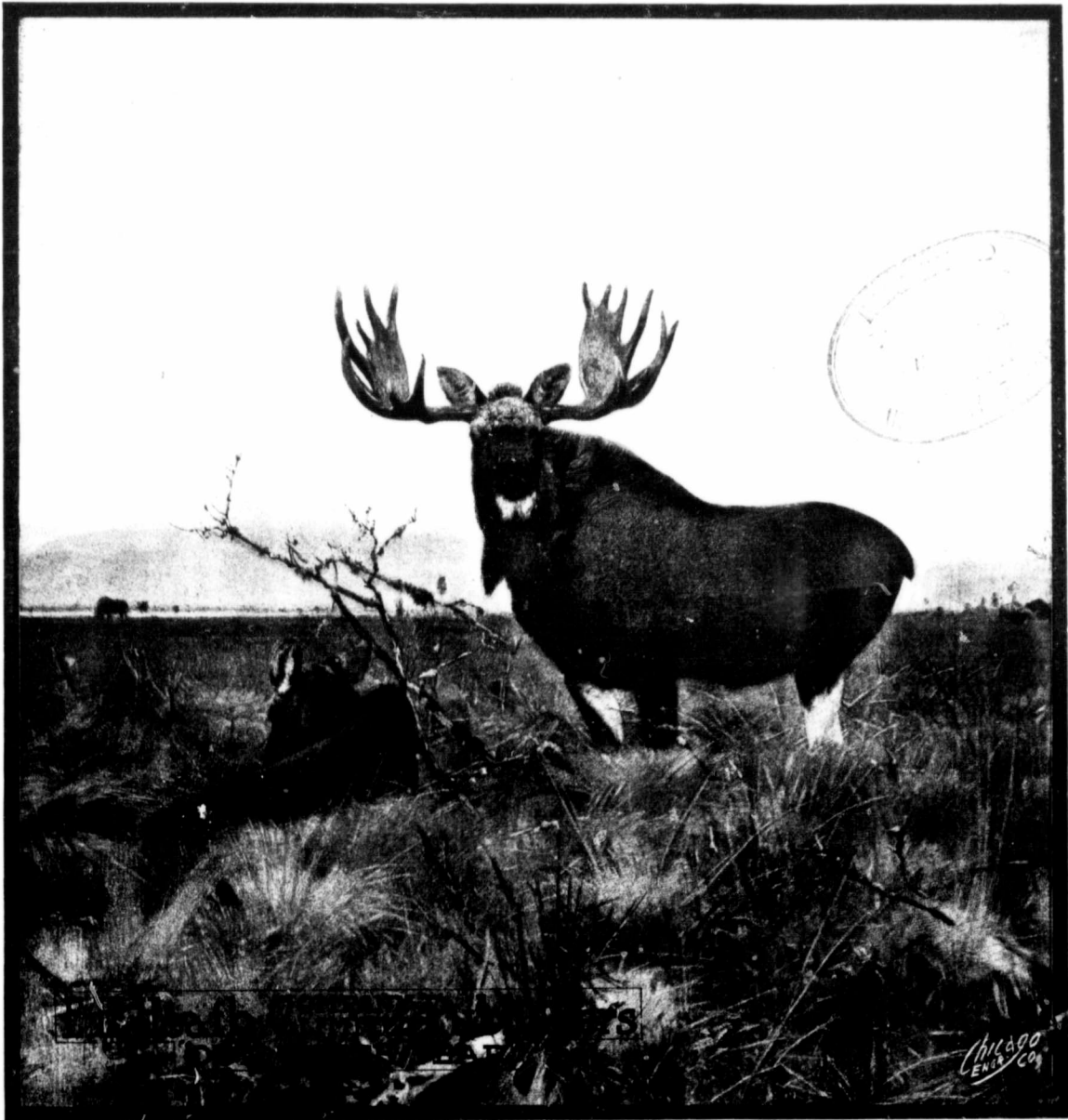


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THE
CANADIAN THRESHERMAN & FARMER
CANADA'S FARM- MACHINERY MAGAZINE
WINNIPEG CANADA
NOVEMBER, 1912



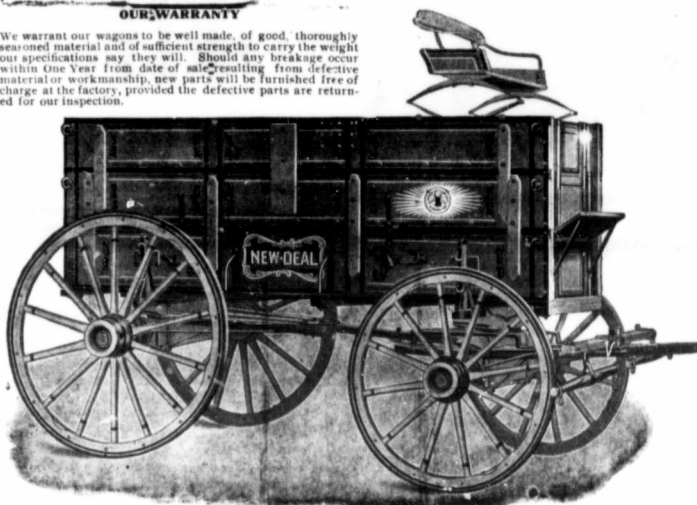
The Wagon for Work and Wear

IS THE

NEW DEAL

OUR WARRANTY

We warrant our wagons to be well made, of good, thoroughly seasoned material and of sufficient strength to carry the weight our specifications say they will. Should any breakage occur within one year from date of sale resulting from defective material or workmanship, new parts will be furnished free of charge at the factory, provided the defective parts are returned for our inspection.



NEW DEAL WAGON WITH TIP-TOP BOX
Greatest Wagon for the Smallest Price you can buy

This is every man's all-purpose wagon. Greatest economy "DEAL" you can make in a wagon because it is the strongest, tightest and least expensive farm wagon that can be made out of the very best material obtainable—selected, seasoned and thoroughly tested before being made.

Remember this is not a thing you are buying for the season. You want a wagon that will last as long as you are on the farm and sell for a good price when you've done with it. You want a wagon that will stand all the jolting and wear of the roughest work and that wind or weather cannot warp or decompose.

You've Certainly Got It in the New Deal

(Get our Booklet of Structural Details)

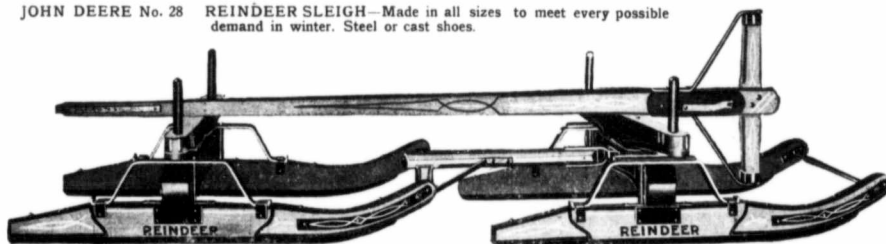
Do you know the REINDEER SLEIGH?

JOHN DEERE No. 28 REINDEER SLEIGH—Made in all sizes to meet every possible demand in winter. Steel or cast shoes.

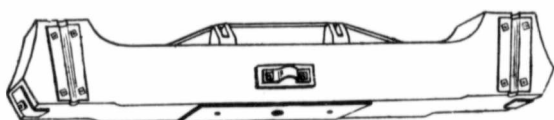
A Reindeer

in every sense of the word. Sure-footed, swift, strong and steady. Easy on the horses and it

Never Misses the Track



The Bolsters are equipped with iron stakes, fastened with bolts and rivets to prevent ends of bolsters from splitting.



The Roller Rods for tongue and reach are full length.

The Bolster Plates are unusually large and made of steel.

Start Pins are $\frac{1}{8}$ inch. Plates rivetted to outside of runners prevent start pins from slipping.

The Runners are a special feature. The front inside ends are plated to save wear and tear of tongue and reach rollers as well as rod holes.

are plated to save wear and tear of tongue and reach rollers as well as rod holes.

The Material and every detail of workmanship put into the Reindeer Sleigh is guaranteed to be of the very best. You cannot buy a better sleigh at anywhere near the price.

Write or See the nearest John Deere Dealer

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GRIND YOUR FEED



'Good Luck' Power with Grinder Attachment

As a power for driving any machinery with two or four horses the "GOOD LUCK" Triple Geared Power is unequalled. The above machine, set up with Arms and Tumbling Rod ready for horses and to drive another machine by rod direct, will be found one of the best time savers and effective dual-purpose machines now in use. The construction and finish are perfect. Thousands of them are now in active service and giving the highest satisfaction. A machine of highest capability.

The "No. 2 Rapid Easy" with 10-inch plates, and its SOLID FRAME or BED, is not only an extremely handsome looking machine but the character of its work and its great capacity make it one of the best "paying guests" on the farm. Feed trough is long and broad giving feeding and screening capacity equal to the rapid work of the grinder.

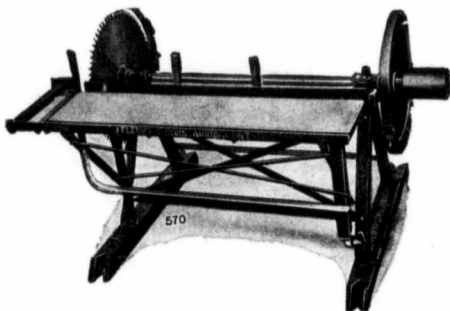


Fleury's "No. 2 Rapid Easy."

Heavy steel shaft with long bearings and heavy balance wheel. Rigid and durable, this machine is especially fitted for fast running and heavy work.

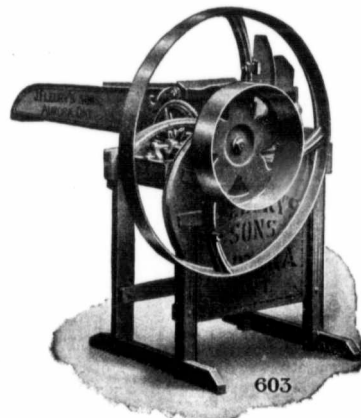
CUT YOUR FODDER

SAW YOUR WOOD



Fleury's Circular Saw Machine No. 3

Frame of steel, angle bars well braced and strongly riveted together. Main Shaft is of fine machinery steel, of great wearing quality, running in boxes babbitted with high grade metal. On the table is bolted a hardwood board and in end of table near the saw is placed a roller which carries the timber to the saw.



Fleury's Straw Cutter No. 2

Seven different styles of this popular and thoroughly efficient Straw Cutter are now made for hand, horse or belt power—with or without carrier or blower. Used largely by hand, it is equally successful when run by rod direct to main shaft (knuckle taking the place of the washer in front of knife-wheel) or by belt on 18-inch pulley, as shown in cut.

This machine cuts **four lengths**; is perfectly **Simple**, strong, well-fitted and finished. Will do **more work** with **same power** than any other style of cutter you can buy.

With a
Fleury Machine

WRITE FOR BOOKLET "BETT & R FARMING," GIVING COMPLETE INFORMATION.

JOHN DEERE PLOW CO. LTD.

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THIS IS THE STEEL AGE

THE LATEST IS A STEEL CUTTER



PRESSED STEEL SIDE
PANELS, BACKS AND DASHES
STEEL FORE DOORS
SELECT HICKORY GEARS

The very Latest, the Strongest and most
Durable—Practically an

INDESTRUCTIBLE CUTTER

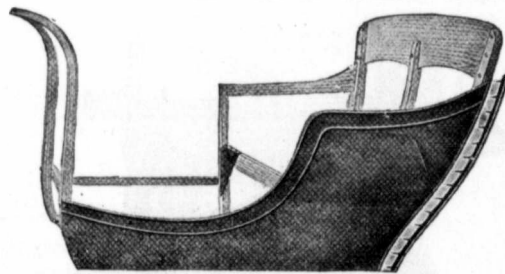
ALWAYS LEADING

BROCKVILLE cutters have always been recognized as the most stylish, comfortable and serviceable winter vehicles used in North America. When an improvement of any sort can be effected, it always comes out first on the "BROCKVILLE" line. STEEL FORE DOORS were first used on BROCKVILLE CUTTERS and nothing in its construction ever added so much to the comfort and appearance of the cutter. This Fore Door device is patented and is an exclusive BROCKVILLE feature. While leading in every new departure, its substitution of FINE PRESSED STEEL for WOOD bodies makes an entirely new and daring record in carriage building, and the BROCKVILLE CUTTER for 1913 will have

PRESSED STEEL PANEL BODIES—SIDE PANELS, BACKS AND DASHES ALL OF PRESSED STEEL

CUTTER TROUBLES CURED !

Cutters are used in a season often of excessive moisture from melting snow which very quickly finds its way into the wood panels. They have to meet the roughest usage to which a carriage of any kind is subjected and the panels open up very often before being used one season. STEEL PANELS put an end to this, and the sorry spectacle of checked, warped and split panels—mouldings broken or knocked off and having to be tacked on again. THE MOULDING ON THE STEEL PANEL IS A RAISED PART OF THE PANEL ITSELF. There are no defective joints to open up. Corners are covered with angle steel specially rolled for this purpose.



NO. 205. CUTTER FRAME WITH STEEL-CLAD PANEL.
Note the neat corner iron-moulding that is put on over the joints.

A LASTING FINISH

A better finish is obtained on the steel body than on the wood. The steel panels are treated with a special process which makes the paint adhere tenaciously to the body. Steel does not absorb nor is it affected by the atmosphere. The finish thus obtained is the highest possible in

BEAUTY AND PERMANENCE

GET THE BUSINESS

that any purchaser can get regarding the quality these cutters possess and the service they will give is the fact that they are sold by The John Deere Plow Co. Ltd., because every Deere Line is a leader. See your nearest John Deere dealer for the very best the world offers in

QUALITY AND SERVICE

JOHN DEERE PLOW CO. LIMITED

Winnipeg

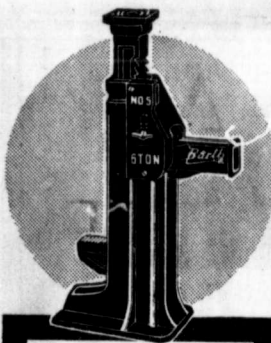
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YES

Our dealers sold more "Barth" Jacks this year than in any year since we started building Jacks in 1892—twenty years ago. That should be good news to you who have one of our Jacks. And still better news to you who have made up your mind to buy one of our Jacks. The "Barth" Jack is a good Jack. We know it is because we make it. You know it is if you own one.

Ask your dealer for the Jack. Ask us for a catalogue.

BARTH MFG. CO.
158 L St. Milwaukee, Wis.

Mention this magazine when writing advertisers



WINDSOR DAIRY SALT

Is The Cheapest You Can Use

not alone, because it is the purest and best salt for salting butter. But because it will salt more butter, pound for pound, than any other salt you can use.

The big creameries will tell you this—and show you tests to prove it. The Agricultural Colleges demonstrate this every day.

Every farmer and dairyman—who is getting good prices for butter—is using Windsor Dairy Salt.

It is pure—it makes beautiful butter—it works in quickly—and it is the cheapest in the end. Just try it yourself.

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Mention this magazine when writing advertisers

About Ourselves

What You Can Get in 1913 for Less Than One-third of a Cent per Day.

I have made some big plans for my Magazine in 1913, and in making these plans I have had YOU and YOUR interests constantly in mind. I want to give you a farm magazine that will be full of interest, and at the same time helpful. It costs me more than the price of a year's subscription to get you as a new subscriber, and unless I can make my Magazine so interesting that you will want to renew without any further soliciting on my part I am losing money. You can therefore see that it is up to me to make good.

Here are a few of the things I have already arranged to give you through the columns of The Canadian Thresherman and Farmer during 1913.

1. The Soils of Western Canada and Their Treatment.

Every farmer knows that the soil is the basis of all his wealth. It is the foundation stone of all crops, and a thorough understanding of soil conditions is a most necessary part of every farmer's agricultural equipment.

I have arranged with one of the best authorities on soils in Canada today to write a series of twelve articles (one each month) on the SOILS OF WESTERN CANADA AND THEIR TREATMENT. The author of these articles is a practical farmer and not a theorist, and each article alone is worth more than the price of a year's subscription.

2. Good Roads for Western Canada.

There is no more live subject in the West than the above. We are building a country here, and good highways are of first importance. Thousands of dollars are being wasted annually because of a lack of knowledge regarding proper highway construction. If you as a taxpayer must spend money for better roads, you must know how the best results are to be obtained.

It is with the idea of giving the best possible information along this line that I have arranged for a series of twelve articles on HIGHWAYS AND BRIDGES. These will be written by one who has made a close study of the subject, and I promise you a rare and practical treat.

3. Problems of the Farmer.

You have your problems, and your neighbor has his. Every farmer has. It may be the Banks. It may be the Railways. It may be the Government. It may be the Grain situation. It may be something else. Throughout 1913 in every issue I intend to have at least one problem discussed, and if possible suggest a remedy. Doesn't this interest you as a farmer? Twelve dollars would be cheap for these problem discussions, yet they are only a small portion of what you get for the price of a year's subscription to my Magazine, The Canadian Thresherman and Farmer.

4. Farm Buildings.

Western Canada is a new country, and the question of erecting suitable buildings at the lowest possible cost is of vital importance. A farm building expert will give you a series of twelve articles on this subject in my Magazine during 1913. They will be practical and interesting. You cannot afford to lose them.

5. Farm Machinery and Farm Equipment.

More money is being spent and wasted on farm machinery in Western Canada today than on any other single thing. Do you understand your implements thoroughly? I have arranged for a discussion every month on one or more of the various farm implements, their uses and abuses. These articles will be the best thing ever published. They will be of interest to you whether you farm 80 acres or 8,000. Don't miss them.

