered. The gasoline traction engine is under our control at all times. It does not ask for holidays, short hours, a raise of wages, or an easier job when it is wanted to plow the ground, thresh the grain, or grind the feed. It is there, and waiting, and ever willing, with a few minutes' work to proceed to business; needs little attention, and when it stops, expense stops. I have seen the old steam engine waiting on the road for hours with a crew of twenty or twenty-five men waiting for steam, before they could move on to the next place of threshing. The time has come when farmers must economize on farm labor. The gasoline engine enables one man to do the work of three or four. In a general way there are two styles of gasoline engine—good ones and bad ones. A poor, cheap engine is dear at any price, and especially so to the farmer who is not an expert engineer or mechanic. The gasoline traction engine can be run by any one who can use

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### SPLENDID for MARKET GARDENING or GRAIN

No. 4.—480 acres five miles from St. Claude on Canadian Pacific Railway; directly south of Portage la Prairie; one of best districts in Manitoba; smooth land, good deep soil, very little scrub; land in same section sold recently at \$40 to \$50 per acre; my price \$16 per acre.

No. 2.—N.W. ¼ of 2-1-4, east of first meridian, 160 acres improved; half mile from International boundary; ten miles from Emerson, Man. Fertile, high land, well drained; rich, black soil; price \$16 per acre.

No. 26.—N. ½ of 14-4-6 east of first meridian, 320 acres; station at Marchand or Dufrost. Government drainage has reclaimed this land, which has an unusually deep, rich black soil; bumper crops can be produced on this land, and my price of \$10 per acre is a snap for someone.

No. 33.—N.W. ¼ of 36-4-6 east, 160 acres, same township as No. 26; all old lake bottom, which has been drained, leaving rich, alluvial, productive soil; price \$12 per acre.

No. 3.—S.E. ¼ of 19-1-6 east of first meridian, 160 acres improved; 1½ miles

from Canadian Northern Railway, six miles from Stuartburn on Roseau River; near the Red River Valley famous market garden district; ten to fifteen acres broken; house on property; price \$12 per acre.

No. 164.—S ½ of 30-22-15 west of first meridian, 320 acres unimproved; only two miles from Laurier, Manitoba, on Canadian Northern Railway; a pretty town, only about ten miles from Riding Mountain; splendid neighborhood, mostly English settlers, good schools and churches; plenty of seasonable rain; soil dark, heavy loam; 12 inches deep with clay sub; large Government ditch east to west on north side of tract; small ditch on road allowance to south; price \$16 per acre.

No. 165.—N.E. ¼ of 18-22-15 west of first meridian, 160 acres unimproved; within one mile of Laurier, Manitoba; soil dark heavy loam, averaging 12 inches on clay sub; small stream through tract, small government ditch half mile of land, affording excellent drainage; mostly open land; price \$16 per acre.

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Judging by the men who are conducting this correspondence course I deem it of inestimable value to every farmer in the West. Any man will miss a great opportunity if he fails to take advantage of this splendid source of practical information.

A. H. Finch, Lidstone, Man.

### One Hour a Day Does It.

I was a little dubious about starting your course thinking that it would take too much time to study it, but find that the lessons are so clear and everything is so plain that I can, by studying one or two hours every evening prepare a lesson in a week. I am well satisfied with the course and think that anyone taking it up would say before they were through that it was money well spent.

J. Errol Knox, Keyes, Man.

### "Building Better Than You Know."

I believe that you are embarking on a most valuable undertaking and are building better than you know.

Jas. Weir, Parkland, Alta.

### "Explains Things."

Your course explains things to me I often wondered about.

W. J. Boughen, Valley River, Man.

### More than a Good Thing.

I feel very enthusiastic over farming and your course in particular as being not merely a good thing but the best practical education a farmer can secure at his own place. It's an appeal of intelligence to the intelligent farmer at a moderate price.

Thos. Duxbury, Imperial, Sask.

### "Worth Double the Price Asked."

I am delighted with the clear and practical teaching of the lessons. I consider that the course is worth double the price you ask for it. It is one of the best means of putting one on the right "trail" to success. To those who are working out, I would strongly advise them to take up the course without delay as it will not only help them in their work but will be of great practical value when they have to run things themselves.

William H. Hill, Halstead, Man.

### First Two Lessons Will Repay.

I will never regret enrolling as a student of your School. The lessons are interesting and contain valuable information. Yours is certainly a splendid course for every farmer. The first two lessons will more than repay for the whole course, and it is money well spent.

Thos. Chapman, Box 23, Elkhorn, Man.

WE HAVE HUNDREDS OF TESTIMONIALS—BUT SPEAK TO A STUDENT YOURSELF



## Correspondence School of Scientific Farming of Western Canada, Limited

5 Edward Block Opposite Eaton's  
WINNIPEG, MAN.

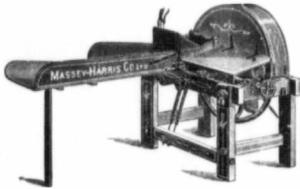
Send me further particulars free of charge.

NAME.....

ADDRESS.....

## DON'T BUY A GASOLINE ENGINE Until You Investigate The Temple Make.

Its Great Advantages are: 1st—Lowest Fuel Cost; pays for itself in Fuel Saving. 2nd—Delivers Steadiest Power Stream, adapting it especially for operating farm machinery. 3rd—Easy on the machine it operates. 4th—Uses Gasoline, Kerosene or Gas. 5th—Perfect Lubrication. 6th—Starts Easily and Quickly, occupying minimum space. 7th—It is the King of Portable Engines. No engine has so wide a range of use. YOU WILL MAKE A MISTAKE IF YOU DO NOT WRITE FOR INFORMATION. We make 1½ to 3½ H. P. single cylinder engines; 6 to 20 H. P. two cylinder engines; 30 to 40 H. P. four cylinder engines. All Heavy duty, slow speed engines. For surety of operation and low fuel cost our engines lead. TEMPLE PUMP COMPANY, Manufacturers. 401 West 15th St., Chicago, U.S.A. This is our 59th year.



# MASSEY-HARRIS FEED CUTTERS

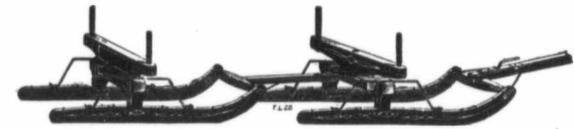
A complete line of Feed, Straw and Ensilage Cutters and Root Cutters and Pulpers. A machine qualified to give every satisfaction to the user of the smallest hand machine or to the user of a large capacity and powerful cutter.

## MASSEY-HARRIS "OLDS" GASOLINE ENGINES

The simplest, most economical and durable Gasoline Engine in Canada for all farm work which can be done by power. It has been giving the Western Farmers A 1 service for the past 35 years.



No Pump  
Mixer has no working parts  
Strong construction  
Fewest possible parts



## BAIN BOB SLEIGHS

Steel Shoes Best Material  
Cast Shoes Expert Workmanship

# MASSEY-HARRIS COMPANY, Ltd.

CALL ON OUR LOCAL AGENT TO SEE SAMPLES OF THE ABOVE

good judgment and "horse sense," as the old saying is, and first makes himself familiar with all the parts and principles involved.

If, for instance, you wish to take a few loads to town with your engine with steam, it would be necessary to have a fireman, an engineer, and a man and team to haul water and fuel. Now, in the case of the gasoline engine, it will carry its own fuel, needs no water, and one man is all that is necessary to run it; there is no danger from fire, no scattering of straw and fowl seeds; and in moving from place to place you need not fear that your water is low, and that you are in danger of being blown up by the boiler exploding, and you do not have to stop some nice day and clean boiler and flues.

The time is close at hand when the gasoline engine will supersede the steam engine for almost every purpose. It will be used in many places where the steam engine cannot be used at all, and in many others where the steam engine cannot be used to good advantage.

It is not necessary for me to enumerate all the uses in the general lines in which it may be employed; it is a money-saver, an excellent master, a still better servant, useful at all times, in all seasons, always ready and willing, a friend in need, and, once you have one, you will never go back to the old style steam engine, or

still further to the horse or oxen power.

The twentieth century farmer would not turn the soil with a wooden plow, nor sow nor reap by hand, and draw the products to market with oxen, as did his fathers. An active, educated brain has come to the rescue, and as a result we have the modern gasoline traction engine.

### Saving from \$20 to \$35 a day on Cost of Harvest

It seems too good to be true, but as a matter of fact this has positively been done on a large number of farms in Manitoba within the past few weeks by farmers who have used the Stewart Sheaf-Loader.

No one who has not seen the old, laborious and long-winded operation of pitching the sheaves one by one into the rack, side by side with the Stewart Sheaf Loader doing its work and filling the largest wagon in less time than it takes a man to hoist up a single stook, can form an idea of the almost ludicrous contrast.

Briefly, the "Stewart Sheaf Loader" entirely takes the place of the men and the whole process of pitching individual sheaves from the stook into the wagon or rack. In fact the job of "stooking" becomes unnecessary, be-

cause the loader lifts the sheaves from the windrows as they fall from the binder with greater precision than hand labor could do. The illustration accompanying this article gives a better idea of the machine than any written description can convey and the history of its inception and progress to the perfect stage were given in our columns some time

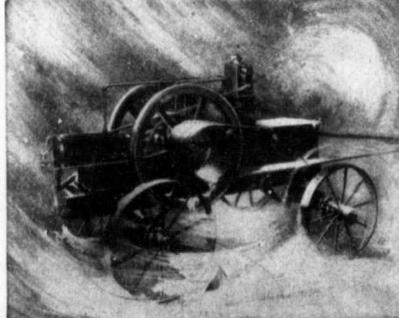
ago and are now fairly well known.

When we last wrote, but a few machines had seen active service and those were used in handling last year's crop, and our comments were made on a special and exhaustive trial made on an improvised field of stooks in the spring of this year.

Continued on page 67

## RUN THAT GAS ENGINE THIS WINTER

But before you do so it will be necessary to buy a Madison-Kipp Oil Pump



The accompanying illustration shows one of our oil pumps on a gasoline engine running in a snow storm.

You know all about the troubles that you have with your lubrication in winter. You know it is a very difficult proposition to get your oil distributed right and to the proper places on your engine. You have, doubtless, wanted to use your engine during the winter, but were afraid to attempt it on account of lubrication troubles.

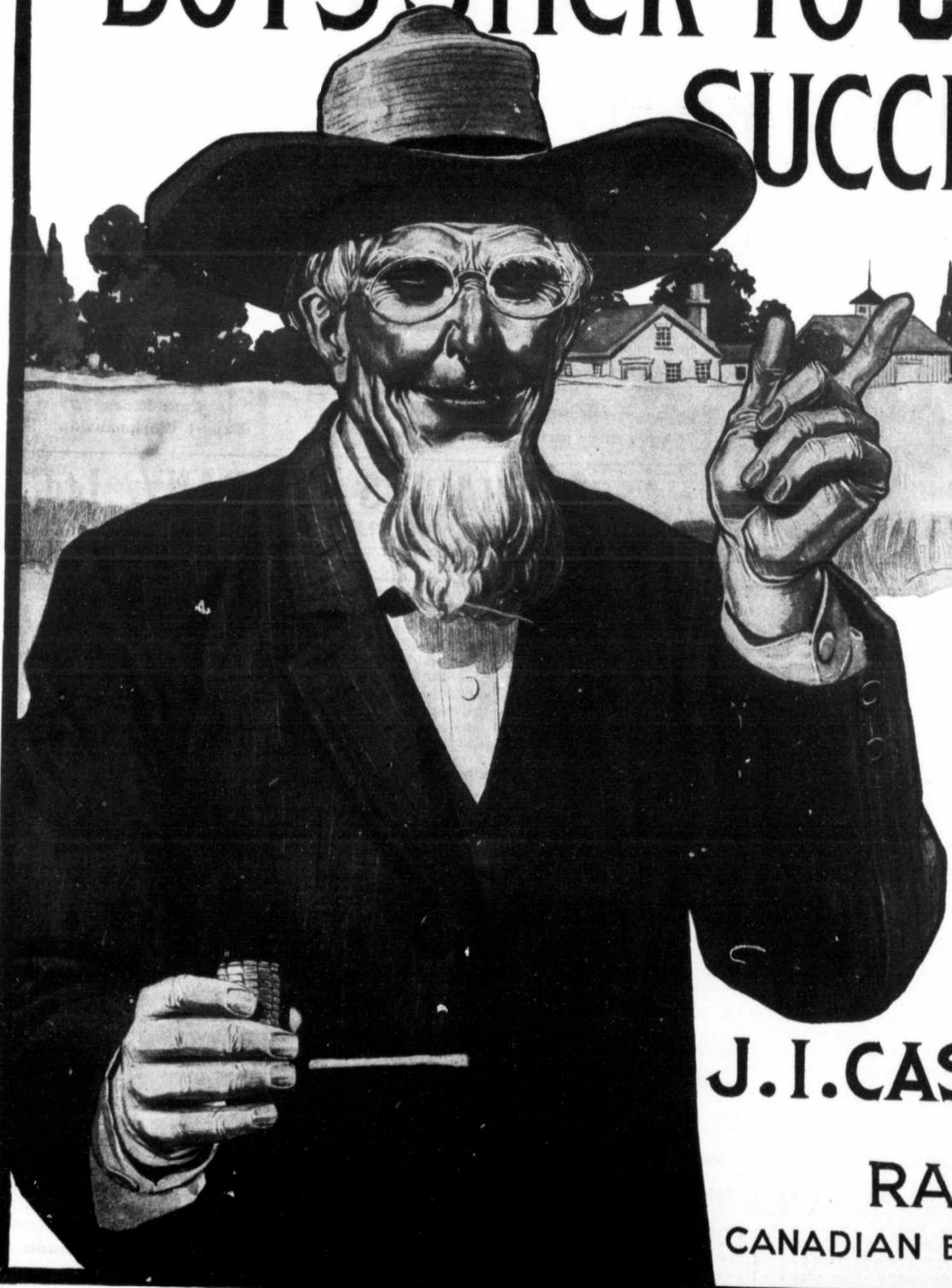
Equipped with a Madison-Kipp these troubles cease. We are pioneers in the oil pump business. All our energies are devoted to this particular line of making pumps suitable of meeting all requirements for either steam or gas tractors as well as all styles and sizes of stationary engines.

Our pumps are especially designed and adapted to work in cold weather; in fact they will work in any kind of weather without change or adjustment.

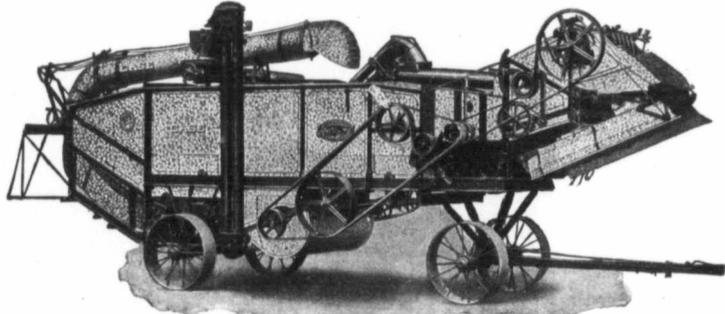
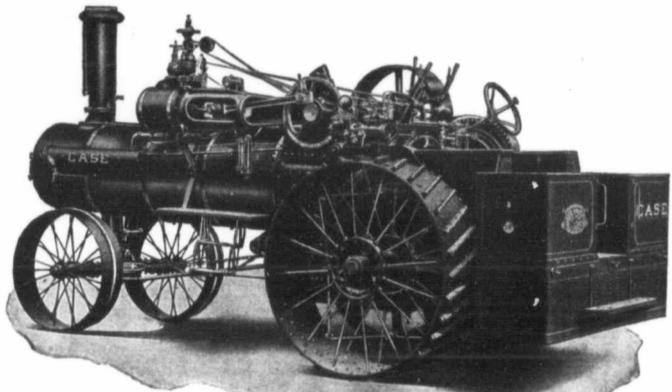
The Madison-Kipp way of engine lubrication is the way that knows no trouble. Get a Madison-Kipp.

THE MAYTAG COMPANY, Winnipeg, Canada  
Manufactured by The Madison-Kipp Lubricator Company, Madison, Wis.

# "BOYS STICK TO CASE MACHINERY AND SUCCESS WILL STICK TO YOU"



That was my Father's advice 40 years ago. I've lived up to it and "made good" and so will you if you buy and stick to **CASE** Machinery. Remember buying "**CASE** goods" is not merely handing the money over to get something; O no! it's more than that. It's an investment pure and simple, which pays for itself within the shortest time besides building a good and profitable business for you.



**CASE** Outfits are always dependable. They are the standard for profitable Threshing all over the world and every outfit sold is backed by the

## J. I. CASE THRESHING MACHINE CO.

INCORPORATED

### RACINE, WISCONSIN, U.S.A.

CANADIAN BRANCHES: TORONTO, WINNIPEG, REGINA, CALGARY.

# TRACTION PLOWING

## AS TOLD BY THE MEN WHO DO IT

On this and the following pages will be found a number of letters from traction plowmen in Canada West, the originals of which are on file in our office. We have inserted the letters just as they came to us, and we will, therefore, not hold ourselves responsible for any of the opinions or criticisms contained therein. Should anyone disagree with the statements made, we would be pleased to offer them the use of our reading columns for the purpose of criticism, etc.—Editor.

### Plowing Not As Hard on Engine as Standing Still.

In 1910 I did not have much experience in plowing, as water was scarce. I started about the first of May and broke 160 acres for flax and after that it was too dry to do much breaking.

On the 160 acres I used 375 pounds of lignite coal per acre, costing \$2.80 per ton and it took me 14 days to finish it, paying the fireman \$2.00 per day and tankman \$2.00 per day. I ran the engine myself and had my own teams.

I have a J. I. Case engine and a Cockshutt plow. This is a good outfit. My engine is in good shape. I do not think that it is as hard on an engine to plow as to stand idle and rust out. I believe an engine will last longer at work than standing idle. That is if it has good care. In a steam engine it is the boiler that gives out first.

A man going into plowing for profit should have a large outfit, as it takes the same amount of men to run a small outfit as it does a large one.

In regard to hitches. I would say that it depends on how the engine is made. I have cut wheat and plowed at the same time, pulling the binder with a cable from the plows and having the drive wheels of the binder in the furrow of the last plow and this worked fine.

In discing I made a drawbar out of a 6 x 8 and fastened it across the back of engine and pulling from this had another 4 x 4 fastened by cables four feet back of the drawbar. This is to keep the discs apart and for fastening the poles of the first discs working as a spreader. This works good and double discs the land.

I have never used the engine for seeding. All engines are not constructed alike and one hitch for one make may not work out on another engine. A man will have to use his own judgment.

Wishing the Canadian Thresherman and Farmer a successful year I remain,

Yours truly,  
Eugene Waite,  
Midale, Sask.

### Wants Plenty of Power.

I have been in the traction plowing business five seasons.

The first outfit I run was a 14 h. p. Geiser engine, which pulled

six fourteen-inch bottoms. It was the first one in the Swift Current district. It did good work and was a success when handled right.

The next rig I had charge of was an Avery engine 30 horse power return flue, which pulled eight, fourteen-inch Cockshutt bottoms. But the engine was not designed for plowing and did not stand up to the work. I broke about 800 acres during the season.

The next outfit I had in charge was a Reeves 32 h. p. cross compound engine, and a ten-bottom Cockshutt plow. We were out 78 days but only plowed 58 days, the remaining 23 days being taken up in moving from one job to another and waiting for repairs and coal. I plowed 1510 acres during the season, making

also use these same engines to thresh with, having two of the largest Sawyer-Massey separators made.

I would advise anybody going in the steam plowing business, expecting to do work for the public, to get nothing less than a 32 h. p. engine. It takes the same number of men and teams to run a rig plowing seven furrows, as it does ten or twelve, the only difference in expense being a little more coal on the large outfit.

Mw crew for one outfit consists of five men and two teams—engineer, fireman, coal hauler, water hauler and plowman. The plowman does the cooking for the crew in a cook car which we keep right on the job.

According to my experience, it requires 75 to 100 imperial

### Expert Firing.

As last summer was my first experience in steam plowing, I will just be able to give the result of my season's work.

My outfit consists of a North West Cross Compound engine, 34 h. p., and an eight furrow John Deere engine gang. As most of the land in this district is heavy gumbo soil, I thought it not advisable to overload, but I could just as easily pull ten plows as eight; in fact, my engine steams better with a heavy load than a light load.

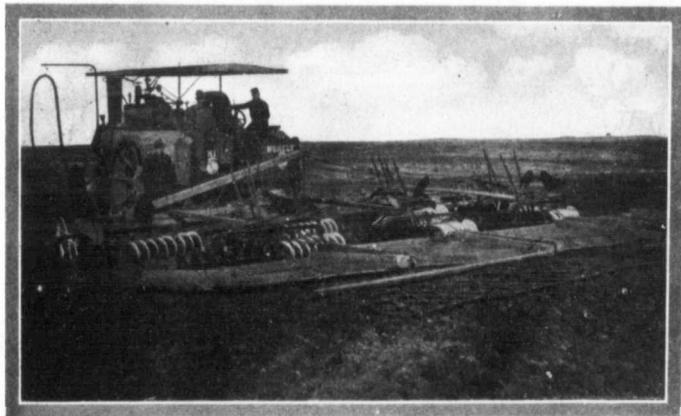
With eight fourteen-inch plows, I cut about 18 feet on the round; thus on a half mile furrow it makes 1 1-11 acres. Most of my work was on the half mile stretch, making an average about 17 to 18 rounds a day, thus making about 18 or 19 acres in the day's work.

I employed an engineer, steersman, plowman, tankman, and team, and a man and a team part of the time for hauling coal, according to the distance. One of the teams on the farm brought a load every day.

We burnt about 3,800 pounds of steam coal in a day's run. It was un-screened coal. Next year I think I will get the screened, as it will make more than the difference in the price to have it clean. The fine coal when put in the firebox forms a cake on the grates, thus preventing the draft and deadening the fire, also forming a

coating on the flues and interfering with the steaming. There is a vast difference in firemen. Some firemen will use from six to eight hundred more coal in a day than others. It requires a man that is on to his job to be an economical fireman. He can soon throw away a lot of money in waste fuel. It took me quite a while to learn to fire myself. Keep about four inches of coal completely covering the surface of the grates and don't allow holes to burn in the fuel or the cold draft will get through, thus cooling the fire and also injuring your flues.

We use a tank of water to every two rounds on a half mile furrow. My tank holds about 8 barrels of water and having tank capacity enough on the engine to empty that, it



A Rumely 30 h.p. Steam Tractor doing a tillage stunt.

an average of about 27½ acres per day for the time we worked. The largest job I had in one place was 200 acres and the smallest was 25 acres. The work was scattered over an area of 25 square miles.

I operated this same outfit in Alberta the following year, which was 1909, but did not do so well, owing to the land being heavier and the season being very unfavorable.

In the spring of 1910 I bought a half interest in a 32 h. p. Sawyer-Massey tandem compound engine and a twelve bottom John Deere big engine gang. We pulled the 12 plows when on nice level land, otherwise we dropped off two. We also have a 30 h.p. Sawyer-Massey and John Deere plows which we ran during the later part of the season. This 30 h. p. engine pulls ten plows. We

gallons of water, and 130 to 200 pounds of coal to break one acre of Saskatchewan prairie land four inches deep. The consumption of coal and water varies with the quality of coal and kind of engine used. With the Sawyer-Massey engine and British Columbia steam coal I can break one acre, using 75 gallons of water and 130 pounds of coal.

The biggest day's work I did was 36 acres in fourteen hours. My average speed is about 2 miles per hour, while pulling plows, taking fifteen minutes off for taking coal, water and oiling up, which makes an hour and fifteen minutes for every two miles. Twenty miles a day I consider good work.

Yours truly, C. C. Wilson,  
Swift Current, Sask.

"Only Machine I ever Bought that will

# Pay for itself in Twenty Days"

J. E. BERGEY—ROSSER

Early in the season we asserted that **The Stewart Sheaf Loader** would save any farmer who had a fair crop to harvest from 20 to 35 dollars a day on his **threshing bill**. That fact has been fully accomplished at every point of the North West provinces this year where the **Loader** has been operating, and it has been done on some of the heaviest fields of grain ever harvested in Canada. When the season had fairly started orders for the machine were received far in excess of the Company's ability to fill them, and in several cases applicants have offered considerable sums in excess of the regular selling prices to secure a machine for this year's crop.

**The Simple Facts**

The Sheaf Loader I bought from you is giving me perfect satisfaction. It does the work it is intended to do, being strongly built and easily operated.

I run a Reeves outfit and used to have eight stook teams, where now I only use four, making a saving of twenty dollars a day on teams, also have four less men on the gang, which is another saving of ten dollars a day.

I can recommend the Loader to any thresher as being a labor saving machine.

(Signed) ISAAC MOTHERAL,  
Snowflake, 20th Sept., 1911.



**Positive Results**

In regard to the Sheaf Loader I purchased from you, I would say that I have run this six days and am very well pleased in the way it is doing its work. I worked it in sheaves that were just thrown in wind-rows, which it handled satisfactorily. It supplies my threshing machine with all the stuff four men can throw into it, and I think it is the only machine I ever bought that will pay for itself in twenty days.

(Signed) J. E. BERGEY,  
Rosser, Sept. 14th, 1911.

Having bought one of your Sheaf Loaders and having given it a two weeks' trial, I can highly recommend it to any thresherman as to the work it does, it being not only a labor saver but a money maker. I am saving the price of two stook teams and six men. Figuring the board for the men and the feed for the teams the saving would amount to about thirty dollars a day. The machine is easily operated and can be handled by a fifteen year old boy. It shells very little grain and in fact picks up more loose straw, which would be left on the field by hand pitching.

(Signed) DAVE HOUSTON.

Elsewhere in this issue will be found fuller details of this machine—the only perfect Loader made. As the demand made for this season's threshing has been so far in excess of the makers' ability to fill it—delivery for next season can only be guaranteed on early applications, accompanied by a deposit of \$100 on the price of the implement. Write for complete information, price, etc., to the

**Stewart Sheaf Loader Co., Ltd.** 715 McIntyre Block, WINNIPEG.

makes it convenient for the tankman, thus requiring only one tank to keep going.

In my experience the estimated cost per acre for breaking will be:—

|                         |        |
|-------------------------|--------|
| Engineer .....          | \$5.00 |
| Steersman .....         | 1.25   |
| Plowman .....           | 1.25   |
| Tankman and team..      | 3.50   |
| Hauling coal .....      | 2.00   |
| Oil and grease .....    | 1.00   |
| Sharpening shares ..    | 1.60   |
| Board for men .....     | 4.00   |
| Coal at \$6.45 per ton, |        |
| 3,800 lbs. at 32¼c      | 12.15  |

Total expenses for day's work .....

We averaged 18½ acres per day, making the cost per acre \$1.72.

This statement is not including wear and breakages, which probably would make up the balance of \$2.00 per acre, not including interest on the investment.

In regard to experience in hitches for drills, harrows, etc., I have not had much experience but will give you my ideas.

In hitching a drill or any other implement behind a plow, it is necessary to have a fore-carriage to carry the tongue or poles and it is also necessary to have it far enough back so as not to interfere with the plows. This can best be accomplished by having a carriage with two wheels either big enough to carry the poles at the proper height, or have

a crooked axel to make the raise. The wheels do not need to be very heavy. The wheels of an old wagon or drill are sufficient. It requires a bolster the width of the two poles of the drill with a king bolt in the middle to allow the axle to swing without cramping the poles. It also needs a brace from the bottom of the king bolt to the frame of the drill to keep the carriage from toppling over. This brace should be stiff enough to stand a push back if necessary, but it is very seldom that this would occur.

The hitch from the axle of the fore-carriage should be from both sides with cross chains to the frame of the plow: One chain will require to be longer on account of the distance to the frame of the plow. Be sure to have the chains crossed and also a grab hook on each chain to shorten or lengthen so as to make your drill come to the required place. By this means you can set your drill to track exactly in the right place.

The idea of the cross chains is that when you turn your engine at the end, the front end of the frame of your plow will follow the engine, thus throwing the rear end of the frame to the other side and bringing the opposite corner of the frame ahead, pulling the chain on the fore-carriage of the drill so as to bring the drill up to the

Continued on page 30

## Stickney Gasoline Engine

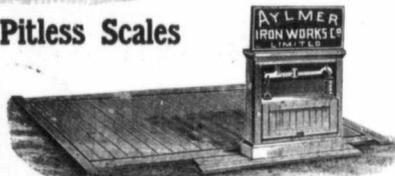
Stationary or Portable



When you buy a Gasoline Engine, make sure it is a Stickney, for only in this way, can you obtain the advantages of the BEST Gas Engine in all the world. Used from coast to coast for Threshing, Grain Grinding, Wood Sawing, Pumping Water. Lowest fuel cost, lowest up-keep cost, adapted especially for farm work.

## Aylmer Pitless Scales

We are prepared to show every man who will be shown that the Aylmer are the best scales on the market for weighing Hay, Grain or Stock.



Marvels of accuracy, they are built, in the least detail, in the light of long practical experience. The "Aylmer" name makes the Scales dependable. To realize this you have but to compare.



## Ontario Wind Engine & Pump Co., Limited

TORONTO WINNIPEG CALGARY

- Flour City Tractors
- Wood Saws
- Toronto Grain Grinders
- Aylmer Standard Scales and Pumps
- Well Casing, Pipe and Fittings
- Waterloo Well Drilling and Boring Machines



# GAAR-SCOTT

A REAL SENSATION

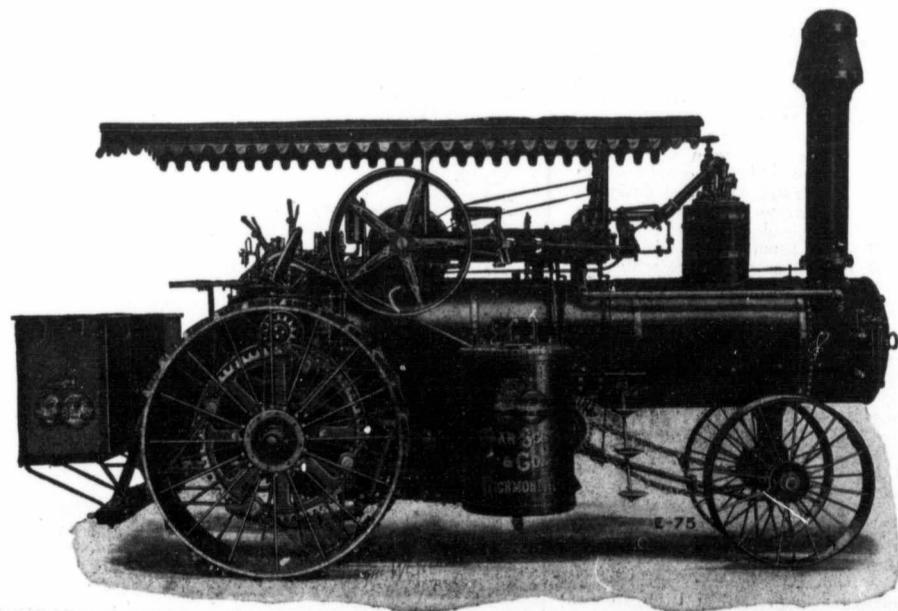


AN AVERAGE DAY'S BUSY SEASON.—GAAR-SCOTT SHIPMENT IN WINNIPEG YARDS

Have you a similar traction problem to solve, or even one that looks harder? Put it up to us—that's what we build these Turf-Turning-Tiger-Tractors for. So far this year we have put more Steam Traction Engines into Canada than in any entire year before, and our Gas Tractors are past pioneering.

The Tiger line is in Canada to stay—high tariff or low tariff because Gaar-Scott Three-Quarter-Century Quality knows no handicap and fears no competition. Threshermen in Canada are fast being educated to recognize the best in threshing and plowing machinery, and they are demanding it.

Right now Gaar-Scott Threshers are teaching them a lesson on getting all the grain, which they cannot soon forget. There has never been a year when wheat was so hard to thresh, but we have't had a word of complaint from the thousands of Gaar-Scott Threshers scattered all over Canada. When the Tigers growl, it's for more wheat. Do you run one of the machines that makes you do the growling?



All the resources of our three big Canadian branches are at your command.

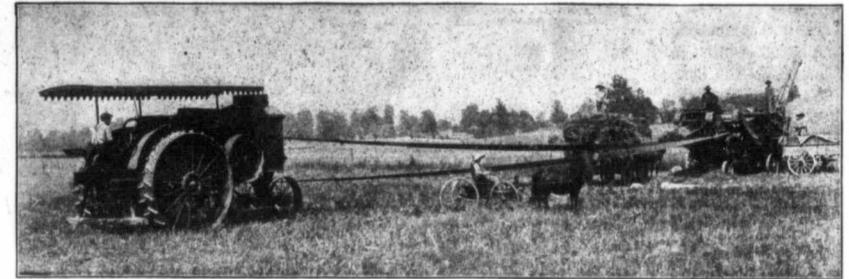
## GAAR-SCOTT & CO.