All of the above are extras. The regular departments of my Magazine will be enlarged and improved. The COURSE IN GAS ENGINEERING, PRACTICAL TALKS TO THRESHERMEN, THE THRESHERMAN'S QUESTION DRAWER, QUESTIONS AND ANSWERS ON THE GAS ENGINE, EXPERIENCE LETTERS ON POWER FARMING, etc., will all be continued.

Then there is the MAGAZINE SECTION, a department that is full of good stories and matter of real literary value. You will enjoy this section of my Magazine, and so will every other member of your family.

The WOMEN'S DEPARTMENT of my Magazine is already a household necessity to thousands of farm homes, where it is eagerly watched for every month. The Mother's Column is one worth a dollar alone.

Even the BOYS AND GIRLS—the future men and women of Canada—are by no means neglected. Their department is the best of its kind published in the West.

But I am going to stop, or you will think I am trying to sell you a "Gold Brick" instead of a farm magazine. I want you as one of my readers. I want your co-operation. I'll give you the biggest value for one dollar that you ever get. DON'T DELAY—BUT DO IT NOW.

Sincerely Yours,

E. H. HEATH,

Pres. E. H. HEATH CO. LTD.



Where You Entertain Your Guests

Home is not for its inmates alone, but even if it were, it should be as attractive and artistic as possible. Therefore the decorating of the Dining Room should receive the careful and serious consideration of the home-maker.

SILKSTONE FLAT WALL COLOURS

"Smooth as Silk—Hard as Stone"

Enables the home-maker to produce artistic and permanent effects never before possible. It is the new finish for plaster and metal walls and ceilings. Fine for refinishing burlap. Silkstone is durable and sanitary—is not affected by steam or moisture—may be thoroughly cleaned with warm water and pure Castile soap. Suitable for every wall in the house—takes the place of wall paper and kalsomine. Sixteen beautiful colours and white.

Sold by leading dealers. Write today for free booklet "Suggestions"—for paint users.

Everything for the Painter
G.F. STEPHENS & CO. LIMITED
PAINT AND VARNISH MAKERS
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Be an Expert Accountant

The field of expert accountancy offers pleasant occupation and very large earnings. We can train you in your own home, in your spare time, to be an expert accountant. Here is proof. Of those who have passed the examinations for chartered accountants in Ontario within the past eight years the Shaw Correspondence School has trained 31 of 52 final, 70 of 110 inter-ordinate and 82 of 152 primary candidates. We have made a similar record in Manitoba, Alberta and Saskatchewan. Let us give you further proof that we can better your position and earnings. If you really want to better yourself, make a definite effort to do so. Start NOW by using the coupon.

ACT NOW!

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Please explain without obligation on my part how I can immediately qualify for the position or profession indicated.

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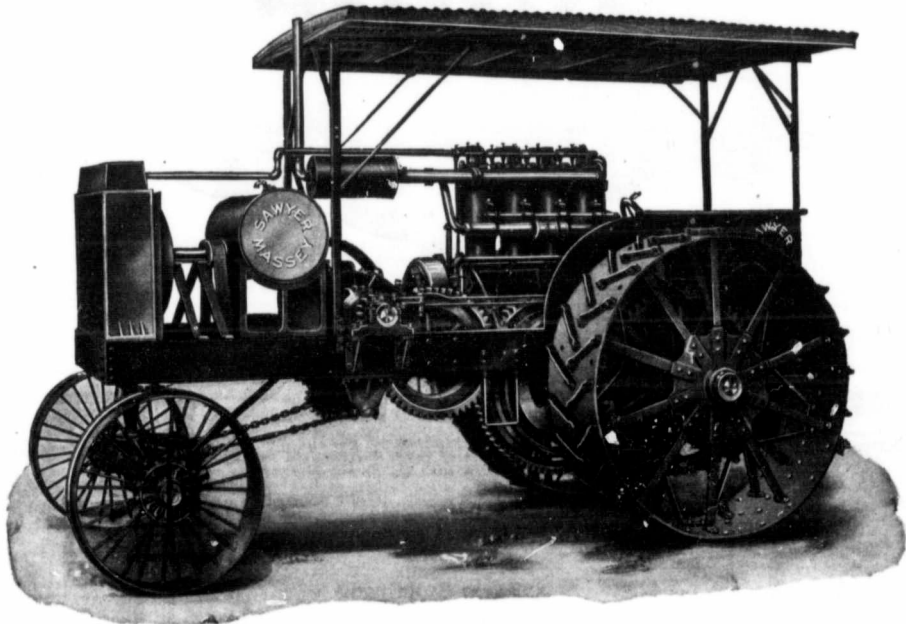
Leather, Fair	15	Army Revolvers	8.25
in Silver	2.00	in R.L. Rifles	2.00
Cartridges	2.00	in R.L. Rifles	1.25
Team Harness	21.25	Tank Cartridges	2.50
New Uniforms	1.50	Old Pistols	1.50
Colts Army Cal. 45 Revolver	8.50		
Springfield-Monroe High Power Rifle	21.50		
Colts Revolver Cartridge by each	30	Springfield-Monroe High Power Rifle	21.50

FRANK HANDELMAN, 501 Broadway, New York City

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FOR YOUR WORK

YOU SAID you wanted a Gasoline Tractor not only to plow and put in your crop, but that had enough speed to pull binders and be suitable for freighting on the road. It must be a steady threshing power and be a Tractor you could run and look after yourself, and that would last.



WE OFFER YOU a Gasoline Tractor that adapts itself to the work in hand. The power is flexible. Two-speed gearing allows you to instantly change this machine from a slow heavy puller to a fast hauler. In the belt it is 45 B.H.P., and is a wonder. In fact one of our Tractor Owners called the other day to see if it was possible to put a pulley on both sides and run two separators.

This Canadian Made Tractor exerts a pull at the draw-bar equivalent to that of 22 horses. Being four cylinder, and having a balance wheel on both ends of the crankshaft, it delivers a smooth steady power almost as vibrationless as an electric motor. The floor of the cab is at the same level as an engine gang plow platform; thus doing away with steps and ladders to get into the cab. The drive wheels, frame, gearing and drawbar we have often been told are built too heavy, but we believe in massive construction for year in and year out service, and have kept right on putting in the quality and workmanship.

It is easy to operate this Sawyer-Massey Canadian Made Tractor as it requires very little attention from the time it is started until you stop it. The convenient placing of the simple, easy operating control, makes it recreation to drive this machine. Even the oiling has been reduced to a minimum by our system of automatic and splash lubrication. This Tractor does not require "titivating" (whatever that means).

Make the Sawyer-Massey Gasoline Tractor do your work. We have a Department especially for you which we call our "Publicity Department." Write them to-day for Free Gasoline Tractor Information.

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A MAGAZINE
FOR

THE FARM
AND HOME



THE CANADIAN THRESHERMAN AND FARMER

Vol. XVII.

WINNIPEG, CANADA, NOVEMBER, 1912.

No. 11.



Why Uncle Sam Has a New Problem



STATESMEN, and the United States government generally, are much concerned because of the emigration of many of our farmers to the Prairie Provinces of Canada. They reason that these farmers take with them horses, cattle, and good farm implements, to carry on their work and in many instances, several thousand dollars in money each, which they proceed to invest in land in the new country.

In 1909, when the papers announced that 90,000 Americans had gone to Canada to make new homes, their readers were astonished but predicted that said Americans would soon return to the good old U. S. During the year ending March, 1911, 121,451 emigrants went from the U. S. to Canada. The first eleven months in 1911 the number who emigrated was 125,399. Some few thousands do return but the number of those leaving us is increasing rapidly and steadily. Think of this stream of intelligent, wealth-producing farmers, the back bone, as it were, of our country who yearly are going to Canada, while aliens from Southern Europe, dirty and ignorant, are pouring into the already congested districts of our large cities. Is it any wonder that statesmen are taking steps to check this emigration and to induce our people to develop some of our own unused lands?

It is a fact that there are millions of acres in our West that are still open to entry. Nevada has some 28,000,000 acres alone. New Mexico, Oregon, California and Arizona also have several million acres each, and there are many other states with a smaller amount of government land.

Recently, the homestead laws were changed so as to offer more inducements to settlers. It used to require a residence of five years upon the land before the homesteader could acquire his title to it. Now only three years' residence is necessary and five months of each year the homesteader may be absent from his claim, earning money for his maintenance the other seven

Months. Various reclamation projects are also under way. The government undertakes the work and furnishes the money to supply certain irrigable districts with water. The government sells the land all ready for irrigation at a nominal price to settlers. Millions of dollars are being expended on reclamation work by the U. S. and yet the

work is only begun.

Many private companies are also undertaking irrigation projects of various kinds, and are offering their tracts of land for sale to prospective buyers. The railroads offer low rates to homeseekers. The country is flooded with literature urging people to go every direction where land may be purchased. At the land shows, held in Chicago each year, various products of the different

each-year lands of the Middle West to go to a new country, under a foreign government, where we have always thought of the climate as being so severe and the country a huge waste?

Perhaps, if we carefully considered conditions both here and in the Canadian Prairie Provinces, we may understand the situation better. Improved land in Illinois, as we all know, sells in prices ranging from \$150 to \$300, and even higher, per acre. Rents range from five to eight dollars an acre and in Iowa the prices both of land and rent are not much lower. Now what chance, many people say, has a young man who has only his brain and brawn as his heritage, to buy and pay for a farm at such prices?

The American farmer differs from his neighbors of foreign extraction, in that he thinks he must clothe, house and educate his children as well as the wealthier people around him do. Many an Illinois renter finds that all he can do is to keep up in external appearances with his neighbors and to pay his rent. No wonder they seek a changed condition of things where there will be more of an incentive to work diligently. Ten and even five years ago there were thousands of acres of land in Saskatchewan and Alberta that could be secured free. The Canadian government only required three years' residence upon the land and then 160 acres of level or slightly rolling prairie covered with nutritious grasses, all ready for the breaking plow, would be theirs. The homesteaders put in wheat, oats, rye, potatoes and flax and when conditions were favorable, reaped astonishingly



A former Ill. farm hand and his bundles of oats raised on his own land near Gleichen, Alta. Note how profusely the oats are headed out.

sections are shown and speakers and booklets vie with each other in telling of the opportunities here and there.

One would think that all this activity would keep the farmer within the bounds of the U. S. Most of the people who go to Canada are from Minn., the Dakotas, Ill., and Iowa. Why should the Illinois or Iowa farmer leave the fertile and sure-of-crop-

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large crops. Those who have gone in later than that have found the available homestead lands occupied, unless they went thirty or forty miles back from the railroad. But many homesteaders have been willing to sell their claims and there are always the Canadian Pacific Railroad lands that can be bought.

The afore-mentioned road received a grant from the Dominion government of 25,000,000 acres of Alberta and Saskatchewan land when they built their road through these provinces to the Pacific Coast. These broad acres they have put upon the market at a very low figure, with easy terms and at a reasonably rate of interest. They also offer land to be farmed on shares by those who cannot buy. The title to the lands which they give, comes direct from the Crown and is perfectly good.

The Middle West farmer knows nothing of irrigation, of horticulture or of raising vegetables as a crop. The wonders of that kind of agriculture do not tempt him, for he has read that it necessitates much hand labor. He wants to do farming on a large scale, driving several good horses and using the latest and largest of farm implements. Hundreds of acres of waving grain, ripening in the sun, is something in which his imagination can revel. He also reasons that fruits are not a staple product, but that wheat, being the universal food of all mankind, must always be in demand and therefore must always command good prices. Pictures of red, red apples, vast irrigation tracts with sugar beets in profusion, are shown him in vain.

In Illinois and Iowa, where diversified farming is practised, their most serious problem at present is the securing of good help. Wages are high, good hired men are scarce and when secured are independent to a degree. A farmer who has stock, necessitating many chores, is compelled to keep a hired man and to labor early and late himself. Talk to any farmer on a large farm and he will tell you an eloquent story of his troubles, both in securing, and in being able to keep, his men for a season. It is no joke to have all the men quit at once during the busy season and leave the farmer alone with stock and fields to care for until more help can be secured, for the loss in many ways is often great. The Illinois farmer is often called upon to face just such a situation.

In Alberta or Saskatchewan one man with the latest farm machinery and with several good horses can put in his wheat and oats without any outside help. Corn, in the cultivation of which there is so much labor, cannot be

raised there, thus lessening that work of farming. Machine plows and, in fact, all the equipment for putting in crops that are run by mechanical power, may be hired if one likes. The help question looms large only at harvest time there, when the grain is being cut and "stooked," as the French Canadians call it. Not much stock is kept as yet, the

his live stock, break some of his land and fence it with a capital of \$1,200.

In a country where everyone is striving to pay for their land, or to improve what they already have or to buy more land, there is no time for mere display. The dweller in the shack feels no shame but is looking ahead to the time when he can have a conven-

veloping country. They see towns spring up as if by magic, their cities double their population in a few years, railroads are pushing in every direction and their land is rapidly increasing in value. If, thrilled by all these lightning changes, they view the future through rose-colored glasses, what wonder is it? For the western man, whether in the U. S. or Canada, is the most optimistic person in the world, cheerfully "seeing double" whenever he estimates the population of his nearest city or state or province.



A team of oxen that had been driven from the ranch to Castor, Alta., a distance of 85 miles. The owner is loading barbed wire and new machinery for the return trip.

wheat and oats being sold to grain dealers.

It is a fact that many Alberta farmers have paid for their land with the proceeds of a single crop. When land that cost the owner, perhaps \$13 an acre, will yield from 60 to 100 bushels per acre of oats, and from 30 to 60 bushels per acre of wheat, it is not hard to pay for. The cool summers are especially good for oats, both as to quality and quantity, while Al-

berta house. There is a beautiful spirit of comradeship and kindness to one another in these pioneer communities. Just like the "good old times" in the early days of the Middle West that our grandparents loved to tell about. But they suffer many of the same hardships; being so far distant from friends and relatives, the absence of ready money and in many cases the great distance they must travel to their nearest rail-



\$13 land near Vulcan, Alta. Grain fields can be seen for miles at a stretch. A new railroad through this country has made the land much more valuable.

berta Red wheat is now famous and is said by experts to be the best hard wheat grown.

Then again, a man can start farming with a much smaller sum of money as his capital than it is possible to do in our country. He can make a payment of one-tenth the cost of his land, on say 320 acres, build a shack for his family, and a primitive kind of stable for

road, in fact all the inconveniences of a new country. The isolation is especially severe on the brave women who live so far out. But many of them, both men and women, come of pioneer stock and it is in their blood to subdue the wilds. They feel that they have no time for loneliness or weak complaining or strife, for they are part and parcel of a rapidly de-

SASKATCHEWAN SEED FAIR

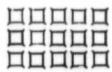
DATES, 1912

Broadview	Nov. 18-19
Santaluta	" 20-21
South Qu'Appelle	" 22-23
*Windthorst	" 25-26
*Montmartre	" 27
Francis	" 29-30
S'oughton	Dec. 2-3
*Aroola	" 4-5
*Redvers	" 6-7
Stockholm	Nov. 18-19
Dubuc	" 20-21
Lipton	" 22-23
*Southey	" 25-26
Strassburg	" 27-28
Nokomis	" 29-30
Bladworth	Dec. 2-3
Craik	" 4-5
*Plymouth and P. P.	Nov. 19
*Melville	" 20-21
Canora	" 22-23
Vonda	" 25-26
North Battleford	" 27-28
Radisson	" 29-30
*Lashburn	Dec. 2-3
*Parry	Date later
Carnduff	Nov. 25-26
Oxbow	" 27-28
Alameda	" 29-30
Estevan	Dec. 2-3
Milestone	" 4-5
Mortlach	" 6-7
Morse	" 9-10
Maple Creek	" 11-12
†Moose Jaw	Dec. 4-5
Outlook	" 6-7
Plenty	" 9-10
Kerrobert	" 11-12
†Asquith	" 13-14
Elfron	" 16-17
Foam Lake	" 18-19
Salteats	" 20-21
Carlton District	Dec 4-5-6
Melfort	" 9-10
Prince Albert	" 11-12
†Cudworth	Date later
Pelly	Date later

* Poultry Show.
 * Grain Growers' Association.
 † Stock Judging Demonstration.
 Saskatchewan Provincial Seed Fair will take place on February 4, 5, 6 and 7, 1913.

Something to Laugh At.

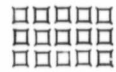
Two Irishmen were among a class that was being drilled in marching tactics. One was new at the business, and, turning to his companion, asked him the meaning of the command "Halt!" "Why," said Mike, "when he says 'Halt,' you just bring the foot that's on the ground to the side of the foot that's in the air, an' remain motionless."



Trade Conditions in India

Outlook for Implement Business in the Empire Not Very Promising.

C. E. Allison interviewed on his return after making a special study of trade possibilities in the Empire.



HOW did you find trade conditions in India?"

"But little progress has been made in the way of implement sales compared with European countries. Hardly anything has been done in the sale of harvesting machines or tillage implements.

"In the first place, in the central provinces and all India south of there, the average farm is three acres or a trifle less. In the Punjab country of northern India, the average size farm is a little more, or about three and one-half acres. The farms have been divided and subdivided after the death of the father among the children, always making them smaller at each division until the farms are very small throughout the country. This method has been followed for hundreds of years, so I was informed. You understand this refers to the farmer who originally had larger holdings.

"Next comes the maharajahs or rulers of the different provinces who own large tracts of land. If a ryot, or farmer, gets a little money ahead and wants to buy a farm he usually can do so from the ruler, but he never has enough ahead to buy more than one to three or four acres. The remainder of the tillable land owned by the maharajah is rented to his people. The land is cut up into small farms and is rented to the ryot according to the size of his family and his ability to work the land with his children or relatives dependent on him. This accounts for the small farms throughout India.

"There are no fences in India, but all farms are separated by buas or ridges. The buas are about 3 feet wide at the bottom,

and from 24 to 30 inches high generally, with a foot path on top to walk on in carrying off the crops, which is all done on the heads of the natives.

"The natives are not movers, as they very seldom move from one province to another. The large majority of them are reared and die in the same province in which they are born. The mahar-

ajahs that have in later years come into power, who are opening up some larger farms and are advocating modern methods of farming. To these it may be possible to sell some implements. Larger farm operations are encouraged by the British Government, which teaches modern methods in agricultural colleges and on the government farms.

Both the colleges and the farms are ably managed.

"The Punjab district is the most promising for agricultural implements, but as yet there has been little progress made in the introduction of modern methods. Some American, as well as European firms, have tried to introduce their lines in the Punjab district.

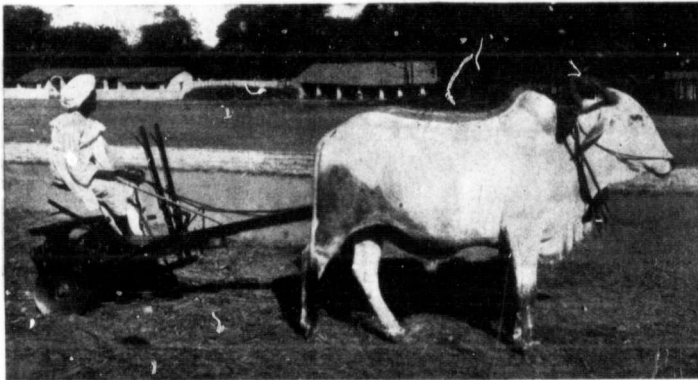
"The Oliver Chilled Plow Company has an agent at Lahore, who recently received a consignment of plows from South Bend, but at the time of my visit no progress had been made with reference to sales. The prices of American plows seem to be too high to sell in India. Several other companies have tried to introduce their goods in years past but without success. Messrs. Burns & Co., of Calcutta, make a cheap 6 to 8-inch plow that sells for about \$2.50 or \$3.00. The American plows sold there are about \$11.00 to \$14.00 and very little call for them.

"There are some places in India where they rely upon the natural moisture to mature the crops. In such territory where they are opening up new farms they are not putting in the ridges to hold the water, providing the land is level and will permit. On such farms as these the reaper may come into use some day. There are a few such farms in the Punjab district, some near Nagpur and Bangalore, but the Punjab district really offers the better

possibilities for reaper and mower trade, as it is in a better wheat district and labor is a little higher.

"The government has a large irrigating ditch in the vicinity of Lyalpur and Lahore, and is opening up a wide area that heretofore has been a desert, but very productive with a sufficient amount of moisture. The crops mostly grown are wheat, sugar cane, cotton, corn, rice,

millet, and jowara, or Kafir corn. The reapers could be used on farms that are not ridged to cut wheat, millet, and Kafir corn. Practically all the hay in India is baled and sold to the government for the army horses. The straw from the wheat and rice fields is fed to the bullocks, and that is about all

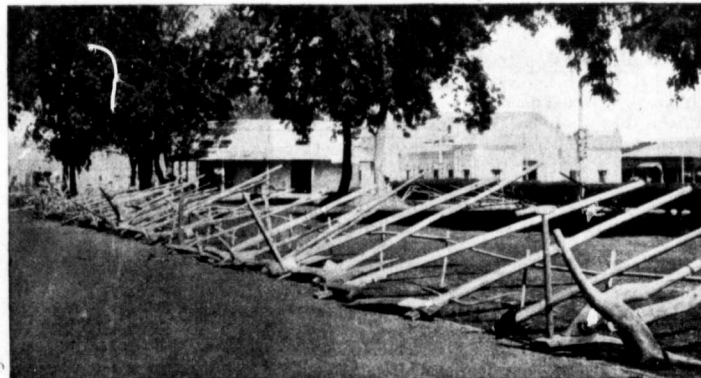


Zebus Hitched to a Dak Harrow

ajahs have these people with them and must necessarily take care of them. The country is very thickly populated. For example, the maharajah of Barods has eighteen miles square in his province that support two and one-half millions of people. The farms usually have ridges across them, making squares from 15 to 50 feet across, the ridges being

"Very few of the ryots have enough money to buy modern machines, even though they wanted them and could not use them to advantage.

"The British Government is running a number of experimental farms throughout India, and in several instances agricultural colleges have been established in connection with these



A Battery of Wooden Plows Used in India

from 12 to 16 inches high. This is to hold the water and keep it from washing the soil. There are some exceptions to this rule, as I saw in the Punjab district some farms of five to ten acres on which a reaper could be used, but such farms were an exception.

"There are a few of the younger

farms. These schools have only a moderate attendance, all natives, and as fast as the students graduate they are given positions as instructors on the government farms. The college instructors are nearly all from England, there being a few from America—but in every case com-

Editor's Note:—As a representative of the International Harvester Company of America, C. E. Allison spent more than a year studying the trade conditions in India. Although the Empire is only one-third the size of Australia or Canada, the population is fifty times greater, there being more people in India than in the United States, Canada, Russia in Europe, Australasia, and Argentina combined, while the area of India is equal to only 8 per cent of the area of the countries named. Mr. Allison reviews the business conditions in India very fully, and what he has to say will be read with much interest.

the feed they are given. The average bullock is small and poorly fed and is not strong even for his size. They weigh from 500 to 700 pounds, and in demonstrating a 4-foot cut reaper I had four of these bullocks on and it was all they could do to pull it.

"Among the factors retarding the progress of India are over-population of the country, and the extremely low wages at which labor can be secured—also the several hundred different casts of the people which keep them from progressing, because those who are born in a certain cast must remain in that cast—they cannot advance. The average wage paid an able-bodied farm laborer in India is about 4 7/17 annas, or 8 2/5 cents per day. Women and children work in the fields for one-half this amount or less. Wheat, as well as other crops, is cut with a sickle, and it takes on an average about seven men to harvest an acre in one day.

"The grain drill is one of the machines that India has great need for, as their old-fashioned drills are very poor. In making a drill, the natives take a wood piece about 5 inches long, bore five holes through it and put bamboo pieces through the holes. A small piece of iron is attached on the point, and a hole fastened in front to hitch to. Boys follow along behind the drill and drop the seeds in the top of the bamboo sticks, and you can readily understand that the seeding is not very evenly done. The government has offered a prize of 500 rupees for a drill that is adapted to the conditions found in India.

"The wagon used is a two-wheel cart. The user buys a pair of wheels, an iron axle, puts a piece of wood on it, and makes the other parts out of bamboo poles. The total cost to him would not exceed \$4.00 or \$5.00.

"Two years ago a European company sold two steam threshing outfits, and sent a man with each machine to run it. The machines did the work in good shape and after the season was over the purchasers refused to pay for the machines, saying that they did not leave any dirt in the wheat and therefore the grain did not weigh as much as when threshed with bullocks, and that the expense was too great, and the straw was not chopped up fine enough for their bullocks to eat easily. In India the threshing is

done by laying the grain on the ground and driving bullocks over it, treading the wheat out, and trampling the straw into fine bits. All the straw is saved to feed the bullocks, and the wheat is fanned out by hand—which leaves plenty of dirt in it. The buyers deduct 8 to 10 pounds per bushel for dirt, and the same amount was deducted from the wheat threshed with the modern machines. The claim was also made that the

say there are only two systems that you would call lines of railway—they both run into northern India, and both run across from Bombay to Calcutta. Then there are lines across to Lahore and another line down the western coast, as well as lines across the north-eastern part of Calcutta, and lines to the southern part of the country."

"Are there any more telegraph lines than there are railroads?"



Operating the Reaping Attachment

threshing came at a time when they had nothing else to do with the bullocks and they preferred working them. Both the threshing machines referred to are standing idle and rotting down."

"What is the population of India?"

"The last census places the figure at about 320,000,000—but I understand that the population is not less than 400,000,000, as I was told by good authority that many towns of 100,000 people in the interior were never counted."

"How does India rank as a wheat producer?"

"India is the fourth wheat growing country in the world, the crop yielding approximately 300,000,000 bushels annually. India exports considerable wheat and flour to Europe. The natives use but very little wheat flour. They use a crude flour made out of red rice—they eat rice and that is their principal living. Red rice is grown extensively and the yield is large. The whites do not eat it at all. Its cheapness makes it the principal diet for the natives."

"How many miles of railroad are there in India today?"

"I could not tell you exactly, but would estimate from seven-teen to twenty thousand miles."

"Are there any new railways under construction?"

"The government has been putting in some new roads, but there is no great amount of railway building going on at the present. The English Government, of course, controls the railroads absolutely, and you might

"There are some more telegraph lines—there are some extensions to some of the interior cities, but not many."

"Do they use the telephone?"

"The telephone is used but very little—there are no telephones in the country to speak of. While there are telephone systems in Bombay and Calcutta, and other large cities, but a very small percentage of the business houses use them. They can send a boy with a "chit" (a note) as



Carrying Cotton to Market

they call it, cheaper than to use the telephone. There are very few houses that have telephone connections at all."

"Tell us something about the Tata Iron & Steel Co., Ltd."

"These works are owned by the Tatas at Bombay; they also own the Taj Mahal Hotel at

Bombay, which is considered the best hotel in India. On the boat I went over on, I met a Mr. Arthur E. Wolsey and his wife of Chicago, and a Mr. Hoyt; Mr. Wolsey went to India as general superintendent, and Mr. Hoyt as his assistant, to take charge of the Tata Iron & Steel Company's plant. They were formerly with the Illinois Steel Company. They are making steel rails at the Tata Works, which were the first rails ever made in India, and I understand the government has given them a contract to take their output for quite a little term, and I was told they already have a contract to furnish a large amount at once; however, that does not necessarily indicate that there is a large amount of new railroad development, because with the amount of road they have already in operation in India, it would take perhaps more rails for repairs and reconstructing than that plant would turn out for some time to come."

"Do you think the time will ever come when the small farms will be replaced by large areas—will be consolidated and made modern?"

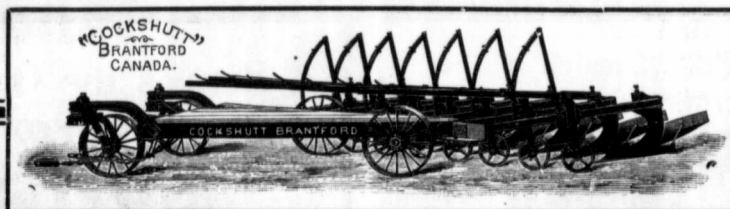
"On a large portion of them, I cannot say that the time will ever come when they will even be made into small farms of 20 to 40 acres. I would not think they would ever be consolidated to that extent.

"The general merchandise lines are handled largely by European concerns, or large English corporations that have stores in many of the large cities in India as well as other of the tropical countries around there, and I was informed that they were quite successful.

"The hotels in India are high-class only in price, and the American tourists support them, as I think without the Americans and Europeans they could not possibly pay expenses, and during the tourist season they double their rates.

"While the British Government is doing all it can to educate and induce the natives to apply modern methods of farming by opening up many agricultural farms and colleges throughout the country, to induce the younger class of natives to apply methods of farming, I feel that such efforts are not bringing the good results

they are entitled to; however inasmuch as India moves slow they may in time convince the natives that modern methods of farming is the secret of success in farming as well as other lines of business followed in India."



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The Lethbridge Session of the Dry Farming Congress

By Prof. W. J. Gilmore

S EVEN annual sessions of the Dry Farming Congress have been held, respectively in Denver, Salt Lake City, Cheyenne, Billings, Spokane, Colorado Springs and Lethbridge, Alberta, each addressed by the most learned agricultural instructors and progressive men of advanced thought from nearly every corner of the world.

The late session which was held at Lethbridge, Alberta, from Oct. 21 to 26 was perhaps the best session yet held and on account of it being the first time that the congress came to Canada, it drew a large number from the Western provinces.

"Dry Farming is better farming—it is scientific farming. It is a profitable system for every farmer upon every farm in the world. It is not farming without moisture, but it is the method by which the natural rainfall is conserved in the soil, by which soils are enriched and drought resistant plants are developed with the object of saving the moisture."

About six-tenths of the earth's surface receive an annual rainfall of less than 20 inches and can be reclaimed only by irrigation or dry farming. One tenth of this can be reclaimed by irrigation, but the only hope for the other nine-tenths is dry farming.

Today the United States Government has 25 experimental stations, devoting their entire attention to dry farming experiments and to educating the farmers the modern tillage methods that are bringing success to all who are trying them.

Conferences were held last week at the Lethbridge session on soils, tillage methods and machinery, crops and crop breeding, agricultural forestry, livestock and dairying, agricultural engineering, agricultural education, and farm management. In connection there was held an International Congress of Farm Women.

Delegates in large numbers were present, appointed by heads of governments, departments of agriculture, agricultural societies, agricultural schools, and civic bodies. Some of the prominent men who spoke or read papers were Dr. Widsow, of Utah Agricultural College, Prof. J. H. Shepperd of N. D. Agricultural College, Dr. Hopkins of Illinois Agricultural College, A. Kol, Commissioner of the Russian Government, Sr. Ing. Lauro Viadas of Fomento, Mexico, Hon.

L. C. Newman, Mysore State, India, Ali Khan, charge of Affairs for Persia at Washington, Lang Shein, Representative from China, Hon. Martin Burrell and many others of prominence in Canada and the United States.

Dr. Bailey of Cornell University, the special representative of Pres. Wm. Howard Taft spoke very entertainingly to a large crowd and his talk can briefly be summed as follows:

In a new country you must not let history repeat itself but must keep up the fertility of the soil. Soils and machinery go together and machinery has a large part to do with the land. What we need to develop is to apply machinery to the needs of a community. Manual training is not what it should be in our schools. A revival of mechanical interests in the country is coming. The corner blacksmith is to put in the water supply and furnish tools for the farmer of the vicinity. Farmers have too few tools and a knowledge of them. He said that "A man can not handle a gasoline engine without being a better man. It puts pride in him. Introduction of good machines is going to have a good effect on country life."

Prof. W. C. Palmer, N. D. Agricultural College in his paper gave the following as the ten commandments of Dry Farming:

1—Thou Shalt Plow Deep.

Deep plowing lets rain get into soil easily.

Deep plowing lets in big rain without run-off.

Deep plowing provides more feeding space for plant roots.

More plant food made available.

2—Thou Shalt Keep the Surface Soil Loose and Level and Lower Soil Compact.

Loose surface soil keeps soil moisture from evaporating.

Loose surface soil lets rain get into soil easily.

More plant food made available, due to more moisture.

Harrow the grain after it is up two inches or use weeder.

Level cultivation leaves the least soil exposed to the air.

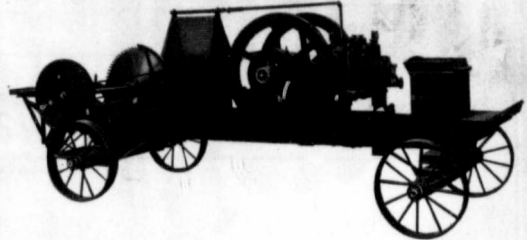
More evaporation from a ridged soil.

On ridged soil the rain runs off through the furrows.

The soil in the ridges dries out so that the plant has less moist surface soil to draw on for food and moisture.

Compact lower soil brings moisture up to plant roots.

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Write for full information TODAY.

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BECAUSE of neatness of mechanical design, simplicity of construction, and **GREAT ELECTRICAL EFFICIENCY.**

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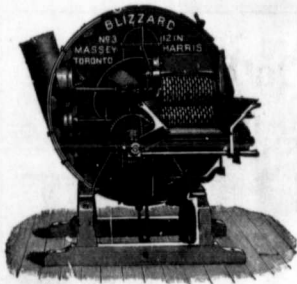


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"Blizzard" Ensilage Cutter



Massey-Harris Straw and Ensilage Cutter



No. 8 Straw Cutter



No. 1 Pulper

MASSEY-HARRIS

complete line of time-proven Feed Cutters. Built in every way to do the work perfectly, and in a way to please the careful farmer.



No. 2 Pulper

Call upon our Local Agent or write Winnipeg Office for Catalogues and Booklets re Feed Cutters and Sleighs.

MASSEY-HARRIS "BAIN" BOBS

FOR PARTICULAR PEOPLE

Best obtainable material made into Sleighs by expert workmen in Canada's most up-to-date Wagon and Sleigh Factory produces the BEST Sleighs sold in the West—or anywhere else.

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Subsurface packer leaves surface soil loose, lower soil compact.

3—Thou Shalt Add Organic Matter to the Soil.

Organic matter holds moisture and plant food.

Organic matter improves mechanical condition of the soil.

Organic matter helps make plant food available.

Organic matter lessens drifting and plowing of the soil.

Sowing ½ bushel barley or oats on fall plowing lessens drifting.

Organic matter lessens washing of soil.

Stable manure is the best form. Growing grass or leguminous crops adds organic matter.

Plow weeds under when green.

4—Thou Shalt Summer Fallow when Rainfall is less than Fifteen Inches.

The summer fallow saves up two years' rain for one crop.

The summer fallow kills weeds and plant diseases.

Plow summer fallow before June 15.

Cultivate summer fallow at least twice.

When rainfall is over 15 inches corn will be as good a preparation for a crop as the bare fallow.