Winnipeg, Manitoba

Regina, Saskatchewan  
Calgary, Alberta

# GAS TRACTOR

IN COLORADO



GAAR-SCOTT GAS TRACTORS FURNISH IDEAL, STRONG, STEADY THRESHING POWER

Biggest Plowing Ever Attempted  
At High Altitude  
We alone of all Gas and Oil Engine Competitors were willing to sign a guarantee to—

## DO IT

### THE WESTERN UNION TELEGRAPH COMPANY

25,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD

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ROBERT C. CLOWRY, PRESIDENT

BELVIDERE BROOKS, GENERAL MANAGER

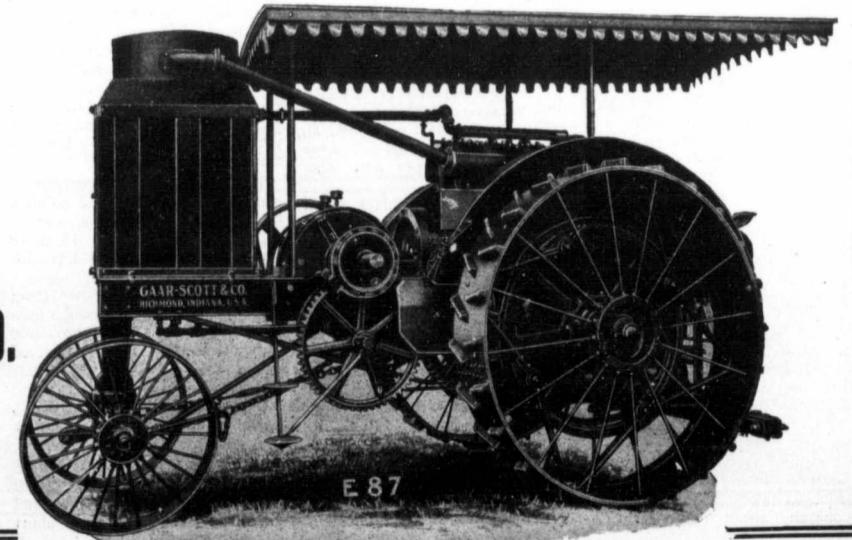
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Berthoud Col. Sept. 16

GAAR SCOTT & CO RICHMOND INDIANA



Was out to see gas tractor in operation today. Everything working fine. Engine pulling fourteen plows eight to ten inches deep and burning distillate. No other gas or oil engine in this district attempting to pull to exceed seven plows. Altitude does not affect motor. Engine has been visited by a number of plow engine men and its work is considered sensational. J. E. Jones.



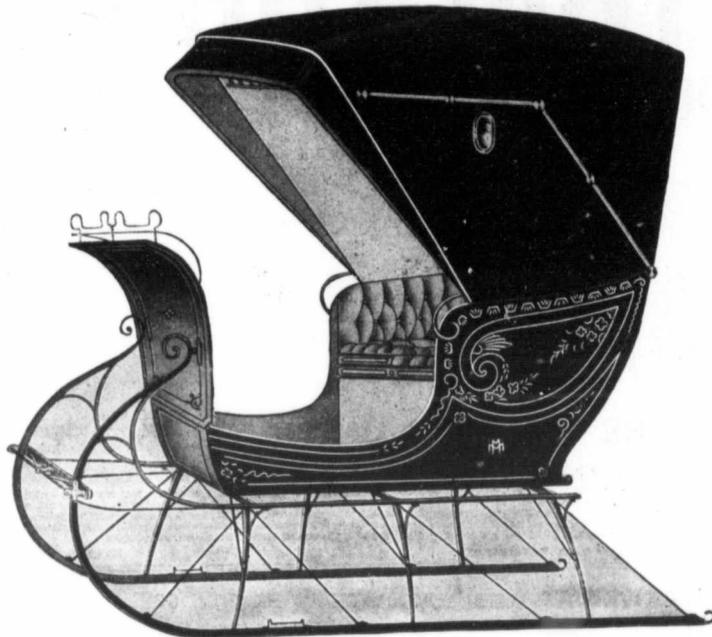
# Defy the Blizzard in a GLENGARRY Top Cutter

The Prairie Monarch, the latest addition to the GLENGARRY Line, has a Closed Top with wide extension hood and inside Levers.

Can be furnished with storm boards if desired.

Seated in this cutter you can be comfortable in any kind of weather.

At the same time you have a cutter that is unequalled in style, construction, durability and finish.



Have you seen our New Shanty Jumper? Everyone who has, agrees it is the swell-est article on the market for the money.

Our Cutter Catalog shows a complete line of Open and Top Cutters, as well as Jumpers and Express Sleights.

You can't afford to be without it.

Drop us a postal today.

**CANADIAN MOLINE PLOW CO. - Winnipeg, Man.**

## Traction Plowing

Continued from page 27

end in a straight line with the rear end of the plow.

If properly constructed and bent axle be used to make the raise on the poles of the drill, you could arrange a lever on the brace from the carriage to the frame of drill to tilt the axle to the required height of poles either that, or have it stationary and move the fore-carriage forward or backward to the desired place. This construction could either be used on long or stub poles. Harrows should also be hitched with cross chains with grab hooks so as to bring them to the desired place and also to pull up straight on the end.

Hoping this may be of some use to someone, I remain,

Yours truly,

J. A. Miller,  
Argyle, Man.

## Gets \$4.00 per Acre.

This is our second year in the steam plowing business and we have found it a profitable way of putting our engine to use in the summer months. We have an M. Rumely 25 h. p. double cylinder plowing engine and a Cockshutt eight furrow fourteen-inch engine gang, using wood or coal for fuel. It takes about 15 cwt. of coal and about 1½ cords of

poplar wood per day, and from five to eight 10-barrel tanks of water per day of ten hours, breaking about 20 acres, which we consider a good day's work, as the land is rather stony and rough.

Our expenses were about as follows:

|   |        |
|---|--------|
| Engine .....                                  | \$5.00 |
| Fireman .....                                 | 2.50   |
| Plowman .....                                 | 2.50   |
| Tankman and team ...                          | 4.00   |
| Coalman and team ....                         | 4.00   |
| 15 cwt. of hocking valley coal at \$7.25..... | 5.43   |
| Sharpening shears and oil .....               | 1.00   |

Total expense... \$24.43

We received \$4.00 per acre for breaking sod—\$4.00 x 20—\$80.00, making a profit of \$55.57. Our average expense per acre was \$1.25.

We used Sawyer's black oil in the gears and it is very good, as it keeps the gears clean and well oiled and they show no wear whatever. We consider plowing a lot harder on the engine than threshing, as it has only the separator to haul from set to set, and it is very hard hauling the plows over the rough and uneven ground.

Hoping this may be of some interest to the readers of the Canadian Thresherman and Farmer I remain,

Yours truly,

George A. Ireland,  
Bannerman.

## Soft Spots Bad.

Last season I plowed about 1000 acres of land. I started out about April 15th, using a 25 h. p. Case engine and a 7-furrow Cockshutt plow. The engine was an old one but outside of a broken axle we did not have a break of either engine or plow. We had no trouble to speak of, except one day when plowing we got into a mud hole and was in most all day and that was the hardest day's work that we put in all season. We did everything we ever heard of, but still the engine stuck till we put the tank team on ahead on a chain and let them pull when the engine was pulling. In this way we got it out. Then we used a long cable and got the plow out. After that we left soft spots alone.

I used about 3 to 4 barrels of water per acre and used about a ton of steam coal at a cost of \$4.50 per ton, to every 15 to 18 acres. We averaged 24 acres for every day.

I paid the tankman and team \$5.00 per day, steering man \$5.00, coal hauler \$4.00, cook and shear sharpener \$3.00 and I acted as engineer. I figure it cost me about \$1.00 per acre to plow.

I hitch three drills or discs to engine and find they work very well, using 9-ft. drills and 8-ft. discs. I take a log or timber 18 ft. long and hitch a disc or drill with a short tongue at each end and hitch or disc with short

tongue in centre. I just let the log lay on the ground, as when the engine pulls, it raises and does not drag and it seems to do fine everyway. I can turn as short as with the plow. When discing I arranged with an extra long tongue in the centre and used six discs in three pairs coupled behind one another hitched in the same manner. The discs I coupled behind all with short tongues.

When discing I could cover about 60 acres per day and seed the same. I am going to draw a rough sketch of the hitch I use for discing or seeding.

I find it very little harder on an engine if properly handled to plow than thresh. The gearing is the only part that is affected in plowing, but if the engine is carefully handled the gearing will not give out nearly as quickly. Wishing you success I remain,

Yours truly,

Wm. H. Miller,  
Brant, Alta.

## THICK, SWOLLEN GLANDS

that make a horse Whose, Hoarse, have Thick Wind or Choke-down, can be removed with

**ABSORBINE**

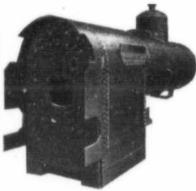
Also say Bunch or Swelling. No blister, no hair gone, and horse kept at work. It is sold by all druggists. Book & E. Free. **ABSORBINE, J.H.**, ointment for manking, Redness Gout, Painful, Worms, Painful, Knotted Varicose Veins, Ulcers. \$1.00 and \$1.00 a bottle as dealers or delivered. Book with testimonials free. **W. F. YOUNG, P.D.F., 112 Lytton St., Montreal, Can.**

Also furnished by Martin Ross & Wynne Co., Winnipeg. The National Drug and Chemical Co., Winnipeg & Calgary. and Henderson Bros. Co. Ltd., Vancouver.

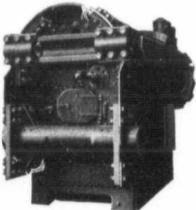


# You Can Save Money and Make Money by Getting a Rumely Steamer this Fall—

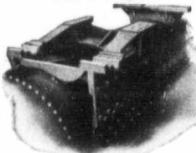
**O**VER animal power, you can save anywhere from \$1.00 to \$2.00 per acre, and in addition to this, after you have done your plowing, you can plow for your neighbors and make, over and above all expenses, \$25.00, or more, a day.



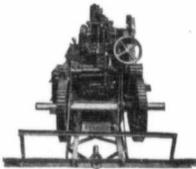
Showing Wing Sheet Construction



Showing How Counter Shaft and Rear Axle Brackets Fit Securely Inside of Wing Sheet



Engine Bed Mounted on Wing Sheets



Rear Mounting and Double Geared Construction

Aside from profits, the Rumely Steam Plowing Engine has other advantages. It enables one to get his plowing done quickly, at just the right time, when weather conditions are right. Deeper plowing and more thorough harrowing can be accomplished with one operation with a Rumely Steam Plowing Engine. These two operations are very essential in conserving moisture and insuring crops against drouth.

## The New RUMELY Steam Plowing Engine

Having found such distinct advantages in the Rumely Steam Plowing Engines, which were built in accordance with the Canadian laws, we have adopted this type of engine as a standard and are now building all of our Steam Plowing Engines in this type. Those sold in the States, as well as in Canada, comply in every particular to the requirements of the Alberta laws.

The complete wing-sheet construction used eliminates all bolt holes in the boiler and does away with any possibility of leaky studs; insures better steaming qualities, strengthens the entire construction and makes our engine a long-lived, more substantial engine in every way.

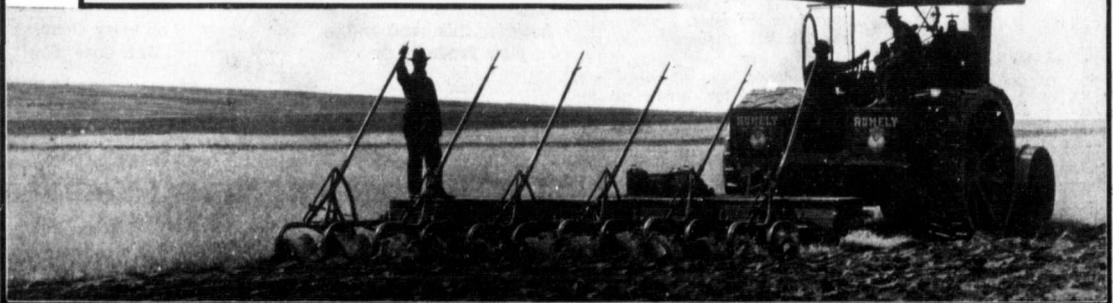
The rear mounted and double geared features which made the Rumely Engine such a well known fuel and power saver, are still maintained. Both these features add materially to the life of the engine, as one entirely eliminates the side strain on the boiler, while the other absolutely prevents tipping in, wobbling or uneven wear on gears.

## Send for this Free Book

Our new catalog, entitled "From Track to Stack" is descriptive of this new Rumely Steam Plowing Engine. It is nicely illustrated and covers every mechanical detail that is of interest to the possible buyer of engines. It is sent free for the asking—a post card will do.

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19102 Rose Street, REGINA, SASK.

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Winnipeg, Man.      Calgary, Alta.      Saskatoon, Sask.



## MEN WHO MAKE No. 1 HARD

Being first hand experiences of the men who own and operate threshing outfits in Western Canada

### An English Thresher.

I have read with interest the experiences of threshers in the West in your paper and I think it a splendid idea as there are lots of little things, and big ones, too, which come in useful to old threshermen. Some men may think they have got it all pat, but, in my experience, there is always something new to learn every season and there always will be.

Now, I will try and give you my experiences in Canada. I was born in Yorkshire and volunteered for the South Africa War from England. When I came back I could not settle in England, so came to Canada the next spring in 1903. I might say I was not very much impressed with Canada for a while, but it is all right now.

My threshing experiences started that fall. I might state that I was mechanically inclined from boyhood and had considerable experience with several kinds of machinery and engines before coming here. My father was a thresher in England and I got most of my threshing experiences from him.

Well, the first fall, 1903 I was walking down the street in Brandon, when I met a well-known thresher and farmer. He told me that he was looking for a separator man and I said that I would go and run his separator; so he engaged me to go with him as he ran the engine himself. We got on very well together.

I went out with him on Saturday, and had all Sunday to look the machine over. When I went out to the shed where the outfit was I found that it was very much different to the English machines, but did not give up. I had an idea where the threshing had to be done, so starting at the cylinder I followed the straw to the blower and the grain to the cleaner and bagger. Then I studied the feeder and got it pretty well fixed before I stopped. I went out on Monday morning and belted the machine and we started threshing and went off very well. In a week I had got to know the machine very well.

I ran for the same man four seasons. At the end of three years I took a trip to the Old Country. For two years' previous I had been sending the folk at home The Canadian Thresherman and Farmer which they liked very much. About that time farming in England was very bad, and after a lengthy discussion they all decided to sell up and come to Canada, there being fourteen in the family, nine boys and five girls. Seven of the boys and three of the girls came with

father and mother. We are now farming two sections of land and have a hundred head of cattle and horses, and a threshing rig, which I will tell you all about.

In 1906 I came back to Canada and the family came in 1907 and we hit for Lloydminster and located north of the Big Gully. So the boys got to work to haul lumber for the house and a fine time we had. There was about one foot of snow left and we had oxen and wagon and not one of us had driven oxen before. I think the oxen knew their business better than we did at that time, but we know more about them now and I think they are the poor man's friend, for we have got a quantity of stone and we shall continue to keep them while we have land to break. The land here is very rolling with considerable stone.

In the fall of 1908 I ran an engine for a thresher up in this country in order to see what size machine was best suited for the country and came to the conclusion that the big rig was not a good paying investment, as farms were too few and far between, and when you arrived at the farm they only had a day's work for a big rig and sometimes less. I have threshed as many as five farmers a day with our rig with one half mile moves between.

Well, we decided to get a 12 h. p. Case simple traction engine and 24 by 42 separator. I and my brother ran the engine and separator, my brother on the engine also acting as fireman when we were set and I was separator man. So when we were threshing it left me to the machine which kept me very busy as we had only carriers on and I had to buck the straw myself, but got a Case Gearless Wind stacker for the next season, and I have been very pleased with it, as it left me with a free hand.

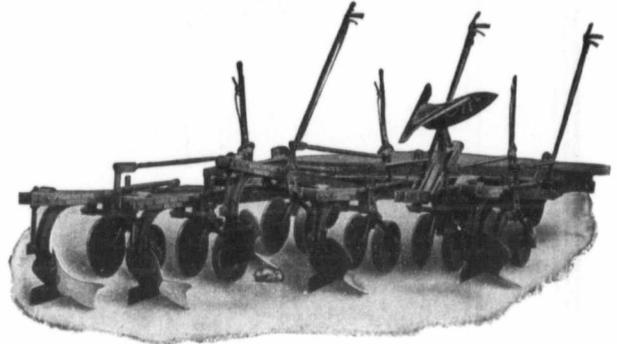
We threshed 42,000 bushels in 1909, chiefly oats. We threshed very steady that fall, with only one hour's stop, and that was my fault. I was under the carriers pitching straw and stayed there too long. The consequence was a burnt box. We threshed for three cents for oats, barley, four cents, wheat five cents, in 1909, and were well satisfied with our first year's work.

1910 we had a clear field as our neighbor, who had an outfit, sold his rig, so we threshed him this season. First, we threshed our own crop, which amounted to 3,500 bushels of wheat, 1,500 of oats, and 500 of barley. The crops were not very heavy around this dis-

# J. I. CASE

## ENGINE GANG

### SUPERIORITY



Made with 4, 6, 8, 10, 12 or 14 bottoms

#### Break Pin

An exclusive J. I. Case point of advantage. When the plows become caught under a stone or root, the pin breaks when otherwise part of the plow would break or bend. Will save many a dollar and hours of time in a season's plowing.

#### Lightest Draft

Users say so. This means low cost of fuel consumption for your tractor, and low cost of plowing.

#### One Lever for Two Plows

One lever lifts two plows, hence one man can easily take care of the plows on the largest outfit.

#### Accessibility of Parts

Hinged beams permit turning up of plows, so that shares or bottoms may be changed while operator is in standing position instead of crouching down on his hands and knees, as he must do with other makes.

#### Simple, Positive Adjustments

Insure perfect work in the shortest possible time. Each plow independently adjustable for depth. A minute and easy-to-get-at adjustment for lining up each plow.

Look for this hand and  
plow Trade Mark



on every Genuine  
J. I. Case plow

CANADIAN SALES AGENTS:

**The Harmer Implement Company**

WINNIPEG, MAN.

or

**J. I. CASE PLOW WORKS**

RACINE, WIS.

# I H C Gasoline and Kerosene Tractors

PLOWING,  
HARROWING,  
HARVESTING,  
HAULING



THRESHING,  
AND ALL  
BELT POWER  
WORK

Thousands of Farmers and Threshermen who are making the real big money are using I H C Gasoline and Kerosene Tractors. The reason is simple. I H C Tractors are first of all reliable, and built to work 24 hours a day if necessary. The economy in fuel consumption has been proved time and again. No other tractor is as simple or easy to operate. It is to your advantage to get the facts about the I. H. C. Tractors. For plowing, hauling, threshing, in fact all drawbar and belt power work they are without an equal.

See the I H C local dealer and let him tell you all the reasons why I H C Tractors are best for your use. I H C Tractors are made in 12, 15, 20, 25, and 45-horse power—a size for every farm. Then there are horizontal and vertical engines—stationary and portable—air or water cooled—in sizes from 1 to 50-horse power. Call on the I H C local dealer, or if you prefer, write the nearest branch house for catalogues and complete information.

WESTERN CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Lethbridge, North Battleford, Regina, Saskatoon, Weyburn, Winnipeg, Yorkton.

International Harvester Company of America  
CHICAGO (Incorporated) USA



tract, so we did not have a very long job.

We threshed three times as many people this year as we did the year before, and ran through without a hitch. Our biggest day was 713 bushels of wheat, 59 bushels of barley, 1,015 bushels of oats, and moved five times. We finished up and got home before the snow this year, with 45,000 bushels to our credit, 20,000 bushels of this being wheat and the rest oats, barley and flax. We threshed faster this year on account of the short straw. We kept four men going as much as they wanted. We charged 3½¢ for oats, 4½¢ for barley, 6¢ for wheat for stack threshing, and 1¢ extra per bushel for stook threshing. We were very well satisfied with our fall's work.

I might say that we overhaul both engine and separator every year before going out as the threshing season is no time to wait for repairs. The season is so short that you have to keep going to make ends meet. We have a blacksmith shop on the place and do all our own work of every kind. It might interest some of you to know that we have only spent 75 cents in outside labor since we came. The blacksmith shop is a fine thing when you have anyone that can do the work. I consider we have had pretty good success for greenhorns.

Yours truly,  
John Gillyean,  
Lloydminster, Sask.

### A Small Outfit.

About three years ago I bought an 8 horse power portable International Harvester Co. gasoline engine and a 10 inch Maple Leaf grinder to grind for myself and neighbors, moving the outfit from farm to farm, where there were five tons or more to grind at one place. I found this quite profitable, being able to grind from ¾ to 1 ton an hour.

I then began to wonder if I could get a threshing machine small enough so that my engine could handle it all right. I was finally persuaded to try a 24 by 24 Belle City separator, fitted with 18 foot straw stacker, high elevator, and hand feed. We used three stook teams, one man and team with two wagons to haul the grain when not setting at a granary in the field, one man to stack the straw and two of us to change about feeding.

Last fall we threshed as high as 600 bushels of wheat in one day, but 50 bushels an hour is a good average in wheat and 75 to 85 in oats.

I have a knife fastened to my wrist when feeding and cut bands while feeding, in that way not needing anyone to cut bands for me.

We have no trouble as long as we have a good battery to start with. Then we switch on to the auto sparker. I only use a 30 ft. 7 in. rubber drive belt which brings engine and separator quite close together with no danger from fire, as with a

steam engine when setting close to stacks.

The price for threshing here is 8¢ for wheat and 6¢ for oats, stook threshing; 6¢ for wheat and 4¢ for oats, stack threshing. I have had to pay 30¢ per gallon for gasoline.

I think anyone farming a half section or more would do well to consider the advisability of buying a small threshing outfit, if they are dissatisfied with the large outfits generally used.

If I were buying another outfit I believe I would get one somewhat larger with self feeding attachment; then one man could attend to both engine and separator.

Yours truly,  
Charles Rick,  
Lacombe, Alta.

Regarding thresher's experiences. I have only run two falls, so my story will be short. In the fall of 1909 we did very well for the first experience, but the rig was new and every run pretty good. I did not, however, get the power I should have had on account of my inexperience. At any rate we got along pretty well and threshed away in the wind when steam rigs were shut down on account of fire and often when it was damp we threshed when they did not.

Men were pretty scarce, but we managed to keep a pretty full gang. We paid \$4.25 for man and team. We had the misfortune of having two pitch forks go through, but recover-

ed them before they reached the cylinder. So they did no harm.

Later on, however, one concave broke. We could not find the cause, unless it was a wet sheaf, for we were threshing damp oats at the time. It did no harm with the exception of bending a few cylinder teeth.

Our outfit consists of an I.H. C. 20 h. p. engine and an Aultman Taylor separator. We tried plowing, but gave it up, as there are quite a few little things about an engine that wear out and we found it difficult to get repairs when we wanted them. We make what we can, but what we cannot make we have to wait for so long, which is a loss to any thresher.

As for the fall of 1910, this settlement was all hailed out and most of the fall was spent in threshing hailed grain in which there is not much profit for either thresher or farmer. But it has to be done by someone.

We were out 28 days and threshed somewhere about 15,000 bushels. And if the crop had been good we could have threshed twice as much. We charged all the way from 6 to 12 cents according to how badly it was hailed, but in good grain six and eight cents is what we charge. We had to pay \$4.50 for wages for men and I expect wages will be higher this fall as they have been going up every year.

Continued on page 67

Conducted by  
Professor  
P. S. Rose

## Practical Talks to Threshermen

Talk No.  
XLX.

### LESSON L.

In the last two lessons I have dwelt at some length on the matter of speed at which the cylinder should be run. What has been said applies to the conditions mentioned, but perhaps a little further discussion of this rather important subject may not be without interest. In considering the size of the grain threshed we find as a general rule that the larger the grain the slower we must run the cylinder in order to do satisfactory work. For example, in threshing peas or beans if we should run the machine at the

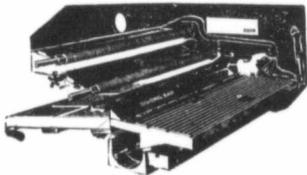


Fig. 90. Combs and rollers in Geiser Separator

usual speed employed in threshing the smaller grains damage would be done to the grain itself. Much of it would be cracked and rendered worthless or nearly so for the market. The same rule applies to the larger varieties of wheat. This is especially true if the wheat is very dry. West of the mountains, where the wheat is very dry and the kernels large, it is necessary to run the cylinder considerably slower than the speed employed in localities east of the mountains in order to prevent cracking the grain. In fact, it would be well to have the cylinders of the machines that go into that territory speeded a little slower than they are for the middle sections of the country where the grain is always somewhat damp, due to climatic conditions.

As indicated in previous lessons, the speeds of the different parts of the machine are very important and the careful operator will be careful to watch and make sure that every part is running at normal speed. An accurate speed indicator is, therefore, very essential, for by its use it is easy to tell in a moment if any pulley is running too slow. By its use one can tell if a belt is slipping and just how much. It is a very good plan to figure out, once for all, just how fast each of the different pulleys should run and mark the speed on the side of the machine for future reference. A great deal of the trouble experienced with separators is due to the slipping of some of the belts and often the operator does not know which belt is at fault.

And right here I want to give our readers a little advice in regard to the care of belts. Go all over the machine twice every day, once in the morning and again at noon time, and make sure that every belt is laced properly and in fit condition to go through until the next inspection time. There is very little excuse for being obliged to stop the separator to make repairs to the belts, racks, or any other parts unless it be the cylinder teeth. These, of course, are liable to injury through sticks or stones that may accidentally go through the machine unknown to the separator man. Close attention to details and a never ending vigilance are the necessary qualifications of a good separator man. If he understands his business the work is not hard. It is, in fact, easier than the engineer's job though a little dirtier. There are probably fewer good separator men than

better with the machine than he is doing.

Fast threshing, clean grain and no waste; this should be the separator man's motto. Until he can live up to this motto he is not a real separator man.

At least two companies, the Geiser and the Frick, build what are known as sieveless separators. Instead of using sieves they make use of revolving grooved rollers and combs, over which the grain passes while at the same time it is being acted upon by the blast. Before the grain reaches the first roller, which has zig-zag U-shaped grooves, it passes first over a short vibrating bottom which carries it to the roller. A large part of the grain will pass down on the inside of the roller through the grooves. The coarse stuff and some of the grain will be carried over and fall upon a narrow shelf. Between this shelf

heavy stuff that does not readily respond to the influence of the blast. Below this shelf there is another roller, as can be seen by referring to the accompanying illustration, figure 90. This roller is also grooved and a blast of air passes up on each side of it. Below this there is another shelf upon which the grain falls and the same operation is repeated that has been explained for the first roller and shelf. After the grain falls upon the lower shelf, it passes over a short toothed comb which is attached to the rear side of this shelf which allows all of the rest of the grain to fall through. All of the coarse stuff, unthreshed heads, etc., now pass over the comb and drop upon a narrow vibrating rack located above the tailings spout. The heavy, large stuff is carried back while the unthreshed heads drop into the tailings and are carried back to the cylinder. Wheat, oats, barley, and grain of that character can be threshed and cleaned with this device by merely making some trifling adjustments, but when it comes to the threshing of flax, timothy or some of the other small grains it is necessary to use a special attachment consisting of two sieves. With this change the machine will do excellent cleaning of any of the grains. Another feature of this machine which differs from any of the others is the automatic blast regulating device shown in figure 91. With this arrangement a blast of practically uniform intensity is said to be maintained, which aids greatly in doing clean work. The foregoing description applies particularly to the Geiser separator, but the explanation of the action of the grooved rollers and combs applies just the same to the Frick machine.

The Frame. — Logically the frame work of the separator should probably have been discussed first, but for obvious reasons it has been deferred until the present. At the present time there are two distinct styles of frames, one made of

Continued on page 46

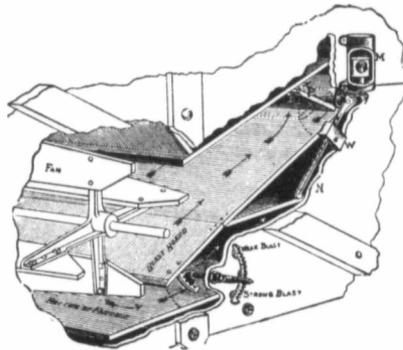


Fig. 91. Geiser Automatic Blast Regulator

good engineers. Many young fellows seem to think there is a certain sort of glory or distinction in being an engineer, but not in being a separator man. This is where they make a mistake, however, for it requires just as careful thinking and just as good mechanical ability to be a good separator man as it does to be a good engineer. There are few rules to work by in handling a separator and every new condition is almost a new problem, which must be solved and solved quickly and correctly. There are many men running separators who get along in an indifferent manner but who do not really do good work. They do not get the maximum efficiency out of the machine; either it does not thresh as fast as it should or it wastes grain, or it does not clean the grain as well as it should. One should not be satisfied with his work until he knows no one can possibly do

passes which does two things: it prevents any chaff from falling and projects the lighter, coarser particles to the rear of the machine. The grain falls upon this shelf in a cone-shaped ridge, with comparatively clean grain on the front side of the ridge that continually falls through the blast to the grain spout below, while the rear side of the ridge is covered with unthreshed heads and coarse,

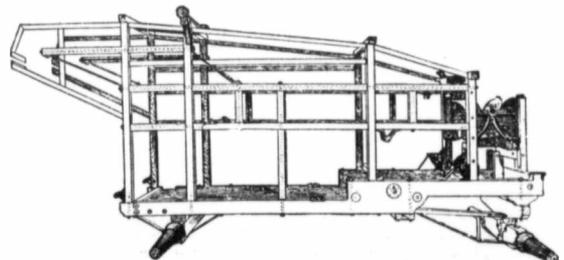
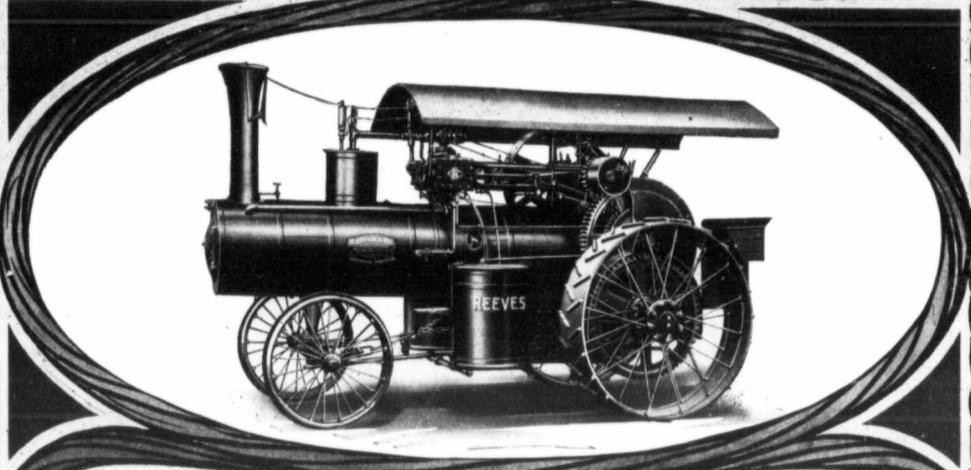


Fig. 92. Framework of Separator built by the Northwest Thresher Co.

REEVES



### Durability and Good Working Qualities in a Threshing Outfit Assure Profit to the Owner

Profit is what appeals to the buyer of threshing machinery, and when the qualities necessary to the greatest profit can be found in one machine, that is the one you should buy, even though, as is likely to be the case, the price is larger than on other machines. The following letter is right to the point and tells the experience of an operator of Reeves machinery:

*Reeves & Co., Columbus, Ind.*

*Fullerton, N. D., May 29, 1911.*

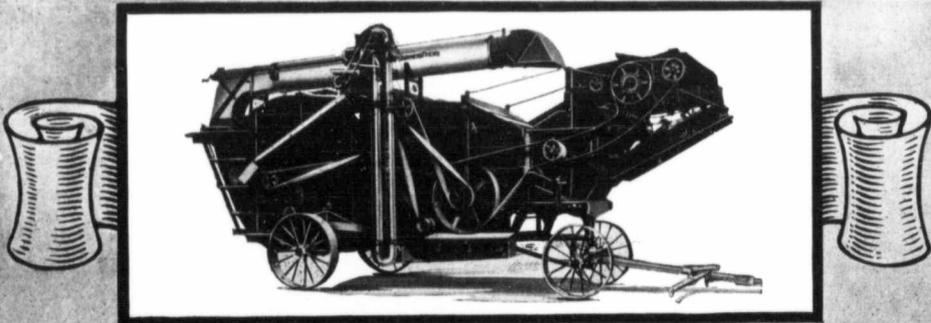
*Dear Sirs:—Have you on hand lower pan for 40x60 separator No. 1052 bought in 1900? If you have, let me know and send price. This is the first repairs I have had to buy in eleven falls. I run this separator six falls in Illinois and five falls in Dakota, and it is still in first-class shape excepting this pan, and today, with a new pan, I will put it up along side any new separator and do a better job. I also am using most of the belts that come with it.*

*Respectfully,*

*R. F. D. No. 2, Box 25.*

*Myron McKeague, Fullerton, North Dakota.*

The Reeves Double Cylinder Engine and the Reeves Compound Separator make an outfit that will prove profitable to you, satisfactory to your patrons, and with reasonable care, will last a life time.



Our catalogs are free — ask for them  
**REEVES & COMPANY**  
COLUMBUS, IND. U.S.A.

REEVES

## The Thresherman's Question Drawer

Answers to Correspondents

**L. Y. Q.** I have a 30 h. p. Woolff compound engine that exhausts through heater. What would be the result if I take the heater off and exhaust through pipe instead? Will the exhaust be sharper? It is now flat.

**A.** A sharp exhaust is a sure sign of poor economy. It takes back pressure to produce a sharp exhaust. If your steaming capacity is good leave the exhaust as it is. If not, the exhaust nozzle can be slightly reduced. The heater will not likely have any effect on the exhaust as the opening through it is about the same as the exhaust pipe.

**G. W. Q.** When my Woolff reverse gear is hooked up to one-half or three-fifths it will run smooth, but hook it out to three-fourths or full cut-off, it will jerk the reverse lever in the quadrant as if it would break it. What is the cause?