5—Thou Shalt Grow Corn or a Cultivated Crop every two to Five Years.

Corn cultivation saves moisture.

Corn cultivation kills weeds.

Corn cultivation kills plant diseases.

Corn best preparation for a grain crop.

Corn produces fine stock food, both grain and fodder.

Corn produces more per acre than other crops.

Do not hill the corn as this wastes the moisture.

4—Thou Shalt Grow Clover, Alfalfa or some Leguminous Crop every few years.

Clover and alfalfa produce very valuable seed crops.

Clover and alfalfa add organic matter to the soil.

Clover and alfalfa add fertility to the soil.

Clover and alfalfa produce a most valuable hay.

Clover and alfalfa kill weeds and plant diseases.

If these will not grow try other leguminous crops—field peas for instance.

7—Thou Shalt Grow Early Maturing Crops.

Growing conditions best in early summer.

Winter grains better than spring grains when they do not winter kill.

8—Thou Shalt Keep Down the Weeds.

Weeds use up moisture (one pound of dry weeds wastes 300 to 1000 pounds of moisture.)

Weeds crowd the plants.

Weeds shade the crops.

Weeds make it difficult for the plant to grow.

Weeds make it hard to work the land properly.

9—Thou Shalt Keep Stock.

The most profitable way of marketing grain and fodder is through stock.

They produce manure, which is very necessary to the soil.

They bring about prosperity.

10—Thou Salt Plant Trees.

Trees retard wind.

Trees prevent drifting of soil.

Trees lessen evaporation.

Trees hold snow.

Trees increase yield.

Trees lessen the effects of hot winds.

Trees make homes for birds that eat harmful insects.

Trees furnish fuel and fence posts.

Trees make a place homelike and shelter stock, garden and fruit trees.

When clean cultivated, trees will do well. If left to fight weeds and grass they are quite sure to fail.

Who obeys these commandments shall reap abundant crops.

He who violates them shall be punished by decrease in yield in proportion to the transgression.

Manitoba Conditions Vary

McKillican of the Brandon Experimental Farm divided the Province of Manitoba into four parts and told how the soil differs. He described the south western part of Manitoba, by saying that the soil was shallower and that the evaporation was not so great due to a larger number of trees, also on account of more rainfall, it was not a typical dry farming region.

To maintain soil fertility, deep tillage and crop rotation are very essential, states Mr. McKillican in his talk. Clover and alfalfa should be grown to return soil fertility and to keep up the texture of the soil. The speaker advocated drainage as it improved the condition of the soil by giving it moisture holding properties, also that summer fallow may be necessary to conserve soil moisture if grain farming is to be continued. Following the binder with a disc covers weed seeds. Plowing early and deep are important, in that moisture is conserved. Stink weed land should be plowed early in June, and the plow should be followed by a duck foot cultivator to keep a mulch.

These should be practiced by the farmer of Manitoba, stated Mr. McKillican. He does not think the two plowings are any

Continued on page 23



"Everything Begins and Ends with the Soil"

NOV. 1912

THE CANADIAN THRESHERMAN AND FARMER

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As to Good Roads

WE ARE NOT EXPERTS IN ROAD-BUILDING but we have a little Suburban property of our own that required a little attention in this way. It was not "up to" the municipality to make our garden-paths and to fix up that part of the domestic high-way which no one was ever likely to use except the family, the friends of the family, the milkman and such like. But we had to have a good road or sink deplorably in the estimation of our neighbors. They had done their bit either with their own pick axes and shovels or employed someone else to do it. So in justice to our self-respect, we did our bit and are still eminently satisfied with the job. The fact is that the first man to settle in that district set us all a great example and there are no cleaner and more solid looking highways in the wide world than are to be seen in our little Suburbia.

A ROAD-BED THAT WILL CARRY the heaviest traffic incident to any particular City or municipality is something that that

city or municipality has reason to be proud of if they made it themselves, and to be grateful for if Nature or some other generous hand bequeathed it to them. In the making of good roads in these prairie provinces there are gigantic difficulties that the average man who sits down to write about them knows nothing of. This subject appears to be a prolific source of income to magazine writers in these days, as well as a booming big drum to platform speakers who delight to avail themselves of any manner of excuse or occasion for laying a club on the back of the much-belabored farmer.

"WE HAVE BAD ROADS AND THE FARMER MAKES THEM" is the common theme of to-day. The farmer makes a miserable highway if he merely neglects it and makes "confusion worse confounded" if he begins to dabble with it at all. That is an everyday description of the case but it isn't a fair one, and fair or foul it will not help things one bit. Men never do good work when they are driven to it. Their best is always seen in a job which they have been encouraged rather than coerced into undertaking; in something which they have labored at with some measure of interest or zeal rather than disgust and resentment. Let us, therefore, "cease firing" in so far as abusive lecturing is concerned and do something, if we can, that smacks of inspiration rather than invective.

NO GENERAL PRESCRIPTION can be laid down for the common guidance. The topographical difficulties at one point do not exist at another. While it may be comparatively easy and inexpensive to make a serviceable road for all contingencies of traffic say in Western Manitoba, at many points in the east one will find conditions that cannot be overcome except at enormous expenditure of labor and money—a large portion of it in drainage before any "building" can be undertaken. A good road on the level prairie (i.e. one that is something more than the time-beaten trail) may be a more difficult undertaking and a more expensive business than a road through the Rockies.

THE COST OF MAINTENANCE is another and quite a distinct, charge from the initial cost. However perfect a drainage scheme

may be, it is reasonable to expect that on the flat prairie lands the cost of maintenance will be greater than that of a road built in a hilly country, although the initial cost may be considerably less in the case of the prairie highway. But it is not our purpose to go into details or even to suggest to the experts what may be done. Who and where are the "experts?" We have some excellent men officially engaged by the Cities and by the Provincial governments but they would be the last to say that they hold a monopoly of the secret of making and maintaining good roads in Western Canada.

THERE ARE "FLOWERS BLUSHING UNSEEN" in many a quiet spot in these Western Provinces whom we are persuaded could give some remarkable points out of their experience of failures and successes and whose contribution to the general knowledge would be found an invaluable one. Why not trot them out? The problem is a big and a tough one. There are few more imperative needs under discussion at the present moment. How does the following suggestion appeal to those readers of the "Canadian Thresherman and Farmer" who are vitally interested in good roads?

BY WAY OF ENCOURAGING not only discussion but of stimulating real and instant action, suppose the provincial government offered a substantial money prize to that municipality which by a specified date might be adjudged "top dog" in a general competition in the science and art of good road making. The Department of Agriculture has done a fine thing through the medium of its contests in well kept farms. Would it feel inclined to develop this to the extent suggested? We are sportsmen if we are anything in this part of God's country and we have reason to believe that there is nothing will tighten the muscles of the average Canadian so quickly as an appeal to his sporting instincts.

THE TAX BURDEN SHOULD NOT WEIGH EXCLUSIVELY on the farmer, at all events on the average quarter-section farmer. The men who do most damage to the roadways are the fellows who own heavy traction machinery and the automobile folks. Now a man who owns an up-to-date tractor or an automobile may be adjudged well able to pay somewhat more than his neighbor who has got no further than his farm wagon and the all-purpose rig or buggy. And it does not strike us that those men would feel insulted if they were asked to pay a bit extra in the shape of a special road tax on their expensive engines and autos.

WE WOULD WELCOME ANY COMMENT upon or criticism of our proposal. From lack of the only thing that counts—experience—we are not in a position to pose as authorities who can hand out advice ad lib. We have our strong opinion nevertheless as to the urgency of the case and what should be done to meet it but would not at this juncture offer more than the suggestions outlined. We are anxious to do our part in creating and keeping alive a strong progressive movement in this direction and would do our part right up to the hilt in contributing to any sensible plan to this end. But it wants more of an incentive than any single magazine or news-medium would be likely to offer to make an appeal that would at once prove effective and permanent.

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."

STEWART SHEAF LOADER

THE solution of the
Farm Labor Problem
EVERY machine is
guaranteed
WASTES no grain
AS NECESSARY as a
Self-binder
REDUCES the number
of men and teams
TESTIMONIALS from
all who use it

SAVES from \$20
to \$30 per day
HAS capacity sufficient for
largest threshing outfit
EVERY man who uses
it is a booster
ALL parts are
interchangeable
FAULTLESS in
construction

LET us send you
full particulars
ORDER now and
you save money
ABOVE criticism
DOES what is claimed
it will do
EVERY part built
to do the work
REDUCES the
threshing bill

AFTER THE HARVEST

do you know how much you have lost by not having a **Stewart Sheaf Loader**? Do you know that every day you threshed you lost from \$20 to \$30 by not having one? In 1912 we placed **500** machines in Western Canada. These machines saved the farmers considerably over **\$200,000**, figuring that each machine worked on an average of 20 days. Did you get your share of this amount?

NOW is the time to get ready for next year. We have a proposition to make whereby we can save you big money providing you order that 1913 Stewart Sheaf Loader early. You thus effect a **saving before** you get your machine and you **save money after** you get it.

Read what the Commissioner of Immigration for Western Canada has to say about the STEWART SHEAF LOADER

STEWART SHEAF LOADER CO., WINNIPEG, MAN.

I saw your Grain Loader in action on the farm of Mr. Bergey, near Winnipeg, yesterday afternoon. It was an interesting revelation to me. As a machine it is extremely simple, free from delicate mechanism and for hours successfully demonstrated to me that it was what it claimed to be—a perfect grain loader. The work was clean, quick, complete.

I consider your Loader the most important agricultural implement given to the farmer since the advent of the binder, and believe that it shares equally with that machine as being indispensable to every successful and progressive farmer. Mr. Bergey told me that it saved him \$20 per day in laborers' wages. I quite believe it.

Without missing a sheaf, I saw the Loader gather hundreds of stooks and load a successive train of six large hay wagons to their fullest capacity, providing abundant material for a double-crewed separator with absolutely no waiting. Yesterday, all day, this machine operated by one man, was doing the work of seven grain pitchers and doing it better. As a labor saver it will prove of incalculable benefit.

In my judgment it is a solution of the acute labor problem which for the future stares in the face the energetic Canadian Farmer.

Yours faithfully (Signed) J. BRUCE WALKER,
Commissioner of Immigration.



What the men who are using it have to say!

STEWART SHEAF LOADER CO., WINNIPEG, MAN.

GENTLEMEN:

I have been using your Sheaf Loader for over three weeks and it has given perfect satisfaction. It keeps my 34-56 Separator well supplied with sheaves and I only need four stook wagons. It saves me from \$15 to \$20 per day in labor alone and is a great deal easier on the men I have employed. Every farmer I have threshed for is perfectly satisfied with your Loader.

A great many people who never saw it work thought it would shell the grain, but every person who has seen the machine work claims that it does not shell as much as the pitchers and it leaves no loose grain lying at the shocks. It gathers up everything, whether loose or tied, and one Loader will supply the biggest outfit made with plenty of sheaves. We have never lost a minute on account of the Loader.

Yours very truly (Signed) ROBT. A. ROBINSON, South Regina, Sask.

STEWART SHEAF LOADER CO., 804 TRUST AND LOAN BUILDING, WINNIPEG, MAN.

GENTLEMEN:

We figure our Loader saves us \$30. a day in help and board. It also saves us a lot in handling the grain.

Yours very truly (Signed) FAIRBAIRN BROS., Clavet, Sask.

STEWART SHEAF LOADER COMPANY, LTD.

804 TRUST AND LOAN BUILDING, WINNIPEG, MAN.

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

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.)

Likes a Cab on His Engine.

Traction farming is undoubtedly one of the most animated enterprises of this era, and in conjunction with this, traction engineering. Upon the latter, the success of the enterprise chiefly depends. One may understand the practical science of up-to-date progressive farming and yet if he falls short in the practical side of traction engineering, providing this power is the one in hand, he will make a decided failure of a would-be success. This is chiefly due to a lack of knowledge, and a wide-awake adaptability for operating such complicated mechanism, for the gas tractor, unlike steam engines, must be in perfect order or the machines is a dead-head, and a financial detriment to the proprietor, so long as it remains so. Often times the defects are not really apparent, and the unskilled operator, in his state of bewilderment and excitement, is for the time beaten, and an expert has to be called. This often entails delay and financial loss. To the man who contemplates purchasing this class of power, my advice is think twice and then again, before you buy. Get a good practical knowledge of the mechanism of internal combustion engines, and if you are sufficiently apt in mechanics, operate the machine you purchase yourself.

My experience with this class of power is somewhat limited. I have owned and operated a Hart-Parr 25-60 with considerable success. I have an Emerson 14-disc gang, complete with mouldboards and spring trips. This also has given me excellent satisfaction.

In the spring of 1911 I plowed 185 acres, drawing the 14 discs with harrows behind. I also broke 250 acres of prairie, drawing six 16-inch mouldboard plows, and I could easily have handled another. I threshed thirty days last fall, and did 115 acres of fall plowing.

I find that two men can handle the outfit for farming purposes quite satisfactorily. One does the steering and the other the engineering and handling the plows, etc. I used a one-horse wagon for drawing water and fuel to the engine. This is distributed in steel barrels, which I

find is the most convenient way for hauling the same, and the service of one horse is all that is necessary.

Fuel per day is rather an inaccurate way of measuring the cost of the work, as on some days fully one-third more work is done than on other days.

For breaking, my average was two and three-quarter gallons of kerosene and one-fourth gallon of gasoline, making in all three gallons per acre. I used about two gallons of gas engine oil, one gallon of gear oil, and from twenty to twenty-five gallons of

hinged folding doors at the back and an adjustable seat for two which can be dropped out of the way instantaneously. I find this cab very convenient and comfortable for night work, as in windy or rainy weather, as well as protecting the working parts of the engine. I may say that my engine has never cost me anything for repairs yet, and everything is in good working order. Thanking you for space in your valuable paper, I am

Yours truly,

A. W. Brewer.

Cupar, Saskatchewan.



The Oil Pull Doing Things

water, making an average of 53c. per acre for fuel and lubricating oil. My engine has drawn eight disc harrows at full cut on stubble, at approximately two-thirds of its draw bar pull.

I find that plowing is somewhat more severe on the engine than threshing, owing to a great deal of dirt blowing in on the working parts of the engine. But I have overcome this to a limited extent by extending the platform back the width of another plank. I also extend the canopy back about fifteen inches and build on an enclosed cab, having a glass front and plate glass window in the rear, so that the steerman is in full view of his surroundings. This cab is built of inch lumber for the lower half, and the upper half is made of galvanized sheet iron hinged at the lower edge, so that on a fine day this upper half can be lowered and leaves the cab entirely open. It has doubled

Does Work of Thirty-five Horses.

Many people ask me how I like my new oil tractor. Well I only got it last October, and it is a 30-h.p. Rumely Oil Pull. After I got it home, we had so much rain, snow, thawing and freezing that I did not get a chance to test it thoroughly in every respect. But as far as I tried it, I surely think well of traction plowing.

We pulled eight Cockshutt 14-inch double bottoms, a 12-foot packer and a three-section harrow. We plowed deep, and it surely did a nice job, and left the surface in a splendid condition for the seeder, and the engine did its work very easily.

Owing to the kind of fall we had, we will have much work to do in the spring. We will have a lot of stubble plowing to do then. Our intention is to take off the harrow and substitute the drill, and cross harrow after-

wards with horses. I think it will be fine to seed as fast as the ground is plowed. In this way we can prevent the moisture escaping and will put the seed in moist dirt. It wont have to lay there and wait for moisture; in case of a dry spring.

Yes, I believe, our Oil Pull will easily do the work of from 35 to 40 horses, and two men on the tractor can do the work. It would require seven men for the above number of horses. Again, we can't put in as long days with horses as we can with the engine. I am unable to say how much fuel we used per acre, but am convinced that kerosene at 17½c. per imperial gallon makes a fairly cheap power, as a barrel of kerosene will last as long as one and sixth-tenths barrels of gasoline. As soon as the engine is started you can switch off the kerosene with an Oil Pull. With the speed regulator attachment, you can reduce the speed to a minimum if you have to stop to adjust anything. Hence a saving of fuel. As to the amount of water, we find that only a barrel a day is needed for mixing and cooling.

I consider traction plowing harder on the engine than threshing. We found ours a very steady power for threshing, and it gave most excellent satisfaction, so far as we tried it on the belt.

We have a goodly number of both steam and oil tractors in this community, but the oil tractors are growing more and more in favor.

We find it better to keep a few horses to do the errands and the light work. We can also raise a few colts, and they come in handy, especially at harvest time and when it comes to marketing the crops.

We have a double beam feed grinder and use the tractor for grinding up all our feed for horses, cattle, hogs and sheep. We grind sufficient in the winter to last us through the summer, and it will keep very nicely by providing a nice place for it.

Last, but not least, on account of the conditions of the seasons in the Northwest, with a good tractor we can get a lot done in a short time, and do the farming the way it ought to be done and at the right time. If we could

Settle That Power Question Now!

NO DOUBT the power question has been a most vital one with you, especially if you have been entirely dependent upon animal power with which to work the farm. You have, no doubt, watched with interest the rapid development of the gas tractor for farm power purposes—have been convinced of its adaptability for this purpose—and are now seriously considering the purchase of a tractor for your farm. The question then naturally arises: "Which tractor shall I buy?" If you will take the time to go carefully into this matter you will have no difficulty in reaching the conclusion that the

AULTMAN-TAYLOR 30-60 Gas Tractor

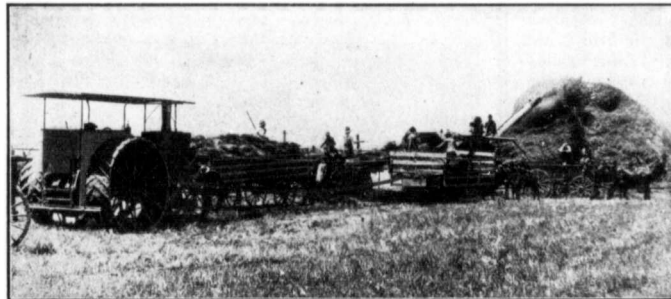
is positively the best tractor in the world for farm power purposes. Technical talking points concern you very little. What you want to know is just what these tractors are doing at every-day, hard work on farms—the way they stand up week after week, year after year—that's the only true way of demonstrating their absolute superiority. You want results. Every owner of an Aultman-Taylor "30" will cheerfully furnish, to any person who may desire to have it, a detailed account of work accomplished which produces real, live evidence of the Aultman-Taylor "30's" all around superiority. What it is doing for others can be duplicated right on your own farm. Ask us for names of owners of these tractors. They're good men to consult before buying a tractor. Should still further proof be desired, the Winnipeg Motor Contest proves definitely and finally that the Aultman-Taylor "30" will do more and better work, at lower pounds consumption of fuel, than any other make of gasoline or kerosene tractor.

Think what this all means to you! You're not buying an uncertainty, but a time-tried and time-proven tractor which has gone on the field, been sold on its merits—made good every time—step by step made itself a place in the hearts of farm power users and today is universally recognized as the best.

Call at our nearest branch house and let our branch manager explain to you the many superior features of this prize-winning tractor; or, if you cannot do that, drop us a postal and we'll send you literature. You want to get all the facts and figures about this tractor before placing your order. Write today.

The Aultman & Taylor Machinery Company, Mansfield, Ohio

Branches: Minneapolis, Minn., U.S.A.; Calgary, Alta.; Regina, Sask., Canada



Aultman & Taylor Machinery Co.,
Mansfield, Ohio.

Gentlemen:—

"My Aultman-Taylor 30-60 Gas Tractor has given me perfect satisfaction. I know it to be the best engine built. The 36 x 56 Separator was certainly a plaything for the engine. We plowed 300 acres, all stubble, pulling 8 and 10 plows. The land is very heavy on my farm. Next year when I get a larger separator we will do some real threshing.

"Yours truly,

"Jacob Siemens,

"Rosenfeld, Man. Can."

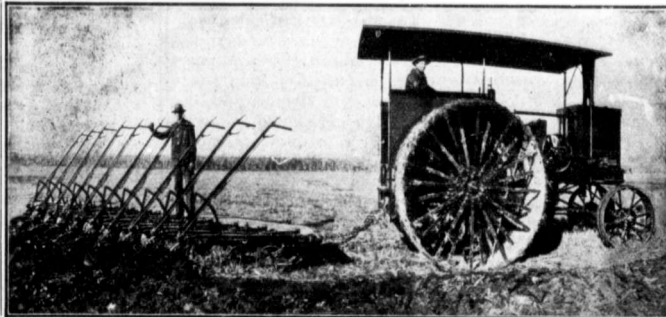
Richardton, North Dak., Oct. 2, 1912.
The Aultman & Taylor Machinery Co.,
Mansfield, Ohio.

Gentlemen:—

"The Aultman-Taylor 30-60 Gas Tractor has given me entire satisfaction.
"I have plowed 800 acres and have only broken two bolts which is all the expense for repairs on the engine.
"The 36 x 56 New Century Separator has given me and my customers entire satisfaction and it saves the grain and cleans it all ready for market. I have threshed over 18,000 bushels to date and have only run 12 days. I heartily recommend the Aultman-Taylor Machinery to any one wanting the best for all purposes.

"Yours truly,

"Domonick Wetstein."



get free trade with the United States, direct legislation and a sample grain market, farming would be more profitable in the Dominion of Canada.

Yours truly,
George B. Snapp & Son.
Warner, Alberta.

Prefers the Small Engine.

In reply to yours, I would say that my experience with traction engines is as follows:

I have a 20-h.p. International Engine. This engine requires 20 gallons of gasoline and one barrel of water per day. I employ two men to run the engine. It also requires one team once a week to haul water. I think that plowing is harder on the engine than threshing.

For plowing, I use Oliver plows with five 14-inch bottoms. The cost of plowing an acre, as I estimate it, is \$1.50 per day. I have broken and backset on my farm also. Since 1910 I have always raised from 20 to 35 bushels per acre.

I think the 20-h.p. engine is large enough for this country, as it does not pack the ground as much as the larger ones do, and it is also safer in crossing the mud holes.

I am very much pleased with the Oliver plows, and they do an excellent job. I have a Cuddy steering device attached to my engine, so that one man is able to operate the outfit. With a good day's run I can plow from 12 to 15 acres, so that you see at that rate during the spring, summer and fall, with even a small outfit, I can turn over considerable ground.

Yours truly,
M. O. Olsen.
Starbuck, Man.

A Steady Power.

In reply to yours, I would say that I own a 15-h.p. Rumely Oil Pull, with which I pull a 6-bottom Cockshutt plow. On this outfit I employ two boys, their ages being 15 and 17. I employ only one horse on the outfit, for the purpose of hauling the kerosene and water. I use about 35 gallons of kerosene per day and a few cups of gasoline. In short, I pay about \$7 a day for the fuel. I use about 40 gallons of water for mixing and cooling purpose.

As I have not done any threshing with my engine yet, I am unable to say whether traction work is harder on the engine than what threshing is. From what I can gather from other Oil Pull owners, it is very little harder on the engine.

My estimate of the cost per acre for fuel is about 50c. in breaking and 38c. for stubble plowing. The oil tractor in this community is rapidly taking the

place of steam. I can say this especially of the Rumely, as some of the other makes of oil pulls and gasoline engines, jerk too much in threshing, one make being absolutely useless for that purpose.

Yours truly,
P. W. Duke.
Aberdeen, Sask.

All Kinds of Work.

This being our second season in using our 40-b.h.p. Hart-Parf gasoline engine, would say that we have had good success, and have done more work the second season than what we had accomplished the first season.

We have been using a 7-bottom Cockshutt plow, but have only been pulling six of them in breaking, as the sod is very hard to break here in Alberta, and that number is all that our engine can pull.

We operate our outfit with three men, besides my own help, employing one engineer to run the 12-hour shift, and the one plowman, as we generally operate our engine from 15 to 18 hours each day, and commence our day's work at 4 a.m., and always aim to keep to keep the engine going as I take the engineer's place when he is at meals, and also operate the outfit from five to six hours each day. Of course we don't always have the best of success, as I am no experienced engineer, but we always manage to break from 22 to 25 acres each day. The one man that attends the plows when the extra run is made, keeps the fuel and water in the field as we use a tank wagon, which holds about 300 gallons, to convey our oil.

We have one team with the outfit which is only used about two days each week for supplying the oil and water.

In using fuel, we start on gasoline and then turn on the kerosene, and we find that it is cheaper for us to use kerosene than gasoline, as it only cost us 20c. f.o.b. our station, where gasoline costs us 24 $\frac{1}{2}$ c. per gallon. The amount of fuel that we use depends on the number of hours we operate the engine, but we figure that it takes from 3 to 3 $\frac{1}{2}$ gallons in discing and 40 to 50 gallons in cutting wheat, and in breaking from 50 to 60 gallons. We use about 50 gallons of water each work day. In making our 16-hour run per day, we generally plowed from 23 to 25 acres, as we averaged our 26 to 30 miles, and always filled our water tank with water every six miles without stopping the engine and at eight miles filled with kerosene and water, and filled all the hard oil cups.

We used our engine this season for threshing, pulling a 32 x

Do You Know What Tractor Efficiency Means?



It means the ability to "stand up" under the heaviest work. It means the flexibility that enables you to do your plowing, your hauling, your harvesting, your threshing, etc., with equal efficiency. It means strength that eliminates repair expense. It means fuel economy.

These are what you should demand of the Tractor you buy—because these mean efficiency.

You do get this efficiency in any tractor equipped with the **Waukesha Long Stroke Tractor Motor.**

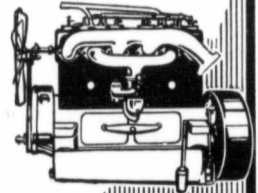
Here are a few reasons why it is efficient—write us for detailed information.

☛ It is strictly a tractor motor. ☛ Its crankshaft has a tensile strength of 70 tons to the square inch. ☛ The Bearings have 3 times the wearing quality of Parsons' White Brass—which has heretofore been considered the best metal for bearings. ☛ The Waukesha Piston Pins outwear the bronze bushings. ☛ The Bushings are easily renewed. All these metals are exclusively our own processes. ☛ The Cylinders are ground accurately to size and do not have to be removed to clean out carbon. ☛ The Waukesha has the wonderful fuel economy of one pint of kerosene per horse-power per hour— $\frac{1}{2}$ of a pint of gasoline. Every bit of fuel makes power—there's no waste.

Write us for a list of tractor manufacturers using this perfect and efficient motor. Tell us the size of your farm and we'll advise you as to the right size tractor for your purpose.

Waukesha Motor Co.
Second St. Waukesha, Wis.

We don't make Tractors,
but just efficient Tractor
Motors. [2]



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

"FLOUR CITY" TRACTOR



The Tractor the Farmer Can Rely On

The "FLOUR CITY" is not a promoter's proposition, but a proposition for the farmer. It was brought out with a view of supplying a REALLY AND TRULY GOOD TRACTOR—one that will furnish the power economically, and hang together while doing the work.

The "FLOUR CITY" stands for QUALITY. We build but one line, and concentrated effort in one direction has resulted in our turning out a tractor that is the simplest, strongest, smoothest running and most economical of any in the field—a tractor that will burn kerosene or distillate equally as well as gasoline.

We make no claim that the "FLOUR CITY" cannot fulfil. We never indulged in panoramic trainload shipments. A car load sold is better than a trainload unsold, and a quarter page of simple facts, stated conservatively, should be more effective than a double page of bombast. The "FLOUR CITY'S" record is open to you. Write for Catalog.

KINNARD-HAINES CO.

828 44th AVE. NORTH

MINNEAPOLIS, MINN.

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

Farm Power That Really Pays

*The Handy Man
of Agriculture*



The "Farmer" in the Field

Make your farm pay by getting out of it the very most it can profitably yield.

It cannot be done by old-fashioned methods; you must follow the example of the men who have grown from small beginnings to big things. The man with the small farm, the quarter or the half section, needs power just as much as the land magnate. But he requires it in proportion to his needs. Expert farmers and expert engineers have combined their knowledge to produce the tractor which is right in work and price for the man with few acres. It is the "Farmer" which is the only tractor which fulfils ALL the requirements.

That is the reason for the popularity of the FARMER TRACTOR because it is simple, reliable, cheap to buy and cheap to operate, light enough to go over all ground without miring, strong enough to do the work of twenty-four horses. It has the hall mark of enthusiasm from every owner. It is the easiest tractor to work, any youth can work it, it is the easiest tractor to buy because its price is right, the easiest to sell. Agents who are prepared to deal with a big turnover in machines are still wanted in many districts.

Learn what this tractor is: write for booklet and catalogue describing the cheapest, lightest and best tractor ever invented.

25-35 Horse Power, Price, \$1750.00 F. O. B. WINNIPEG

There is only one way to make next year the most profitable you have ever known—by using ALL your farm. You know that you must give up the old methods. If it is a matter of expense the Farmers' Tractor is within your reach now. You can if you wish realize all your dreams of expansion next year.

The Farmers' Tractor solves the Farmers' problem. It is sold direct to the farmer—the user. Write today—early order means early delivery.

Sold Direct from Manufacturer to Farmer. Write Us.

The Farmer's Tractor Sales Co., Limited, Winnipeg, Man.

301 UNION BANK BUILDING

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

52 Red River Special, and found threshing much easier on the engine than plowing. First, as there were not so many parts in operation and the load was not as heavy as at no time was our engine overloaded in threshing as it is in plowing at times.

In threshing we used from eight to nine bundle teams, two field pitchers and one spike pitcher, and with that number it kept the machine always running steady, as we threshed for five days in succession without a stop of the engine or separator during our days' work, which we considered very good, but we had several other days that we did not stop, but not as many in succession.

One thing we have tried to do, and that is employ the best men that we are able to get to handle both the engine and separator. In breaking, we figured it cost us about \$2.50 per acre, that is including cost of repairs and all help necessary to run the outfit, and as we get from \$3.30 to \$4 per acre for breaking, we figure that we are making some money by the work. We think that it would pay one owning a section or more of land to have a gasoline rig, as the work can be done easier, cheaper and better, and at the time it should be done in order to insure a crop.

We do our discing with the engine, pulling five double-spade discs which, by going over the ground twice, gets it in the best of shape. We disc from 75 to 90 acres each day's work, but we find the discing very hard on the gears, as there is so much dust blowing all the time. We used our engine last spring for drilling 275 acres, and found that it gave very good success. We pulled three 22-double disc drills, but this did not make any load for our engine, drilling on an average of 75 acres each day.

This fall we used our engine for cutting wheat, cutting about 600 acres, and about 80 acres per day at ten hours a day. We used the Hansman binder hitch, which gave the best of satisfaction, and our men could turn the corners as good with them as by the use of horses.

We pulled a four 8-foot McCormick binders and at all times were able to cut the 8-foot swath in full, which, with a team, you are not able to do. We herewith give you a list of work we have done with our engine.

Breaking 430 acres, drilling 275 acres, discing 1,500 acres and cutting 600 acres of wheat and threshing 24 days.

We are sending you photo of our cutting wheat, and you can

use same—we would be very glad to have you do so.

Yours truly,

Kessler Bros.
New Dayton, Alta.

Gas and Oil in the Lead.

Yours of some time ago, addressed to Mr. C. A. Henderson, came to hand, and as Mr. Henderson is somewhere in the States, and as I am acting as his foreman, I will do the best I can to reply to it.

Mr. Henderson is general manager of Neuport Land Co., Ltd., at Plenty, Sask. We have ten sections here and are getting it under cultivation as far as possible.

In 1911 we used one 45-h.p. International Twin Cylinder and pulled an Emerson 14-inch 5-bottom engine gang, with a 12-foot scrubber attached. Two men handled it, and made about 20 miles per day, averaging from 16 to 17 acres, and using about 35 gallons of gasoline. It required about three barrels of water to keep it cool on a hot day, and less in cool weather.

We consider plowing the hardest work on an engine, of anything on the farm. We did not have the 45 on the thresher last season, but expect to pull a 36-inch machine in 1912. We pulled five McCormick binders from

early until late on 25 gallons of gasoline, and it was nice easy work for it.

We have pulled two 12-foot scrubbers, making 24 feet, and three 8-foot discs, but this was late last fall, and we did not get started in time to do much before the ground froze up.

We intend to use the same outfit next spring, with two 12-foot drills attached, making about a 34-horse load.

There are some steam outfits doing good work in this neighborhood, but gas and oil is used most extensively, about three to one. We did some drilling with a team last year, but will not do any next year, as we will have another engine, making two of the 45-h.p. We have eight teams, but can keep them busy at other work, such as hauling grain, gasoline, stone, pulling up hay, etc.

Yours truly,
Neuport Land Co.
Plenty, Sask.

Believe me when I tell you that thrift of time will repay you in after-life with a usury of profit beyond your most sanguine dreams, and that the waste of it will make you dwindle, alike in intellectual and in moral stature, beyond your darkest reckonings. —William E. Gladstone.

Course in Gas Engineering

Conducted By D. O. BARRETT.

This Course consists 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 XXII

(Carburetion and Carbureters

As all of the internal combustion engines with which the farmer has to deal use liquid hydrocarbon and as the internal combustion fuel must be in the nature of the gas before it can be utilized in the engine, it is plain to be seen that it will necessitate an apparatus whereby the gas can be manufactured from the liquid fuel as required by the engine. The most convenient form of gas for engines is that which is made by carbureting.

One of the great steps in the development of the modern inter-

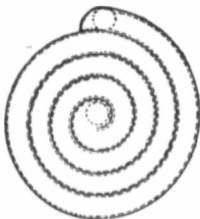


Fig. 2.

nal combustion engine has been the design of satisfactory apparatus to carburey air just before it enters the combustion chamber. The idea of carburetion is not a new one, but the improvement in the forms which have been produced for the purpose has drawn a distinct line between the early and the more modern forms. In fact it is not too much to say that the successful work of the automobile engine and of all other engines of the same class is principally dependent upon the certainty, reliability, and satisfactory working of the carbureting device.

The carbureting apparatus will serve to saturate atmospheric air with any liquid hydrocarbon. There will, therefore, be carbureters for gasoline, for kerosene and for alcohol, divided only as required by the varying characteristics of the liquid. In general the process of carburetion is to saturate the atmospheric air with the liquid fuel in a finely divided or atomized state like a mist. This general principle of atomization has long been used in medicine and surgery and is familiar in the form of the apparatus used in spraying perfumes. The air saturated with a mist of hydrocarbon will subsequently undergo a further mixture with an additional supply of air such as may be required for its full and complete combustion in the working cylinder. With the less vola-

tile hydrocarbons the process of carbureting the air cannot be satisfactorily carried on at the ordinary temperatures of the external air. The carbureter for such liquids will have both the principle of atomization and the subsequent vaporization by heat. When the engine is working, the vaporization can be effected by waste heat from the hot exhaust gas. In starting the motor, however, when all is cold, the vaporization requires an outside source of heat in lamp or torch or otherwise.

The first principle in carburetion, historically, is the vaporation of the volatile hydrocarbon at atmospheric temperature, from the surface of its own liquid. Such carburetion may be called surface carburetion and the evaporation may then be from the cool surface, or the volatility of the liquid may be increased by heating. This system required that a current of air to be carbureted moves over the surface of the liquid.