**A.** When a Woolff gear is cutting off at a late cut-off the reversing guide or link is at a more obtuse angle to the eccentric than when it is cutting off at an early cut-off. Notice when you have the reverse lever in the centre notch the guide is vertical and offers little resistance, but as the cut-off is increased the angle of resistance becomes greater and therefore makes it work harder. Plenty of oil to the slide valve will help this "jerk."

**C. B. Q.** What is the matter with my governor? It is a Waters, 1½ inch. I cannot make it run the engine slow enough when doing light work, such as sawing wood. The stem seems to be long enough, as I can screw the valve down to bottom of seat. Should the valve have a solid bottom or an open one? This valve is open at the bottom. It will let the engine run from three to four hundred revolutions per minute. It will hold the engine when doing heavy work, but does not govern it well.

**A.** The plan of changing the speed with a Waters governor is the changing the valve. When a slow speed is required the valve is screwed down into the seat, thereby cutting off the steam with but little movement of the balls and springs. The valve opens but little in this case and there is not much power in the engine. When the governor valve is set to run the engine faster the valve is set to open farther, thus having to move the balls and spring farther. To get better results at a low speed the better plan is to put a smaller pulley on the governor; the valve can then be set to open farther.

**O. C. Q.** What makes the crosshead in an engine run out of true? Top shoe runs outside of

slide and bottom runs inside of shoe.

**A.** We understand from your question that the top shoe of the crosshead extends out over the guide and the bottom shoe extends in. If this is the case there can be no trouble come from this cause. The important thing to note is that the crosshead is the correct height. This can be found by watching the piston rod while the engine is running. If the stuffing box works up and down the crosshead is either too high or too low, and when the crosshead is properly adjusted the rod will run true.

**G. R. Q.** In looking about for a 20 h.p. engine and studying the different catalogues, I was considerably bothered. They ranged in stroke from 10 to 13 inches and in diameter from 8½ to 10 inches in single engines. It seems to me there must be considerable difference in power of these engines. I understand that speed and pressure make quite a difference, but would like to know the relative power of a number of 20 h. p. engines figured at the same speed and pressure. Here are all the sizes of 20 h. p. engines I could find: 10 x 10, 8¾ x 12, 9¼ x 11, 9 x 10, 9 x 12, 8¾ x 12, 10 x 10¾, 8¾ x 10½, 8½ x 12½, 9 x 13, 10 x 11, 9½ x 10, 8¾ x 10, 9 x 11, two 6¾ x 10¼ and two 6½ x 12. Say the 10 x 10 engine is 20 h. p., and figure them all at that rate, that is, at the same speed and pressure.

**A.** It is not exactly fair to figure a lot of engines at the same rate, as some engines are designed to carry a higher pressure and some to run faster than others. However, we can make a comparison of the sizes. The 20 h. p. is, understand, nominal rating and if we consider the 10 x 10 engine 20 h. p. the 8¾ x 12 is 18½ h.p.; the 9¼ x 11, 18½ h.p.; 9 x 10, 16 h.p.; 9 x 12, 19½ h.p.; 8¾ x 12, 19 h.p.; 8½ x 12, 17 h.p.; 10 x 10¼, 20½ h.p.; 8¾ x 10½, 16 h.p.; 9 x 13, 21 h.p.; 10 x 11, 22 h.p.; 9½ x 10, 18 h.p.; 8¾ x 10, 16 h.p.; 9 x 11, 17½ h.p.; two 6¾ x 10¼, 18½ h.p., and two 6½ x 13, 20 h.p.

It will be seen that there is five nominal h.p. difference between these engines. The largest one may be the slowest in speed and carrying the lowest pressure and the smallest may run the fastest and carry the highest pressure, thus making the power about equal.

**P. G. Q.** I am running a 30 h. p. stationary engine with a 40 h.p. internally fired boiler, to pump water for irrigation purposes. My object is this: I would like to use the steam from the exhaust pipe to warm the water before I feed it to the boiler and, by doing so, save fuel. The water

ASK YOUR DEALER FOR

## "Garlock Packings"

Standard for over a quarter of a century, also write for Garlock catalogue showing

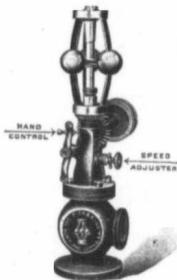
"PACKINGS FOR EVERY PURPOSE"

## The Garlock Packing Co.

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## PICKERING "THE GOVERNOR WITHOUT JOINTS"

Less Friction  
Less Wear  
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Longer Service  
Greater Efficiency

One day lost costs you more than a new Pickering Governor. Patent Ball Ranger Speed Changer Supplied on all Genuine Pickering Governors.

If you have Governor troubles write

## The Pickering Governor Co.

PORTLAND

CONN., U.S.A.



## GOOD GOODS WIN

The "Good Goods Win" slogan of this Company is not an idle dream, but the very soul of a clearly defined and ruggedly rooted business policy



MAPLE LEAF

Endless Thresher Belts and Lion Rubber Endless Thresher Belts  
Go Hand in Hand as Pre-eminently the Best—Ask the Fellow that has one

## The Winnipeg Rubber Company, Limited

Winnipeg Not in any Trust or Combine Calgary

is good, coming from an artesian well. I pump it from a hole made in the ground outside of the buildings about six feet on the right of the engine. I feed with an injector or a small double acting pump with brass valves. So I would like to get your advice on the following: Can I let the exhaust pipe discharge the steam in the water?

**A.** An injector will not handle very hot water, or water over 100° F., especially if it has to lift it a few feet, and after the water gets very hot a pump will not lift it. The chances are you will have trouble all around by heating the water. Your best plan will be to get an exhaust feed water heater. The principle of such a heater is usually to force the cold water through the heater and after it comes out of the heater and ready to go into the boiler, it will be much hotter than it would be if it were heated before it were pumped. However, there are heaters that heat the water by exhaust steam before it is pumped into the boiler, but this heater must always be higher than the pump so that the water tank can run into the pump, as the pump will not lift hot water very well.

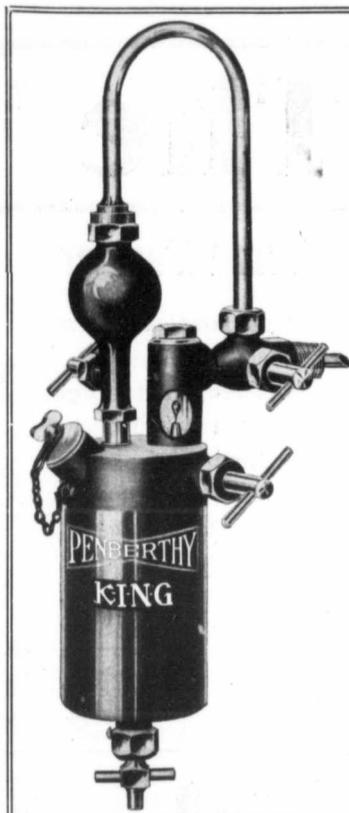
**A.** It would not be any help to you to reduce the injector connections to one-half-inch. If the three-fourths-inch injector delivers the water too fast, you can reduce the capacity of it by partly closing the suction valve. The injector can be throttled so that it can be working continuously. To reduce it to its minimum delivery, turn on the suction and steam valves full, and after it is at work shut off the suction valve until the injector "breaks," or runs at the overflow; then give it a little more water at the suction valve so that it will again deliver the water to the boiler. After the engine is running and you see that the water is getting low in the boiler, open the suction valve a little more and after working with it a short time you will be able to set the injector at the start, so that it will keep up the water without starting and stopping it so often.

**L. T. Q.** I wish to ask you what harm cylinder oil which the lubricator feeds while the engine is not running will do?

**A.** Cylinder oil fed into the steam pipe or steam chest can do no harm to the engine. It is simply a waste of oil.

**J. D. Q.** If the cylinders happen to run short of oil (not enough to make them squeak) the eccentrics will pound very hard; they are not loose. I would like to know the cause of this.

**A.** The absence of oil under an unbalanced valve has a tendency to make it run hard. The valve will suffer for a want of oil long before the piston. The oil should be fed continuously. If it were not for the warning "pound" of the eccentric many a valve would be ruined for the lack of oil.



## THE NEW KING LUBRICATOR

### New Improvements-Better Than Ever

The Sight Feed Glass can be inserted or taken out without the use of a special wrench. Just drop the glass in and screw on the plug.

We have equipped the filler with a wood handle, thus making it easy to fill and without burning the fingers.

You will notice a lipped shaped extension on the filler opening, so that an oil can with a large spout can be used. Does away with the use of a funnel and saves oil.

We also now use special jockets for the Sight Feed Glass which will not blow out.

The LUBRICATOR will give you better satisfaction than any other make.

GIVE IT A FAIR TRIAL

Write for Descriptive Circular To-day

**Penberthy Injector Co., Ltd.**

**Windsor, - - Ont.**

**R. A. Q.** Knowing that the exhaust nozzle increases the back pressure and that back pressure reduces the power of an engine, how would it work to let the exhaust go free and produce an artificial draught by means of a fan or steam jet? Would the difference in the power make up for the energy taken to produce the draught without the exhaust steam?

**A.** No. It takes very little back pressure to produce enough draught to make a fire burn in a traction boiler. In some engines the most of the back pressure is caused by a poor distribution of the steam, and if the exhaust nozzle were taken off there would be little difference in the back pressure. We expect to find some back pressure in every engine, and since the exhaust, even if it is let go free, without a nozzle, has a certain velocity and this we get without costing anything, and it takes very little reduction in the nozzle to increase velocity of the steam to make sufficient draught. To create the draught by means of a jet, the whole amount would have to be done with live steam, and it would take more extra energy than to sharpen up the exhaust with a little back pressure. If, however, the exhaust could be used to get more power by means of a condenser as in stationary practice, there would be more than enough energy gained to either run a fan or steam jet.

**E. W. Q.** Is there any advantage for a straw stoker for a traction engine other than a labor saver?

**A.** With a good straw stoker much of the trouble of leaky flues will be avoided; as in firing by hand, at times too hot a fire is made, and often the fire is allowed to die down suddenly. With the stoker a more steady fire can be had and there should not be any more tendency to leaky tubes than with coal for fuel. The accumulating of ashes on the tube sheet will also be reduced as there will not be so much stirring of the fire and thus reduce the tendency of the straw to fly through the fire.

**F. A. Q.** The governor on my engine does not control it satisfactorily. I have to set speeder spring very tight to get proper speed for threshing. When separator is empty it runs too fast. A new valve did not better it. It is a Pickering. Would it do to raise the valve a little, so as not to have the spring so tight?

**A.** If you raise the valve it may not shut the steam off when the engine is running light. The governor should cut off the steam when the balls are spread. To adjust the valve correctly you can take the governor belt off and without any belt on the fly-wheel, have some one turn on full steam while you pull the governor balls

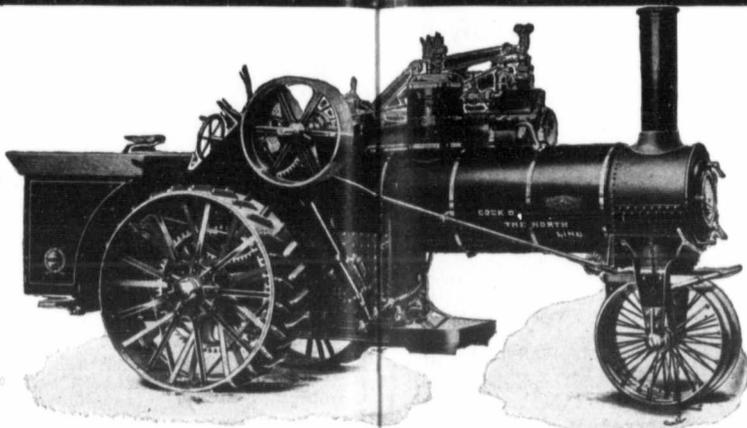
out by hand. You can readily tell where the valve is in relation to the seat by this method. If the engine runs at high speed when the balls are pulled out to the extreme, this would indicate that the valve is set too high; if the engine is shut down before the balls are pulled out to the extreme, this would indicate that the valve is set too low. Adjust the stem so that the valve comes to the seat when the balls are out. To tell when you have this adjustment, you will find that the engine stops just as the balls strike the outward position, or to make the engine run steadily, while running without a load the valve should admit enough steam (when under full steam from the throttle and when the balls are pulled out) to run the engine very slowly. In other words, the valve should be slightly off the seat when the balls are pulled out to the extreme. After this is done and if you do not have the proper speed for giving the speed spring a reasonable amount of tension, the diameter of the pulleys should be changed. If you want to run the engine faster, the pulley on the governor should be increased in diameter. If you want to run slower the pulley on the crank shaft should be increased. As it is likely not to take much, one or two thicknesses of belting put around the pulley will likely be sufficient. The pulley may be wrapped with other things to increase the diameter.



# In The Fall-**PLOW** DEEP

## Mr. Thresherman and Farmer

Do you realise to what extent your profits are influenced by the power you use? Power in abundance is easily obtained, but if it is got at a ruinous cost--What then? Our line of farm tractors is designed to give you all the power you need at the lowest cost at which power can be supplied. And we certainly "deliver the goods."



\$3,500.00

This is the 28 H.P. rear mount tricycle **AMERICAN-ABELL** Special plowing Engine—the greatest value in Steam Plow Tractor at work to-day. While it has been specially designed and built for plowing, its capabilities in all kinds of haulage and belt work are unsurpassed. Compare it with anything close in up-to date Steam Traction. Ask the men who are using it **what it does**, and judge for yourself. **DON'T BUY 'TILL YOU HAVE SEEN IT AND OUR OTHER SPECIALS IN STEAM PLOWING ENGINES.**

## The American-Abell "UNIVERSAL" Farm Motor

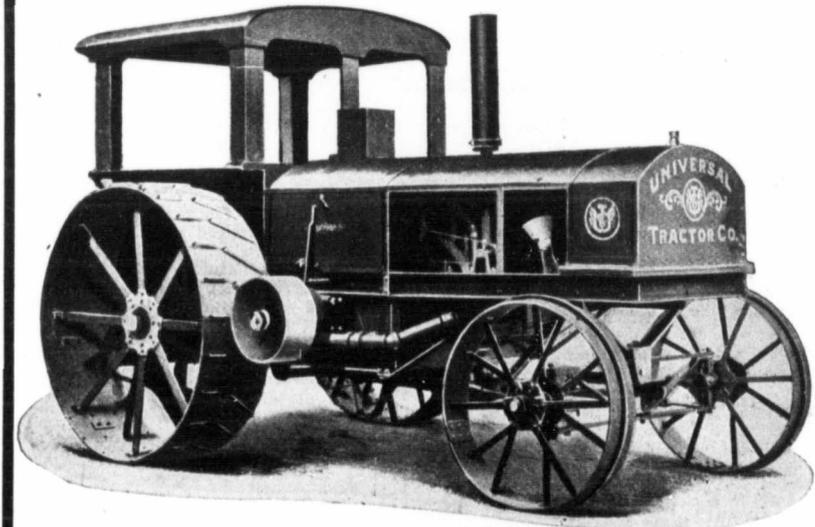
## Are you on the Right Track

to get the **big money** there is in grain growing? You can still make a living and the price of a new suit with the well-worn teams, but the **big money**---the **quick returns** are no longer to be got from horse-power farming. The great law of the "survival of the fittest" has left the Iron Horse in possession of the field. Have you seen our Gold Medal Winners?

## The Great 25 H.P. "MINNEAPOLIS" Farm Motor

The Luck is Always on the Side of the Best Plowman

Get to the Heart of the Soil as you would the Heart of a Friend



## The Twin Wonders

The "**MINNEAPOLIS**" is the latest in all gas power, and is unsurpassed as an economical, durable and reliable gas engine.

The very best grade of material only is used in the construction of this machine—regardless of cost, steel being used in place of cast iron wherever it is practical.

As a plowing engine, and in every kind of traction and belt service, it has been thoroughly tested in the field with the most gratifying results to a wide circle of practical men who are using it.

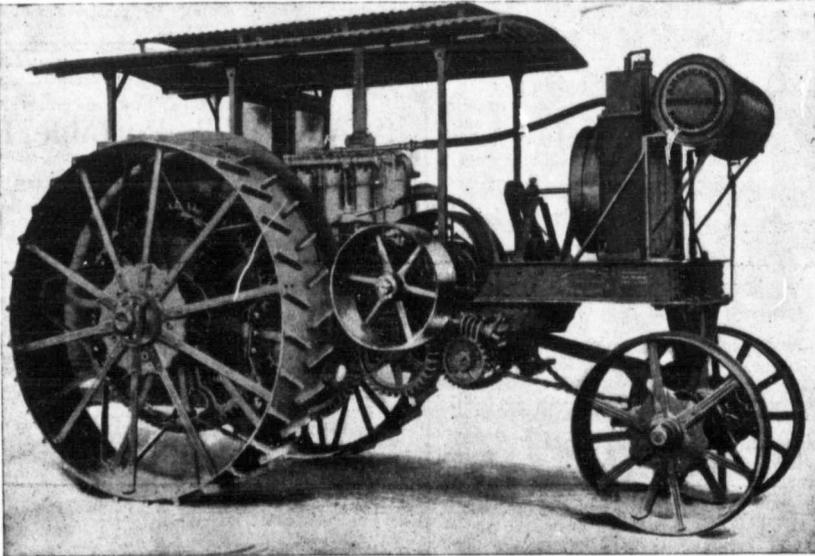
Get our descriptive catalogue.

The "**UNIVERSAL**" is a double opposed cylinder type, 7 1/2 inch bore by 8 inch stroke. Speed 500 revolutions, 40 horse break test, weight 10,500 lbs.

With this engine, one man and 25 gals. of gasoline will plow 18 acres of ordinary stubble in 10 hours. And, without fatigue, it will work all night if called on.

Plowing with horses (figuring a man's labor worth \$2 a day, and the horse feed only while engaged in plowing), costs, per acre, \$1.

With the "Universal" (figuring a man at \$3 a day, \$1 a day for lubrication and gasoline at 15 cents a gal.), costs, per acre, 45 cents.



Our Creed: "We believe that honest goods can be sold to honest people by honest methods."

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**American-Abell Engine and Thesher Co., Limited**

Our Creed: "We believe that honest goods can be sold to honest people by honest methods."

We represent THE ADVANCE THRESHER CO., BATTLE CREEK, MICH., and THE MINNEAPOLIS THRESHING MACHINE CO., HOPKINS, MINN.

# In Harvest-**PLENTY** REAP





**The Man Behind The Plow.**

They sing about the glories of the man behind the gun, And the books are full of stories of the wonders he has done; There's something sort of thrilling in the flag that's wavin' high, And it makes you want to holler when the boys go marching by; But when the shouting's over and the fighting's done, somehow, We find we're still dependin' on the man behind the plow.

In all the pomp and splendor of an army on parade, And through all the awful darkness that the smoke of battle made, In the halls where jewels glitter and where shoutin' men debate, In the places where rulers deal out honors to the great, There's not a single person who'd be doin' business now, Or have medals, if it wasn't for the man behind the plow.

We're a buildin' mighty cities and we're gainin' lofty rights, We're winning lots of glory and we're settin' things to rights, We're showing all creation how the world's affairs should run; Future men will gaze in wonder at the things we have done, And they'll overlook the feller, just the same as we do now, Who's the whole concern's foundation — that's the man behind the plow.

S. E. Kiser.

**Feeding Laying Hens.**

I feed a mash in the morning as follows: 100 pounds each of bran, provender (corn and oats), gluten meal and linseed meal; 50 pounds beef scrap and 25 pounds alfalfa meal, giving about two quarts of this to each 20 hens. Early in the morning I mix this up in a tub or pail with enough water to moisten it, and let it stand for a half hour for the alfalfa to swell. This is fed about 8 o'clock in the winter and half past six in summer.

For the noon meal I give to each 20 hens one quart of the following mixture: 100 pounds each of barley, buckwheat, wheat, oats and cracked corn. This is thrown in the

litter in winter and fed in troughs or on the ground in summer.

At night I feed whole corn in the winter at about four o'clock and in the summer the cracked corn is left out of the grain mixture and fed at night at about six o'clock, giving one quart to every 20 hens.

**Limber Neck in Fowls.**

This is caused by the fowls eating dead carcasses, either of other fowls, birds or animals. The remedy is, first, to bury deep or burn all fowls that die, and disinfect the spot where they were found dead with any good material, like creolin or diluted crude carbolic acid.

For the sick birds a teaspoonful of hyposulphite of soda in their drinking water, and to each fowl put in its mouth a piece half as large. Keep dead and decaying meat so the fowls cannot get it, and you will not be troubled with limber neck.

**A Type for Laying Hens.**

We see shape defined for laying hens and we see it successfully disputed, but, personally, I have convictions that will not move. Let me describe a good layer:

Small neck and head, a bright eye and a general neat, feminine appearance; a rather long body, with her head elevated more than her tail. Instead of dragging her feet along, she should pick them up and plump them down.

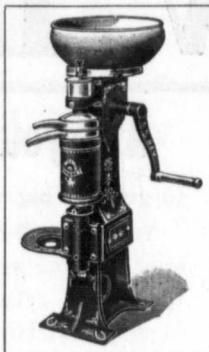
The reverse of my idea is the club-headed masculine look; her head lower than her tail; a wedge-shaped body, lightest in front; and awkward, clumsy walk, with a sort of broody, dreamy look.

What about the cockerels? Apply pretty much the same rule. Select them on the same principles. Pin your faith on the alert, elevated head and the one that hunts up the knick-knacks, and sort of an all-around entertainer.

**Cheap High Priced Fols.**

Last winter a fancier paid \$200 for the second prize Burred Plymouth Rock cockerel at the New York show. The price seems extravagant to many, but it proved to be a very profitable investment. He sold 463 eggs at \$1.00 a piece and is raising 72 chicks from the pen which the cockerel heads. Over half of these are cockerels and the majority of them will sell

**RIGID AS A ROCK**



**The Canadian Made "MAGNET" CREAM SEPARATOR**

will never give way to wobbling wherever it is located. On the open prairie it stands solid, strong and steady, and the first look at the unique structure of this wonderful utensil from the base upwards leaves no doubt to be satisfied.

*For Clean Skimming, Easy Movement and Structural simplicity there is nothing like it among Cream Separators.*

Because it is designed and constructed with absolute fidelity to mechanical principles that never change, its effectiveness as a CREAM SEPARATOR is practically everlasting. It has been conceived and is manufactured by men who are by birth and training EXPERT CANADIAN DAIRY MECHANICS. They are therefore At Home and On Hand at the instant to look after each customer.

We will prove every point we claim for the superiority of the "MAGNET" on your farm—at our own expense.

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

HEAD OFFICE AND FACTORY: HAMILTON, ONT.

WINNIPEG, CALGARY, REGINA, MONTREAL, VANCOUVER, ST. JOHN, N.B.

**Load your own cars or fill your granary with a "TAGGART" Portable Elevator**

**Construction**

The "Taggart" Portable Grain Elevator is built any height, standard 18-ft. leg.

Grain is elevated by cups and conveyor by worm screw.

Mounted on skids, but can be operated on a wagon or truck.

Hopper swings back out of the way for wagon.

Leg swings down when moving and rests on frame.

Spout can be swung in any direction, or up and down.

**Will save its cost in one Season**

It is a back saver, time saver, money saver. It will save three men's time and two teams at least.

**Our Prices are Right**

For loading cars and filling granaries—it can be operated by horse power or gasoline engine.



This cut shows Elevator mounted on truck, with leg up and hopper ready to receive grain. Write for prices and terms. Agents wanted.

Our 1911 Model has improved skids, delivery spout, force feed connection, etc., and is in fact as near perfection as we can make it—write for descriptive circular.

Our Line Includes Case Plows and Engine Gangs, New Superior Fanning Mills, Owens' Smut Cleaners, Steel Wheel Trucks, Harrow Carts, Sewing Machines, Disc Sharpeners, etc., Gasoline Engines, 1 to 4 h.p.

**The Harmer Implement Company**

WINNIPEG

See our Exhibit at Winnipeg Fair

at from \$5 to \$25. That's pretty good return for one year and shows the possibilities from breeding good stock.

He will make out at least \$500 (may be \$1,000) from the sale of the cockerels and with \$463 from sale of eggs, this cockerel will have brought him in cash returns over a thousand. How many thousand cockerels would a farmer need to raise out of mongrel chickens to clear a thousand dollars?

**Too Much Work.**

"Too much work" is a remark that meets one on nearly every farm. The writer has often heard the same remark at farmers' institutes. And especially when new methods are advocated. It is a real serious problem. However, it must be faced and solved, too. As long as the land was new, spreading over a large number of acres, was in many cases profitable.

That time has now passed, as the results in half farming now too often result in crop failure or so many wild oats and weeds in the grain that it makes a man ashamed to take them to market. Half farming with such results simply wastes work. Some better method must be worked out.

**What To Be Done.**

What is the man to do who has more land than he can work thoroughly? One solution is to sell a part of it. That, however, is not what most land holders want to do. Another solution is to sow a part of the land to alfalfa, clover or some grass, as timothy bromus or slender wheat grass. The returns for land in hay will be fully as good as from that in grain. And the work will be much less. At the same time, the land will be cleaned from weeds and plant diseases and the humus content will be in-creased. Some farmers keep their separators in their barns. This is wrong. First, no matter how clean they keep the parts during the time of separation, the cream is exposed for some ten or fifteen minutes or more to a very impure atmosphere. Cream absorbs bad odors from the air very rapidly. Second, a hand separator in a barn stable sets a bad example. It encourages and furnishes an excuse for other patrons less cleanly in habit to produce some very poor cream by reason of filthy surroundings.

The starting of the clover and alfalfa may need some special preparation, as manuring and sowing without a nurse crop, and introducing some of the germs that live on the nodules. Get a small piece started and that will help you get the whole farm in condition.

Leave it in grass three to five years. Every year sow more grass and also plow up some sod. This new land will be in fine condition to grow large crops.

By this procedure the work on the farm will be reduced and the returns increased, and the land put in much better shape than is possible in continuous grain growing. The work that is saved on the hay land should be used to give the land thorough tillage.

**DE LAVAL CREAM SEPARATORS**

*Built as accurately as a watch and finished like a piano. It lasts a life time, and earns its cost every year.*

**THE DE LAVAL SEPARATOR CO.**

Do not delay sowing some grasses, as the longer the land is cropped to grain the harder it is going to get the grasses to start.

**Care of Cream.**

The man who operates a cream separator on his farm should always take to the creamery clean, sweet and high testing cream. Sour cream is generally off in flavor. One can of poor cream is sufficient to lower the quality of a whole churn full of butter.

The first essential of good cream is cleanliness. The cows should be clean as well as the stables. We frequently see men begin milking without brushing the dirt and dust particles from the cow's udder at all. It should be remembered that all extraneous matter that gets into the milk carries with it bacteria and dirt or filth. A person should never milk with wet hands. The practice of dipping the hands in the milk is to be condemned.

There should be a ventilating system in the barn, such that the air is always pure and sweet. Some dairymen are helping to keep things sanitary by the use of liberal amounts of lime sprinkled on the floor.

With pure milk as raw material we have the "makings" of good cream. The next thing to engage our attention is the separator. It should be placed or located in a milk room, which has screens over open windows and is entirely removed from air that is filled with bad odors. Some farmers keep their separators in their barns. This is wrong. First, no matter how clean they keep the parts during the time of separation, the cream is exposed for some ten or fifteen minutes or more to a very impure atmosphere. Cream absorbs bad odors from the air very rapidly. Second, a hand separator in a barn stable sets a bad example. It encourages and furnishes an excuse for other patrons less cleanly in habit to produce some very poor cream by reason of filthy surroundings.

We now come to care of utensils. They should be kept clean. The parts of a separator should be washed every time they are used. Rags should never be found in the dairy as weapons against filth. Brushes are far better. It is well to use some cleaning powder during the washing operation. After the milking utensils have been cleaned they should be inverted in pure air — sun them if possible.

After the cream is removed



**DEERING DRILLS**

Deering Drills are equipped with every device necessary to put the seed in the ground at the right depth. The single disk drill has more penetration than any other type. For this reason the disks always open a furrow of the proper depth for the reception of the seed. This leaves the ground in good tilth, so that it does not blow so readily when dry. When fall seeding is done, these ridges retain the snow so that a greater amount of moisture will be available for the growing plants in the spring. The bearings keep the disks running perfectly true, have wide bearing surfaces and are as nearly dust-proof as it is possible for a disk bearing to be made. These bearings are so designed that clean oil always reaches the cones. The scrapers are effective, and can be removed quickly from the disks when not needed. The grain box is of larger capacity than on the average drill.

There are many other features of Deering Drills about which Deering agents will gladly tell you, and they will advise you about the complete Deering line of tillage implements. The Deering line comprises single disk, double disk, and shoe drills, disk harrows, peg-tooth harrows, cultivators, and land packers.

**International Harvester Company of America**

CHICAGO (Incorporated) U.S.A.  
 WESTERN CANADIAN BRANCH HOUSES—Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Lethbridge, Alta.; North Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Winnipeg, Man.; Weyburn, Sask.; Yorkton, Sask.

**Wall Plaster**

For a Cool Building in Summer, and a Warm Building in Winter, use Plaster Board, and the "Empire" Brands of Wall Plaster.

We shall be pleased to send you plaster literature.

**THE MANITOBA GYPSUM COMPANY, LIMITED**

WINNIPEG, MAN.



**Automatic Seed Grain Pickler**

This Pickler is self-operating and is guaranteed to thoroughly pickle any kind of grain or money refunded.

The fastest, easiest, most economical and thorough pickler on the market. Capacity 135 bushels per hour.

Write today for full particulars, a postal card will do. Agents Wanted

**THE DOMINION SPECIALTY WORKS**  
 820 Union Bank Building, WINNIPEG

from the milk the next thing is to cool it. This can be done by placing it in a small tank through which the cold water runs on its way to the stock watering tanks. As the cream is being cooled the covers on the cans should be loose and the cream should be stirred until the animal heat is entirely out. Never mix warm cream with cold cream, as the latter will be raised sufficiently in temperature to cause it to sour quickly. In taking cream to the creamery during hot summer days cover the cans with some kind of blanket. One or two hours of exposure to the hot, direct rays of the sun results in a very great raise in temperature of the cans, and the air and cream inside of them. This makes for sour, poor cream and involves the use of much ice and labor at the butter factory.

Cream should test about 25 or 30 per cent. Thin cream means that there is less butter fat in the same amount of cream, which means more expensive transportation and much more work in handling. Again, the average creamery is not equipped with facilities to churn a little butter out of a whole lot of skim milk. Thin cream sours more quickly. It contains a larger relative amount of sugar, which is the part that bacteria feed on in producing sourness. Lastly, with thin cream there is a larger loss of butter fat in the butter-milk. The cream screw on the separator is for the purpose of regulating the test of the cream. With most separators it is turned in when a richer cream is desired.

**Selecting Flax for Seed.**

The following points may help to secure a 1912 flax crop free from weed seed and flax wilt:

**What to Do**—Pick out your most healthy, dark green colored area of flax on your land or in your neighbor's field and remember this when you cut the crop.

Have the mustard, false flax and other weeds pulled out of your seed plot now.

Let the flax get fully mature.

Cut, if possible, with a binder, shock and thresh as soon as dry, or stack it dry and cover with canvas cap or slough hay cap. If the ground is rough and the flax straw is too short to cut with a binder, use a "flax attachment" and run the sickle bar as close to the ground as possible. Many growers lose about one-third of the flax seed which they grow, because they do not make smooth enough seedbed to allow the reaper to work smoothly below all of the heads. If this hits your case, do not blame the flax crop as a non-productive one, but do better for it next spring. If you cut it and drop it in loose bunches, do not let these get wet, if you can help

it, because they soon become mouldy and this ruins the seed for sowing purposes, besides, when the bolls begin to dry, after being wet, much flax will be lost through shelling. If you cannot thresh at once, when dry, place in large cocks or small stacks and cover with caps made of hay or use the regular canvas or stack covers. Be sure to have the straw dry when placed in the cocks.

Store the seed dry and keep it dry.

\* \* \*

**Resistant Flax Seed.**—Grow your own seed. No matter how small an amount of seed ripened on your land, save some of it. It is better seed for your land than that grown somewhere else. This is the only way of getting the best wilt resistant seed. If you have some flax-sick land, try it. Save the seed from such land, grade out the light weight seeds and sow it back on your sick ground and each year it will become more and more resistant until eventually you have gained a type of flax that is practically a disease resistant stock on your land.

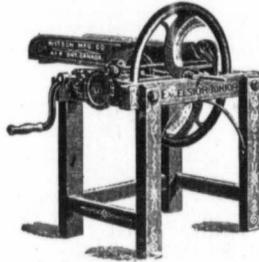
**Pure Seed.**—Send about one pound of your seed flax to the Pure Seed Laboratory for analysis and inform us how much you have for sale. If we find it O. K. we will be able to place you in touch with persons who wish to buy good seed. Be sure to save enough seed for your own farm and enough to supply your neighbors, so that they will not spoil their land and through later shifting of the disease-bearing dust and dirt spoil your hopes of raising this valuable crop.

**Resting the Engine.**

Mr. Farmer, are you careful to rest the engine one day in seven? Perhaps you haven't yet arrived at the point where you do most of the farm work with gasoline power, and consequently you think this question isn't meant for you. But it is! Every farmer is a liberal user of power of some kind. His horses — and mules, if he has any—together with himself and the hired man, constitute the "engine" which does the farm work, whether it be plowing, harrowing, cultivating, harvesting or something else.