The second system may be called the principle of mechanical ebullition. The current of air to be saturated is made to pass through the liquid mass, so that it bubbles up through the liquid and escapes at the surface. By this bubbling the liquid is mechanically agitated and a certain proportion of it is entrained with the air in a finely divided state or mist.

The third principle is that of the spray carbureter. These are true atomizers in which the jet of

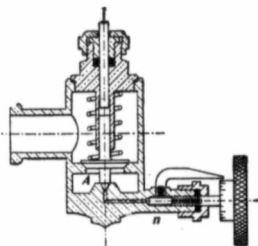


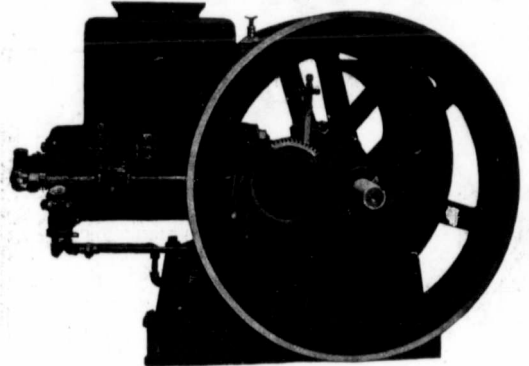
Fig. 1.

liquid fuel is thrown up into the current of moving air by the fact that the air on its way to the cylinder on the aspirating stroke of the engine has a pressure less than atmosphere. A small orifice or nozzle opening into the suction-pipe delivers the liquid fuel into the moving current, and by the mechanical action of this current the mist or cloud of liquid particles is disturbed through the moving current which it saturates.

It will be seen in the latter

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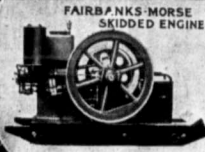
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treatment that the form of the apparatus utilizing this third principle for the less volatile hydrocarbons will require that the spray be made into a gas by heat. With gasoline, as a rule, it is not necessary to vaporize the mist. The first two principles are practically out of competition with the third, which is the modern form.

A carbureter is a device for transforming liquid fuel into a vapor by passing the air either over or through the body of the liquid, and carrying off a portion of the liquid in the form of vapor with the air. Carbureters usually operate at ordinary temperatures, but for fuels that have a low specific gravity that air or the fuel and sometimes both, are heated. This mixture of gas and air is usually too rich in fuel to be explosive, and a further addition of air in the engine cylinder is required before it is suited to the work.

A vaporizer is an appliance for transforming into vapor, just the quantity of gasoline that is required for one impulse of the engine and no more, and it differs from the carbureter in not having a supply of vapor constantly on hand. Either the proper quantity of fuel is caused to flow directly into the path of the entering air,

or the air is passed over a pipe connecting with a small gasoline reservoir and a current of the fuel is induced into the path of the entering air.

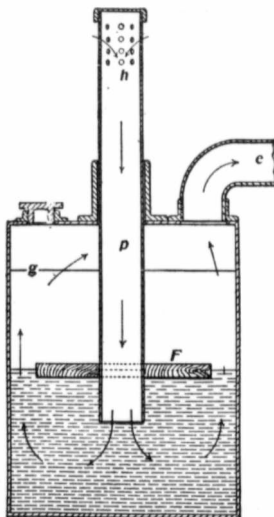


Fig. 5.

Jets are what the name implies, a jet of liquid usually controlled by a small pump. The pump throws a jet of the liquid into the air pipe so that it strikes the side

of the pipe and breaks into a spray, or, as in certain classes of kerosene engines, into a compartment of the compression space and against the side. Jets are sometimes classed as vaporizers, but placing them in a class by themselves makes them much more convenient to refer to.

Carbureters may be divided into two classes, surface carbureters and filtering carbureters. In Fig. 4 is shown an example of a surface carbureter. The carbureter is constructed in the form of a spiral in order that the air passage through it may be a long one. The bottom of the carbureter is covered with gasoline to the height of X.Y. and the wicking absorbs the liquid so that a large surface of fuel is exposed to the air as it passes through. According to Mr. Gardner Hiscox, the height of the gasoline should be not over 3 inches and the total height of the carbureter not over 8 inches. The air enters the spiral through the clack valve V, and passes to the engine through the pipe E.

A filtering carbureter is shown in Fig. 5. The air enters the carbureter through the holes H and passes downward through the pipe P to the gasoline, whence it bubbles up carrying with it par-

ticles of vapor. A float F carries the pipe P in order that the lower end may be constantly at the same distance below the surface of the

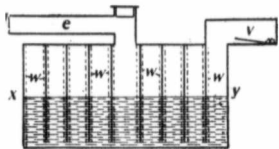


Fig. 4.

liquid. In passing upward, the carbureted air goes through the wire gauze G so many drops of the fuel that may be held in suspension will be caught and left behind. The mixture passes to the engine through the pipe E.

A good example of a vaporizer is shown in Fig. 6. Gasoline enters the vaporizer through the needle valve N and air through an opening leading to the space A. The double-seated valve A is lifted at each induction stroke of the engine the larger seat opening a passage for the mixture while the smaller seat on lifting opens the passage for the gasoline. As the air is warmed previously to coming in contact with the fuel, it vaporizes readily, and the proportions of gasoline vapor and air may be regulated by the needle valve.

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.

T. J. Q. How can I find the power of an engine without an indicator?

A. An engine indicator or a dynamometer is necessary to find the amount of power which is used to run a certain machine; but if the maximum power of an engine is required, the Prony brake will answer the purpose very well. The difference in results is that the indicator gives the power developed in the cylinder, which is more power than the dynamometer or the brake will show. The difference is caused by the friction of the engine which is 10 or 15 per cent. Brake h. p., or power measured by a dynamometer, is known as available h. p.

A Prony brake can be very easily constructed. The accompanying drawing shows how one can be made. The bolts are drawn up till the desired load is obtained and the pressure is then weighed on a scale. C, is a weight used to counterbalance the beam, so that when everything is at rest, the beam rests on centre, A, and there is no pressure on the scales.

There are two ways in which the h. p. of an engine can be figured. If the distance from A to B is not as per drawing the following is necessary: The distance from A to B in feet, multiplied by 2, multiplied by 3.1416, multiplied by the pressure on the scales, multiplied by the revolutions per minute, and divided by 33,000, equals the h. p. This is the regular rule. But when the distance from A to B is 5 feet 3 inches, the problem can be very much shortened, thus: Pressure on scales multiplied by revolutions per minute and divided by 1,000 equals h. p. This applies to gas engines as well as steam engines and to motors of all kinds.

Q. A.R. (a) In what proportion should gasoline and air be mixed to get the most perfect combustion?

(b) What temperature does it explode at best?

(c) What is the chemical composition of the result of the explosion?

(d) Are any solids or liquids left from the explosion which would tend to clog up the machinery?

(e) What is the relative volume of the mixture before and after the explosion?

(f) What would happen if a number of charges were forced into a cylinder and the explosion delayed until the pressure caused by forcing these charges in was raised to 25 or 50 pounds?

A. (a) One hundred and

twenty-four volumes of gasoline to 1,000,000 of air.

(b) The editor does not understand this question thoroughly, but assumes it to mean the temperature to which the charges should be brought before ignition to get the best effect. This brings it down to a matter of the best compression, and this should be as high as may be obtained without the charge taking fire of itself. At normal speed, about 600 feet per minute, the limiting compression for gasoline is between 80 and 90 pounds per square inch.

(c) As gasoline consists entirely of hydro-carbon, the result of perfect combustion is a mixture of carbon dioxide, water vapor (steam) and nitrogen.

(d) Imperfect combustion will cause a deposit of carbon in the cylinder and the exhaust passages. Carbon will also deposit from an excessive amount of lubricating oil when this is but partially consumed.

(e) In a gas engine there is practically no change of volume at the time of the explosion, but instead a rise of pressure in the ratio of about four and a half to one.

(f) Nothing unusual would happen in this case, not any more than what occurs when the pressure is raised by the usual compression in the gas-engine cylinder.

Q. At what temperature F. may kerosene be converted into gas and used in place of gasoline?

A. Kerosene vaporizes at from 300 to 375 degrees F. It is not, however, necessary to bring the kerosene up to this temperature for use in the engine. After an engine has got hot by starting on gasoline it will usually run successfully on kerosene, and even some of the other distillates. Ordinarily kerosene engines draw in the air from around the exhaust pipe or air shaft surrounded by hot water from the engine.

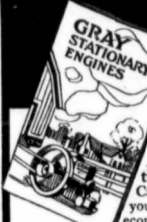
Q. W.W.T. (a) What is the power of a two cycle engine with 4½-in. bore, 6-in. stroke at 400 r.p.m., and at 450 r.p.m., fly wheels 26 in. and weight 120 lbs. each?

(b) What would be the difference in power of the above engine fitted with 12-in. pulley, and 16-in. pulley?

(c) Which is the most durable, simple and less liable to get out

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The wonderful economy—big power and absolute simplicity of Gray Stationary Engines are facts you should know about before making your selection. Write today and get a copy of the big Gray Catalog—tell us what you want the engine for—we can give you some mighty valuable help and suggestions about the most economical selection for your particular requirements.




Gray Stationary Engines are made in sizes from 1½ to 36 H. P. and are suited to doing the widest variety of work on the farm and in the shop. Big powerful engines for the heavy fall and winter work—big jobs of sawing, pumping, etc. Medium sizes for running all the various machines on the place and small sizes for the small machines—cream separators, churns, washing machines, pumps, etc.

30 DAYS TRIAL—You can get any Gray Engine and try it for 30 days at your own work. We take all the risk. If engine is not all we claim it can be returned and we will pay the return freight. Our broad and liberal guarantee as to workmanship, material and power protects you absolutely.

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If you are interested in the purchase of a gasoline engine write today and ask for a copy of the "Gray Engine Book." You owe it to yourself to get full details of the Gray line before making your final decision. Don't hesitate to ask questions that will help you in getting the most profitable engine for you.

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The **WATERLOO BOY GASOLINE ENGINE** will run all day without attention, furnish exactly the power you need, maintain a uniform speed and save you money every hour it works. The either Kerosene or Gasoline for fuel—equipped for both at no extra charge.

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Has many important exclusive features—Speed Lever works like throttle on a locomotive; old reliable fly ball governor; automatic feed regulation; open jacket, starts easy in Winter; interchangeable parts, etc. Lowest in price because made in largest quantities at a manufacturing cost. Guaranteed 5 years. Book free. Write today.

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SIMPLE, RELIABLE

Barrie Engines are so simple in construction your boy can safely run one. Little attention required. Reliable and economical.

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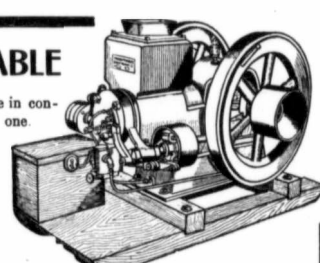
are staunchly built. Cold weather or long hours don't bother them. All ready to run. No skilled labor required to adjust them. 3 to 100 horse power. Stationary or portable. For gasoline, producer gas, natural gas, and distillate.

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Patronize Those Who

Patronize This Magazine

of order, a two or four-cycle engine, and which requires most fuel and water per h.p.?

(d) Which is the best, a vertical or horizontal engine, and why? Which is most durable, and which has the most vibration when in motion?

(e) Which is preferable and best, a closed crank, known as a splash oiler, or an open crank?

(f) Which is most durable, a jump spark, or a make and break, and which requires most current? Which is the simplest and less liable to get out of order?

(g) What is the difference between a hit and miss and a throttling and an automatic governor, and which is the most sensitive to irregular load? Which is the most saving of fuel?

(h) Do you know of any 4, 5 or 6 h.p. engines that can be started in zero weather without cranking?

(i) Is there any way to increase the compression of a 4-h.p. two-cycle engine which has been run about 8 or 10 days?

(j) A 4-h.p. two-cycle engine has a 12-in. pulley. What difference would it make in power to put on a 16-in. pulley, and would it not be more straining on the crank and all bearings to use a larger pulley?

(k) I am using a 14-in. pulley on 4-h.p. two-cycle engine, to run a pole saw, which has a 5-in. pulley on saw mandrel. Engine runs at 410 r.p.m. and saw at 1,050 r.p.m., which, by figuring, shows belt is slipping, for engine at 410 with 14-in. pulley should run saw at 1,148 with 5-in. pulley. Is this not correct? And how can same be remedied? I use 5-in. rubber belt, 13 feet long, doubled, and as tight as two men can put on pulleys, and I have tested speed of engine and saw with one of Stuart's speed indicators, and found engine 410 and saw 1,050.

(l) I want to increase speed of saw about 200 r.p.m. Which would be best to put, larger pulley on engine, or put smaller pulley on saw mandrel, or use a line shaft?

(m) Does it require more power to run a machine belted to a line shaft and then to engine than it does if only one belt is used and engine is belted direct to machine?

(n) What is meant by the following terms: What is watt, an ohm, a volt and an ampere?

(o) Which is the most durable, a battery with one and a half volts and 15 amperes, or a battery with one and six-tenths volts and 30 amperes?

(p) Which is best, a pulley with crowning face or straight face?

(q) About how many drops of oil per minute should be fed to

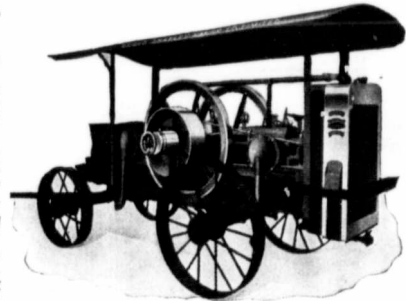
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If You Have a Manitoba Engine

You don't mind the coming cold weather

MANITOBA Engines are made in the West with regard to Western climatic conditions. They start in coldest weather, without trouble. Our Automatic Mixer does the work and needs no priming.

The Hopper Cooling system gives perfect results, with only slight evaporation of water. No danger of pump or pipes freezing. Battery and Fuel Cut-Out works automatically. Saves much fuel money and makes batteries and ignition points last far longer.

Every MANITOBA Engine is guaranteed for two years from date of purchase.

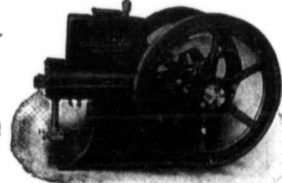
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 BRANDON, MAN. CALGARY, ALTA.



OUR 25 H. P. MANITOBA PORTABLE ENGINE IS "GREAT" FOR THRESHING

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the cylinder of a 4-h.p. two-cycle engine? I use 15 drops per minute, and before starting engine put proper amount of oil in crank chamber.

After one hour's run I find only half the desired amount left in crank chamber, and as there is no leak in the chamber, what becomes of the oil, as the waste oil from cylinder drips into crank chamber, and is supposed to keep proper amount to oil crank and piston pin. Would it be advisable to use more oil? My instructions from the makers were to use 8 to 12 drops per minute in the cylinder.

(r) Do you know of any firm who make 5 or 6-h.p. traction engines and a firm who builds re-

versible engines of 4 to 5 h.p.?

A. (a) At 400 r.p.m. about 4 h.p. At 450 r.p.m. about 4 1/2 h.p.

(b) None.

(c) Other things being equal, the reliability and durability depends much on the operator. It is generally conceded that the two-cycle requires a little more fuel and water than the four-cycle.

(d) Of the single cylinder type the manufacturers show by their output that the horizontal is to be preferred, because practically all of them run into the horizontal single cylinder engine when they reach the 8 h.p. limit. Vibration depends on the non-efficiency in balancing the engine.

(e) A closed splash oiler might

be preferred on vertical, but we favor open crank or horizontal.

(f) This again is a matter of preference, possibly due to experience with both methods. We should prefer make and break in slow speed engines, and jump spark on high speed work. Nor is there much difference in current strength required, all things being in the pink of condition. Durability varies in either mechanism, according to the care and attention given them.

(g) Hit-and-miss governor allows a full charge, and then cuts out as many succeeding charges as are not needed to carry the load or allows full charges in succession under full load. A

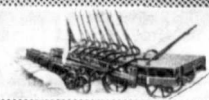
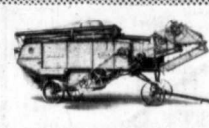
Continued on page 71

CASE THANKSGIVING

Farmers, Threshermen and Farm Power Users of the World. We wish to thank you for the liberal orders for Machinery and Supplies that you have poured in upon us this season.

It has been our honest endeavor to give each and every one of you a "heaping measure" of value and service in everything purchased from us and from the outspoken satisfaction which so many of you have expressed, we feel that we have succeeded.

Though you have kept us very busy we haven't neglected to plan ahead so that we may be still better prepared to serve

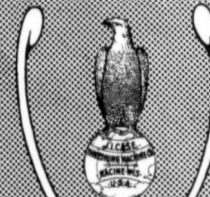
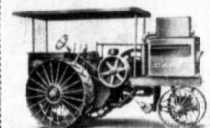


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CANADIAN BRANCHES, TORONTO, WINN

WISH TO ALL

you in the future. We have steadily increased our facilities and anticipated in every direction the demands you will make upon us next season. You will find Case Machinery for next year, as for seventy years past, a step in advance of the rest, with the latest Practical Improvements embodying the Newest Ideas for Increasing your Earnings and minimizing Labor and Expense.

We rejoice with you in the Prosperity that has attended you and wish you all Equal Prosperity this Coming Season.



MACHINE CO. INC. RACINE WIS. U.S.A.
PE G, SASKATOON, REGINA & CALGARY

The Lethbridge Session of the Dry Farming Congress

Continued from page 13

advantage and that the particles of the mulch should not be smaller than the size of wheat as if smaller it will blow away.

In summing up Mr. McKillican stated that the south east is rich and undeveloped with weeds and needs drainage and rotation; also that the south west needs a change in crops, and recommended a rotation which consisted of two years wheat, one year oats or summer fallow, two years oats or barley and five years alfalfa.

Prof. Hopkins of Illinois University talked to a large number of farmers and others interested in Dry Farming on what he termed the Six Factors in Crop Production, namely: good seed, a proper seed bed, heat, light, moisture and plant food. He advised securing the best seed possible and treating it if necessary, then give it a good home. Heat, light, and moisture are all essential. The two former can not be controlled, while the third is very essential even in dry farming. He briefly stated that it was the farmers business to see that moisture be conserved, and that the more moisture one receives, the more he can conserve. The plant needs less soil moisture continued Mr. Hopkins, if it is rich in plant feed. He also added that weeds, insects, and diseases were all negative factors which must not be over looked, and that crop rotation eliminated them more than any other thing. The rotation he mentioned was turnips or corn one year, oats or barley one year, clover, then wheat. Prof. Hopkins gave data on results of experiments of the Illinois station which showed that rotation pays and advised that a great deal of attention be paid to reports of experiment stations.

Prof J. Braken of Saskatchewan gave what he termed the six commandments of Dry Farming, as:

- 1—Deep plowing, especially for summer fallow. Deep plowing and proper cultivation will conserve from 2-3 to 9-10 of all the precipitation.
- 2—Time of plowing and that the first week in June was better than the third with twenty cases with flax.
- 3—Properly tilled fallow will carry over nearly all of the precipitation.
- 4—Surface cultivation which largely prevents surface evaporation.
- 5—Vigorous cultivation.
- 6—Sow seed according to amount of moisture in the soil. The thicker the sowing the earlier

the ripening of the grain. Sow as early as the ground can be gotten on to.

Good Roads a Great Factor in Modern Farming

Scientific farming and good roads were mentioned as two great factors in agriculture by Premier Sifton. He spoke of the wonderful growth of the North West, the good such eminent agriculturists could do by a gathering of such a nature, and the need of good roads in the rich north west.

L. A. Boykin of the United States Department of Roads spoke very strongly on the matter of good roads. He said that the opposition of the farmer was part of a campaign for good roads, because an improvement of the roads meant taxation in some form. He stated that the crop was of no value until marketed and that every dollar spent to improve roads was an investment.

Mr. Boykin spoke of the use of the split log drag for maintenance of the highways and of the construction of the roads. He said that some thought must be given to road location and that the drainage was the most important item in road construction.

He spoke of the country population moving to the cities and that good roads would help much to make country life more attractive. Place the administration in the hands of competent men, place the payment of road taxes on a cash basis and make the work permanent and the roads will be greatly improved, were points of his talk.

Plowing has been too Shallow

Mr. Haney of the International Harvester Company gave an interesting talk on plowing, stating that a great deal up to the present time has been done shallow, due to a lack of power. He said that the first plowing should be shallow, especially if wet and that each succeeding plowing should be a little deeper. The objects of this extra depth each time was to break up the hard pan which would form if the same depth was maintained year after year, also to bring up a little more plant food each year. He thought that the eastern farmer should plow deeper to turn up fertility and under germs.

The plowman must know the soil, moisture condition, and know why plowing, discing and harrowing is done and he will know how it should be done, stated Mr. Haney. He advocated an abrupt turned mould board to break up the particles and placed the disc next in importance to the plow.

Power for Thorough Tillage

Raymond Olney, Traction Farming Expert, M. Rumely Co., La Porte, Ind. prepared a paper on Traction Farming which was

THE LAMP

FOR FARM HOME

THE



"Poor and badly distributed artificial light kills more optic nerves than any combination of constitutional weakness."
—Professor Flint

SAVE YOUR EYES

and read, sew or do your indoor work of any kind in absolute comfort by using one of our

Table or Hanging Lamps

An entirely new lighting system for domestic purposes, for stores, offices, schools, halls, etc. Gives a powerful white, steady yet mellow light of approximately 300 candle power. One cent is the cost of four hours light. Odorless, smokeless and no wicks to trim.

Perfect combustion, lowest gas consumption, absolutely shadeless, highest candle power—will not blacken the mantle. Better than gas or electricity and infinitely superior to kerosene. Easy to light and while burning may be carried from room to room in horizontal or in any position in perfect safety. May be rolled on the floor without effecting it in any way. It is supported on cork cushions so as not to mar the most delicately finished furniture.

Most Simple, Safe and Economical Light ever Built. Send for one; if after lighting and testing you don't find it the finest light you ever saw, return to us and your money will be refunded. If we have no agent in your district, Secure The Agency once. You will make many friends and a good margin of profit by selling "ACORN" LAMPS.

ACORN BRASS MANUFACTURING COMPANY, 275 FORT STREET, WINNIPEG.

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

Big Ben



Big Ben ends the over-sleeping of Farm Hands

Will you spend Three Dollars to insure yourself for years against that everlasting bother—getting the farm hands in the fields on time? Will you spend it to insure a full days work from each man six days out of every seven.

Then, spend it for Big Ben. He's doing it on thousands of farms every day right now. More than a million people have spent it for Big Ben to help them get to work on time. Don't you want to join the Big Ben Army. Don't you want your farm hands to be members?

Alarms are sold at \$1.00 and \$1.50 less than Big Ben costs but such alarms are merely things to wake up by, not to wake on time with. They enable you to make a guess at the right time, that's all.

Big Ben enables you to know the right time. When he wakes you he does it at the time you want, the right time.

Then, cheap alarms may last a year but Big Ben actually lasts for years and years. He's built of steel. He's a handsome clock plus a punctual alarm. You can use him all day long in any room for he fits bed room, parlor, dining room or hall.

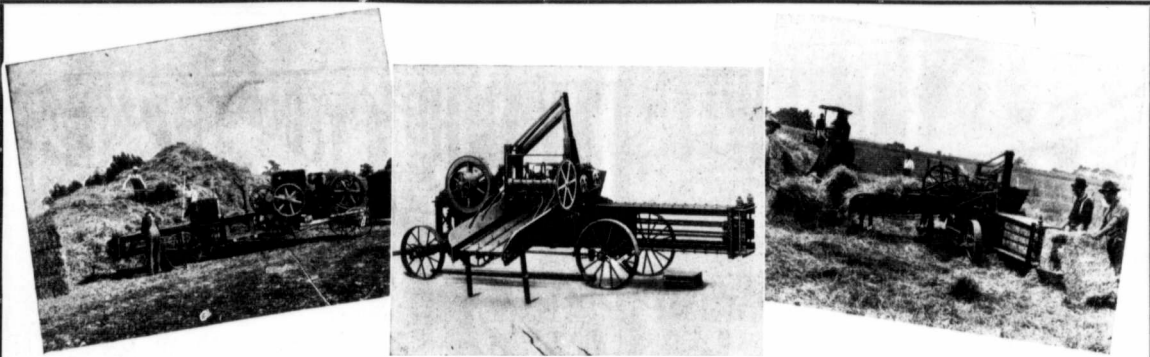
The city man can get the right time of his neighbor or by picking up a telephone but that's not so convenient for you. You need a reliable time-keeper always in the house. That's why you need Big Ben more than you need a plain "alarm."

Big Ben rings just when you want and either way you want five straight minutes at every half minute during ten minutes unless you flag him off. His big keys make winding easy and his great open face and large hands tell the time plainly across the largest rooms.

Big Ben is sold by 5,000 Canadian dealers. His price is \$1.00 anywhere.—If you cannot find him at your dealer's, a money order sent to his designers, Waukegan, La Salle, Illinois, will bring him to you duty charges paid. Put him right now on your Xmas list.

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

Remember to renew your Subscription



**THERE IS EXTRA PROFIT FOR YOU THIS FALL
IF YOU HAVE
A RUMELY "AUTOMATIC" BALER**

Your neighbors will appreciate your getting this machine, which bales timothy, clover, meadow hay, straw, alfalfa, shredded fodder, pea-vine hay—in fact, all kinds of materials.

The output is at least one-fourth more than that of any machine of equal size where hand feeding is employed.

Keep your engine from standing idle when it might be doing good work for you and your neighbors. Our catalog telling all about it is yours on request. Ask us or our nearest branch.

RUMELY PRODUCTS CO., Incorporated

POWER FARMING MACHINERY

General Offices: LA PORTE, INDIANA



CALGARY, ALTA.
ESTEVAN, SASK.
SASKATOON, SASK.

CANADIAN BRANCHES:
BRANDON, MAN.
REGINA, SASK.
WINNIPEG, MAN.

EDMONTON, ALTA.
TORONTO, ONT.
YORKTON, SASK.

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

read before the Dry Farming Congress, in which the writer stated that mechanical was superior to muscular energy for power. In a few paragraphs Mr. Olney pointed out that the farmer must not only break up a vast area of virgin soil but that the plowing must be done deeper than in the past. These he claimed to be the two important factors in an increased crop production. To accomplish this the oxen and horses must be replaced by the farm tractor.

Mr. Olney said in part:

"The great problem of deep plowing is power and plenty of it. The farm tractor has already solved this problem, for by its use it is possible to plow eight, ten, twelve or more inches deep. The reason most farmers are not plowing deeper than four or five inches is that they have not the power available. It is possible but not profitable to plow deep with animal power. A team of four horses are about the limit for one man to handle. Beyond that they become not only awkward but very inefficient. The efficiency of animal power decreases very rapidly as the team increases in size. With a farm tractor its efficiency increases as the size of the power unit increases. The horse must be fed 365 days of the year to store up energy when

needed, and an animal is a continuous source of expense. A tractor eats only when it works, and with the exception of interest on the investment and a slight depreciation cost, the expense stops with the wheels. The repaid bills for a tractor will not exceed those of the doctor and horseshoer for the number of horses that equal it in power, and it also requires a building only about one-tenth the size and cost as that required for the horses.

"As to efficient farm labor, we all know that this is a great problem. The tractor solves it, however. From three to five men are required to handle three to fifteen horses in a field; with an engine guide and a self-lift plow, one man can easily operate a traction plowing outfit. Then, too, it is possible to haul discs, drills and harrows behind the plows or deep tillage machines. In this way four jobs are performed in one. Instead of going over the land four times, it is covered but once.

"I am not advocating the use of traction power to the exclusion of animals, because this will never be possible. Horses will always be needed on the farm, as some of the lighter tasks can be done more economically with them than with a tractor. Farmers who have given the tractor a thorough tryout have

found it a labor saver and expense saver, and a time saver. It meets the needs of the farmer for all power purposes."

The writer quoted figures to show the cost of upkeep of the engines, as compared with the cost of keeping horses for work on the farm. He figured that the average consumption was 5213 pounds grain and 7072 pounds hay as taken from reports of Minnesota Agricultural College and U.S. Government Reports. Figuring the grain at 35c and hay at \$12.14, the cost to feed a horse for a year was \$100, and that the horse worked on an average of 948 hours per year. On the other hand the 15 h.p. tractor would burn 3000 gallons of kerosene for 1000 hours of work, which at 15c per gallon would cost \$450, with grease and minor repairs; the cost of horsepower would be three times greater than that of a tractor. Not only could this be done cheaper, but it was essential that plowing and tillage be done in a short time in a dry farming country to conserve soil moisture, and the tractor had sufficient capacity as it could be worked night and day.

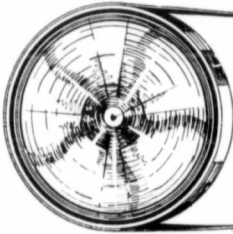
Are Horses Better than a Tractor Engine?

When Mr. Olney concluded several delegates protested in-

dignantly against the paper having the official endorsement of the meeting. Practical farmers pointed out that the horse was the best investment on the farm if it did not work a day. Mr. Knight of Raymond advocated the use of the cable plowing outfit manufactured in Leeds, England, and stated that when he wanted to plow deep he left the tractor aside and used horses, as tractors could not carry themselves over the loose land that has been plowed deep. The feeling of the meeting seemed to be opposed to some of the statements of the expert, and many who were not already opposed left the room feeling that the tractor of the present day is too heavy a machine for anything but the virgin soil.

Agricultural Engineering of New Section of the Dry Farming Congress

F. S. Harris of Utah, acted as chairman of the Agricultural Engineering Section of the Congress. This was the first time that this branch had a place at the Congress and was well attended. Mr. Harris spoke briefly of the needs of agricultural engineers in the dry farming country and said that the farmer has been neglected as the engineer went to the city to show his skill, but at the present time the agricultural engineer



BETWEEN FLY WHEEL *And* CYLINDER PULLEY



Always Use Either A "LUMBER KING" or a "STAR" THRESHER BELT

The best that the experience of a lifetime and human skill can make out of the very best material that nature supplies. For wear and tear and uniformly smooth work there is nothing "between fly-wheel and cylinder pulley" that can give greater satisfaction. We have thousands of delighted threshermen and engineers to speak for us and we have not a single dissatisfied customer in our record as thresher belt specialists.

QUALITY IS ECONOMY

Remember that subtracted worth by the manufacturer multiplies trouble for the user.

SAVE TIME—TROUBLE—MONEY

By using either "Lumber King" or "Star." Insist on them.

Canadian Consolidated Rubber Co.

LIMITED
Winnipeg

CALGARY

EDMONTON

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REGINA



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

could find a great variety of work among the farmers. He divided the work of an agricultural engineer into seven departments, namely: irrigation, farm surveying, building roads, sanitary engineering, farm machinery, farm buildings, and the manufacturing of farm products.

Water Supply for the Dry Farm

In the Agricultural Engineering Section rural water supply was one of the important subjects discussed. Prof. R. B. West of Utah in his paper stated that water ranks first in quantity of matter consumed, as over half the matter daily taken into the stomach was water. He said that water ranks lowest in regard to freedom from noxious germs and is so stable chemically that microbes may exist within it in incalculable numbers without breaking it down or appreciably changing its character. "In short water is pre-eminently the food substance of living things from the highest to the lowest; it is the most abundantly consumed of any food substance, often more than all others combined, and at the same time there is a danger in its use much greater than in all other foods."

The writer classified wells as dug wells, driven wells and drilled wells. Dug wells, being from 10 to 25 ft. deep and about 5 ft. in

diameter, are very popular, because of the ease with which they may be constructed by the farmer when other work is not pressing, and they require so little money. As commonly sunk these wells are the most dangerous of all sources of water supply, but with certain precautions they could be made very satisfactory in many vicinities. Mr. West described the ideal well as one not located closer than 100 ft. to a barn and having a tightly cemented casing extending 10 ft. below the surface and projecting 1 ft. above the ground, from which concrete should slope back to prevent the surface water from entering. The top should be tight so that drippings from the well cannot find their way back, and to exclude mice, toads, and insects.

Mr. West stated that drilled wells were usually from 2 to 10 inches in diameter, and varied in depth, and usually furnished a good supply of water, but if water could not be found before 300 ft. had been reached a new well should be started.

The writer also classified springs as gravity, artesian, and seepage or tubular—the seepage spring having vegetation at its mouth and the tubular spring terminating in limestone formation. He also warned the user of spring water to see that the

surface water was kept away and that a concrete mouth be put in to make everything as sanitary as possible.

Farmers Should Pipe Water to House

Mr. West said in part that: "It would appear from observing the farming communities that the farmers have been very slow to appreciate the value of piped water in the farm home; usually they forgot the effort required in carrying the water for the household. There are excellent methods that have been perfected and machines are now on the market at reasonable prices that perform the work very satisfactorily. Besides the direct value of the piped water in the house we are able to have the modern bathroom which adds much to the convenience of the farm home and makes it much more sanitary."

In conclusion the writer mentioned that the windmill could be used to pump the water to an elevated tank or into an attic, but there was some danger of the water getting warm or leaking. He recommended the pneumatic tank system with the windmill as pumping power, so regulated that when a certain pressure was reached the mill would be thrown out of gear. He also recommended the hydraulic ram if conditions were favorable, which

would lift about one in every seven gallons.

Exhibits Numerous

Several firms exhibited on the Congress Exhibition Grounds. The Big 4, Aultman - Taylor, Minneapolis; Rumely, Owsted Four Wheel Drive, J. I. Case, and the International Harvester Co., were all exhibitors of gas or steam tractors. Separators and the Stuart Sheaf Loader were also shown, but as the Congress was held at the time when so much threshing was being done there was not a large number of farmers present on the exhibition grounds. Those who came attended the lectures regularly.

Colorado, Oklahoma, Washington, Idaho, California, Nevada, Arizona, British Columbia, Saskatchewan and Manitoba all had displays which showed that these states and provinces were all prosperous in an agricultural way. One of the finest exhibits was that of the U. S. Government.

The awards made by the judges were so numerous that mention could not be made without taking a great deal more space.

Raymond, Alta., Farmer Won Big Prize

M. Rumely & Co. of La Porte, Ind., offered a 15-30 h.p. Oil-Pull to the farmer producing the best bushel of wheat. Henry Holmes of Raymond, Alta., won the engine

Emerson-Brantingham Implement Co.

Rockford, Illinois, U.S.A.

The Largest Line of Farm Machinery in the World

TUDHOPE, ANDERSON CO., Canadian Sales Agents

WINNIPEG

The Foot Lift Line

Plows, Harrows, Roller Pulverizers, Listers, Planters, Stalk Cutters, Cultivators.

Reeves Threshing Machinery

Traction Engines, Separators and Accessories, Steam Plows, Clover Hullers, Corn Shellers, Steel Baling Presses, The Reeves "40" Gasoline Tractor, Saw Mills, etc.