Now, do you give the engine a rest once in a while? Or are you going on the principle that you have discovered a form of perpetual motion, and that you and the hired hands can go on forever and a day at the same old grind without showing the effects of it? There is many a man on the farm who is good to his team and who wouldn't think of working it on Sunday for anything, but at the same time he is pushing his own engine to the limit of its powers. Sunday finds him doing a lot

**Watson's "Excelsior Junior" FEED CUTTER**



For Hand, Horse, Gasoline or Steam Power—in sizes from 7 to 13 inch mouth. 9 and 13 inch sizes, with or without blower as required.

**MONEY Earned Saves TIME**

**You Can't Choke the "EXCELSIOR JUNIOR."** It is absolutely accurate in every mechanical detail. The stop, start and reverse lever is within easy reach of the operator so that he can handle the machine with perfect safety while it is going. The "EXCELSIOR JUNIOR" is made of the very best material, and there is practically no limit to its strength and durability. The special CHAIN DRIVE reduces friction to a minimum, and more feed can be cut by hand than by any other machine made. Capacity up to 50 tons A DAY according to size of machine.

**WATSON'S ONLY!**

Accept nothing else from your dealer. Ask for WATSON'S Pole and Wood Saws, Root Pulpers, Grain Grinders, Ideal Sleighs, Soil Packers and Pulverizers, Boss Harrows, Neck Yokes, Whiffletrees, etc.



THE STANDARD BABBITT OF THE WORLD  
**MAGNOLIA METAL**  
GIVES SATISFACTION

Where all other Bearing Metals Fail  
Lowest Co-Efficient of Friction of any known Metal  
Saves Oil, Fuel, Power and Rebabbitting.

We carry in stock Magnolia and a full line of other Babbitts.

**THE GENERAL SUPPLY CO., OF CANADA.**  
WINNIPEG OTTAWA

**The Marlin Model 20 REPEATING RIFLE**

You can buy no better gun for target work and all small game up to 200 yards.

Without change of mechanism it handles .22 short, long or long-rifle cartridges perfectly. The deep Ballard rifling develops maximum power and accuracy and adds years to the life of rifles.

The solid top is protection from defective cartridges—prevents powder and gas from being blown back. The side ejection never lets ejected shells spoil your load and allows quick, accurate repeat shots. With simple in-folds-down construction, removable action parts,—best parts of any .22—is the quickest and easiest to clean. A great vacation rifle. Ask any gun dealer. The 130 new Marlin outfit will help you decide what rifle best suits your individual desires. Send 3 stamps for it today.



**The Marlin Firearms Co.**  
105 Willow Street New Haven, Conn.

## Would you make quick work and an easy job of your FALL PLOWING?

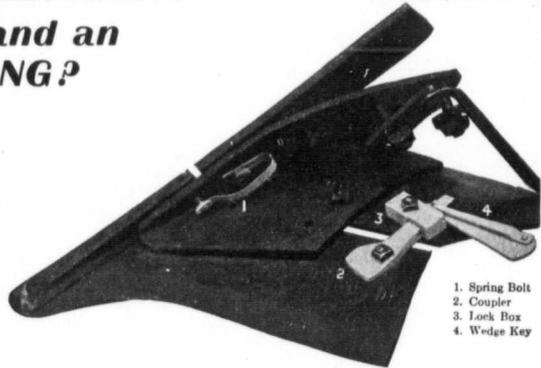
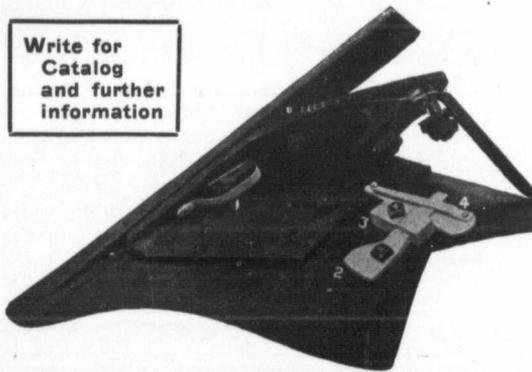
HAVE EVERY PLOW YOU USE EQUIPPED WITH A

# Parks-Coughlin Plowshare Fastener

**QUICK!** You can change the shares in forty seconds. Its grip cannot be loosened by any obstacle whatever or by any condition of soil, and yet a boy can remove or fix it as easily as he can turn a door key.

**HOW IS IT DONE?** Simply lift the plow out of the ground, loosen the wedge by tapping it at the point with your wrench, remove it, unsnap the spring bolt and lift the share off. Place the new share into position, insert the wedge key, secure the spring bolt and drive the wedge key in with your wrench.

Write for  
Catalog  
and further  
information



1. Spring Bolt
2. Coupler
3. Lock Box
4. Wedge Key

### WITH THIS INGENIOUS BUT INEXPENSIVE DEVICE

YOU WILL NO LONGER HAVE burr or bolt troubles—the worry of sprung shares.

YOU WILL NO LONGER NEED a night man to change shares on engine gangs—hammer and punch to force holes in share into line with those in the frog of the plow.

## The Century's Greatest Boon <sup>TO</sup> THE Farmer

One set will last a life time. The fastener is easily attached and need not be removed till the plow is worn out. The value of time and bolts saved, not to speak of higher grade of work, will more than pay for a set in one season.

## IMPLEMENT SPECIALTIES CORPORATION, LTD.

45 MERCHANTS' BANK BUILDING, WINNIPEG

of odd chores about the farm that he says he's too busy to do at any other time. He never goes to church—never takes a day off—he just plods along week in and week out, including Sundays, as though he had solved the problem of perpetual motion and never expected to stop going until the family find it necessary to send for the undertaker.

Of course, there isn't much use in arguing with a man whether he's got time to go to church—especially when a lot of things are pressing him hard and he feels he's got to attend to them. But we may be permitted to give out the observation that taking the countryside over, the best-kept places—the farms which show on the face of things that the odds and ends have been looked after and that things are kept right up to the handle—are those whose occupants rest their engines once a week by observing the Sabbath. Man who lets his mind get into new channels on Sunday and who gives his muscles a rest into the bargain will feel so much more like working on Monday morning that he will get a sight more work out of the way during the week than some other fellows who never would know it was Sunday unless they heard the church-bells ring or saw folks pass on their way to meeting.

### Selecting An Automobile.

The automobile is rapidly earning a place for itself on the modern farm, which is coming more and more to a factory basis. Power, other than horse or man, is becoming more essential every year. The automobile for quick trips to town with light loads, the heavy motor truck for hauling heavy ones, or the tractor with its string of wagons will become common whenever the community is sufficiently advanced to have passable roads.

Of course, as the money-making possibilities of motor hauling become evident, a marked advance in road building is sure to come.

A farmer who has used the automobile for several years and who has tried out a number of machines, was asked his opinion of the kind of car a farmer should buy. Not necessarily the make but the type of car that would give the greatest day after day service. He said:

Buying a motor car is the same as buying any other machinery needed on the farm. If the farmer prefers a car which will prove comfortable and which has the stability to last for a number of years, he must pay a higher price than for one of lighter and cheaper construction. Motor cars may be purchased for prices ranging from a few hundred dollars to

several thousands, and in general the buyer gets what he pays for, although, of course, luxurious appointments add much to the cost in the high-priced cars.

In buying an auto it is well to investigate the maker of the car. Find out whether he is financially in a position to continue his business for years to come so he may supply needed repair parts. You can judge this to some extent by the past history of the concern; the rating in Dun's and Bradstreet's; the size of the factory; the number of men employed; in fact, by all of the various methods which tend to produce for a manufacturer that reputation for permanency and honest dealing which it is necessary to take into consideration when purchasing large machinery like tractor engines, threshing machines or binders.

The larger car usually affords more advantages for comfort, as it is heavier, carries larger wheels and tires and more substantial springs and frame; and furthermore, it is heavy enough so that it will set close to the road, making it less likely to slip the tires in starting. The small cars or runabouts have been brought to a high degree of perfection and fill admirably the purpose for which they were designed. For dodging about in the city on smooth streets they are altogether satis-

factory. Their carrying capacity is, of course, limited, and on that account they are not in as great favor in the country as in the city, as the farmer usually wants a car that will carry his family, and that can be used for light freight purposes. In many sections the smooth roads are adapted to the light cars, but over rough roads they are at a decided disadvantage. Conditions will govern a wise choice of a car, and they should be studied carefully by each purchaser. The manufacturing field affords wide choice not only in the adaptability of motor cars to conditions, but as to individual preference in type of engine and body. It is measurably true that the second purchase of a car usually reflects the conclusion that a larger and higher priced car will give better satisfaction.

### Book Farming.

We have not heard so much fun made of late about book farming. We remember very well when there seemed to be an impression in the minds of many that anything about farming written in a book was for that very reason doubtful. These men who made fun of agricultural literature and agricultural books and papers as book farming never hesitated getting what hints they could from their neighbors when they were gossiping around the fire-

side in the winter evenings or chatting neighborlike across the fence in the summer time; but they seemed to think that truth lost its virtue when put in type, whether in a book or a paper.

There were two classes of men who opposed book farming. One class was made up of really good farmers according to their light. They had a fertile soil; wages were low; there was fine, cheap pasture on vacant lands on the public range. Insect pests had not multiplied as they have done in recent years. The cost of living was low. From long experience they had come to know their soils. They had followed methods which experience justified, and were content.

There was another class, made up of men who were shiftless, unenterprising, not interested in any lines of improvement. They could point to a book farmer here and there and say that with all his studying he grew no better crops than the man who refused to subscribe for a paper or read an agricultural book of any sort.

There was some reason for their objection to book farming and their prejudice against the agricultural college graduate. A good deal that was published under the name of agriculture was purely theoretical, often wholly impracticable. The education given at the colleges was often not practical; and the boy educated in an unpractical agricultural college would naturally turn out an unpractical man.

All this is changed. While there is a great deal of stuff published in agricultural papers particularly the cheaper sort, solely for the purpose of separating advertisements solicited on the ground of the magnitude of the cheap circulation, there are a few papers (and their number is increasing every year) with which education is first and the securing of advertisements second. The farmers can each year put more confidence in these papers, subscribing for them more largely; and they are willing to pay for them at least the cost of the white paper and postage. May their number increase in every state and form year to year.

Since the establishment of the experiment stations, and more particularly since the establishment of extension departments, farmers are rapidly getting over their prejudice against what they are pleased to call book farming. These apostles of advanced agriculture are directly in touch not merely with the young farmers, but with the older ones as well; and these are beginning to hunger for the practical knowledge that will help them in solving the problems of life. The agricultural college professors are giving them the life history of insects, showing

them how to maintain soil fertility, and especially how to keep the soil in physical condition. The experiment stations are conducting different series of experiments which no one man could undertake.

Some of these men were not waked up until the railroads took an interest in the matter and sent out agricultural trains of one kind and another. Perhaps few things have done more good than judging schools and short courses, for if a young man once becomes interested, he insists that his father provide him with a good agricultural paper, and if his father is still hard-hearted and far from agricultural righteousness, the boy manages to secure it for himself.

Farmers are beginning to realize that the prosperity of the country is greatly promoted by subscribing for agricultural papers. They realize that if any community is to grow, it must to some extent grow all together; that the presence of every wideawake farmer is a good thing, promoting the welfare of every other good farmer. In fact, we regard our subscription agents as public benefactors. They help us, for which help we are truly grateful; but they have helped their neighbors, or should we rather say, have enabled us to help them through their self-help even more than with the very best of endeavors they have been able to help us.

Count yourself among people who have red blood, and who also have enough self-control to be clean regardless of the fact that they are literally on fire with energy, vitality and virility.

Believe in yourself and you will turn more of yourself to practical use. The increase of self-confidence therefore will increase your capacity and make you a much larger man.

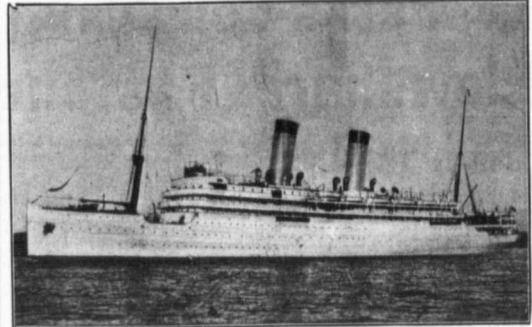
If we can eliminate lost motion in the work shop and thus get greater results with less work, why can we not do the same in our own minds? The answer is, We can.

A large business will never spring from small ideas. And as a rule it is only small ideas that originate in the mind who simply thinks of economy for to-day and profit for this month.

Continue to work in the right frame of mind and you will enjoy your work so much that you will never want to retire.

The greatest wealth does not justly belong in the hands of brokers and financiers, but in the hands of those who have made life worth living for the many.

## Canadian Northern Steamships THE ROYAL LINE



New Service to London, via Bristol, by the  
Superb Ocean Liners.

T.S.S. ROYAL EDWARD 12,000 Tons.  
T.S.S. ROYAL GEORGE 12,000 Tons.

Luxurious Comfort to Travellers nowhere exceeded.

Paris, via Boulogne, and the Continent via  
Hamburg.

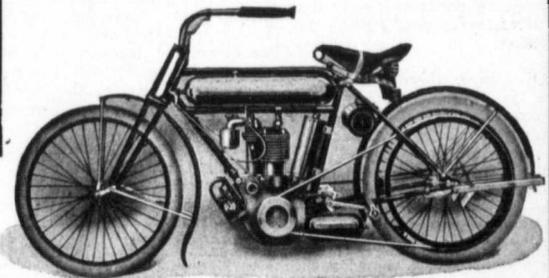
Splendid Accommodation for all Classes of Passengers  
at Moderate Rates.

SHORTEST      QUICKEST      BEST

For general information, illustrated booklets, rates, sailings, plans, etc., write to A. H. DAVIS, 272 Main Street, Winnipeg, General Agent for Western Canada.

## Farmers - Threshermen

Did you ever stop and consider what a Motor Cycle could do for you during the busy season? It combines the simplicity of the Bicycle with the comfort and speed of the Automobile.



Do you need repairs quickly? The Motor Cycle will get you to town as fast as any Auto. Do you want to make a quick trip to town for supplies or the mail? The Motor Cycle will get you there and back in a hurry. It costs practically nothing to run. And will pay for itself in time saved in a very short period. You need a Motor Cycle this fall, and what is more you need a

### M-M-4

"KING OF MOTOR CYCLES"

It embodies the best in construction and equipment. 4 h.p., Schebler Carburetor, Magneto, air cooled Motor, positive Lubrication, easy control, roller bearings, long wheel base etc., etc. These all make a machine that will give you service and save you money. Investigate this immediately as the low price will surprise you, but do it now before the threshing season starts.

Canadian Port Huron Co., Ltd.

Chambers of Commerce

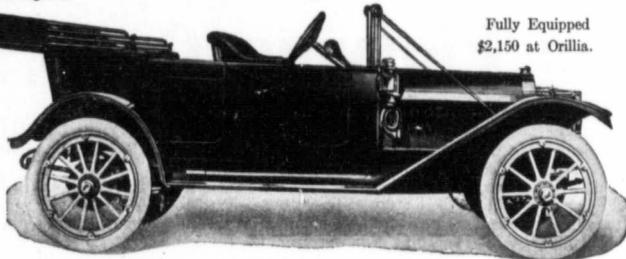
Winnipeg, Canada

Agents Wanted

# THE TUDHOPE LINE for 1912.

The 1911 "Everitt" broke all first-season selling records. It attained *five times* the first-year's output of any other Canadian car. The Tudhope factory was forced to its full capacity. The Tudhope Line for 1912 will surpass the 1911 standard, with greater value in tyre equipment, ignition system, completeness of equipment and general refinement throughout.

1912  
SIX - 48  
Nickel  
Finish  
2 Year  
Guarantee



Fully Equipped  
\$2,150 at Orillia.

The Tudhope "Six 48"—Canada's Car de Luxe.

Long, low, graceful clean-out body lines; long wheel base, 120 1/2 inches; large wheels; 37 x 4 1/2 tyres; Continental demountable rims; double-drop frame; low-hung body; high road clearance. Bosch Dual-ignition System with high-tension spark from two absolutely independent sources—obviating cranking and ignition troubles. Motor vibration entirely absent owing to unit-cast motor rigidity combined with steady power stream from the six cylinders. Sliding type nickel-steel gears run in hard oil. Extreme motor simplicity. Self-oiling power plant.

Hand-buffed leather upholstery. Roomy tonneau. Wide rear seats. Tudhope built bodies. Top in finest English mohair, improved automatic wind shield. Nickel Trimming throughout, full light equipment with five lamps and generator, foot and robe rails, high-grade speedometer, horn, tool box, extra Continental demountable rim and extra 37 x 4 1/2 tyre complete with cover, holder, etc. Sold complete, no extras. Guarantee 2 years with "Tudhope Service."

**WE ADD A SIX-48 WITH UNIT-CAST MOTOR.**

The Best Development of the SIX. The six-cylinder car has unique qualities—smoothness of running, wonderful flexibility in power, remarkable freedom from gear troubles. For months we have been working to the point where we could announce the most remarkable development of the "six" that we know of, at a price within the public's reach. The Bosch Dual Ignition System (not the commonly known "duplex")—the use of chrome-nickel steel, the world's strongest metal—the Continental demountable rims and extra demountable rim and tire feature—and the remarkable "Tudhope Equipment 1912" all conduce in this "six" to a degree of riding comfort and safety hitherto unknown in any car.

**"BIG" TREATMENT LIBERAL EQUIPMENT.**

Behind each sale is the policy of "Tudhope Service," a positive feature of vast importance to car buyers, especially to first-car buyers. We prepare for our responsibility in the factory, but it begins when we actually sell. The completeness of our "Tudhope Equipment 1912," makes each car a purchase complete in itself. Your question, "What does this price include?" is met with a terse, satisfying answer—Everything!



Fully equipped  
\$1,600 at  
Orillia.

The Fore Door Roadster, 1912.

Four-cylinder, long-stroke, unit-cast motor, 30-36 h.p. large wheels, 35 x 4 1/2 tyres, Continental demountable rims, oval tank, trunk, extra rim and tyre. Best English mohair top. Nickel trimmings throughout. Has wind shield, high-grade speedometer, horn, tool box on running board, full lamp equipment with five lights, Bosch dual magnet system for absolute safety of ignition. "Special Tudhope Equipment, 1912" Two Years' Guarantee. Sold complete. No extras.

*Tudhope reputation known for 57 years in the Carriage Trade is assurance of the quality of the Tudhope Car.*



The "C" 30-36, Fully Equipped, \$1,625 at Orillia.

Large wheels, 35 x 4 1/2 tyres, Continental demountable rims, double-drop frame, Bosch dual ignition. Unit-cast, long-stroke, four-cylinder, 30-36 h.p. motor, self-oiling and accessible, safety, nickel-steel gears in oil. Hand-buffed leather upholstery and Tudhope-built bodies. High-class Nickel Finish. Best English mohair top, heavily-nickel-plated windshield, extra rim and tyre. Horn, full light equipment including five lamps (ni-seled), generator, foot and robe rails, high-grade speedometer, tool box. 2 years' guarantee, and "Tudhope Service" for owner's protection. Car complete as above—no extras.

**Tudhope Reputation & Ample Factory Resources behind every Car**

The Tudhope factory is fully equipped with jigs and fixtures. The jigs held the unfinished parts and also guide the tools working upon them to an absolutely exact position. This ensures hair-breadth accuracy. The result is an accurately assembled and well-fitting chassis which cannot develop lost motion under road vibration. All this gives Tudhope cars many years of life, and enables great value to be offered at moderate price.

## TUDHOPE MOTOR Co., Ltd., ORILLIA.

SEND FOR ADVANCE CATALOGUE.

Prices all f.o.b. Orillia.

### AN IMAGINARY INEBRIATE

"Speakin' of the Prohibition party," said the squire, working down the tobacco in his pipe with a corpulent finger, "re minds me that I took the gold cure myself once, unbeknownst."

This declaration was met with the astonishment it deserved, not one of the men on the post-office steps having ever seen the squire so much as enter the Eagle House, which had the only bar in town.

"Its true enough," said the old man with a chuckle. "Not that I needed it; but Betsy, she reckoned I did. In them days," he went on reminiscently, "Valencia wasn't so uppish as she is now. There wasn't no Eagle House, and there wasn't no post-office. So 'bout once a month I'd drive the ten miles over to Hart's Mills, an' get the church paper an' some fresh beef, an' mebbe some butter-colorin'. Well, ef 'twas hot an' dusty I'd get a glass o' beer from old man Tubbins to c'lar out my throat 'fore I started back home. Betsy'd always kiss me when I got back, same's ef I'd been gone a week, an' finally it struck me her kisses were more investigatin' than lovin'. Thinks I, ef she's huntin' trou-

ble, I'll just relieve her mind a bit; so the next time I went to Tubbins' place I chewed every bit o' mint growin' beside the road for ten miles. I ain't never rightly liked mint sence. From that day, ef you'll believe me, ef I so much as rubbed agin a patch o' mint in the pasture, Betsy'd go round



for twenty-four hours lookin' as down in the mouth as ef she'd lost her store teeth.

"'Bout that time the coffee went bad. We'd been usin' the same coffee in the same paper packages fer years, but all at once it began to get queer. It tasted like a mixture o' bone-phosphate an' hard cider.

Betsy's the kind you can't talk to 'bout her cookin', and I stood it fer a while. But one mornin', after I'd nearly choked tryin' to swallow it, I said, real gentle-like:

"'Coffee's a leetle bit off, Betsy. Seems like my stummick won't have it, an' it's takin' to my nose.'

"'Ef your coffee don't suit you,' she snaps, 'you'd better hire some one as 'll make it better.'

"I didn't say nothin'; but when Bill come in I sez, real solemn:

"'Bill, take out this cup o' coffee an' pour it over Shep to kill the fleas.'

"Well, the coffee was better after that, but somethin' went wrong with the well. I reckon you remember, Jerry, how you cleaned that well o' mine about fifteen years ago?"

Jerry expectorated with thoughtful accuracy.

"'Yep," he said finally. "'Wasn't that where we found Butts' dog, that had been missin' all spring?"

"It was not," said the squire sternly.

"Cleanin' didn't do that well no good, an' at last I said sence I couldn't drink the water I was goin' to take to beer. An' the way that well c'lared up was somethin' wonderful. Then my victuals went back on me. I'd sit down, hungry as a b'ar,

an' the buckwheat cakes 'd taste like a mixture o' horse-liniment an' bran mash; an' ef you've ever et rhubarb pies flavored with castor oil an' senna, you'll know how them pies tasted to me. I was gettin' thin an' kind o' peaked, an' then one day I found the trouble.

"I was feelin' round the top o' the spare room closet' fer a mouse-trap, an' I knocked a bottle over. So, knowin' it warn't no place fer a bottle, I made a pint to fetch it out to the light. I put on my specs an' went to the winder to read it. It said:



"'Drunkenness Cured at Home. Every Desire for Liquor Abolished Without the Suspicion of the Inebriate.'

"Well, I was pretty mad. So this was the reason my drinkin'-water an' the my victuals had

Continued on page 68

# Before Spending \$4000 For a Traction Plowing Outfit

Read "Power and the Plow," by L. W. Ellis and Dr. Edward A. Rumely, and post yourself thoroughly.

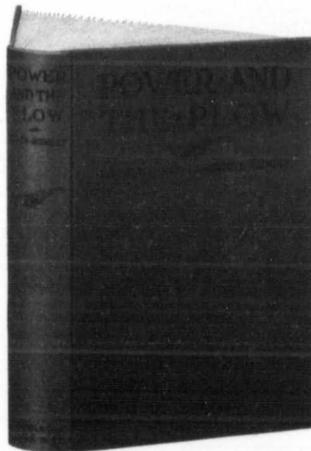
"Power and the Plow" is the first and only complete scientific treatise on power farming—a subject that affects the bread and butter of every dweller in Western Canada—whether farmer or city man, merchant or manufacturer, designer or user, teacher or student. All will find ample food for thought in this well-illustrated, well-written, simply-worded book. It covers the sources of power, the types of tractors and other plowing motors, the horse, fuels and efficiencies. It tells the history of the plow from the crooked stick to the engine gang and discusses the types, principles and draft in a thorough, practical manner. Seven chapters at the close, devoted to the use of power and plows, are of the greatest value to the reader seeking light on the economy of power farming.

**Power  
and  
the  
Plow**

**Cloth, 318 pp.**

**\$1.50**

**post paid**



**The  
Canadian  
Thresherman  
and  
Farmer**

**\$1.00**

**per year**

**Both for \$1.50 post paid**

**Nothing but praise for "Power and the Plow."**

**PRACTICAL**  
The book is certainly timely and treats of the subject in a very practical and thorough manner.  
P. G. HOLDEN (Iowa),  
Supt. Agr. Extension.

**GOOD MATERIAL**  
I have looked this over carefully and compliment you on the amount of good material contained therein.  
W. H. WILLIAMS,  
Sales Mgr., Hart-Parr Co.

**NEEDED**  
I am glad to see books of this kind coming into existence.  
L. H. BAILEY, Director,  
Cornell Univ. College of Agriculture.

**A ROMANCE**  
"Power and the Plow" is not only a story of the evolution of the plow . . . it is a romance, and almost as interesting as any fiction on the book-shelf.  
NEBRASKA FARM JOURNAL.

**RECOMMENDS IT**  
I shall be very glad indeed to recommend this to my students and friends.  
L. W. CHASE (Nebraska),  
Prof. of Agr. Engineering.

**TIMELY**  
It is something that has been needed for some time.  
M. A. CARLTON, Cerealist in Charge,  
U.S. Dept. Agr.

**DISTINCT ADDITION**  
This is a distinct addition to the literature on this subject, which is forcing itself by sheer merit upon the attention of farmers of this country.  
H. HAYWARD, Director,  
Delaware Agr. Exp. Station.

**THOROUGH**  
The authors are to be complimented highly for the thoroughness of their work and for their keen insight as to what it should contain.  
C. O. REED,  
Dept. Agr. Engineering Univ. of Illinois.

**RIGHT**  
You are absolutely right in saying that the greatest need of modern agriculture is more power. . . Believing that your book, "Power and the Plow," will help to promote these reforms, I hope it will have great currency.  
CHARLES WM. DABNEY, President,  
University of Cincinnati.

**COMPLETE**  
It gives me great pleasure to say that it excited my liveliest interest. . . it seems to me to be the most complete presentation of the entire subject that has ever been made.  
WM. P. BROOKS, Director,  
Massachusetts Agr. Exp. Station.

**VALUABLE**  
This I am sure will be a valuable addition to the department library of books on agricultural topics.  
A. F. MANTLE,  
Deputy Minister of Agriculture (Sask.)

**CLEAR AND READABLE**  
It is the most readable book on the subject that I have ever seen, and it explains clearly to my untrained mechanical mind many points regarding power plowing that have been hazy and indefinite to me heretofore.  
A. D. SHAMEL,  
Expert, U.S. Dept. Agriculture.

**TAKES HOLD**  
An interesting book, one that takes hold of the reader in chapter one and keeps close to him till chapter thirty-two, or the end, is reached.  
KANSAS CITY JOURNAL.

**PLEASANT MIXTURE**  
The mixture of facts and figures with good English is a pleasant one.  
L. H. GODDARD (Ohio),  
Chief Dept. Co-operative Experiments.

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It is most interesting, and we congratulate you on what you have produced in this line.  
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**E. H. Heath Co., Ltd., Winnipeg, Man.**

# Farmer Up-to-Date—Farmer Good Intention

Their Farms adjoin. Both of these Farmers live in your neighborhood. You know them and they know you. Are you one of them? If so, we sincerely hope you are the right one.

## FARMER UP-TO-DATE

OCTOBER  
1911

## FARMER GOOD INTENTION

FATHER: Well, we haven't noticed any of the good or bad effects of the anti-reciprocity landslide as yet. I cast my vote as I thought best, but did not waste any time before or since. It is the duty of every farmer to cast a ballot, and the man who does so and at the same time keeps his farm work in rendering his country a service that is a worthy one. Boys, you better get the engine tuned up, as we want to get all of the plowing done this year that we can. This season has convinced me more than ever that it is the early planted crop that produces the harvest. If the season is a favorable one, you get a good crop, and if the season be unfavorable, you stand a chance of getting a crop anyhow. "Early sown, early harvested," is a pretty good motto to follow.

Week  
Ending  
October  
7th

CHARLES: Here we are with no threshing done and with the prospects not very bright for getting it done very soon. On account of our grain being so late we were not ready for the machine when it was in the neighborhood, and now we will have to wait until it comes back again, whenever that will be. It is probably just as well that we did not get it all cut before the frost came, as we saved the cost of the twine on that much of it at least. I am going to run this farm on my own account next year or I am not going to work here at all. I don't mind working, but I like to see something for my labors at at the end of the year. This chance of working all summer and then give it all away in the fall to the grocer and the implement store certainly gets on my nerves.

HENRY: Well, it is only a week or two until I leave for the Agricultural College. Some of the boys in town think I am foolish to pass up all of the good times this winter and study. Sam Snider said that he would wager that I would not finish out the first term, but I wouldn't take Sam's bet, because he wouldn't pay if he lost. If there is anything to be learned about farming (and I know there is), I want to know it. That little idea about seed selection that the Canadian Thresherman and Farmer reported as coming from the Agricultural College has made a great many dollars for this farm, and I know there must be a great many more good ideas where that came from.

Week  
Ending  
October  
14th

MOTHER: Would it be possible to have this old house banked up a little before it freezes up. Last winter it was so cold that I could scarcely stand it to do my work during the daytime. A few loads of earth would do a great deal towards making this old shell warmer.

FATHER: I don't see just how we can do it now, we are so far behind with our work. I want to take the plows to town to-day and get them sharpened, in order that we can get some fall plowing done. We lost a great deal by not getting our crop in early last spring. I mean to get a better start next spring, and see if we can't do a little better.

MOTHER: I wonder if I could get you men folk to bring me in a few loads of good dry leaves from the woodlot some day before the snow falls. I want them for the scratching pen in my poultry house this winter. Straw does very well, but I believe the leaves would answer the purpose much better. I want to keep those hens working all winter, so that they will be in good trim to begin laying early in the spring. It is from the early spring eggs and the late fall eggs that the real money is made. I want to have eggs when no one else has them, and when everybody is willing to pay a good price. I am not forgetting the fact that I have another payment to make on that poultry house next summer.

Week  
Ending  
October  
21st

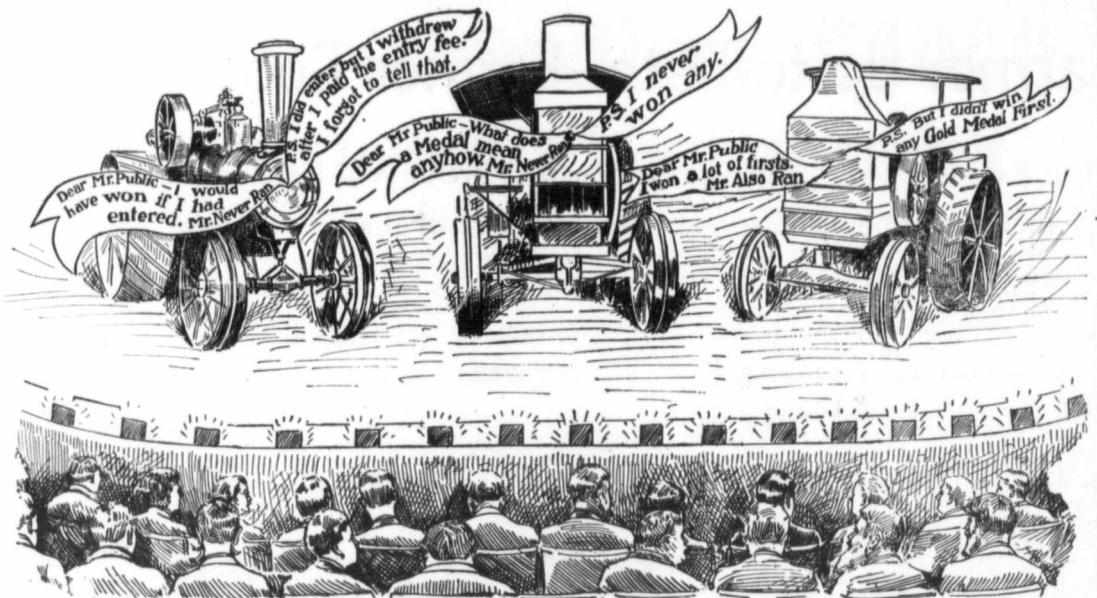
FATHER: Hang that blacksmith; he hasn't got my plows done yet. I have lost a whole week by not having those plows, and it is liable to freeze up any day now. First thing we know we will be in worse shape than we were last fall. I suppose I should have an engine, but I cannot afford it, and then, besides, I don't know anything about such things and haven't time to learn. Another wheat crop like this one will bust me entirely. I don't see where I am going to get the money with which to pay off the mortgage. I don't think I can renew it again. I presume it will mean that I must sell off the stock. I might just as well, as they don't pay anyhow.

JOHN: Father, don't you think it would pay us to build an addition on to the engine shed, and buy a larger feed grinder and put it in there. You know there is a lot of frosted wheat in this neighborhood, and the farmers will want it ground. We could have a certain day every week that we would do grinding, and I believe we could make good money out of it. We could either take our pay in cash or in toll. We can easily feed anything we might get in that way.

Week  
Ending  
October  
28th

FATHER: John, I believe your idea is a good one, and I am going to leave it to you to work out the details, and I will give you two-thirds of all you make.

MOTHER: That fall of snow makes me dread the winter. It is all right for you men folks, as you can get about and to town; but I simply am obliged to stay at home day after day, and cook and wash and bake and scrub, and the next day begin it all over. How I would like a new coat and dress, so I could go to some of the things that other women go to. I haven't had a new dress or hat in over a year, and when I try to raise a few chickens in order to make a little pin money, I can't get even the slightest bit of help. I believe I would sooner live in town and take in washing, for I could at least see some people from the window.



## And Now the Public Listens while the "Never Rans" and the "Also Rans" tell Their Stories of the Winnipeg Motor Contest

Here Comes Mr. "Never Ran" and says:

Dear Mr. Public:

"I would have won if I had entered."  
Yours truly, Mr. Never Ran.

If?

"If" is a big word, isn't it?  
Well, maybe he would.

But what do you think of a man who stands around leaning on the ropes watching the others fight and afterward tells about what he would have done if he had been in it?

Especially so when he should have added this postscript to his story:

P. S.—"I did enter but I withdrew after I paid the entry fee. I forgot to tell that."

Isn't it too bad that he forgot to tell you that he really did enter and paid his entry fee, but afterwards withdrew. It's hard to see how he could still say, "If I had entered."

But, maybe it wouldn't have sounded so well to tell it all.

And perhaps there were some special reasons why he withdrew and he didn't want it known.

Perhaps it might have been—that his last year's type of boiler would not comply with the new Alberta rules under which the contest was held.

Perhaps it might have been—that after he saw the wet and soft condition of the plowing field he was afraid to enter with his big, heavy engine and short wheel base. (And probably he was wise, for if he had entered he might have sunk to the axle in the plow field like some of the others did with the same style engine as his.)

Perhaps it might have been—that with the closer observation and the new rules and the different conditions this year he was afraid he couldn't make the record again that he had made, and he thought he could fool the people into thinking that the conditions were just the same.

And another Mr. "Never Ran" comes up and says:

Dear Mr. Public:

"What does a Medal mean, anyhow?"  
Yours truly, Mr. Never Ran.

Well, it at least means that somebody had nerve enough to enter a contest and run the risk of losing for the sake of winning.

And it probably means also that those who won had made every effort to build the best type of machine to meet the conditions of the average purchaser instead of sitting down and claiming that their machines were perfect.

And it also means that they were willing to enter into a contest with others to promote the general Power Farming Industry as a whole and give prospective buyers some clear evidence upon which to base their opinions as to which machine would best meet their requirements.

But he also should have added this to his story—

P. S.—"I never won any."

Of course you know that makes a lot of difference.

It's pretty hard for the fellow who "Never Ran" to appreciate the medal that the winner received.

But what kind of a spirit does it show for him to stand off and try to make light of the meaning of the First Prize Medals that were won in the Greatest Machinery Contests ever held in the World?

And here comes Mr. "Also Ran," too:

Dear Mr. Public:

"I won a Whole Lot of Firsts."  
Yours truly, Mr. Also Ran.

I won first in this.  
And first in this.  
And first in this.  
And first in this.  
A lot of firsts—

But—

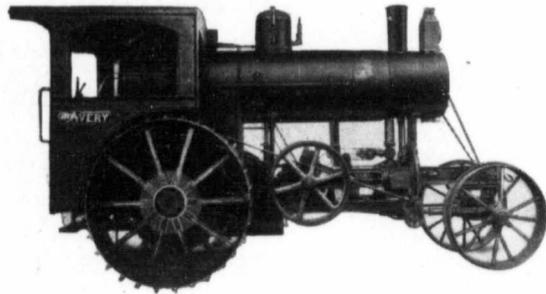
P. S.—"I didn't win any Gold Medal First."

Oh, yes—everybody won something.

But the Gold Medals were the things that counted. The contest was to determine which were the best Around Engines on all of the different points covered. **Not all the points that should be are included, but all the points that are included are necessary in an Around Engine.**

There's a story about Uncle Billy who couldn't say anything bad about a person. So when Henry Jackson, who had been a poor, lazy wretch, died, they told Uncle Billy that it was a good riddance, and he answered, "Well, he could whistle good any how."

And so, maybe Mr. "Also Ran" can make a good noise too, even if he didn't win a Gold Medal.



## But the Bull Dog Won!!

That's enough to say. It doesn't need any explanation.

*You'll always find the Bull Dog in the fight.*

He never stands off and tells what he would have done. He doesn't always come out on top, but

### He Always Fights

When he wins he is proud of it, but not over-proud. He still keeps on developing and getting better. When he loses he never explains why and he never "hunts his hole" either even if he does lose, because he always fights hard and makes a good showing even when he doesn't win, and he goes home to train up and get ready to fight harder the next time.

*And the Bull Dog might have told a Whole Lot More Things than he did.*

He might have said—that it seems mighty strange that when he was the only one in his class to plow all of his ground, some one else should get first place in plowing. It is the first time he ever heard of a fellow who couldn't finish a race getting the first place in that event.

And he might have told—about the fact that his Draw Bar pull was figured by mistake on the basis of a smaller dynamometer than the one he pulled on, and that he lost a lot of points he should have had because of the error.

And he might have told—about 300 lbs. of coal which "disappeared somewhere" and didn't get into his firebox, but which was charged up against him.

**But what's the use?**

**Only this—That with all the half-representations and misrepresentations being made, the whole truth ought to be told. But in spite of these things**

### The Bull Dog Won

Sweepstakes in the entire contest over 29 competitors and the Gold Medal in his class.

*But how much better it would have been if Mr. Never Ran had only told the whole truth.*

If—When he told about the pounds of coal the Bull Dog used in the maximum brake test, he had only told the rest of it and said that the Bull Dog was pulling 159 3-10 H. P. —the highest H. P. ever pulled in a motor contest and 30 H. P. higher than his own record.

If—when he said that the field plowed in the 1911 Contest was "practically the same soil, plowed at the same season of the year, on the section adjoining the 1910 field," he had only told the whole truth and said that the condition of the ground was very soft and wet and entirely different from what it was the year before.

Did you, Mr. Public, ever see a field in a different condition one year than it was at the same time the year before? If you did, you can understand that there was a whole lot of difference between the conditions of the 1911 Winnipeg Contest and the 1910 Contest.

If—He had only explained further that his was a single cylinder engine while the Bull Dog was a double cylinder—so the public would have known clearly that he was trying to represent his Single Cylinder Threshing Engine to be an Around Engine, when everybody knows that a Double Cylinder Engine is the only kind of an Engine that can possibly be a Real Around Combination Plowing and Threshing Engine.

**But of course it probably wouldn't have sounded quite so well to have told it all.**

## There doesn't have to be any explanation made about what the Bull Dog Won

Sweepstakes in the Entire contest over 29 Competitors and the Gold Medal in its Class. The best Around Engine in its class and in the Whole Contest.

And besides all this Avery Undermounted Engines are backed up by the Strongest Warranties given with any Engine.

Write for a catalog telling all about the Sweepstakes and the Gold Medal Winner, Avery Double Cylinder Undermounted Engine and the Avery Line of Threshers and Engine Gang P ows

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BRANCH HOUSES: Kansas City, Omaha, Des Moines, Minneapolis, St. Louis, Fargo, Grand Forks, Billings, Aberdeen.  
JOBGING HOUSES: Other Principal Machinery Centers EXPORT OFFICE: 2 and 4 Stone Street, New York City



**T**HE above illustration shows one of our Standard Type of Telephones for Rural Party Line Service. Our Telephones are the clearest-talking and loudest-ringing telephones on the market.

They are made in Canada, and have many exclusive features—many improvements that add to their efficiency. They are the result of careful study, by our expert engineers, of Canadian telephone requirements. Given the severest tests and examined part by part, by men of wide experience in telephone construction, they have been pronounced the highest-class, the most efficient, telephones yet constructed.

#### GIVE BEST SERVICE

Your system requires the highest-class telephones that money can buy—telephones that will give the best and longest service—that will save repair expenses—that will cost the least for maintenance; in short, Canadian Independent Telephones.

The amazing success of our telephones with Independent Telephone

## Get the highest-class telephones for your system

They will give better and longer service  
Save maintenance cost. 10 years' guarantee

Companies in Ontario, where we are in competition with all telephone manufacturers, and where we dominate the field, is a safe guarantee to the West that our telephones are the highest quality and best value.

The very fact that our business doubled in volume last year, and is doubling again this year, is surely sufficient proof that the QUALITY of our telephones, and the SERVICE we render, is above par

There are inferior and cheaper telephones on the market, but we are not competing with them for your business. We want your business on the basis of SUPERIOR QUALITY and VALUE.

#### FREE TRIAL

And to eliminate all chance, all possibility of dissatisfaction, we offer to send our telephones for FREE TRIAL.

In addition, we GUARANTEE them for 10 years against defects in material and workmanship. That shows our confidence in our telephones.

#### A NEW BOOK

Write and ask us all about our FREE TRIAL OFFER, also for No. 3 Bulletin, which is just off the printing press. It is the latest book on telephones. Profusely illustrated, and contains correct information on the most improved methods of building lines, operating, selection of materials, etc.

With our No. 3 Bulletin, if requested, we will include a copy of our famous book, "Canada and the Telephone"—an exceedingly interesting

book, graphically illustrated by a leading artist. It gives the history of the Canadian Independent Telephone Movement and shows the advantages of rural telephones.

You may require the services of our Staff of Qualified Telephone Engineers to assist in planning construction or solving operating problems. Their wide experience and knowledge are at your service without cost to you.

#### WRITE FOR PRICES

If construction materials are required in a hurry, we can supply them promptly. We carry a large stock of all kinds, and handle nothing but first grade. Write for Price List.



Packed in most up-to-date style. Every telephone in separate case, as shown. Note that the transmitter, receiver and shelf are attached ready for service.

## Canadian Independent Telephone Co.

1844 DUNCAN STREET, TORONTO

Limited

### Course in Gas Engineering

Continued from page 19

tures will often run higher than this.

The maximum temperature which the gases reach depends upon the amount of heat liberated during combustion and the temperature of the gases when ignition occurred. All the heat liberated, however does not act to raise the temperature of the gases as some of it passes through the cylinder walls to the jacket water. The longer combustion lasts, naturally, the more heat is lost, and the lower the final tem-

perature and pressure. The actual rise of temperature is only about one-half what it would be were there no loss to the walls and were combustion instantaneous. This, of course, is only a rough approximation. This temperature ranges somewhere around 2000 deg. Fahr.

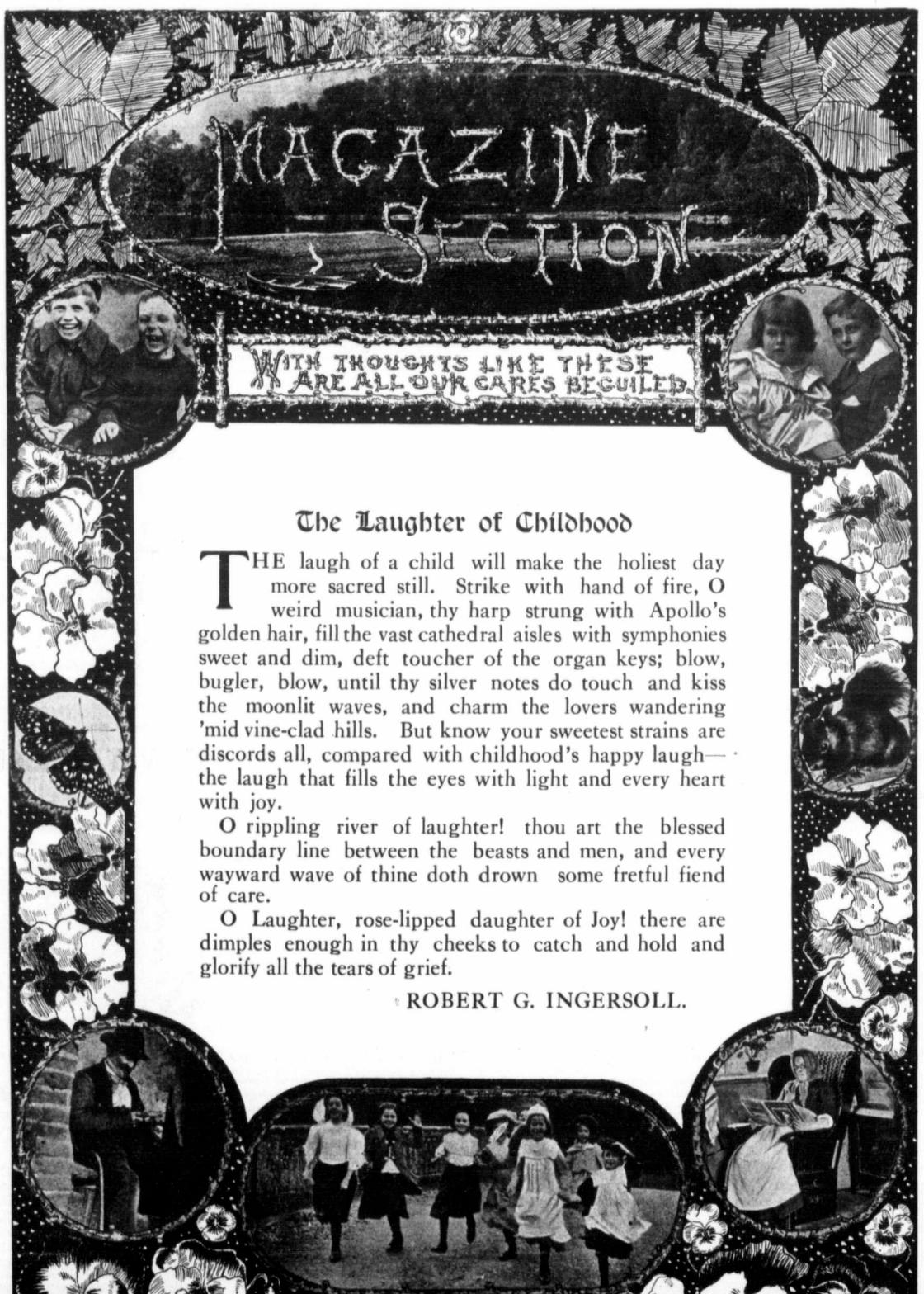
Knowing the compression pressure it is possible to estimate within certain limits what the mean effective pressure will be under proper conditions of ignition and mixture. This brings the m.e.p. dependent upon the maximum pressure produced.

The table gives the values which may be taken as average practice for the m.e.p. for different compressions.

The difference is here shown between the power produced by the kerosene and gasoline engines. It is seen that to obtain the same m.e.p. in the kerosene engine as in the gasoline, the compression must necessarily be higher. Gases require a higher compression than kerosene, while producer gas should have an absolute compression of from 150 to 160 pounds absolute. Alcohol as a fuel has not been used long

enough to have all its characteristics definitely known, but the U.S. Geographical Survey found that the proper compression for the least fuel consumption was about 195 pounds absolute. With this compression about 30 per cent. more power was developed than with the same engine operating on gasoline, while the fuel consumption remained practically the same.

It is estimated that the people of England use each year the milk of five million cows.



# MAGAZINE SECTION

WITH THOUGHTS LIKE THESE  
ARE ALL OUR CARES BEGUILED.

## The Laughter of Childhood

THE laugh of a child will make the holiest day more sacred still. Strike with hand of fire, O weird musician, thy harp strung with Apollo's golden hair, fill the vast cathedral aisles with symphonies sweet and dim, deft toucher of the organ keys; blow, bugler, blow, until thy silver notes do touch and kiss the moonlit waves, and charm the lovers wandering 'mid vine-clad hills. But know your sweetest strains are discords all, compared with childhood's happy laugh—the laugh that fills the eyes with light and every heart with joy.

O rippling river of laughter! thou art the blessed boundary line between the beasts and men, and every wayward wave of thine doth drown some fretful fiend of care.

O Laughter, rose-lipped daughter of Joy! there are dimples enough in thy cheeks to catch and hold and glorify all the tears of grief.

ROBERT G. INGERSOLL.

## PICKED UP BY THE EDITOR ON HIS TRAVELS

### When Paw was a Boy

I wish 'a I'd of been here when  
My paw he was a boy;  
They must of been excitement then—  
When my paw was a boy;  
In school he always took the prize,  
He used to lick boys twice his size—  
I bet folks all had bulgin' eyes  
When my paw was a boy.

They was a lot of wonders done  
When my paw was a boy;  
How granpa must have loved his son,  
When my paw was a boy;  
He'd git the coal and chop the wood,  
And think up every way he could  
To always jist be sweet and good—  
When my paw was a boy.

Then everything was in its place,  
When my paw was a boy;  
How he could rattle, jump and race,  
When my paw was a boy!  
He never, never disobeyed;  
He beat in every game he pl'eyed—  
Geel! What a record they was made  
When my paw was a boy!

I wish 'a I'd been here when  
My paw he was a boy;  
They'll never be his like agin—  
Paw was the middle boy,  
But still last night I heard my paw  
Raise up her voice and call my maw  
The worst fool that she ever saw—  
He ought of stayed a boy!

Chicago Times Herald.

### No Horse for Him

Once upon a time there was a young married man who had some slight bickerings with the woman of his choice. These having occurred with great frequency, he went to his father, who was older and much more married.

"Father," he said, "is it not meet that I should be the ringmaster in my own wickup? Or must I kowtow to the old lady?"

Whereat the old man smiled wisely and said:

"My son, yonder are a hundred chickens and here a fine team of horses. Do you place the feathered tribe on this wagon, hitch up the team and start out. Wherever you find a man and his wife living together, make diligent investigation to find out who the commanding officer is, and where it is the woman give her a chicken. I you find a man running a horse give him one of the horses."

So the young man loaded up the fowls and started out upon his pilgrimage of self-education. And when he had but seven chickens left, he approached a habitation with his forlorn inquiry, to which the man replied:

"I'm the ace-high cockalorum of this outfit."

And the wife without fear or favor, corroborated the statement. Then the young man said:

"Take your choice of the horses. Either one you fancy is yours." And after the man had walked around the team several times and looked in their mouths, he said, "Well, I'll take the bay."

Now the wife didn't like bay horses, and she called John aside, and after whispering in his ear she allowed him to return.

"I guess I'll take the black horse," he said.

"Not a bit of it," said the pilgrim.

"You'll take a chicken."

### Looking Backward

"Well, doctor, do you think it is anything serious?"

"Oh, not at all. It is merely a boil on the back of your neck, but I would advise you to keep your eye on it."

### After Forty Years

Wife—Have you ever thought, darling, of what epitaph you would like to have on your grave?

Husband—Nothing complicated, my ove; merely the words, "Alone at las."

### And All was Forgiven

The Owen County courthouse, at Spencer, Indiana, was built in 1823. For years there has been a local legend that the fathers of the county placed a jug of twenty-five-year-old whisky under that cornerstone.

They decided last summer, to build a new courthouse, and when the wreckers began tearing down the old structure there was a large crowd daily watching the work and wondering how long it would be until they got to the cornerstone.

Spencer had voted dry in the previous election, and the thought of a jug of stuff more than a hundred years old was enticing. One night after the work was well along the contractor went to a leading merchant and told him he had peked into the box under the cornerstone and that there was nothing in it but the roll-call of the Masonic Lodge and the address a preacher had made when the stone was laid.

"That won't do at all," said the merchant. "It must have a jug, and a jug it shall have."

So a jug was forthcoming. Next morning news of the discovery went out, and the watchers gathered in the temporary courthouse to talk it over and try it out.

In half an hour they had forgotten the increased taxes that the new courthouse meant and were unanimously sorry they hadn't torn the old building down long ago.

The last sip was given to a local official, who made a speech which closed as follows: "Gentlemen, our respected and revered fathers knew blamed little about building courthouses, but when it came to making red liquor they knew all about it."

Loud cheers!

Any one who has ever traveled on the New York subway in rush hours can easily appreciate the following:

A little man, wedged into the middle of a car, suddenly thought of pickpockets, and quite as suddenly remembered that he had some money in his overcoat. He plunged his hand into his pocket and was somewhat shocked upon encountering the fist of a fat fellow-passenger.

"Aha!" snorted the latter. "I caught you that time!"

"Leggo my hand!" snarled the little man. "Leggo my hand!"

"Pickpocket!" hissed the fat man.

"Scoundrel!" retorted the little one.

Just then a tall man in their vicinity glanced up from his paper.

"I'd like to get off here," he drawled, "if you fellows don't mind taking your hands out of my pocket."

### The Provider

Senator "Bob" Taylor, of Tennessee, tells a story of how, when he was "Fiddling Bob," governor of that State, an old negress came to him and said:

"Massa Gov'na, we's mighty po' this winter, and Ah wish you would pardon mah old man. He is a fiddler same as you is, and he's in the pen'tentry."

"What was he put in for?" asked the governor.

"Stead of workin' fo' it that good-fo'-nothin' nigger done stole some bacon."

"If he is good for nothing what do you want him back for?"

"Well, yo' see, we's all out of bacon ag'in," said the old negress innocently.—Cosmopolitan.

### Some Loose Clothes

One of the leading citizens of Portland, Oregon, is a retired banker named Wheelwright, who is rather stout.

When Wheelwright first went to Portland he met a local wit named Reed. They were talking together one day and Wheelwright said: "C.J., can you tell me the name of a good tailor? I have tried So-and-So, and I don't like him at all. Where can I get some clothes made?"

"Have you ever tried Ames & Harris?" asked Reed, and let the matter drop.

Next day Wheelwright looked up Ames & Harris and found they made tents and awnings.

### On Getting the Wrong Wife

A little anecdote wherein is shown the unhappy promptness of Oliver Cromwell.

Jeremy White, one of Oliver Cromwell's domestic chaplains, paid his addresses to Lady Frances, the Protector's youngest daughter. Oliver was told of it by a spy, who followed the matter so closely that he hunted Jerry to the lady's chamber, and ran immediately to the Protector with the news.

Oliver, in a rage, hastened thither himself, and found Jerry on his knees, kissing the lady's hand. In a fury he asked what was the meaning of that posture before his daughter.

"May it please your highness," said White, "I have a long time courted that young gentlewoman there, my lady's woman, and cannot prevail. I was therefore humbly praying her ladyship to intercede for me.

The Protector, turning to the young woman, cried:

"What's the meaning of this, hussy? Why do you refuse the honor Mr. White would do you? He is my friend, and I expect you shall treat him as such."

My lady's woman, who desired nothing more, with a very low curtsy, replied:

"If Mr. White intends me that honor, I shall not be against him."

"Say you so, my lass?" cried Cromwell. "Call Godwin. This business shall be done presently before I go out of the room."

Mr. White had gone too far to retreat. The parson came, and Jerry and my lady's woman were married in the presence of the Protector without more ado.

Another story of a misfit wedding, even more harrowing than the above, is still circulated in the Scottish highlands.

Scott, of Harden, one of the ancestors of Walter Scott, was a famous border thief, and at one time, when he had either spoiled the neighboring English or their cattle, or had frightened them all away, he began to fear that from disuse he might become less expert at the honorable trade he pursued; and, to keep his hand in, amused himself with driving the cattle of one of his own countrymen and neighbors, Murray, of Elibank.

Murray soon found the means to revenge himself, and brought Scott, his followers, and his cattle, all prisoners to Elibank Castle. On the walls was sitting his wife, who, perceiving the train that followed him, asked what he meant to do with Scott.

"Why, hang him, to be sure," was the answer.

The more prudent wife exclaimed, "What, hang such a winsome mannie as Harden, when we have three such sorry damselfs at home?"

Murray was persuaded by his wife, and sending for one of his daughters, whose ugly face and immense mouth had acquired her the name of "Mag-o'-mouth," proposed to Scott to marry her, leaving him no other alternative but a halter. The unfortunate prisoner most gallantly refused the lady; and tradition says that it was not till the rope was tied to the tree, and he began to feel it tighten, that he repented.

He was married, and sorrowfully bent his steps homeward, taking with him his ugly wife.

Despite the inauspicious beginnings, it is said that both of these unions turned out to be fairly successful and happy, which goes to prove that marriages are arranged after the ceremony and not before.

### Crushed

Mr. W. S. Gilbert was once at the house of a wealthy but ignorant and pretentious woman. She asked Mr. Gilbert several questions about musical composers, to show that she knew all about them.

"And what about Bach?" she asked.

"Is he composing nowadays?"

"No, ma'am," answered Gilbert; "he is decomposing!"—Tit-Bits.

### The Ceremony

"What was the wedding like?"

"Beautiful. It beggared description and her father."

## The Old Dreary Day of WASHING

THE HOUSEHOLD LINEN BECOMES A GENUINE

### PIC-NIC

TO THE CHILDREN—IF YOU SET THEM TO PLAY WITH A



## "PASTIME" Washing Machine

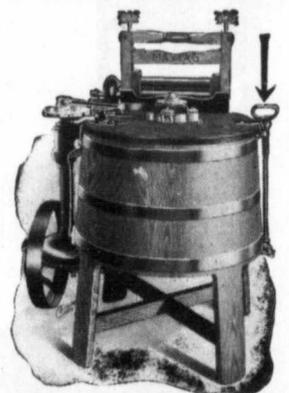
### WARRANTY

We guarantee the Pastime Washing Machine to wash the Clothing QUICKER, CLEANER, and to OPERATE EASIER than any other hand power Washer on the market.

We further guarantee it to be well made and of good material throughout.

There's nothing like it in existence that will do such perfect work—so much of it, and save such a load of domestic drudgery. And its low price will astonish you.

## The Maytag Power Washer



### SMALLEST GASOLINE ENGINE

Will run it and have heaps of power to spare. Simple, strong, quiet, as I with tremendous capacity.

No working parts exposed. One operating handle controls the washer, wringer and reverse.

The wringer shown in cut is an extra good one. It is part of the washer and cannot be removed. Same power that runs the washer turns the wringer. Tub is made in the same substantial way as the "PASTIME." It is identically the same, except that it is equipped to run by any available power instead of by hand.

### WE BELIEVE

this power machine is as near a PERFECT WASHER as it is possible to make a perfect machine.

Same Warranty as in case of the "Pastime"

If your dealer does not handle these machines—write us direct, and we will see that you get supplied.

THE MAYTAG CO., Ltd.  
WINNIPEG, MAN.

WHEN YOU SHOP BY MAIL  
INSIST UPON GETTING  
**DELIVERY-PAID MERCHANDISE**

Whether You Order Fifty Cents' or Fifty Dollars'  
Worth of Goods, You Will Have All Delivery  
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No more looking up express or freight rates. The price you see PRINTED is all the money YOU SEND to have Goods Delivered to your nearest Station.

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Our Fall and Winter Catalogue Prices will show you that you're losing money by shopping any other way.

We're enrolling thousands of new customers, and receiving "delighted" letters from all over Canada.

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of the value you receive with all charges paid.

**W. 1508.—Serviceable Waist of Heavy Jap Silk,** black or white, opens in front and has groups of double one-inch tucks; centre panel of lovely guipure lace, full length sleeve, tucked cuffs and collars with lace **\$1.95** edging.

Send money order for \$1.95 and we will send you this beautiful waist with all charges paid.

We take all the risk. If goods are not entirely satisfactory, RETURN THEM AT OUR EXPENSE and we will exchange them or refund your money



A feature of our New Fall and Winter Catalogue is its 45 pages of Delivery-Paid Furniture. Just write on a Post Card "Send me FALL AND WINTER CATALOGUE, No. 17"

#### In a Street Car

Blodgett—You see that homely woman hanging to that strap?

Foster—How do you know she is homely? You can't see her face.

Blodgett—I can see she is hanging to a strap.—Boston Transcript.

#### An Engagement

One day recently a young textile-worker in a certain cloth-mill called at the office of the overseer and asked permission to remain out a few days. Being short of help, the overseer asked him if he wanted to stay out for anything particular.

The operative, who was a Frenchman, replied: "Yaasir, I'm going to git married, un I'd lik' be there—that all."

#### Worth Observing

In a certain preparatory school in Washington an instructor one day made the statement that "every year a sheet of water fourteen feet thick is raised to the clouds from the sea."

"At what time of the year does that occur, Professor?" asked a freshman. "It must be a sight worth going a long way to see."

A woman, dirty and disheveled, came into a public dispensary with her right arm torn and bleeding. As the surgeon bathed her wound preparatory to binding it up, he asked, "Dog bite you?"

"No, sorr," the patient replied, "another loidy."

#### Feminine Arithmetic

When I was ten and you were eight,

Two years between us stood,

We used to meet by Daddy's gate—

A stolen kiss was good.

When I was twenty—quite a boy,

You still were my heart's queen,

But grown of kissing somewhat coy,

You se—you're quite sixteen!

When I was thirty, bronzed and tall,

With sweethearts, too, in plenty,

I met you at the Wilson's ball—

You told me you were twenty.

I'm forty now, a little more—

Oh, Time, you ruthless bandit!

But you—you're only twenty-four—

I cannot understand it!

James McNeil Whistler and a friend strolling through a London suburb, met a small boy. Whistler asked him his age.

"Seven," the boy replied.

"Oh, you must be more than seven,"

said Whistler doubtfully.

"Seven," insisted the boy, rather pleased at being taken for older.

Turning to his friend, Whistler said,

"Do you think it possible that he really

could have gotten as dirty as that in only

seven years?"

Junior partner—Your caller looked like a Russian.

Senior Partner—He was.

"What was his name?"

"I don't know; he sent in his card, but

the office-boy carelessly broke it off about

a foot from the end."

# LANDMARKS

IN THE LIFE OF **JOHNNIE LUNDIE**

## SPIKING DOWN AN EMPIRE.

By JAMIE SOUTAR

Stories in the making of a great manhood from a poor start; told in the "Brandon Local," and elsewhere

When the venerable chief of the Armstrong Construction Company decided that Johnnie Lundie was the man he would place in command of the supplies and transport department of the huge gang of men who were to handle the steel work of the great Saskatchewan Valley Bridge, his junior partners demurred.

The senior of the two younger men was not so emphatic as his colleagues. He mildly suggested that it was "taking a long chance" to saddle an absolutely untried man with the immense responsibilities involved in the undertaking.

Simpson Hayes, the younger member of the co-partnership, expressed himself in much stronger terms. The folly of the proposal was too apparent and if the chief persisted in the idea and this "raw Scotchman" was sent out—"Well, all I can say, sir, is that I have no doubt as to the effect of the arrangement and that it will not be to the credit of the firm."

"Well, Hayes," and the sagacious, steely-blue eyes of the old chief looked calmly upon his young partner more in sorrow than in anger, "I hope and believe that the day is not a remote one when you will regret the attitude you are taking on this matter. In fact, I am sure you will very shortly have occasion to let your sportsmanlike spirit assert itself by frankly admitting you were mistaken. By the way," and the manner of the old man suddenly changed to that of an abruptness that he rarely assumed, "may I ask if you had any other nominee for the appointment, Hayes?"

"Well, sir, to be perfectly frank, I had; but to satisfy you that I have no preconceived objections to employing an Old Countryman on the job, I may say that the man I had in view—like your young friend—is also a Scotchman."

The old gentleman smiled, for if he cultivated any little personality on which he piqued himself, it was the circumstance of his Scottish ancestry, although, as he was accustomed to acknowledge on convivial occasions—more of these, from the notorious Johnnie Armstrong downwards, had been hanged for sheep stealing and cattle thieving in the days of the raiders than had ever subscribed to the tenets of "The Solemn League and Covenant."

The end of it was that the head of the firm suggested that they "toss for their man."

The tactful proposal broke down the strained feeling that was perceptibly increasing and was immediately accepted by the younger men.

"Is it sudden death, or—?"

"No; the best of three gentlemen," replied the senior.

The coin spun aloft and came down in favor of Johnnie Lundie. The second throw gave the other man his chance, and it was just about to make the fateful spin when the ringing of the telephone bell called a halt. Hayes put the receiver to his ear.

"Hallo!—Yes, Hayes speaking—Oh!—Where did you say?—Police Office! What's that you say—drunk! Never! Well, Well!"—after a long interval during which the party at the other end of the wire did all the talking—"O, yes, I dare say you had better go there and see if you can do anything for him."

As Hayes hung up the telephone, he turned to his colleagues with a rueful smile and sank down into the chair from which he had risen. Tossing his arms aloft he exclaimed:

"I've not another word to say, chief. I throw up the sponge. That's Elmsley ringing up to say that my man was pulled out of the "Victoria" dead drunk last night about midnight. He is now at Vine Street Police Station and wants someone to come down and bail him out."

The two younger men treated the circumstance with a levity which the senior did not encourage. He calmly received the assurance of his partners that they buried their objections and would do all they could to justify their chief's unbounded faith in Johnnie Lundie.

Four days later, the vanguard of bridge builders, numbering some sixty men, with their equipment, stores and personal baggage pulled out westwards from the works' siding of the Armstrong Construction Company, and the onus of accounting for all that it meant in transportation and distribution of material lay on the shoulders of the youngster who, at the moment, least of all looked the part of the "boss of a section gang."

"But this is the young man's country, you know," remarked the old grey headed chief to a friend who had been commenting on the extreme youthfulness of the chief clerk in his charge, "I am satisfied that he



## The Howard Watch

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Responsible jewelers all over the Dominion sell HOWARD Watches—and the price of each grade is uniform everywhere. That means that you buy on the one sound basis of value received. It means that you and every other HOWARD purchaser owns the finest practical watch in the world on the most favorable terms. It means the fullest possible service from the jeweler—his attention

and advice as an expert in watches, not as a shrewd bargainer over the spitting of a half-dollar.

A HOWARD Watch is always worth what you pay for it.

Several months ago the demand for the higher-priced HOWARDS became so great that we had to discontinue the making of the models at \$35 and \$37.50.

The lowest-priced HOWARD that we are making now comes at \$40. It is a 17-jewel (double roller) case in Crescent or Rose gold-filled. The 23-jewel HOWARD in a 14k. solid gold case sells at \$150—there are several grades in between these prices.

You can buy HOWARD Watches in every part of Canada. Find the HOWARD jeweler in your town. Not every jeweler can sell you a HOWARD. The jeweler who can is a representative merchant—a good man to know.

Send us your name on a postal card and we will send you—free—the little HOWARD Book, full of valuable information for the watch buyer.

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ESTABLISHED 1875

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and you also will sing their praises

What has pleased us more than anything and what has helped our business is the fact that 90% who wear our Lumbersole Boots are enthusiastic boosters—(they are so pleased with them they tell others—we receive thousands of testimonials—here's a sample just to hand.

Souris, Man., Sept. 27th, 1911.

"I got a pair of Lumbersoles last fall from you, they are good, I would not be without them—this pair is for a present. The farmers all admire my boots—not once cold feet last winter."

J. W. CUMMINGS.



All Sizes \$1.75 Delivered Free

Lumbersoles have light weight wood sole—tough grain leather uppers—lined throughout with easy 1/4 inch felt. Advertised price includes free delivery to nearest post or express office. Boots sent by return on receipt of order with cash to cover—state size when ordering. Send at once.

**LUMBERSOLE BOOTS**

#### DIFFERENT STYLES AND PRICES DELIVERED FREE TO P.O. OR EXPRESS OFFICE

- Men's Best Quality, 2-Buckle Styles. Size 12..... \$1.00
  - Two-Buckle Style, to fit all ages. Size 3-12..... 1.75
  - Men's J Wellingtons, 6-12..... 3.00
  - Children's 2-Buckle, Sizes 6-2. Fit ages 3-10..... 1.35
  - Children's, one Lacing, 6-12..... 1.50
- ASK your dealer for Lumbersoles. Dealers and others send for complete list. SCOTTISH WHOLESALE SPECIALTY CO. 134-135 Princess St., Winnipeg, Man.

will do his work just as well as an older man and if I have the pluck to admit it, I don't see that the younger fellows have much to complain of."

It was a motley crew and one in which the most discordant elements began to ooze out from the first. The skilled mechanics were all men of a superior type, but the laborer section represented a mixed lot of the roughest-looking toughs that up till that point of his life Johnnie Lundie had ever seen grouped together or that Peter Macintosh, with his wider experience of the wild and woolly West, had ever encountered in the worst depths of dissipation into which he had drifted.

Peter had been taken on among the unskilled at Johnnie's request. While he remained sober, he could be depended on to give good value for the money he would receive as wages and Johnnie believed that while he had him in tow, the chances were ten to one that he would give a good account of himself.

The caboose in which Johnnie travelled with a squad of engineers was a new experience to him, but he adapted himself to it at once and was as much at home as in his old quarters on the Royal Adelaide. He had a small office arrangement in which he spent the greater part of the time during the day in mastering the details of his duties and preparing for them ahead so far as he could.

Peter occupied the bunk next to him at sleeping time, and altogether they made a happy party in that little home on wheels. The others of the party were Clydebank men, having served their time in the great "Fairfield" yards and came West when an unfortunate strike arrangement denied them the privilege of working at home.

The trip to the banks of the Saskatchewan passed off without mishap, except that in the enforced idleness of the journey out some of the foreign element among the laborers got to drinking and fighting at Fort William till one of their number got so badly mauled that he had to be left behind in the general hospital of the Great Lake port.

At Winnipeg, supplies in a large variety of eatables—tinned stuff, flour, rolled oats, etc., had to be shipped and a day was spent with the contractor at that point who supplied the necessary part of the camp equipment.

He was the most affable and brotherly individual Johnnie had ever met. He simply overwhelmed the lad with kindness,—lunching him at one of the leading hotels of the city and offering to keep him going in cigars—lend him money, or in fact, to "run" him in every conceivable need while he remained on the great undertaking which was then in progress.

## THE Ideal Household Blue Polished Steel Range

The Handsomest and Best Steel Range ever Produced.



\$48.50

Buys this \$85 Steel Range

Just as Illustrated

A new design with elaborate nickeled trimmings. The nickeling is done by special process, and is of a white silvery effect. The Ideal Household Steel Range is equipped with all the latest improvements, and thoroughly up to date in every respect. Pay \$85.00 to the local dealer and you will not get a range to equal the Ideal Household. Absolutely the handsomest, most elaborate and highest grade steel range made in the world. A long step ahead of others in high art of stove making.

JUST LOOK what we are doing. We are furnishing you this magnificent new six-hole full nickeled range, in all sizes, complete with reservoir and warming closet, just as illustrated, beyond question or doubt the highest grade range made in the world. Burns wood or any kind of coal. Takes wood 24 inches long.

No. 9-20 has oven 20x20x15 inches; six 9-inch lids, copper reservoir enclosed, shipping weight, 550 pounds. Complete with high closet and oven thermometer \$48.50

WHITE IRON STOVE CATALOGUE Showing the most complete line of up-to-date stoves and ranges. Sold direct to consumer at wholesale prices.

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## KITCHEN CABINET, \$18.50

Larger, Better Quality, and more convenient than other cabinets sold at \$20 to \$35

Study the arrangement of this Large Kitchen Cabinet and you will soon decide that it is the most conveniently arranged cabinet made. THERE IS NOTHING SMALL OR POKEY ABOUT A WINGOLD KITCHEN CABINET. From the large divided four bin to the smallest spice drawer, you will find it just the proper size; it's just what you need to save thousands of those unnecessary steps which you take every day. Cooking will become a pleasure instead of a burden when you use a WINGOLD CABINET. Cutlery and spice drawers, the kneading and cutting board, the sugar, salt and flour bins are all within easy reach. Two large cupboards and china closet complete the cabinet in every detail. Made of white maple, natural finish. The base 32 inches high, 46 inches wide and 26 inches deep. Entire height of cabinet, 84 inches.

Lowest Price ever quoted for a High Grade Cabinet.

\$18.50



Write for new furniture Catalog. Sent free on request.

The confidence Johnnie's Chief had expressed in him was as nothing to the unbounded belief the great Winnipeg contractor had in his ability and integrity. He was "on the square" all right. He believed that it was every man's duty to help his fellow in every way he could. That was the policy that covered all his operations like a great philanthropic blanket and he subdivided it into a large number of detailed particulars which lately (to his credit, although it was not his place to speak of them) he had the pleasure of dispensing to those who stood in need of his help.

So crowded was Johnnie's time by the attentions of this great worthy, he had little opportunity to see anyone or go anywhere while he remained in the gateway city, and the parting was most embarrassing. Peter and the whole of his companions in the caboose were treated to cigars and chewing tobacco just before the work train resumed its trip. A supply of liquor was proffered in the most engaging manner but respectfully declined and no one more sincerely than Peter rejoiced at the firm attitude Johnnie struck when he would not allow the liquor on board.

A small party from the rear end of the train, where the rougher element travelled, were grouped around the cars while the food supplies were being shipped. Among these was a certain gaunt, sinister-looking individual whom Peter had

## After the Harvest

PROTECT THE GAINS OF ANOTHER ABUNDANT YEAR BY MEANS OF LIFE INSURANCE

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Life Insurance is not expensive—rightly chosen. In The Great-West Life the cost is remarkably low, and the profit returns are high. The Policies are liberal—with every modern privilege.

Ask for information. Learn of the Policies that have earned such approval that, at the end of nineteen years, the Company has a business in force of \$34,000,000.

A postal, with name, address, and date of birth, will bring full details.

### The Great-West Life Assurance Co.

HEAD OFFICE - WINNIPEG

ASK FOR A VEST POCKET MEMO BOOK. FREE ON REQUEST.

noticed on several occasions peering around apart from the rest like a great vulture on his solitary trail—piercing with infallible optic every recess in which there appeared the remotest hope of plunder.

For the first time and just as he shook hands in parting with the contractor, Johnnie noticed this individual. The face was turned full on to him and at once it lit up the caverns of his memory, but the light was yet too uncertain to positively identify that ugly wolfish jowl, the prominent cheek bones, and a deep scar that cut across the left temple.

The keenest memory for faces

will at times alight on one that is as familiar as that of a member of the family but for the moment, and it might be for a long interval, it just cannot be placed in its local setting. That was Johnnie's plight in this case, and it was not until the construction train had gone many miles on its way that the whole personality of the man flashed upon him.

When it did, the memories it occasioned were of a somewhat mixed, if not disquieting, nature. Here was one to whom he felt he instinctively felt he was an object of implacable hatred, and for no other reason than the fact that Johnnie had been the innocent means of thwarting him in a criminal act and indirectly the

means of his subsequent punishment.

The man was as well known to his friend Peter as to himself and he at once took counsel with Peter. That faithful friend had also "spotted" the shadow—before Johnnie had been aware of its presence, but decided that he would not alarm the lad. He would set a quiet and careful watch on the movements of the creature and just bide his time.

As a matter of fact Peter had been shadowing the fellow from the moment he first made his appearance around the construction train. He recollected the face as one it was never possible for him to lose from his memory. He noted its lowering, sinister gleam as it watched like a lynx every movement of Johnnie Lundie while he was able to keep him in sight.

As it happened, Peter had for many years allowed moustache and beard to grow in the wildest profusion on a face that in its better days had been kept scrupulously "clean," and for this reason, no doubt, Peter was satisfied the prowler had not become aware of his identity.

The man was no other than the notorious Muchals, the first and probably the only human being who had ever deliberately set himself to do Johnnie Lundie an "ill turn." He had nearly succeeded in blighting the lad's career at the beginning and but for the providential appearance of a little maid on the scene, the course of the boy's life had no doubt been very different.

It was certain he was not on the train that was slowly crawling westward with its huge construction freight, but it was morally certain that Muchals would be aware of its objective and that he might re-appear at any moment could be taken for granted.

Three days later just as the last streak of sunset lit up the Western prairie, the train pulled into the siding on the banks of the Saskatchewan near to which operations were to begin at once on the great span that was to carry the steel of the great transcontinental to its western bank. Fairly comfortable quarters for the men in the shape of tents and log huts had already been prepared by an advance party, and "in a jiffy" fires were going and coffee and sundry meats in process of cooking "lent their perfume to the breeze," and whetted to a fine edge the appetites of strong, healthy pioneers who never required a second invitation to arise and eat.

For sometime since leaving Winnipeg, Peter had given way to long periods of abstraction from which Johnnie had jocularly endeavored to rouse him, first by one playful suggestion and then by another but it seemed without effect. Peter had evidently some mighty purpose or care on his mind, but the inherent politeness of his young friend forbade him to pry into the nature or cause of it.

Immediately after supper that

night, Peter mysteriously disappeared. The circumstance occasioned Johnnie considerable uneasiness but he dared not express his fears to anyone. The night wore on and still no sign of Peter. Johnnie had taken a look round for the last time before turning in. His watch was within a minute or two of midnight as he sought his berth, when the sound of horses' hoofs on the gravel outside struck his ear. They came close up to the hut and the next moment the shock head of Peter was stuck in at the door, the face bearing a smile of satisfaction Johnnie had

not seen on it for a long time.

"Wiere in the world hae ye been, Peter?"

"Hush!" and the man of mystery signified by a forefinger placed warningly against the nose that "mum" was the word; but "Come oot bye, Johnnie an' I'se tell ye a' about it," Peter whispered.

The strange fellow had by some means obtained possession of a really good, serviceable nag that already appeared to have entered into the conspiracy with Peter, for she was as docile and obedient and apparently as knowing as any human being in pos-

session of every gift of nature except the power of speech.

"Johnnie lad, ye'll hae to trust me. There's nae time for words, You want your bed and I need a sleep too; but this mare belongs to an honest farmer some eight miles away. He knows I've got her and he knows I'll bring her back. I've got a job to do that may take me away at least a couple of days and I'm off before any of the chaps are stirring tomorrow mornin'. Good night, old chap."

"Good night, Peter;" and the strange mortal and his nag stole quietly away in the darkness.

# GREAT WEST

## CUT PLUG

# SMOKING TOBACCO



10¢

EVERYWHERE

### Saving from \$20 to \$35 a day on Cost of Harvest

Continued from page 23

Since then, however, some fifty loaders have been engaged at different points in the three provinces and a more severe test could scarcely be imagined than what has been made on the heavily weighted fields of this year's grain yield.

Without exception, the reports from the owners of these and from practical men who have seen them operating are without qualification in high praise of the work of the loader. We have seen it at work on several occasions this year and last of all on a heavy field of grain at Rosser. Humanly speaking the work was perfect. At the moment, the loader was collecting at a distance of from eight to ten hundred yards from the thrasher and four teams without effort were serving the threshing outfit. Five were actually in attendance but the fifth one was quite superfluous and would be unless the haulage was at a very great distance from the thrasher.

We refer any interested reader to our previous article for details of the loader which we need not reproduce here, and shall be happy to reply to any inquiry which our knowledge of the implement can deal with.

Several letters have reached us respecting it and in two cases (from farmers who have seen it working) offering a substantial premium on the selling price of the machine if we could in any way help them to get one in time for this year's crop.

As often happens in a case of the kind, the proprietors of the patent have necessarily been somewhat guarded in making arrangements for its out-put until the success of the thing as an agricultural implement had been

ber for next season's requirements.

A saving of from \$20 to \$35 a day on an ordinary harvest is a nice little item to think about. This is what the makers claim for the "Stewart Sheaf Loader," and from what we have seen and



The Stewart Sheaf Loader at Work in the Field

placed beyond a peradventure. This has been finally established, and we understand the Company are entering into a big undertaking to manufacture a large num-

ber from the reports that have been made to us, we are inclined to give them full credit for their claim.

Anyhow, there can be no doubt as to the serviceability of the "Stewart Sheaf Loader," and that no one using it need look for failure that is not due either to gross stupidity or carelessness. It has abundantly proved its value and we have no hesitation in saying that as a labor-saving machine it is a complete success and the greatest economist of time and money the harvest field has seen since the perfect binder came to stay.

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Trained Salesmen earn from \$1,200.00 to \$10,000 a year and expenses. Hundreds of good positions now open. No experience needed to get one of them. We will assist you to secure a position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars, list of good openings, and testimonials from over a thousand men we have recently placed in good positions.

Address Nearest Office, Dept. 177  
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**\$3,600**  
in Cash Prizes for Farmers  
**Your Photograph May Win a Prize**

**A**MONG the prizes we are offering in our big Prize Contest is one of \$100.00 (Prize "C") for the farmer in each Province who furnishes us with a photograph showing the best of any particular kind of work done on his farm during 1911 with "CANADA" Cement. For this prize, work of every description is included.

Now just as soon as you finish that new silo, barn, feeding floor or dairy, that you've been thinking of building, why not photograph it and send the picture to us? The photograph doesn't necessarily have to be taken by a professional or an expert. In fact, your son's or your daughter's camera will do nicely. Or, failing this, you might use the kodak of your neighbor's son nearby. In any event, don't let the idea of having a photograph made deter you from entering the competition. Particularly as we have requested your local dealer to help in cases where it is not convenient for the farmer to procure a camera in the

neighborhood. By this means you are placed on an equal footing with every other contestant. Get the circular, which gives you full particulars of the conditions and of the other three prizes. Every dealer who sells "CANADA" Cement will have on hand a supply of these circulars—and he'll give you one if you just ask for it. Or if you prefer, you can use the attached coupon—or a postcard will do—send it to us and you'll receive the complete details of the contest by return mail.

If you haven't received your copy of "What the Farmer Can Do With Concrete," write for that, too. It's a finely illustrated book of 160 pages full of useful and practical information of the uses of concrete.

Write us to-night, and you'll receive the book and the circular promptly.

Do not delay—sit right down—take your pen or pencil, and fill out the coupon NOW.

Please send Contest Circular and book.  
Name.....  
.....  
Address.....  
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**Canada Cement Company, Limited,**  
National Bank Building, Montreal

# JEWELRY

## Finest in Canada

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SUPERBLY ILLUSTRATED CATALOGUE NOW  
IN PREPARATION—FREE TO ANY ADDRESS

## HENRY BIRKS & SONS, LTD. Winnipeg

## The Ethics of Modern City Building

"No joy was ever less complete for a moderate expectation." This time-worn axiom is no less applicable to the world of cold-blooded business to-day than it is to the softer influences that are grouped under the great roof-tree of human sentiment.

It holds out a gentle warning to the ever sanguine and seeks to bridle in wholesome and not unkindly fashion those will-o'-the-wisps who have, with the very best intentions in the world, out-stripped all the reasonable license in their optimistic judgment with regard to "futures."

What a story could be written of the rise and progress of Western Canada and of the hair-brained enthusiasts who have "rushed forward to certain death" for no other reason than that they could not, or would not be satisfied with a "moderate expectation."

Pity rather than blame, however, is due to them, for certainly the prospect of those far spread prairies, lit up sometimes to a dazzling splendor by the glory of the occidant, has been and still is at times enough to "turn the head" of the most steel-clad pessimist that ever looked out on a living prospect.

But the days of blind adventure, of feather-headed foolishness and wild-cat schemes are happily fast receding in so far as Canada is concerned. We have information to-day in place of the "indications" that pointed the way to the fathers of the "boom" days.

Napoleon said that the most successful of men was usually the man who had the best information. Napoleon was usually right and he certainly never wrote unless he had himself experimented. He was one of the men of whom Sir Thomas Overybur of Queen Bess days wrote: "The man who wins; the man who converts all occurrence into experience, between which experience and his reason there is marriage, and the outcome are his actions."

Development in any scheme of land settlement or city building has now been worked down almost to an exact science. It can be watched and directed and its probabilities and certainties are ascertained almost with the precision by which the life insurance actuary arrives at his figures.

But just as the commercial instinct seems to be born in some men and completely foreign to the make up of others, there are men born to the business of directing the affairs of expanding populations and to the detail as well as the comprehensive sweep of a great colonization scheme.

There are not many engagements in modern civilization that tax so severely the very best that the human brain can assimilate and involve to the end that the judgment it shall ultimately deliver is of such a nature that it spells success; certainly that it may not in any case end in calamity or failure. It calls for enlarged business experience and uncompromising devotion to system, indomitable application and constant watchfulness of the trend of events. It means concentration above all things, for no man can safely be entrusted with the custody of one's real estate investments who is running a confectionery store, or the details of a lunch counter as a "side-line."

"A whole man to one thing at a time" will sometimes do what ten men would never accomplish, but the man who isn't intuitively born to the business—who is not an enthusiast in this business with a fairly large inheritance of foresight—will not have much of a tombstone when he has passed in his cheques.

When an investor seeks to dispose of his funds in a way that precludes him from personally verifying all the outs and ins of a proposal submitted to him, he must at least be satisfied beyond all doubt as to the integrity and business ability of the men who are acting for him. There are thousands in Western Canada to-day who are rid-

ing on the very top of the greatest tide of financial success the world has ever known, who probably would not be worth the price of a winter overcoat, had it not been for the advice—probably the unappreciated impertinence—of some real estate friend.

Like the insurance man, his persistence in season and out of season could not be overcome, and just to keep him quiet, the "victim" meekly acquiesced at last, with the result that he was pushed on to the goal that no persistence or effort of his own could ever have reached.

"What one man has done another can accomplish." The chances of yesterday are infinitesimal when compared with what is lying ready to hand in Western Canada to-day. And they can be secured by the old-fashioned means: common sense activity.

To "act in a living present" was the habit of those men and that is the only royal road to success to-day as it was then. The causes that work towards development at a given point are an interesting study to most men, but they are "meat and drink" to an elect few who have given their lives to this study. And the public owes them its gratitude, because the loose, popular mind has no more the ability and disposition to dig up and weigh these things and pass judgment on them than the ordinary domestic plumber can be expected to deal with the caprices of his seventeen jeweled chronometer.

Among many houses of the highest character which have grown to great proportions as the natural outcome of the great trek westward, one of the most enterprising and successful is that of "The International Securities Company Limited" of Winnipeg. This company has an unblemished record and has a system and creed of its own that stamps it unique among land men.

Starting out as a distinctly farm lands institution, it subsequently associated itself with the Grand Trunk Pacific Railway Company in the sale of its townsites at divisional points on new Transcontinental. The compact has been attended by the most happy results alike to the Securities Company, to the great railway concern, and to those who have invested in what they had to offer.

The International Securities Company is the exclusive and authorized sales agent of the Grand Trunk Pacific in the disposal of its townsites of Melville, Watrous, Biggar, Wainwright, Scott, Tofield, etc. In handling the intricate and important details of these developments, it is safe to say that nothing of the kind has ever been placed on the market with so little of the "window-dressing" and clumsy embellishment that has been so much the fashion in publicity work of real estate movements.

The success which has continued to attend the salesmanship represented in the company's advertising matter has been phenomenal, and we believe that this is due more than anything else to the fact that in all its statements the dominating idea has been the wholesome one of the "moderate expectation."

Seen by a representative of "The Canadian Thresherman and Farmer," Mr. E. S. Horn, manager of "The International Securities Company," says: "We are not offering property for sale anywhere as to the position and character of which we nor anyone else in possession of the facts need entertain any doubt.

"We are fully alive to all that has been done and is being done—sometimes by salesmen whose zeal at times outruns their discretion. We are here to do business, and frankly are as anxious to make sales as anyone, but we are working with a single eye to the conservation of our own future.

"We know that we can do the very best for ourselves now and hereafter

# 1,200,000 Bushels of Grain

## Shipped from Canora Last Year

The fertile province of Saskatchewan is rapidly becoming one of the richest grain producing districts of the world. Only a few years ago this rich and fertile province was practically unsettled. To-day it produces the greater part of the grain grown in Western Canada. Situated in the eastern part of the Province of Saskatchewan and in one of its most fertile districts is the town of Canora. In less than five years this live town has grown from a houseless prairie to an incorporated town with a population of almost eleven hundred, which is rapidly increasing.

Canora is one of the largest exporting towns in Saskatchewan. Situated on the main line of the Canadian Northern Railway, it is the terminus of the C.N.R. Rossburn line also the present terminus of the Grand Trunk Pacific International Boundary-Hudson Bay line.

With land in the Canora district being taken up at the rate of fifty thousand acres per year and with the additional railway facilities which Canora undoubtedly will have in the near future, the population should increase very rapidly.

There are at the present time six large grain elevators in Canora, but even this number is insufficient to take care of the large increase in the grain supply, and others will be built in the near future. In addition to the elevators there is a large flour mill which exports large quantities of flour of an excellent grade as well as its by-products annually. In the neighborhood of fifty thousand acres of land is being cropped in the Canora district this year for the first time. Statistics show that over one million two hundred thousand bushels of grain were shipped from Canora last year. With the increased acreage under cultivation this year, there should be over two million bushels of grain sold and shipped from Canora.

# CANORA

Canora is installing one of the most complete water-work systems in Saskatchewan. The handsome sum of \$30,000 has been voted for the purpose of installing a municipally-owned electric lighting plant. The construction of ten foot cement side walks and the grading of the streets in the city is being energetically pushed at the present time. A site has been secured for the erection of a city hall and, \$21,000 has been voted for this purpose.

These facts give evidence of Canora's progressiveness. Canora's future is assured. The large surrounding territory, the rapid and substantial growth of the town, the large number of buildings now being erected and its geographical position as a distributing centre all go to prove that Canora will increase in population. As its population grows, the value of Canora real estate will increase rapidly. The man who buys NOW, and gets in on the ground floor will see his property rapidly increase in value and will make large profits.

### Telegraph your Order at our Expense

On account of the rapidity with which our Canora lots are selling, we would urge you to telegraph us at our expense the number of lots you wish and let us make the selection for you. We will reserve the best available lots until we receive your remittance. The prices of lots are from \$100 to \$300, according to location. One-tenth of the purchase price must accompany the application and one-tenth each month for the next nine months must be mailed to the International Securities Company, Ltd. No interest will be charged on deferred payments, and a discount of six per cent, allowed when full cash payment accompanies the application. No taxes to pay until 1912. Perfect title will be issued direct to the purchaser.

**Put your name and address on the Coupon below, and we will send you postpaid illustrated folder, map and price list of our Canora property.**

International Securities Co., Ltd., is authorized and exclusive agent of GRAND TRUNK PACIFIC for sale of its Townsite lots in divisional points of Melville, Watrous, Biggar, Wainwright, and junctional point of Tofield, as well as town of Scott, all located on main line of Grand Trunk Pacific Railway between Winnipeg and Edmonton.

The International Securities Co., Ltd., is owner or manager of other important townsites or sub-divisions to cities and towns as follows: Lethbridge, Alta.; Moose Jaw, Sask.; Regina, Sask.; Entwistle, Alta.; Canora, Sask.; North Battleford, Sask.; Medicine Hat, Alta.; Swift Current, Sask.; Lacombe, Alta.; Weyburn, Sask.; Yorkton, Sask.

Inquiries are solicited from parties seeking a sound investment in any of above-named cities and towns. Many of these places afford splendid openings for business and professional men. Full information freely furnished and booklets, maps, etc., regarding all these cities or towns mailed free upon request.

#### INFORMATION COUPON.

International Securities Company Ltd.,  
Somerset Building, Winnipeg, Manitoba.

Please forward to me by return mail, without obligation on my part, full particulars regarding the sale of lots in the town of Canora, Sask., which are just being placed on the market.

NAME .....

ADDRESS .....

.....

**INTERNATIONAL SECURITIES CO., Ltd.**  
**Somerset Bldg. WINNIPEG**

by satisfying ourselves with the simple facts and a reasonable estimate as to what the future may involve from those facts. The most encouraging feature of our work here is the daily receipt of expressions of satisfaction from clients and of inquiries respecting Western Canada generally from people who evidently have faith in our judgment or who are glad to draw upon the mass of information we have on file."

Zeal, even in a good cause is not always an unmixed blessing. When it is an ill-timed or mis-directed zeal, mischief is in the air and "the last state of that man is worse than the first." The International Securities Company are operating with the feeling and in the belief that any moment the humblest investor on their books may look in, it might be to give them the grasp of undying gratitude, but never to lift an upbraiding finger.

They are seeking in their own way and in so far as their long arm can reach to undo all that has been done in premature or fictitious "developments," and to establish a feeling of that security their name implies in Canadian investments, which, in popular esteem, play second fiddle to no other in the bourses of the world.

**The Man in his Home**

The seclusion of a home gives to a man a certain freedom and attendant privileges which no other place in the world affords, and it is right that it should. But it is not right that this freedom and those privileges should be abused to the disadvantage of the wife. Too many men seem to have the idea that they can drop into constant disconsolate and churlish moods at home and with their wives, which in any other place, and by any other person would not be tolerated. There is a fine line of discrimination here which is all too often overlooked. Too many men have an ever-ready smile and a cheery greeting for the friends of their wives, which belong, and should go, to the wives themselves, but are too often withheld from them. The politeness of the parlor is with too many men more frequent than the courtesy shown in the family room. It is when a man is within the walls of his home that he is himself: when his real self shows for what it is: when he is not playing a part; when he is the husband, the father, the son, the brother. Then it is that he should be at his best. When a man gives the best that is within him to those closest to him, his home will be the ideal place that he wishes it to be. But not before he does this, nor while he is otherwise than at his best.

No man has a right to expect from his wife what he on his part, does not give her. If he wants her sympathy he must give her his consideration. And, if there is one element lacking in our home life of to-day more than any other, and lacking mostly in the husband toward the wife, the father toward his children, the son toward his mother, the brother toward his sister, it is consideration—a mindfulness of little things. It is not meeting the question to say that a man's life is too busy to think of little things: that his horizon is too broad. These are the whinings of the beggar. If a man lacks the element of consideration he should cultivate it, not only for the benefit of his friends but for those in and of his home. Consideration should begin at home: not in the homes of friends, as it so often does—and ends there, too. The atmosphere which a man creates in his home by example becomes the rule by which his children live. The husband and father strikes the keynote for right or wrong living.

It is not enough for a man to provide his wife with the necessities of life, or the luxuries either. He would do as much as that for his housekeeper. A wife, a mother, or a sister deserves more than this, and far more. If we expect women to be all that we want them to be, we, as men, must do our part to help them. We can add nothing to their fineness, but we can add to their courage, their hope, their feeling that what they are doing for us is appreciated. What thousands of wives and mothers in our homes need to-day is a little more appreciation: a finer consideration, a more just estimate of their work in the home. This is for man to do. The strength of our women is allowed to fall too

often where a little attention on the part of the husband might relieve it. Hope only dies in the heart of a woman where a husband's love, a husband's consideration, fails to keep it alive. I am not asking the husband to be the lover so much as I am asking him to be the husband in all that that word implies. A husband can be to his wife what a lover can never be to his sweetheart. The one is a natural relation; the other, in many respects, an unnatural one. There are men who need to be reminded what it means to be a husband. If being a husband more often meant to a man what being a wife means to a woman, there would be far less silent suffering in this world. We are all very fond of abjuring woman to maintain her highest standard in these days. We say that as woman is, so will the world be. I am far from saying

that this is not true. It must be true because we say it so often. But in all this admonition of women, has man no part? Has he nothing to do? We expect more from women in the arts of housewifery and motherhood than ever before. But, likewise, have wives, a right to expect more from their husbands than ever before—more, I mean, in those subtle little acts of love and consideration which bring new hope to the most tired wife, which make light the heaviest burdens which she carries for her husband, and which make the sorest trials moments of satisfying pleasure.

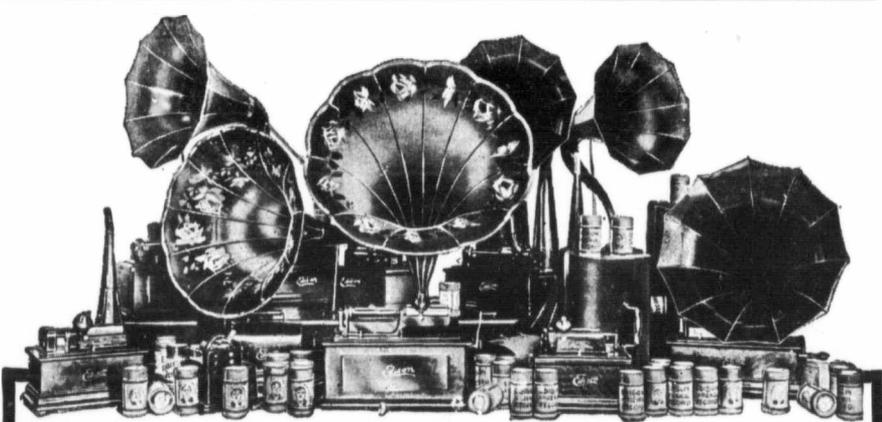
**How Time Flies!**

He—Isn't it time for me to go home?  
She—Dear me, no! It's long past.

**Not Explicit Enough**

The old Patron—Give me two eggs fried on one side.  
The new Waiter—Yes, sir; and how do you want the other side cooked, sir?

Mrs. Penny of Sheffield, speaking at the Co-operative Congress, said, "Man is but clay, and woman makes a mug of him." To which "John Bull" replies:—Sarcastic Mrs. Penny has a tongue that's rough, Bu yet her metaphor does not go far enough; Let us admit that man's the thing a woman makes him— How often when he is a mug the woman breaks him.



**Your Choice** of Any of These  
**Yes, FREE.** Shipped positively and absolutely free. You do not have to pay us a single penny either now or later. We don't ask you to keep the phonograph— we just ask you to accept it as a free loan. We do not even ask you for any deposit or any guarantee, not even any C. O. D. payment to us. All we ask is that you tell us **which** of the magnificent Edison outfits you prefer so that we can send that one to you on this free loan offer.

**Just Take Your Choice** You Don't Have to Buy Anything

Get any of the outfits shown above—your choice of records too. Simply get the phonograph and the records and use them free just as though they were your own. Entertain yourself, your family and your friends too, if you wish, with everything, from the catchiest, newest popular songs, side-splitting minstrels and vaudeville monologues to the famous grand operas, **Amberola** and other records sung by the world's greatest artists. Hear all this to perfection on the Edison Phonograph. After you have had all this entertainment absolutely free, then you may simply send the outfit right back to us at our expense. Now, if one of your friends wishes to buy such an outfit tell him that he can get the rock-bottom price, on easy payments, too; even as low as \$2.00 a month **without interest.** But that's not what we ask of you. We just want to send you your choice of the latest style Edison phonograph **free**—your choice of records too, all free—then we will convince you of the magnificent superiority of the new style Edison. It will cost us a little in express charges to get the phonograph back from you—that is true—but we'll feel amply repaid for that, knowing that we have made you a friend and a walking advertisement of the new style Edison Phonograph.

**Send Coupon for the New Edison Books FREE Today**

Get our handsome Free Edison Catalog and list of over 1500 records so you can select just the machine and the songs, recitations, etc., you want to hear on this ultra generous offer. Remember, there is absolutely **no obligation** on your part. All you need to do is to return the outfit at our expense when you are through with it. If you enjoy good music, and the finest and most varied entertainment that it is possible to imagine, or if you want to give your family and friends a treat such as they could not possibly get through any other means, then you should certainly send the Free coupon today. Don't wait—your name and address on a postal will do, but the coupon is handier. No letter necessary. Be certain to write while the offer lasts. Better write today.

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Name \_\_\_\_\_  
Address \_\_\_\_\_

No letter necessary. Just sign and mail Free Coupon NOW



# Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



## "THORNS HAVE ROSES."

It isn't so much the way things are  
As the way you look at a thing;  
There's always the notes of a merry song  
For the voice that is ready to sing.  
And "Roses have Thorns" is a stupid cry  
For though it may all be so,  
I think we would better be telling the  
world  
That Thorns have Roses, you know.  
We can not expect to live our lives  
From all that is bitter apart.  
But each one knows when he's felt a thorn  
From the pain it has left in his heart.  
He doesn't need us to tell him it's there  
Or murmur a maxim of woe;  
We'd better be singing a paean of hope,  
For Thorns have Roses, we know.  
—Florence J. Boyce, in Park's Magazine.

## THE BRAVEST BATTLE.

The bravest battle that ever was fought,  
Shall I tell you where and when?  
On the maps of the world you will find it  
not;  
'Twas fought by the mothers of men.  
  
Nay, not with a cannon or battle shot,  
With sword or nobler pen;  
Nay, not with eloquent words or thought,  
From mouths of wonderful men.  
  
But deep in a walled-up woman's heart—  
Of woman that would not yield,  
But bravely, silently bore her part—  
Lo, there was the battlefield.  
  
No marshaling troops, no bivouac song,  
No banner to gleam and wave;  
But, oh these battles, they last so long,  
From babyhood to the grave.  
  
Yet faithful still as a bridge of stars,  
She fights in her walled-up town—  
Fights on and on in the endless wars,  
Then silent, unseen—goes down.  
  
O, ye with banners and battle shot,  
And soldiers to shout and praise,  
I tell you the kingliest victories fought,  
Were fought in these silent ways.  
  
O, spotless woman in a world of shame!  
With a splendid and silent scorn,  
Go back to God as white as you came,  
The kingliest warrior born!  
—Joquin Miller.

One of the most discussed reforms of Queen Victoria of Spain is her campaign against the promiscuous kissing of infants and small children. She has forbidden absolutely that any of her own three children be kissed by the loyal people, who are only too anxious to show their devotion in this way. Her example, as is to be expected, is being widely followed, and elegantly printed labels bearing the words "No Me Bese" (Do Not Kiss Me) are now on sale throughout the country.

## HAVE WOMEN ANY RIGHTS?

Women are busy housecleaning in politics, society and in affairs concerning the protection and uplift of women and children. When women in a body go after a reform in anything they usually accomplish their purpose. When one woman starts out with an honest ambition she climbs up, up and on until she commands the respect and honor due her position.  
There are two methods necessary to use in getting what you want. First you must be deserving of it—second you must act with consideration and respect. Mrs.

Ella Flagg Young replied to an over-zealous friend who was an advocate of woman suffrage: "You can't knock off a man's hat and then expect him to take it off." Mrs. Ella Flagg Young is known as the "Little Educational Giant." Last year she was elected, over six male competitors, to the presidency of the National Education Association which met in Boston. Mrs. Young is the first woman chosen to manage the public school system of a great city. Her work requires a large amount of executive ability and pays her the salary of ten thousand dollars a year. For her Chicago position she defeated six men. She won how? By force of her womanly personality.

Then there is the "First Citizen of Oklahoma"—"Kate" or Miss Kate Barnard. When the politicians of Oklahoma want something done, they go to a little office on the top floor of the senate building and shake hands with a graceful little dark-haired young woman, on whose door one sees these words: "Commissioner of Charities." The politicians see Miss Barnard first, and the governor and the other state officials afterward.

A steady stream of people passes through her little office. Now how did Miss Barnard become one of the controlling spirits of Oklahoma? By being deserving and by really helping others. She first started a charity organization with the object of finding employment for the stranded people on the newly opened lands and in the newly-built cities. She soon became almost the patron saint of the "human driftwood of the city slums." These people in turn obeyed her implicitly on election day.

It is a usual occurrence for her to top a group of toughs in tow of a saloon-keeper, and ask them where they are going. If they say they are going to vote for a certain man whom she opposes, she reminds one that she had sent his daughter to school, another that she has nursed his wife through typhoid fever, and had found a suit of clothes for another.

Then she tells them that they must vote against the saloon candidate and for the decent man who was a friend of hers. Then while the saloon-keeper looks helplessly on, the toughs follow "Kate" to the ballot-box. When the State Department of Charities was established, she received a majority of fifty-six thousand votes for the position of commissioner.

All over the world women are giving their active minds and restless energy to the cause they have most at heart.

There are crusades against almost every evil and injustice which exists. Women are banding together to improve conditions in settlements, factories, hospitals, jails, homes, and asylums. They are fighting a hard battle now in the fight to protect the unfortunate.

The time has gone by when women are interested only in their own affairs.

Mrs. Belmont mortgaged her own home and appeared in court at three o'clock in the morning for the factory women she was trying to help—a splendid evidence of sincerity.

There is no prison so ugly that Maud Ballington Booth will not try to enter. She has done more to give the convict a chance than any other living person, and her Hope Halls are filled with men who want to begin all over again.

"Large is the life that flows for other's sakes,  
Expend its best, its noblest effort makes  
Devotion rounds the man and makes him whole"

Love is the measure of the human soul.  
I mention the work accomplished by these women simply to prove to my

readers the fact that women are doing a great work, and they do have executive ability.

It is when the need of reform comes close home to us that we join the rank of fighters.

I am sure every woman who reads this page is anxious to lend her sympathy and help in bringing about a Lower Law. The present law is wrong, un-just, cruel and even dangerous. It is not necessary for the women of Western Canada to bear a large share of the burden in building up and paying for the homes, and their share in the accumulation of property is by no means small. Therefore they need a just law to protect their rights.

But many women say they are helpless, they can do nothing to bring about a reform.

Now the women who are at the head of the movement for the Dower Law say they want to know the actual feeling that the women in the country have regarding the condition as it now exists. So if our readers will write to this department they will help the movement a very great deal. I hope to receive many letters on the subject.

P. R. H.

## Mother's Corner

Last night, I heard a robin singing in the rain  
And the raindrop's patter made a sweet refrain;  
Making all the sweeter the music of the strain.

So, thought I, when troubles come, as troubles will  
Why should I stop singing?  
Just beyond the hill,  
It may be, the sunshine floods the green world still.

He who faces trouble with a heart of cheer,  
Makes the burden lighter. If there falls a tear,  
Sweeter is the cadence in the song we bear.

I have learned your lesson, bird of dappled wing,  
Listening to your music with its lilt of spring.  
When the storm clouds darken, then's the time to sing.  
—E. B. Rexford.

O, many a shaft at random sent,  
Finds mark the archer little meant;  
And many a word at random spoken  
May sooth or wound a heart that's broken.  
—Sir Walter Scott.

There's never a rose in all the world  
But makes some green spray sweeter  
There's never a wind in all the sky  
But makes some bird-wing feeter;  
There's never a star, but brings to Heaven,  
Some silver radiance tender;  
And never a rosy cloud but helps  
To crown the sunset splendor;  
No robin, but may thrill some heart,  
His dawn-like gladness voicing;  
God gives us all some small sweet way  
To set the world rejoicing.

Where there is faith, there is Love,  
Where there is Love, there is Peace,  
Where there is Peace, there is God,  
Where there is God, there is No Need.  
—House Beautiful.

God broke our years to hours and days  
That hour by hour,

And day by day,  
Just going on a little way,  
We might be able all along  
To keep quite strong,  
Should all the weight of life  
Be laid upon our shoulders, and the  
future, rife,  
With woes and struggles, meet us face to  
face  
At just one place,  
We could not stop,  
Our feet would stop; and so  
God lays a little on us every day  
And never, I believe on all the way  
Will burdens bear so deep,  
Or pathways lie so threatening and so steep  
But we can go, if by God's power  
We only bear the burden of the hour.  
—George Klinge.

## MAKE THE CHILD'S BED-TIME HOUR PLEASANT.

My little girl never liked to go to bed when the time came. I would make her and she often cried herself to sleep and her rest was disturbed all through the night.

At last I began to tell her stories and I read to her at bed time with the result that she is so delighted that she is happy now when it is time to go to bed. She talks about it during the day. I do not read excitable stories but good stories—with happy endings. I do not believe in sad stories for children. They think too seriously about such tales, for children as a rule listen very attentively. If I find while reading the story that the ending will be sad I make up a happy one.

Kind words mean so much to a child. I know a little one who is whipped for every little misdemeanor, and I am not surprised that she is nervous and irritable. When a child wants something very much that he should not have, if the mother will ask him a question about an entirely different subject, he will forget about his request. For instance a child wants some pie which the mother does not want him to have, instead of refusing him she will say: "Now Jack which would you rather have—a piece of bread or an apple?" This will turn the child's mind in another direction. I have tried this scheme successfully.

In the August number a table was printed for the feeding of infants. Through an error the table was not completed in the September number, therefore we complete it in this number.

8. Milk sugar, 1 oz. Lime water, 1 oz. 10 oza. of upper half milk. Water to 20 oza.

9. Milk sugar, 3 oz. Lime water 1 oz. Enough water to make 20 oza. To this add 21 oza. of upper half milk.

Of the above mixture it is seldom necessary for the health of the infant to use mixture of less strength than No. 5. Nos. 1, 2, 3 and 4 are of value, however, for temporary disturbances of digestion when it is desired to relieve the digestive organs of as much work as possible.

The infant which can take mixture No. 9 of the above is usually able to begin on No. 5 of the following, in which whole milk (4 @) is used.

Milk Mixtures.—(For the latter part of the first year.)

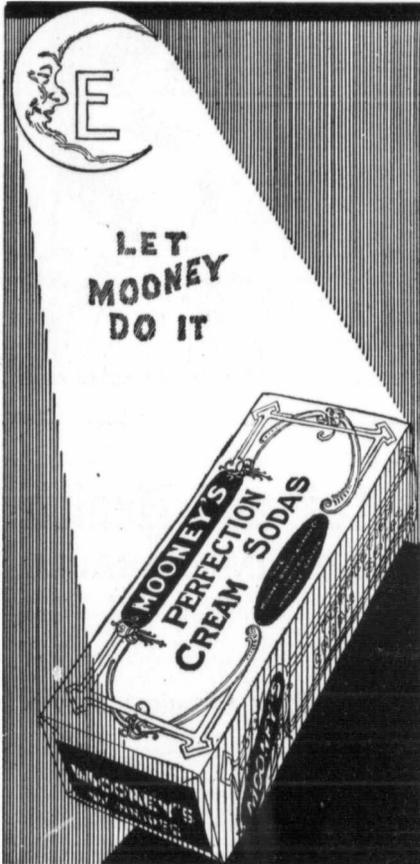
1. Milk sugar, 1 oz. Lime water, 1 oz. Enough hot water to make 20 oza.

After the milk is dissolved add 5 ounces of whole milk.

2. Milk sugar, 1 oz. Lime water, 1 oz. 6 oza. of whole milk. Hot water for 20 oza.

3. Milk sugar, 1 oz. Lime water, 1 oz. 8 oza. of whole milk. Hot water for 20 oza.

4. Milk sugar, 1 oz. Lime water, 1 oz. 10 oza. of whole milk. Hot water for 20 oza.



LESS TIME IN THE KITCHEN

MORE TIME IN THE FRONT ROOM

That's your reward if you let **MOONEY'S BISCUITS** take the place of the bread and biscuits you bake yourself.

You'll find **MOONEY'S** a delightful substitute for your own best efforts—the family will like them. Because

**MOONEY'S PERFECTION  
SODA BISCUITS**

come to you straight from the oven in the big Winnipeg factory.

They have that freshness and crispness only to be found in a newly made biscuit. No other biscuit can come to your table as fresh from the oven as **MOONEY'S**.

Get the big package or the sealed tin—  
both of them damp proof, dust proof,  
dirt proof—and

**"LET MOONEY DO IT"**

5. Milk sugar, 1 oz. Lime water, 1 oz. Enough water to make 20 ozs. To this add 12 ozs. of whole milk.

6. Same as No. 5, with the addition of 14 ozs. of whole milk.

7. Same as No. 5, with the addition of 16 ozs. of whole milk.

For mothers who do not get milk bottles and who have difficulty in using the above formulas, the following mixtures are given:—

For a new-born baby, 1 oz. of fresh milk 3 ozs. of water; 1 oz. of fresh cream, and 2 teaspoonfuls of milk sugar. This makes about 5 ozs. For 20 ozs. use 4 times as much of each ingredient.

For older babies, 2 ounces of fresh milk; 2 teaspoonfuls of milk sugar and 1 tea; spoonful of lime water. Larger quantities may be made by increasing the amounts of each ingredient in proper proportion. More milk and less water will be used as the infant becomes older.

If cream disagrees with the infant, its use should be temporarily stopped. Milk sugar should always be dissolved in hot water. It sours quickly when dissolved so not more than a day's supply should be prepared at a time.

Barley water is recommended by authorities as a valuable infant food. Barley water as a rule is preferable to oatmeal water for steady diet on account of the tendency of the latter to relax the bowels.

As a rule these cereal waters are not required until after the sixth or seventh month. Some young infants, however, unable to digest the curds of the milk, are able to do so when barley water is added. For very young infants, cereal waters and gruels should not be used except under the direction of a physician. After the sixth or seventh month, barley water may be added to the milk of nearly all infants, with advantage. Barley water may take the place of the water used in dilution, as barley water is added, the sugar should be reduced. When the infant is consti-

pated, oatmeal water should be used place of the barley water.

Many physicians of experience say that barley water or oatmeal water should not be given to infants under six months old, and when after that age, should be in the same quantity as the water recommended for dilution of the milk.

Milk should not be permitted to remain in the bottles after the baby is through feeding. When not in use, nipples should be kept in a solution of boric acid—a teaspoonful to the pint. Do not taste the baby's food by putting the nipple into your mouth. Begin with a weak food and the food cold until ready to use it, then warm it to about blood heat. Feed the baby regularly. If you start right the baby will be ready for each feeding and will not cry for food between feedings.

One mother writes asking for information as to the feeding of her boy baby. She says she is feeding him on milk and barley water—half and half and he suffers from wind and constipation. She asks if she is feeding him right.

In the August number and in this number is a complete table for the feeding with the proper proportions. If the mother examine this carefully, she may find that she may not be giving him the right proportions for his age. If any reader could offer suggestions to help this mother I would be thankful.

**Correspondence**

A report from the Deloraine Society, written in May, through some error, did not reach my desk until last week. I am sorry about the delay, but I am pleased to publish it in this number, and I sincerely trust the Deloraine Society will understand the reason of the delay in publication.

**The Report.**

"It was suggested at one of our meetings that we discuss what good results

had been gained so far by forming this society, however that subject was left until the society was a little older and better able to judge, but I can see this far that if nothing else had been gained than just meeting together once a month and exchanging ideas, some advance has been made. We have a membership of about thirty-two, and one of the first things we did was to open a rest room in our town to be used by every lady who cared for or had need of such a room. So far it has not been patronized as well as we could wish, through a sort of feeling that it is only for those of the society—although we have advertized it free to all, and have had cards printed and put up in all the stores. Then, too, it is not as conveniently placed as we would like, but the best we could do. We pay five dollars a month rent, and that heats and cares for the room. We also have had some very excellent papers on the "Relation of the School to the Home," and one on "Amusements in the Country Home"—both by farmers' wives.

"Then our delegates to the Agricultural College gave us a very good report. One of our doctor's gave an interesting talk on 'Germs.'

"So far we have held our meetings in the private houses in town during the winter, to save the expense of rent and fuel, and then, too, it seems more sociable—and that is what we strive for, to have everyone to feel free to talk and take part. Our next two meetings will be in country homes."

This is a very enterprising club, and I am sure we are all interested in this excellent report.

One woman writes:

"I am interested in woman's legal rights. I would like to see my own sex fairly dealt with, as I know of so many who are unfairly dealt with."

Another reader writes:

"We take your magazine, and I am much interested in the woman's department. There are some splendid things in the August number for the woman who has lost her smile and for tired mothers."

Another woman, who is interested in our page, writes very encouragingly of the helps she finds in the letters from other women.

I have received some beautiful letters of appreciation this month, for which I thank the writers sincerely. These letters mean more to me than you realize.

So many are writing in for the article on "Helps for Expectant Mothers," that I will continue the offer another month, and send it to any woman who writes for it. I am thankful it is doing so much good. I am answering the personal letters as promptly as possible. There are a great many, so I ask the writers to kindly pardon any delay.

P. R. H.

**PIE PLANT PARTY**

Katherine Decatur Morse.

It was Cornelia's turn to entertain the "Fortnightly Club," composed of a dozen jolly members. You may be sure that there were no bounds to their curiosity when the members received their invitations, for Cornelia was noted for unusual stunts.

After the guests had arrived and removed their wraps, they were given cards in the shape of a quarter of pie with cards attached which said: "Pie-plant—a place or factory where pies

are made." Below was a list of questions without the answers, of course.

The hostess explained that the answers all had the sound of pie, but were not necessarily spelled so. Twenty minutes were given, and at the end of the allotted time the hostess rang a bell. She then read the correct answers. The reward was a confectionary box in the shape of pie filled with bonbons. Here are the questions and answers:

- Questions.**
1. A large snake?
  2. A philosopher?
  3. A tropical fruit?
  4. A guide?
  5. Of various colors?
  6. Article used by our male friends?
  7. Plant that most of us like?
  8. Devout?
  9. An article used by most dealers?
  10. Pertaining to fireworks.
  11. Found on houses?
  12. A first settler?
  13. A mineral?
  14. A printing type? \*
  15. Reverence?
  16. The nap of wool and cotton?
  17. A kind of spice or pickle?
  18. An outlaw?

**Answers.**

1. Python.
2. Pythagoras.
3. Pineapple.
4. Pilot.
5. Piebald.
6. Pipe.
7. Pie-plant.
8. Pious.
9. Pint.
10. Pyrotechnic.
11. Piazza.
12. Pioneer.
13. Pyrites.
14. Pi.
15. Piety.
16. Pile.
17. Pimento.
18. Pirate.

Next there were small pies passed to six people, each with a missing slice; the other six each had a slice to be fitted to a pie. In this novel way partners were chosen for this amusing little game. Bright, tin, pie plates were passed, one for each couple, on which were a number of letters, which the hostess told the guest were printers "pi."

When the letters were properly put into words the result would be well-known quotations. The letter beginning the sentence was done in red ink; the rest were black, and each couple worked together. There were real pies for these prizes.

The centrepiece for the dining room table was a huge Jack Horner pie containing dainty flavors for all. The refreshments consisted of round sandwiches and cakes, creamed oysters in tart shells and ice cream tarts.

**THE BOY'S NEW SUIT**

Parents are not always aware of the personal pride that is hidden away in the heart of the little boy who must wear handed down or shabby clothing. Many times these garments were worn without complaint, but at the same time there is a better feeling growing in this boy's heart, and he is secretly planning how he will clothe himself as soon as he is able to earn his own dollars.

You'd hardly believe that one neat yet not costly suit saved the life of a boy once, or rather it saved him from becoming a worthless citizen and made him one of the most successful business men of his state. This boy was left an orphan at an early age, forced to earn his own living, and had passed through many discouraging places. He had inherited a liking for good clothes, and many times he went hungry that he might keep himself looking neat and tidy. But the day came when he had almost reached the limit of his patience and strength, his clothing was shabby, salary poor, and he was on the point of giving up to the life of a tramp or beggar.

The boy had thought 'over his unfortunate past, the hard work he had performed with little pay, and as he passed along the street he stopped in front of a window displaying men's

and boy's clothing. As he gazed so intently into the shop window his sad look and poor clothing attracted the attention of a kind hearted man who chanced to be near. A few words of inquiry explained the position of the unfortunate boy, and the hurt pride that he was trying to cover up with his ragged coat. "Come right in," the kind man said as he took the boy's arm. After the merchant had fitted the boy into a complete new suit the two looked after him as he proudly walked out the front door. His new friend kept watch for a few days and was gratified to meet his new friend with: "Do you know what you did? You made a man of me. I left that store and sought work in a store down here, and although it has only been a week, I'm on my feet again and determined to win out. That suit of clothes you gave me did it, for I had planned to give up and become a tramp. I'll repay you some day, for all your kindness."

That boy became a successful business man and many years later was privileged to repay his old friend by administering to him in his old days after a heavy financial loss had left him discouraged and almost penniless. It paid well for both and although the man had received good pay for his deed by seeing his young friend made prosperous, yet he enjoyed even more—he reaped a full harvest.

This is only one instance where crushed and wounded pride would have ruined a good and useful life, had not some kind heart chosen to offer help. We say this and say it earnestly, that many a boy has not reached the height of his ability because he has felt himself unworthy and unfit for a certain advancement in his work. A boy dressed even the best is inclined to feel himself inferior to others of his acquaintance, but when he must feel that he is shabby and a subject of criticism, it takes all the manly pride and ambition out of him.

Remember, mothers, when the girls in the home are getting their tasty dresses and bright new hats, your sons will feel slighted if they are not "brightened up" a little, too.—From the Farmers' Guide.

*Recipes*

**Sweet Pickled Pear**

Ten pounds of Bartlett pears, not quite ripe, wipe them and remove the blossom end, then cook in boiling water until tender. Remove fruit and strain the water. Add to one quart of this water, one quart of vinegar, five pounds of sugar and half a cup of mixed whole cloves, allspice, mace and stick cinnamon. Put it on to boil for thirty minutes, then add the pears and when well scalded, remove them and pack in glass jars. Boil the syrup down until there is just enough to cover the fruit, pour it over and seal at once. Keep in a cool, dry place.

**Grape Catsup**

Cook the grapes till tender, strain through a sieve and to five pounds of pulp add three pounds of sugar, one tablespoonful each of ground cinnamon and spice, one teaspoonful of cloves and saltspoonful each of salt and cayenne pepper.

**Tomato Catsup**

Thirty ripe tomatoes, six green peppers and five onions chopped fine. Bring to a boil eight teaspoonfuls of vinegar, two tablespoonfuls of salt and one teaspoonful of brown sugar, add the vegetables and cook until thick, run through a sieve, heat and bottle.

**Currant Catsup**

Mash and strain through a cloth ten pounds of currants. Add one quart of vinegar, five pounds of granulated sugar, three tablespoonfuls of cinnamon, two of allspice and one each of clove and salt, and one teaspoonful of red pepper. Boil slowly for sixty minutes and seal in bottles.

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### The Cooking of Meats

Here are a few important points in the cooking of meats taken from the Farmer's Guide:

Never wash meat or soak it in cold water, as this extracts the juices and is only allowable in soup making. Wipe the meat with a clean cloth wrung out of cold water. Place on a rack or perforated cover in a baking pan. Do not add one drop of water or seasoning. Place pan in a very hot oven. If the oven is too hot, the outside of the meat will get hard and tough so quickly that the inside will not cook properly, but it must be hot enough to brown a five-pound roast in about half an hour. The heat will sear the outside and keep the juices inside. When it is very brown reduce the heat and cook more slowly. About half an hour before it is done, dredge the meat with salt, pepper, and flour. When the flour is quite brown add two cups of boiling water. This will make a fine brown gravy of delicious flavor.

When meat is well roasted it is crisp and brown on the outside and is browned inside to about a depth of three-quarters of an inch, both top and bottom. The whole inside should be a good pink but not at all raw. Raw meat is digested easily, but we cook it in order to make it more attractive in appearance and more appetizing in flavor.

Round steak is juicy, but not so tender as porterhouse or sirloin, on account of its coarse fiber, and it must be cooked very carefully. Use an iron frying pan, if possible. Heat very hot, but do not use a drop of grease. When the pan is smoking put the steak in and turn rapidly from side to side. This will help to keep in the juices. Then brown and cook more slowly. All meat should have a very high temperature at first to sear the outside; then it must cook more slowly. Meat is ruined if it is cooked very quickly. The flavor is much better and the meat more tender if these directions are followed.

For soup making we want to draw out the flavor of the meat. Therefore soak the meat in cold water for one hour. Place the kettle containing this water and meat over a slow fire and heat gradually. This will make soup of fine flavor. The meat will be tasteless, but will still contain a great deal of the proteid or nourishing matter. It should be seasoned well and may then be used for hash, croquettes and made-over dishes.

If you want to use boiled meat for dinner, not for soup, put the meat in boiling water and cook quickly for a few moments, then slowly. For a stew, where you wish to use the meat and the juice, the process is different. In this case you want some goodness in the meat and some in the gravy, so you must put the meat into cold water and put it over a very hot fire where it will boil quickly. Then cook slowly for several hours, until tender. Some people boil meat so hard that it becomes very stringy. There is no better way of making stews than by using cheap cuts of meat, such as the lower round, adding vegetables as desired, and cooking it in the oven instead of on top of the stove.

Salt meats should be soaked, the water changed once or twice, and then the meat must be cooked long and slowly.

### Weights and Measures in Ordinary Use

- 3 level coffee cups sifted flour equals 1 lb.
- 2 level coffee cups pulverized sugar equals 1 lb.
- 1½ level coffee cups granulated sugar equals 1 lb.
- 1¼ level coffee cups "A" sugar equals 1 lb.
- 4 scant tea cups sifted flour equals 1 lb.
- 2 scant tea cups soft butter, packed equals 1 lb.
- 2 scant tea cups granulated sugar equals 1 lb.
- 2¼ scant tea cups brown sugar equals 1 lb.
- 8 or 10 ordinary eggs equals 1 lb.
- 4 tablespoonfuls equals 1 wine glass or half a gill.
- 2 wine glasses equals 1 gill or half a cup.
- 2 gills equals 1 coffee cup full or 16 tablespoonfuls.
- 2 coffee cupfuls equals 1 pint.
- 2 pints equals 1 quart.
- 4 quarts equals 1 gallon.
- 2 tablespoonfuls equals 1 ounce liquid.
- 2 tablespoonfuls equals 1 ounce liquid.

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C.T.F.

1 tablespoonful salt equals 1 ounce.  
1 pint of finely chopped meat, packed solidly equals 1 pound.

#### FOR ENTERTAINMENT

At a party of young people I found the following game very successful. Cut each number out, paste it on stiff paper and pin these about the rooms. Then given each pencil and paper and ask them to write down the answers. Each answer is a name of a bird. Pin some of the papers in difficult places to find. I put some in the corners of picture frames and on window curtains and draperies. It is a nice game as they walk around and it encourages sociability. It is a good game to begin an evening's entertainment.

#### To Remove Mildew

Mildew stains may be removed from white materials by boiling in sour milk or buttermilk. Then lay on the grass in the sunshine for a few hours. The treatment may have to be repeated several times, but in the end the stains will disappear.

#### IN THE WORLD OF WOMEN

Countess Szechenyi, formerly Gladys Vanderbilt, has given \$120,000, or 600,000 crowns, to the Budapest Academy of Sciences for the purpose of endowing chairs of the Hungarian language and literature at universities in other countries.

Mme. Yei Ozaki, the Japanese writer, is half-English. Her mother was a Miss Morrison, daughter of a famous English teacher. Mme. Ozaki's husband is the mayor of Tokio, and is himself an author of note. He has recently translated into Japanese "The Life of Lord Beaconsfield."

Mrs. Ophelia M. Amigh is matron of the woman's industrial prison at Geneva, Ill. She believes that by surrounding the prisoners with an uplifting influence any latent good that is in them will be awakened.

Fraulein Emmo Krobek, a German woman, who was the chief mistress of ceremonies at the court of the emperor of Corea in 1905, appears as the author of a book, published in Berlin, which contains sections dealing with the visit of Mrs. Nicholas Longworth, then Miss Alice Roosevelt, to Corea in that year. The author makes it very plain, according to a foreign dispatch, that the daughter of the first gentleman in our land acted more like a rude tomboy than a young lady of refinement.

trust to Nature. "The woman who wears corsets," she says, "makes a martyr of herself, and does everything possible to hinder her natural development. All that is unnatural offends my sense of beauty and is hateful to me. A tight waist I resent as unesthetic." Nevertheless corsets will stay on.

#### Women Uphold the Law

A campaign with a twofold object has been begun by a special committee of the Chicago Woman's club. Its aim is to educate public sentiment in favor of civic betterment and to enforce all laws bearing upon this subject. Some of the women have delved into the ordinance records in search for laws which have been disregarded.

Mrs. Herman Landauer, chairman of the committee, thus explains the work in progress:

"This committee means business, and we shall not content ourselves with mere words. Regularly we shall make public some particular law or ordinance which is being dormant; this we propose to have enforced or know the reason why it should not be. The co-operation of the newspapers has been sought, and as a result of the publicity we hope to get results."

One of the ordinances brought to light declares it unlawful to litter the streets with paper or rubbish. It provides a fine of \$2 to \$100 for each offense.

For the first time in the annals of literature a blanket Indian squaw and a white woman of culture have collaborated in the production of a book. And

a daintily beautiful book it is, called "The Maid of Pend d'Oreille," daintily bound in birch bark and tied with strips of cedar bark. The author of the charming little Indian poem is Miss Lucy Byrd Mook of Fayetteville, Ark., who has been spending the past year in the northwest and who has become imbued with the spirit of the "glad, wild west." While she was writing the poem the Indian women were gathering the bark, with which the books are tied. Most of this work was done by the Indian girls of Neah Bay, on Cape Flattery, the westernmost portion of the United States proper. The cover of the book is ornamented with an ideal head of an Indian maiden and the poem tells the story of an Indian princess who lived on the banks of Pend d'Oreille and who threw herself into the water when deserted by her fickle lover, a Hudson Bay trader.

Miss Mook, who writes under the name "Le Moequeur," has adopted the metre and form of Kipling's Mandelay and has put between the pretty birch bark covers with their Indian ornamentation a beautifully written and illustrated poem which is really what its author declares, "a breath o' the west." It brings to us the spirit of the great mountain, silent except for the music of the cascade which pours down its steep sides, the tall trees which seem to meet and kiss the skies in gladness and the Great Spirit which is upon the water. Amid such "subtle charm and mystic grandeur" the author sets us follow the little Maid until the mirrored Pend d'Oreille hides her sorrow and chants a mournful cadence in her memory.

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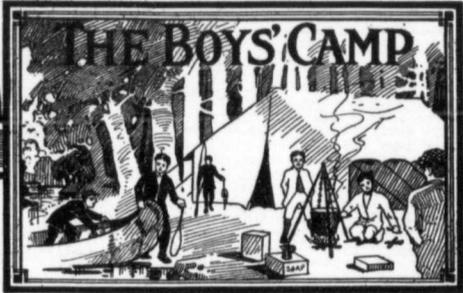
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## The Girls' Cozy Corner

The Foolish Little Maiden and Her Foolish Little Bonnet.

H. Hammond.  
A foolish little maiden bought a foolish little bonnet  
With a ribbon, and a feather, and a bit of lace upon it,  
And that other maidens of the little town might know it,  
She thought she'd go to meeting the next day just to show it.

But though the little bonnet was scarce larger than a dime,  
The getting of it settled proved to be a work of time;  
So when 'twas fairly tied, all the bells had stopped their ringing,  
And when she came to meeting, sure enough the folks were singing.

So the foolish little maiden stood and waited at the door;  
And she shook her ruffles out behind and smoothed them down before.  
"Hallelujah! hallelujah!" sang the chorus above her head,—  
"Hardly knew you hardly knew you!" were the words she thought they said.

This made the little maiden seem so very, very cross,  
That she gave her little mouth a twist, her head a little toss;  
For she thought the hymn they sang was all about her bonnet,  
With the ribbon, and the feathers, and the bit of lace upon it.

And she would not wait to listen to the sermon or the prayer,  
But pattered down the silent street and hurried up the stair,  
Till she reached her little bureau, and in a hand-box on it  
Had hidden, safe from critic's eye, her foolish little bonnet.

Which proves my little maiden, that each of you will find  
In every Sabbath service but an echo of your mind;  
And that the little head that's filled with silly little airs  
Will never get a blessing from sermon or from prayers.  
—Selected.

Dear Cousins in the Cozy Corner: We have a splendid lot of letters this month from the girls and boys too. I promised you I would write about an organization known as the Girl Guides. It is composed of girls in nearly every civilized country and means for the girls what the Boy Scout Movement does for boys.

Girls who belong must be courageous, resourceful, and helpful in every way. They must be thoughtful and helpful and cultivate a character that will tide them over emergencies, and they must be gentle and womanly. It is a splendid idea and I am sure from time to time you will want me to tell you more about it. The girls have done many brave deeds like saving people from drowning and helping older people in trouble. There is a branch of the organization in Winnipeg. The head office is in London, England.

Now I want to tell my girls about a book I have been reading, describing the lives of the poor children in London, England. The family I am telling you about make match boxes for a living. "The youngest, a tot of five years, helps by pressing down the pasted tissue paper which is fastened round the boxes to keep them together. The mother folds the material into shape, and puts on the printed paper; one child makes the "drawer" as the inside is called, another child fastens on sand papers on which the match is struck. This hurts the little fingers." Poor little fingers that should be picking flowers on our beautiful prairies. These little children work all day long in a hot stuffy room and have no pure air to breathe or good food to eat and never, never play.

Now are you not thankful that you can play and live where you have fresh air and enough to eat.

Sincerely  
—Cousin Doris.

Whitewood, Sask.  
Dear Cousin Doris:—Will you please admit a stranger to your Cozy Corner if I promise to be good?

I live on a farm five and a half miles west of Whitewood.  
My papa has taken the Canadian Thresherman and Farmer. He likes it fine.

I go to school every day when it is fine, and I am in the 6th grade at school. I walk two and a half miles to school. We are going to have a new teacher the first of April.

For pets I have a calf and cat. The calf's name is Dandy. Do you not think it a nice name? The cat's name is Tabby. She likes to catch mice and play with a ball.

I am sure you are glad, like all the rest of us, that summer will soon be here, and it will be nice to hear the birds singing again, and see the brave little crowing beauty the earth again.

How many of the cousins are going to plant flower gardens this summer? I am for one. My favorite flowers are pansy, sweet pea, nasturiums and eschscholtzia.

I saw a white owl a few days ago. It is the only one I have seen for the winter. There has been a Jack rabbit around our haystack all winter. I like to see him run from the dog, because he can leap so far.

We have a number of hens and have been getting eggs all winter. There was a weasle in our henhouse. He killed a few hens. We took all the hens out of the henhouse. We do not think the weasle is in the henhouse now, for we put some poison on a dead hen and he ate some of her.

Well, I have taken up too much room in the Cozy Corner already, so I will say Good-bye.—I remain your cousin, Hazel Bottoms.

Minto, Man.  
Dear Cousin Doris:—This is the first letter I have ever written to the Girls' Cozy Corner, and I hope to see my letter in print and receive a book.

My father takes the Canadian Thresherman and Farmer, and I am much interested in the Girls' Cozy Corner.

I am having a lot of fun skating this winter. My brother and I often go to the skating rink, which is three and one-half miles distant. I am just learning to skate this winter, and I think it is a great exercise for the people. I was at a carnival this winter. I went in costume. Some people were dressed very comical. One boy was dressed as a clown. One lady

was dressed as a squaw. There was a man dressed like a Chinaman. There were many more in costume, and some looked very comical.

My brother shot some rabbits this winter. They have a 22 rifle, and in the summer time I try to shoot gophers, of which there are many.

I go to school every day that it is not too cold and stormy. Our school started on Jan. 17th. I am in grade 6 and am eleven years old. My studies are arithmetic, spelling, writing, reading, Canadian history, grammar, geography, drawing, physiology and literature.

I am afraid I will take up too much room in your page, so I will close. Wishing your Cozy Corner every success.—I am your loving cousin, Laura E. Mogk.

Dear Girls of the Cozy Corner—Can I come in? Mother went to Winnipeg yesterday and is going to stay a week. We have not been going to school because the roads are so bad. A while ago my sister went to cook for a week at our neighbors. I went over there once to bake some, and mercy sakes, all the cake stuck to the pan. I tell you I did not go over there to bake again. Say, dear cousins, do any of you know the words of "Hallo Central, Give Me Heaven?" If so, would you kindly send them to me. For pets I have a cat and two calves. I like horses very much, and also sheep. We have four little lambs now and two calves. I would like to correspond with some of the girls, if they would care to write me. Well, I guess I will have to close, hoping to see this in print. If it is too long throw it away, cousin Doris.—I remain your cousin, Dora Bjarnason.

Guernsey, Sask.  
Dear Cousin Doris:—This is my first letter to the Girls' Cozy Corner. My father takes the Canadian Thresherman and Farmer. We all like it fine. I like reading the Girls' Cozy Corner.

We came from U.S.A. five years ago. I am ten years of age. I do not go to school in winter. I think it will open the first of April.

We live five miles from Guernsey. My father has a threshing machine. There is lots of snow here yet, but it is nice weather now days. I like riding on the big snow drifts. For pets I have one cat, her name is Fanny. I have one brother and no sister.

I will close for my letter is getting too long. Wishing your club every success.—Yours sincerely, Hazel Hendricks.

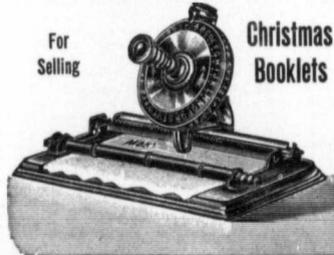
Justice, Man.

Dear Cousin Doris:—This is my first letter to the Canadian Thresherman and Farmer. I am a girl, nine years old. We live on a farm 24 miles from Justice and thirteen miles from Brandon. I go to school every day. There are three of us that go to school. One brother and one sister and myself go. We live one mile from school. Our teacher's name is Miss E. Pentland. We drive to school. We have one dog and three cats for pets. I am in grade 5 at school. My favorite subjects at school are reading, spelling and arithmetic. We have ten horses and twenty-six head of cattle and seventy-five hens. We have a section of land. We play bear at school. I have a brother living one mile and a half from our place, and my oldest sister keeps house for him. I have one sister going to the Wheat City Business College in Brandon. My two brothers stay home in summer and they go to school in winter. One of them stays home one week and the other the other week, for one has to help father. I would like some girls to correspond with me. Wishing your paper every success.—Ella Miller.

Plunket, Sask.

Dear Cousin Doris:—Will you let a little girl join your Cozy Corner? My papa takes the Canadian Thresherman and likes the paper very much. I like to read the girls' and boys' letters very much. I have only been to school 10 months altogether, and I am in the 4th grade. I cannot go to school this summer as we have no school here. We are just new comers here on our scrip, and we have no school started yet. I can make cake and bread, and it is good too. I milk for my papa nearly every night. I like to ride horseback, but our driving horse bucks sometimes, so I am afraid of him, but mama rides him. He just bucks for fun. I have one little sister, eight years old, and one little brother one year old. He is a dear little brother too. Cousin Doris, I wish you could have been here to help mama and papa fight prairie fire. It wanted to burn our cow pasture up, but papa beat it. I see you give prizes. Hope I will be a lucky one. I will close, hoping to see this in print. Wishing you best of success in your good work.—Your cousin, Ethel Yerrill (age 10)  
You write a beautiful letter, Ethel, for one who has attended school so little.—C. D.

## TYPEWRITER—FREE



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This is an exact picture of the nice typewriter we are giving to BOYS and GIRLS for selling our CHRISTMAS BOOKLETS. This typewriter is easy to operate. It has all the letters of the alphabet and figures, etc. Send for only \$4.00 worth of our beautifully embossed and colored booklets, each with a special insert (with appropriate verse) attached with silk ribbon. They are quick sellers at 3 for 10c. Write us now for booklets—you can't fail to sell them—everybody buys Christmas booklets and these are the most "catching" of anything ever offered in this way. As soon as you have sold them, send us the \$4.00 and we will at once forward typewriter as represented. Every boy and girl should have one of these fine machines. Don't delay. The sooner you start the better. More chances of securing other splendid premiums besides the typewriter.

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North West Branch—WINNIPEG. THE STRONGEST FIRE COMPANY IN THE WORLD

FRED W. PACE, Local Manager

Mowbray, Man.

Dear Cousin Doris:—This is my first letter to the Girls' Cozy Corner. I am going to school and like it fine. My teacher's name is Miss A. M. Spearman. My studies are reading, writing, spelling, arithmetic, geography and grammar.

The roads are very muddy, and it makes it bad for walking. All the snow is nearly gone.

We saw a crow the other day, so spring is likely coming.

We have three kittens, whose names are Jennie, May, and Daisy. Also seventeen head of cattle and seventeen horses.

I am going to tell you about our little colt. Last summer when the men were all away, they had taken Daisy, its mother. The colt got hung up in his halter, and it was nearly dead when we found it.

As my letter is getting long, I will close, hoping this escapes the W. P. B. and will win a prize.

Wishing the club much success.—I remain your cousin, Mabel Jackson.

Inglow, Man.

Dear Cousins:—Will you make room for another new comer? I am a little girl ten years old. I have yellow hair and blue eyes. I am short for my age. I live along Boggy Creek. It is very near dry now, but in the spring the water is very deep. The creek has a sand bottom, which is very bad for cattle and horses if they break through the sod they go right down. We had a horse bogged in it last spring. My father went to the creek to bring the horses to the stable to feed them, and one was out quite a way in the water, eating the long grass, when father called

the horses they tried to trot out, and they broke through the sod and the yard horse got out, but the other horse bursted a blood vessel and died. I go to school. I am in grade 3, but I will be in grade 4 as soon as the rest of my class can get their books. Mother sent to Eaton's and got nine, and the others are going to send to Eaton's for theirs. Now I will stop. I am afraid I am making my letter too long.—I remain your new cousin, Rena Clark.

### The Canadian Boys' Camp

October's Party.

October gave a party:

The leaves by hundreds came—  
The Ashes, Oaks and Maples,  
And those of every name.

The sunshine spread a carpet.  
And everything was grand,  
Miss Weather led the dancing,  
Professor Wind the band.

The Chestnuts came in yellow,  
The Oaks in crimson dressed;  
The lovely Misses Maple  
In scarlet looked their best.

And balanced all their partners,  
And gaily fluttered by;  
The sight was like a rainbow  
New fallen from the sky.

Then, in the rustic hollows,  
At "hide-and-seek" they played,  
The party closed at sundown,  
And everybody stayed.

Professor Wind played louder;  
They flew along the ground;  
And then the party ended  
In jolly "hands around."  
—Our Dumb Animals.

Oakland, Man.

Dear Cousin Doris:—I saw my last letter in print, so I thought I would write again I am going to tell you of my brothers' breaking in a pair of colts. They hitched them up one day. They ran away and the box very near fell off. They hitched them up again and were putting on the box, my brother had the box very near on, when the colts got afraid of it. They pitched one of my brothers into the fence. My other brother could only get one line. He caught the line and it turned them into the thorn bush. One day a whole load of grain in the box. The next day the colts were harnessed and put on the wagon tongue. My brothers headed them towards three oak trees. They began to run. They were steered into another bunch of trees. They knocked my brother down and very near ran over his head. They did not run away again, for my brothers got a pair of curb bits for them. Well I guess I will close.

This is a splendid letter, and I am sorry I have lost the name of the writer.—Cousin Doris.

Kelfield, Sask.

Dear Cousin Doris:—I am interested in the Boys' Camp, and thought I would write.

I live nine and one-half miles from Twenty.

I live on a farm of seven hundred and thirteen acres.

We have fourteen horses and two colts about a year old. We call them Prince and Queen.

We have four cows and four young cattle twenty-five pigs, thirty hens, one dog, called Mac, and three cats.

I am ten years of age. My brother will be five the nineteenth of this month.

The cat that stays at the house is our pet, and we call her Muffles.

Wishing the camp every success.—Yours Wilfrid Weese.

Hochstadt, Man.

Dear Cousin Doris:—This is the first letter to the Canadian Boys' Camp. I am fourteen years of age. I caught this winter seven rabbits. I had snares of messing wire. I would like to get a book. We live here in a level country. We live one mile from our post office, and ten miles from Otterburne, which is our station, and about thirty-five miles from Winnipeg. We have three horses, five cows, two big oxen, four calves, two pigs and about forty hens. We have a big farm here, a hundred and five acres are in culture.

Last fall we got only one hundred and eighteen bushels of wheat and two hundred bushels of oats and three bushels of barley. We have a Chatham incubator, in which we can put one hundred and twenty-five eggs. Last year we had two hatches, and this year we want to have three hatches.

I have five sisters and one brother have lots of rats in our buildings. I caught one rat in a trap a few days ago.

My father wants to go to-morrow morning to Winnipeg on the train, and is coming back the same day. We bought ten acres of fruit land in B.C., and want to sell our farm here. My father is not at home now. He went to the grandparents to get their butter, which he wants to take along when he is going to Winnipeg. I will close.—Peter K. Toews.

Portage la Prairie, Man.

Dear Cousin Doris:—I was glad to see my letter in print. I am going to tell you how I nearly lamed myself for life. I was driving the horse power to elevate the grain into the bin upstairs. I had placed the oil can in the center of the power, and I reached for it. I became dizzy somehow and stuck my foot in the power. My foot struck one of the braces and the pole caught, twisting it out of joint. It was a good job I had on a thick stiff leather boot. I yelled, of course. My mother was at the door of the house, and she and a man came out and took me away. Then they took my boot off. Then they bathed my foot in hot water and telephoned for the doctor. I was laid up for a month and over. My father does not like to run it now, but he uses a gasoline engine. While I was looking in the paper for my accident, I came across another accident, where a boy was caught in the wheel of a gasoline engine and nearly killed.

I will close now.—Yours truly, Willie Bradley.

Berry Creek.

Dear Canadian Camp:—This is my second letter to your camp. I received my prize book, which I did not expect to get, as my letter was not very good, and thank the Editor for it. It is a very good book to give for a prize.

There is no school here yet, but there will be one here about the middle of May, for they are building it now. I have been out here for four years, and haven't had a bit of school of any kind, only what I learned at home. I study at home every winter. I was nine years old when I left school at Shepard, Alta., up near Calgary, and I am fourteen now.

Well I guess all the winter sport is done for this year. I had my last skate on the fifth of April, and so I got to break horses to ride for the summer work. I was riding one yesterday, one which I rode last summer, and when I got on at the gate she bucked all the way up the hill, about seventy-five yards, but she never got me off, as I have ridden horses like her before; she never bucked so hard before. I do not know what she will do next time; and don't care. She was only ridden a few times last summer, so she was not broken.

We have about fifty head of cattle, and we never fed them last winter, only the calves, and never lost one at all. Wishing to see my letter in print, I will close. Wishing the club every success.—Cecil Madge.

Dear Cousin Doris:—I thought I would join your club. My favorite game is "Little Water Wild Flowers." I go to school. I am in the third reader. I like going to school. Our teacher's name is Miss Dalahunt. I like her fine. I like to read the letters on the girls' and boys' page. I have six sisters. We have one dog and a cat. We live on a farm. I have lots of fun sleigh riding. We live ten miles from town. My two sisters live there. I am in grade six, and my studies are arithmetic, spelling, reading, history, geography. I am twelve years old. It is cold to-day, so I will close.—Yours sincerely, Herbert House.

### MODEL TRACTION ENGINE

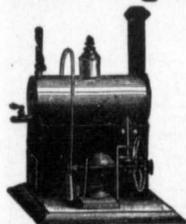


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BOYS! We are giving a number of these engines free. This is a great chance to get an instructive and entertaining article for a few hours' work. This engine runs by steam and has a boiler cylinder, fly wheel and safety valve. We give it free for selling only \$5.50 worth of our high grade postcards at 6 for 10c. These include Christmas New Years, St. Nicholas, Views, etc. Write now for cards; when sold send us the \$2.50 and we will send engine post free to your address.

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of dainty  
Christmas  
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The Great-West Life Assurance Company made its debut in a comparatively small way some nineteen years ago. August 28th, 1891, is the actual date of its charter, and business in earnest commenced 18th August, 1892.

The first policy was written on the life of Mr. R. T. Riley, one of Winnipeg's leading and most respected business men. It is still in force, and to all appearance it is likely that the insured in this case will keep his executors out of employment on his estate for many years to come.

One is accustomed to big figures in handling any development scheme in Western Canada, but the statistics of this company and the descriptive matter in any part of its literature reads more like a romance than the actual daily doings of a matter-of-fact business concern.

As an instance of the stupendous work it has overtaken in its career, the first year's business done was \$862,200 with assets standing at \$124,825. For the year ending 31st July, 1911, the actual business done came to over sixty-two and a quarter millions of dollars, with assets standing at eight and three quarter millions.

The company "opened shop" in a little back office of an old building on Main street, which has long since been replaced with the solid structure known as "The Forum Block." To-day it owns its own premises on Lombard street, which, without exception, are the most palatial office buildings in Winnipeg, if not in the whole of the "great West."

Mr. Alexander MacDonald, wholesale merchant at Winnipeg is the president of the company. Messrs. Geo. F. Galt, R. T. Riley, and A. M. Nanton (all of Winnipeg), are vice-presidents, while their colleagues on the directorate are all men whose names are familiar to Western Canada, as those of the time-honored statesmen whose great personalities are enshrined with all that is strong and progressive in the annals of the British Empire.

The head office directorate at Winnipeg is further strengthened with Boards of Reference for the provinces of Ontario, Quebec and Nova Scotia.

**HOW TO BUILD RURAL TELEPHONE LINES**

... as branch wires can be run from the main line to the buildings and the wire used to simplify the construction. Reference to Fig. 4, in which a, a, etc., represent the buildings to be connected, on the main line and a and b the branch wires, will make the point clear.

**POLES**

Poles twenty-two or twenty-five feet long of any good stock, cut when green, should be used. Cedar and chestnut are particularly desirable on account of their lasting qualities. The poles should be necessarily straight and well proportioned. The diameter

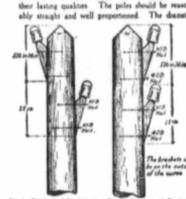


Fig. 4—Diagram of Building on Main Line and Branch Wires. Fig. 5—Diagram of Pole as Fitted with Brackets.

**THE NORTHERN ELECTRIC & MFG. CO., LTD.**

of the top of the pole should be about 5 or 6 inches. In order to prevent the top of the pole and add to their attractiveness, all the brackets should be somewhat knees rounded close and the top cut off square. The top of the pole should be sealed as shown in Fig. 5.

**POLE FITTINGS**

Where only one or two line wires are to be run on the poles, oak brackets fitted with glass insulators are fastened to the pole as indicated in Fig. 5 for straight lines, or as shown in Fig. 6 at curves. The brackets should be attached to the pole before the poles are used.



Fig. 6 Fig. 7

**BRACKETS**

Brackets Figs. 7 and 8 are usually made of oak and give two cross of metallic pins and have a shroud on the upper end to which is fastened a glass insulator, a type, as used in telephone work, is shown in Fig. 8.

8. They should be about 18 inches apart. The upper bracket should be about 8 inches from the top of the pole.

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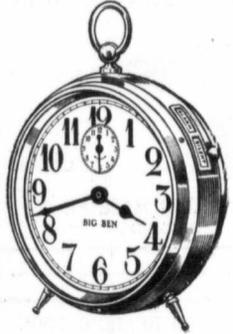
**Men who Make No. 1 Hard**

Continued from page 33

A pitch fork went into the feeder this fall, but did no harm, and we also broke a concave. One of the boxes on the line shaft also got hot, through no fault of the engine. I ran out of gas engine oil and started using common machine oil, but it was not hurt. From that time on I never ran without gas engine oil and that of the best and I find that it pays for it takes twice as much of the common oils and then it is not safe.

This is all the experience I have had so far, so will close. I like to read the experiences published in your paper as one is always learning something from them. I have taken your paper over a year now and would not be without it for twice the price. I am sending you a photo. of our rig.

Yours truly,  
D. K.



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**Practical Talks to Threshermen**

Continued from page 34

wood, the other of steel. The steel frame with steel sides is a comparatively new type which has been brought out within the past very few years. It has certain advantages, such as rigidity and less liability to catch fire than the old wooden frame machines. However, the greater number of separators are still built of wood and these give excellent service when properly made and taken care of.

Figure 92 shows one of the forms of framing that is employed by a number of the large companies. The bed pieces are made of very heavy timbers solidly bolted together and reinforced with angle irons and through bolts where the greatest strains occur. Steel tie rods run through from end to end and materially increase the strength of the frame. A separator of one of the larger sizes weighs complete between eighty-five hundred and ten thousand pounds. It is large and unwieldy and higher above the trucks than it should be to be perfectly rigid. This, of course, cannot be helped, hence the necessity of making it exceedingly strong to withstand the strains of rough roads. A simple mortise and tennon joint is not sufficient no matter how well made where the heavy strains occur. At these points it is necessary to use through tie rods, angle irons or heavy castings to prevent working at the joints. No matter how well a separator frame may be put together there will be some working at the joints unless they are secured very solidly by proper reinforcement. When the joints begin to work they soon wear loose and then the whole machine is out of line. Furthermore, moisture works

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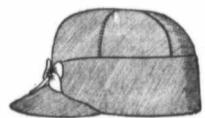


HEAVY DRILL HUNTING COATS

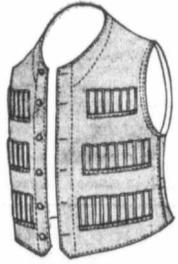
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into the joints and causes decay. Paint is one of the best wood preservatives and the man who wants to keep his machine in good condition will be careful to keep it well painted, especially around the joints. Then if he is careful not to run his machine out of level and takes care to travel at a moderate speed over the roads, and especially the rough roads, he ought to be able to make his machine last quite a good many years. In the next lesson we will try to finish our discussion of the frame work of the separator.

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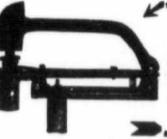
Continued from page 45

been p'izen to me! This was the reason I couldn't even put bay rum on my ha'r without gettin' qualmish! I was goin' to fling it out the window; but then I thinks no, Betsy's paid good money for the truck, an' what's the use o' wastin it? "So that afternoon I soaked the label off it an' carried it down to Jim Tobias'. He warn't no deacon then, an' he used to inebriate considerable. So I sez to Jim:

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The New Desmond Model "U" is made with a two piece body, with the parts connected by a union nut. When loosened, the upper part, with suction connection, can be turned in any connection desired. When the connection is made to the boiler, the nut is tightened, and the injector is ready for work.

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"Next day I took a calf over to Hart's Mills, and when I come back I had a bottle. Betsy couldn't drink her coffee the next mornin'. She said she was goin' to deal at the new grocery, sence Ezry Taylor 'd sold her truck like that. Dinner was boiled meat, cabbage and potatoes, all together. Betsy said the meat must have been spoiled, an' she never did like cabbage nohow. At supper she didn't eat a mite. Nothin' tasted right, she said. She guessed she was losin' her health; there was cancer in her mother's family. Next day was the same, an' by night she was lookin' pretty droopy. I felt mean as dirt every time I looked at her, so when she'd washed up the dishes an' was settin' down with the hymn-book, I sez:

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"Betsy, I wish you'd sew that button on my coat."

"Betsy she put on her thimble an' threaded her needle, an' sat down by the lamp. Pretty soon she felt somethin' in one o' the pockets, an' she pulled out my bottle. She held it to the light an' spelled out the label, me watchin' out o' the tail o' my eye. Over Doc Mulford's emetic prescription I'd pasted a home-made label:

"Sure Cure for Suspicious Wives. Can be Administered Without Detection. Guaranteed to Restore Confidence and Affection."

"Well, Betsy, didn't know what to make of it, fer jest about half a minute. She turned the bottle over, an' then she read it again. Then she looked at me, an' I was lookin' at her. Then she got up an' come over to me, an' — well," said the squire, sucking at his pipe contentedly, "we was both cured!" Elliott Roberts.

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### Questions and Answers

Continued from page 21

leverage over the load travelling at the same speed?

A. Approximately 19 h. p. At 900 r.p.m., approximately 38 h. p.

2. 450 r.p.m. approximately 56 h. p. At 900 r.p.m. approximately 112 h. p.

3. Speed would be too high unless special attention were given to balancing the flexibility so as to give the engine advantages similar to an automobile engine mounted on springs so as to relieve it of strains and shocks it would receive from a rigid mounting.

4. We do not think it would serve your purpose on a slow speed, large size, single cylinder, steam engine.

5. The lower the wheel the more drag or push the load will impart on the ground. As an exaggerated example a two-foot wheel in loose earth or on fresh gravel roads has to shove some of the loose earth before it because it sinks so deep that its hub is practically on a level with the surface. While an eight-foot wheel would not sink so low and practically mash down instead of shoving. Here is where the advantage of the high wheel comes into play, and relieves the engine at the same speed of either tractor.

From the idealistic point of view all things are good, but some are better and a few extraordinary.

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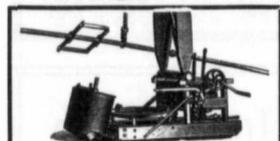
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## Gasoline Traction Engines.

Continued from page 17

engine is necessary, for in such there is a constant application of power which enables the governor to furnish the proper amount of power at the proper time when quickly needed. This is very essential in gasoline engines, for their power depends entirely upon the speed which they are able to maintain under a load.

For working over cultivated soil, such as discing, harrowing or seeding, the engine constructed with high drive wheels has much the advantage because it has so much more surface on the ground in the manner needed. A high wheel gives much more leverage power in going over high bumps and is also an advantage on soft ground because it has very little tendency to dig the soft dirt from under the wheels, thus letting them settle down into the ground.

For work of all sorts it is essential that the cams, crank shaft, and all the gearing run in oil, thus protecting them from wear caused from contact with dust. The accessibility of the important parts, such as the valves, the ignition system and the carburetor is of great importance.

Having considered these things I purchased a 30 horse power gas traction engine. With it I pull a ten-bottom Cockshutt plow. While breaking I use from six to eight according to the nature of the soil. When stubble plowing I use ten bottoms followed by a packer. When working sod down for seeding, I pull six sections of harrow, four eight-foot discs, and two fifteen-foot packers.

While doing this work I employ but one man, relieving him at noon by another, so that I can keep the machine going full time during the rush season. I keep but two horses for cleaning up the corners and hauling gasoline.

Breaking the raw prairie cost me approximately seventy cents per acre, while stubble plowing cost but forty-five. While working the sod down I pulled all three outfits above mentioned for a fraction over 25 cents per acre. I consider threshing a light load compared to breaking prairie.

One difficulty many farmers have with power farming is the difficulty of utilizing all their power satisfactorily in pulverizing the soil. A hitch which will permit the taking of a broad swath, one that will let the machinery turn around corners without damage to themselves or their adjacent machine, and one which can be utilized for harrows, discs, packers or seeders without a great waste of time in changing, will in my estimation add 30 per cent. to the life of the machinery. After close observation and experience I constructed a drawbar hitch which I consider very satisfactory. The details of this hitch I am giving in an accompanying diagram.

Yours truly,  
T. E. Ruby,  
Crailk, Sask.

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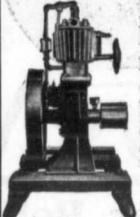
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### Plows 6 Inches Deep.

I have read your paper recently and have been very interested in it. I like to read what other plowmen and threshers have done, and also like the stories.

I have a 20 horse power International engine and pull seven Emerson disc plows. I did not get my outfit last fall until threshing was nearly over, so did not get a separator.

I plowed 145 acres in flax stubble and the ground was certainly hard and dry, but I plowed about six inches and had no trouble pulling the load. I averaged about eleven acres per day and used about 20 gallons of gasoline. I ran the outfit alone. The gasoline cost 25c. per gallon.

Some say that they wouldn't have a gasoline outfit on the place. But last fall we plowed 65 acres with horses and didn't do half as good a job as the engine, because they couldn't plow down in as this is very heavy land and it was hard and dry too.

I had some trouble at first with the engine, as I had never run an engine before. The expert came out with me in the forenoon and only stayed until night, and then I started on my journey alone. It went along fine for three days and then one day at noon when I went to start, it wouldn't go. So I went all over the wires, or rather thought I did, but couldn't find the trouble. So the expert came out and found a loose wire on the switch. Then everything went fine until one morning when I went to start everything was dead. So I got the expert out again and he found the wire broken in the spark coil. That was the last time he was here. I had some little troubles, but I managed them all right. My engine is simple to run, after a person gets used to the wiring.

I think one of my neighbors will get a separator this fall and we will do our own threshing.

Yours truly,  
G. E. Greenman,  
Drinkwater, Sask.

### An Oil Pull.

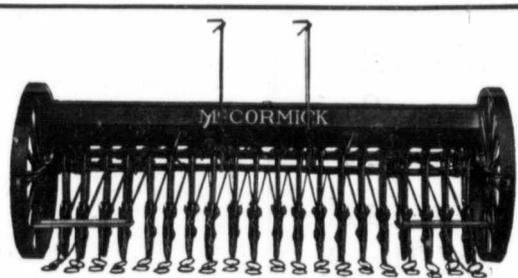
I purchased a Rumely Oil Pull engine and separator — 32-inch cylinder, which gave me excellent satisfaction. I also purchased an eight frame and seven fourteen-inch bottom plow.

As it was late when I finished threshing I only got a few days' plowing done, but intend using the engine in the spring and will then tell you more about it.

Our engine requires about 1/2 barrel of water and 50 gallons of kerosene per day. I find it takes more power to run seven plows than it does to thresh. I am not in a position to give the correct cost per acre.

I employ one man the year round and three or four in seeding and five or six from harvest till freeze up.

Yours very truly,  
Edwin J. Jack,  
Terence, Man.



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In order to give satisfactory service in any section, a drill must be built to meet conditions in that particular region. It must successfully do the work for which it is intended. McCORMICK DRILLS are built to meet requirements in Western Canada. That they do meet these conditions successfully is proved by the large number that are in use in this section. McCormick Drills not only do the work successfully but they are constructed to insure durability. Here are a few of the features:

ANGLE STEEL MAIN FRAME with FOUR CROSS SILLS—an absolutely rigid frame. THE DISK BEARINGS ARE LONG and there are NO PROJECTIONS to CATCH TRASH.

OILING DEVICE prevents dirt and grit from entering the bearing—clean oil always reaches the bearing.

POSITIVE FLUTED FORCE FEED—sows alike under all conditions uphill or downhill. ACCURATE LAND MEASURER and FEED INDICATOR.

If you have ever used a drill, recall the parts that wore out or gave you trouble; then examine the corresponding parts on the McCormick Drill and you will see why it is the drill for you to buy if you want the best.

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**Working on an Engine Hitch.**

I cannot give you a very good report of my work done last year as I did not get my outfit until the middle of July, 1910. I have an American-Abell engine 26 horse power and use the Emerson plow. I am using eight bottoms but believe I could use ten, as eight do not seem to bother my engine at all. I cut ten feet wide. My plow has some fine points and it is so easy to hitch a harrow or disc to it.

I used straw last season for fuel, but expect to use coal most of this season as straw is scarce. I use from 5 to 6 tanks of water per day and employ engineer, fireman, plowman, one tankman and team and one straw man and team. We use one load of straw to plow two miles long and ten feet wide.

I cannot give you much of an estimate on the cost per acre for I did not keep a record last year. I do not think that plowing is any harder than threshing on the engine, unless a man overloads his machine.

I am now getting out my plans for an engine hitch, which is not like anything I have ever seen. If it proves successful I will send you a cut of it.

Yours respectively,  
Charles H. Barker,  
Gledhow, Sask.

**Repair Bill Very Light.**

I am pleased to learn that you are to issue another Traction Plowing number of the Thresherman. Those numbers of the past have been of decided interest to traction plowmen, giving us a chance to compare notes and profit by the experience of our brother plowmen.

I have had a trial of steam traction plowing, covering a period of four years on a farm of 960 acres. We use a Reeves & Co. 25 h. p. cross compound engine and an Emerson disc plow, fourteen bottoms and a two-furrow horse plow, making a total of sixteen discs which makes a fair load in the heavy gumbo soil. Coal costs us \$5.85 per ton and in stubble plowing we use about 100 pounds per acre.

We employ four men, two on the engine, one to operate the plows and a man and team on water tank. Under favorable conditions we plow from 25 to 30 acres per day at a cost of about 80c. per acre.

Our engine is standing up well and our repair bill has been very light. In fact we have had no breaks excepting one or two cap screws, which cost a few cents each. The gear shows some wear, but is apparently good for several seasons yet. I am well satisfied with the steam. I have no desire to knock the gasoline outfits, but I could not be persuaded to exchange the steam engine for gasoline for plowing.

Yours respectfully,  
A. W. Wallace,  
Pacqua, Sask.



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EXPLANATION.—First find the Implement Wanted and the Number opposite will be the Number of the Concern, in the first column, that handles it.

|   |  |   |   |   |  |  |  |   |  |  |  |  |   |   |   |  |
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| <p><b>A—ALBERTA PORT HURON CO.</b>, Calgary, Alta.</p> <p>1—<b>AMERICAN—ABELL ENGINE &amp; THRESHER CO.</b>, Winnipeg, Calgary and Edmonton.</p> <p>2—<b>AMERICAN SEEDING MACHINE CO.</b>, Winnipeg.</p> <p>3—<b>BAILEY SUPPLY CO.</b>, Winnipeg.</p> <p>4—<b>BEAMAN MFG. CO.</b>, Winnipeg.</p> <p>41—<b>BELL, B. &amp; SONS</b>, Winnipeg.</p> <p>5—<b>BELL, ROBT. ENGINE &amp; THRESHER CO.</b>, Winnipeg.</p> <p>6—<b>BRANDON MACHINE WORKS</b>, Brandon.</p> <p>7—<b>BRANDON PUMP &amp; WINDMILL WORKS</b>, Brandon.</p> <p>8—<b>BRANDON &amp; ROBERTSON</b>, Brandon.</p> <p>81—<b>BUFFALO PITTS CO.</b>, Moose Jaw, Sask.</p> <p>9—<b>BURRIDGE-COOPER CO.</b>, Winnipeg.</p> <p>10—<b>CANADIAN FAIRBANKS CO.</b>, Winnipeg, Vancouver.</p> <p>11—<b>CANADIAN MOLINE PLOW CO.</b>, Winnipeg.</p> <p>12—<b>CANADIAN PORT HURON CO.</b>, Winnipeg.</p> <p>13—<b>CANADIAN RUBBER CO.</b>, Winnipeg, Vancouver, Regina, Calgary.</p> <p>14—<b>CANADIAN STOVER CO.</b>, Brandon.</p> <p>15—<b>CARBERRY IRON &amp; WOOD WORKS</b>, Carberry.</p> <p>16—<b>CARBERRY STACKER CO.</b>, Carberry.</p> <p>17—<b>J. I. CASE T. M. CO.</b>, Winnipeg, Regina, Calgary.</p> <p>18—<b>CHAPIN CO.</b>, Calgary.</p> <p>19—<b>COCKSHUTT PLOW CO.</b>, Winnipeg, Regina, Calgary, Edmonton.</p> <p>20—<b>CRANE &amp; ORDWAY</b>, Winnipeg.</p> <p>21—<b>DEERE, JOHN PLOW CO.</b>, Winnipeg, Regina, Calgary, Edmonton, Saskatoon.</p> <p>22—<b>DE LAVAL SEPARATOR CO.</b>, Winnipeg.</p> <p>24—<b>EMPIRE CREAM SEPARATOR CO.</b>, Winnipeg, Scott &amp; Co., Winnipeg, Regina, Calgary.</p> <p>261—<b>GAS TRACTION CO.</b>, Winnipeg.</p> <p>25—<b>GOODYEAR TIRE &amp; RUBBER CO.</b>, Winnipeg, Regina, Calgary.</p> <p>27—<b>GRAY-CAMPBELL CO.</b>, Winnipeg, Brandon, Moose Jaw, Calgary.</p> <p>271—<b>HAMILTON PULVERIZER CO.</b>, Winnipeg.</p> <p>28—<b>HAUG BROS. &amp; NELLERMOE</b>, Winnipeg and Calgary.</p> <p>29—<b>HARMER IMPLEMENT CO.</b>, Winnipeg.</p> <p>30—<b>HART-PARR CO.</b>, Portage la Prairie.</p> <p>32—<b>HERO IMPLEMENT CO.</b>, Winnipeg.</p> <p>33—<b>INTERNATIONAL HARVESTER CO.</b>, Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Brandon.</p> <p>34—<b>LAUDEN HDWE &amp; SPECIALTY CO.</b>, Winnipeg.</p> <p>35—<b>MANITOBA HAYES PUMP CO. 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