The Big Four "30"

Four Cylinder, All Purpose Farm Tractor, uses Gasoline, Kerosene, Benzine, Naphtha or Distillate, with economy and efficiency.

Emerson Forged Steel Vehicles

Original in design and construction.

Emerson Hay Tools

Original Gearless Hay Loader. No gears, no chains, no sprockets. The New Standard Mower, Emerson Sweep Rakes and Stackers, combined Side Delivery Rakes and Tedders.

Emerson Grain Drills

Plain and Fertilizer, Single and Double Disc and Hoe Drills, embodying many original and distinctive features.

Newton Wagons

Invincible since 1854, unequalled in light draft, durability, workmanship and finish.

Emerson Low Down Spreader

Easy to load, easy to handle, light draft.

Emerson Engines

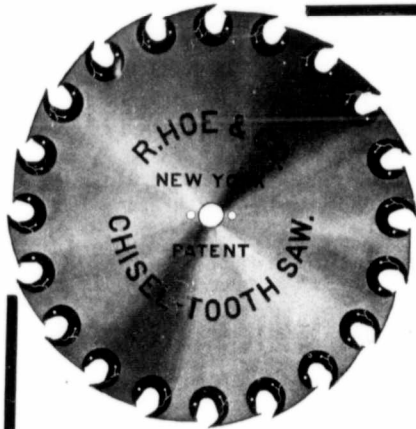
Use Gasoline, Kerosene, Benzine, Naphtha or Distillate with economy and efficiency. 11-2 to 33 horse power.

SOLD BY DEALERS EVERYWHERE

Get Carload rates by buying your complete line from Emerson-Brantingham Implement Co.

Implement Works at Rockford, Ill.; Carriage Works at Rockford, Ill.; Reeves Works at Columbus, Ind.; Big Four Tractor Works at Minneapolis, Minn. and Winnipeg, Man.; Hay Tool Works at Chicago Heights, Ill.; Grain Drill Works at Marion, Ind.; Newton Wagon Works at Batavia, Ill.; Engine Works at Rockford, Ill.

BRANCHES IN ALL PRINCIPAL TRADE CENTERS



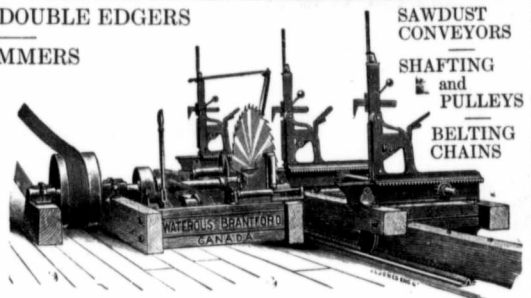
Portable Saw Mills

SINGLE AND DOUBLE EDGERS

LUMBER TRIMMERS

LIVE ROLLS
and
TRANSFERS

KICKERS
LOADERS
and
NIGGERS



SAWDUST
CONVEYORS
SHAFTING
and
PULLEYS
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CHAINS

HOE & CO. CHISEL TOOTH SAWS

PLANERS

Write for Prices

Waterous Engine Works Co. Ltd. Winnipeg Manitoba

in stiff competition, and the biggest prize ever given in any open competition of such a nature remains in the vicinity of where the seventh session of the International Dry Farming Congress was held.

M.A.C. Students Bring Back Spokesman Cup

Last year the Spokesman, a Spokane daily, offered a cup to the best grain-judging team from an Agricultural College, who won it in competition for three years. It was won by a Washington state college team last year, who along with other teams competed for it this year. This year it went to the Manitoba Agricultural College for the best judging. The college was represented by Messrs. Brown, Webster and Betts, and as this team did not know that they were to compete

for it until a few hours before the competition, it is considered even a greater honor.

Among the exhibits was a poster showing the effects of deep tillage with the following directions for plowmen:

Why Plow Deep?

- 1—Plants feed principally in the soil turned up by the plow.
- 2—Deep plowed soil takes in more moisture when it rains.
- 3—Deep plowed soil holds moisture better.
- 4—The crop on deep plowing does not suffer as much from hot winds.

Follow binder with disc, which loosens up the surface soil kills weeds and shuts off evaporation. The discing also mixes the stubble with the soil which makes a better seed bed.

When to Plow Deep

In the fall—the earlier the better, when summer fallowing. The moisture moves through compact soil and aids the moisture in moving from the subsoil. What is needed is to pack the lower part of the plowed soil and not the surface. This may be accomplished by following the plow with a disc, harrow, cultivator or weeder, which leaves a mulch and hinders the evaporation.

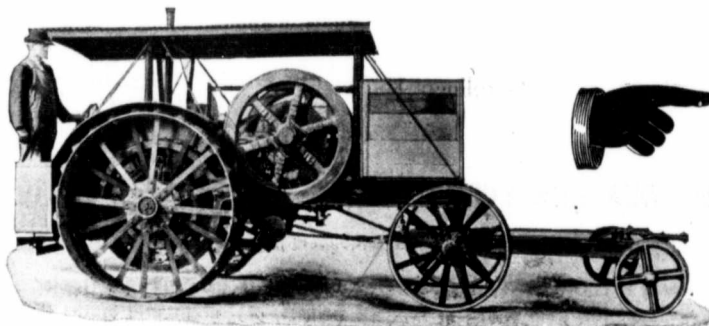
How to Keep the Soil from Drifting

Keep it full of grass or alfalfa roots and manure, or plow under a green crop. These hold the soil particles together as a band holds a bundle of shingles together. Straw or manure spread thinly over the field will prevent drifting.

Summary—To make a good seed bed, rotate the crops, follow binder with disc, plow early and deep, pack immediately with sub-surface packer. Harrow or disc early in spring.

It has taken years to bring before the people the advantages of dry farming. The future is already assured—it has come to stay. It has been successful where the annual precipitation has been less than nine inches. It is a fixture to western Canada as well as to parts of all parts of the world and is recognized by all of the leading agricultural colleges, and the departments of agriculture of Canada, United States, Australia, Mexico, Turkey, South Africa and other countries where the precipitation is under 20 inches.

THE CUDDY PATENT STEERING DEVICE



Read This

A Letter to the Designer of the Cuddy Patent Steering Device

Mr. T. H. CUDDY,
Sanford, Man.

Dear Sir,—... In plowing with engine gang plows.... I find that it is very necessary, in guiding an engine, to do good plowing, to have a steering device. As far as I have seen, the one you have is the best.—Yours truly,

(Signed) GEO. A. LITZENBERGER,
Field Man, Parlin-Orendorf Plow Co.,
Canton, Ill., U.S.A.

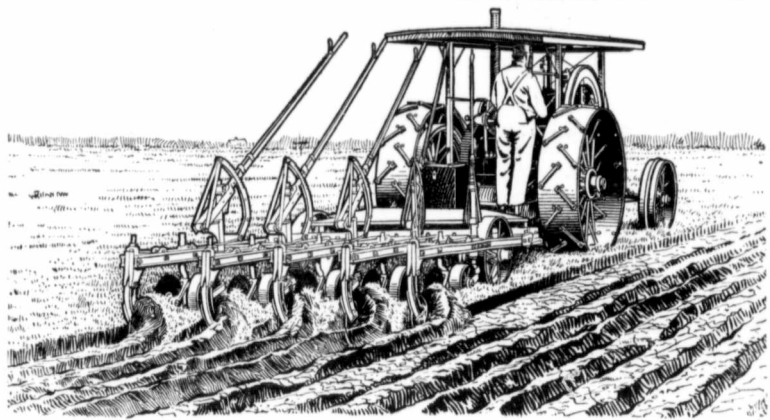
THE WESTERN STEEL AND IRON CO. LTD., Sole Manufacturers
WINNIPEG, CANADA

WRITE US FOR PRICES

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

You Can't Overwork an IHC Tractor

Nobody thinks of feeling sorry for a machine. The minute power takes on a form of steel and iron, it loses all right to be considered in the same class with flesh and blood. Horses tire under a strain. Their work is affected by heat and cold. Their power is limited by many conditions. An unfavorable season may cause sickness and possible death, with losses to the farmer that he is in no position to stand. Not so with an IHC tractor.



IHC Kerosene-Gasoline Tractors Never Tire

Does the work require long hours? A tractor works twenty-four hours a day, and does just as much work the last hour as the first. It requires no rest except the time taken for oiling. Whether used for plowing, harrowing, harvesting, threshing, hauling, or any other of the many things it will do, it works steadily until the job is done. As soon as one piece of work is finished, the tractor is immediately ready for another.

IHC tractors are made in 12, 15, 20, 25 and 45-horse power sizes, suitable for use on large and small farms, and each as reliable and economical as the other. IHC engines in 1 to 50-horse power sizes furnish convenient power for all farm purposes to which the tractors are not suited. The IHC local dealer will supply you with catalogues and full particulars, or you may secure them by writing to the address given below.

WESTERN CANADIAN BRANCHES INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

At Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Lethbridge, Alta.; North Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Weyburn, Sask.; Winnipeg, Man.; Yorkton, Sask.

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

The credit end of the farm implement business is the one that causes both the implement manufacturer and the farmer a lot of trouble. For were it possible to sell all implements for spot cash there is not a question of a doubt but that a great deal of the friction that sometimes arises between the manufacturer and farmer would be eliminated.

Western Canada is a heavy user of agricultural credit, in fact millions of dollars are annually loaned to the farmers in the shape of unpaid balances upon farm machinery that is purchased. So great is the annual aggregate amount that it is sometimes difficult for implement firms to get enough actual cash with which to carry on their business. Iron, steel, labor, salaries, new buildings, etc., are practically spot cash in so far as the manufacturer is concerned while the proceeds from the sale of manufactured articles are made up largely of "promises to pay."

With the idea of relieving this "credit congestion" somewhat there has been formed in New Jersey a Company to be known as "The Agricultural Credit Company."

The new company will be organized with power to purchase and to hold for investment and collect any promissory notes,

The Farmer and His Farm Machinery Credits

obligations, book accounts or claims given to manufacturers in connection with the sale of agricultural implements, tractor engines, or other machines or fertilizers, used in agricultural pursuits.



The above cut is that of Mr. S. S. Stratton Jr., who is President of the Agricultural Credit Company with a capital of \$4,000,000. Mr. Stratton has spent almost a lifetime in the implement manufacturing business having been for several years Secretary and General Manager of Gaar-Scott & Co., of Richmond, Indiana. At the time of the taking over of the Gaar-Scott Co. by M. Rumely Co., Mr. Stratton became Secretary of the M. Rumely Co., which position he held until he resigned to take up his present position. Mr. Stratton is thoroughly familiar with agricultural conditions both in the U. S. and Canada. This combined with a wide business experience should enable him to pilot the new company to a big field of usefulness in the Agricultural Implement Industry.

Character of Business

To clearly understand the necessity for the creation of this company and the broad basis upon which its integrity rests, one must first get a comprehensive view of the evolution in farming methods, and the radical and rapid changes now taking place, due to the installation of mechanical power on the farm, and the inadequate financial facilities available to meet the requirements of the farmers during this period of transition.

The present epoch of modern industry began with the production of mechanical power and its application to manufacture and transportation. Within the past few years a new epoch in agriculture has begun with the application of mechanical power to farm work. A number of agricultural implement concerns are now manufacturing tractor engines especially designed for farm work, which burn coal, gasoline, kerosene, or other fuels. These machines may be used as stationary engines to supply power to

drive all kinds of machinery; they may be used to draw a gang of plows, or other machines, used in discing, harrowing, fertilizing, and preparing the ground for the planting of crops. They may be used to draw reapers and binders for the harvesting of crops; they furnish the power to threshers which separate the grain from the straw, and to corn huskers which separate the corn from the stalk; they are used to propel the machines which weigh and bag the grain, and in many cases are used to haul wagons to market loaded with the season's harvest. In other words, the present day tractor engine economically and efficiently supplies the owner of a farm with mechanical power to largely supplant the human and animal muscle formerly required.

The demand for mechanical power on the farm is increasing rapidly, and it is calculated that the farms are already using more horse power of internal combustion engines than all other industries combined. It is almost impossible to overestimate the number of machines which will be required in the future to meet the demand. The total producing capacity of the manufacturers in this line is able to supply but a small part of the demand at present existing for these machines.

Free to Trappers

Send us your name and address and we will send you a supply of these tags free. Put them on your furs when shipping and your are guaranteed absolutely the best prices. We are the most liberal fur house in America. **SEND TODAY FOR FREE FUR LIST.** We Charge no Com. at all. We are Direct Buyers. **Lotz Bros.,** 87 Chestnut St., St. Louis, Mo.

Mention this magazine when writing advertisers.

WE WANT AGENTS

Everywhere in Western Canada for C.O.W.L. Brand Ranch & Farm Remedies. (Preparations made from refined Coal-Tar and blended with suitable emolient oil). **Liberal Commissions** Full particulars, prices etc., on application. **The Carbon Oil Works, Limited** WINNIPEG - CANADA Write to Dept. "T" Remedies.

Mention this magazine when writing advertisers.

WANTED — SALESMEN AND SALES-WOMEN—Hundreds of good positions now open paying from \$1,000.00 to \$5,000.00 a year. No former experience required to get one of them. We will teach you to be a high grade Traveling Salesman or Saleswoman by mail in eight weeks and assist you to secure a good position where you get good wages while you are learning. Practical businessmanship. Write today for full particulars and testimonials from hundreds of men and women who have recently placed in good positions; also list of good positions open. Address Dept. K, **NATIONAL SALESMEN'S TRAINING ASSOCIATION,** 506 Kent Building, Toronto, Ont.

Mention this magazine when writing advertisers.

Send your Raw FURS to John Hallam

Sixty Thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges. Change no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada. **FREE** Our "Up to the minute" Fur quotations and the latest Edition of **HALLAM'S TRAPPERS GUIDE,** a book of 96 pages, mailed FREE. Write to-day to John Hallam, Mail Dept 44 TORONTO, 111 Front St. E.

Mention this magazine when writing advertisers.

Hunters and Trappers

Save your fine Specimens! Every trophy you kill is worth money to you. You will be astonished at the prices you will get for your specimens. We can teach you, by mail in your own home, how to **Mount Birds and Animals** also heads, fish, and to tan hides, make rugs, robes, etc. Yes, you can learn easily—quickly—perfectly in your own home by mail. Success guaranteed. Fascinating work. We practice 2,000 specimens at a time, and every one is an enthusiastic taxidermist. Big profits to all who know taxidermy. Write today. **Special for Canadian Students** For a short time we are making a special reduced price to Canadian students. Act promptly. Write today. We will send you, absolutely free and prepaid, our handsome new book on Taxidermy and the Taxidermy Museum. Hundreds of letters from enthusiastic Canadian students are on record. We practice every country. We practice in Canada to better than any other place. Big profits to all who know taxidermy. Write today. **NORTHWESTERN SCHOOL OF TAXIDERMISTRY** Two Wood Building, Omaha, Neb.

Mention this magazine when writing advertisers.

As indicating the possible development of this demand, it is calculated that in the United States alone there are upwards of 3,000,000 farms of 160 acres or over. Of the 270,000,000 to 300,000,000 acres plowed annually in the United States, but about one acre in 10,000 is plowed by mechanical power. The fact that the amount of plowing to be done each year is constantly increasing and that, once an acre is plowed and planted it must again be plowed in practically every succeeding year, regardless of whether the crops are a success or failure, gives rise to an unusual degree of stability.

The short period during which either plowing, planting or harvesting must be accomplished, has made all time-saving machines absolutely essential to the successful farmer. The old plan of extensive farming, the tilling of large areas, has been supplanted by intensive farming which involves careful preparation of the soil, and very careful attention to the crops while growing and during their harvesting. The high cost of labor and the greater amount required to carry on intensive farming has made it imperative that farmers use all the labor-saving machines possible. There is a broad line of these time and labor-saving machines made for all kinds of farm work, and although each machine might represent a moderate cash value, the aggregate cost of the large number of specialized machines required amounts to a very considerable sum.

Necessity for the New Company The shortcomings of our banking system alone limit the facility with which the farmer is enabled to purchase and instal mechanical power and these time and labor-saving machines on the farm. In the farming sections of this country, banks have always been taxed to their utmost capacity to supply money to farmers, who have been most inadequately financed in comparison with the farmers of European countries where the government institutions have provided adequate funds for long periods at low rates of interest. In the past the average farmer has been able to pay cash for most of the small machines, and whenever a farmer could not pay cash, the agricultural implement manufacturer has practically been his banker, giving him the machines for use in planting or harvesting his crops and receiving payment when the crops are sold. In such cases the farmer has of course paid for the accommodation extended by the implement manufacturer through paying a higher price for the articles purchased. Machines costing moderate sums could thus be obtained and paid

for in a satisfactory manner, but with the advent of the present-day tractor engine, and intensive farming methods requiring a large amount of time and labor-saving machinery, the farmer finds that it has been very difficult to secure the necessary funds with which to purchase these necessary machines.

Although the farmer may have a very substantial equity in his farm land and buildings and have a large investment in current or liquid assets, such as livestock, fodder, crops and the numerous specialized agricultural machines, he finds that his local bank as a rule is unable to give him the necessary accommodations to purchase for cash these new machines. The Implement manufacturers have therefore been compelled to provide the necessary credit to the farmer, which has forced them out of their proper course of business into functions which properly belong to a banking institution. The present company is being formed to handle this kind of business.

A Farmer, to Do Best, Must Keep Books

This grand old Roman farmer wrote a treatise on agriculture, so clear, so concise and showing so thorough a knowledge of his subject that it is valuable not only as showing to how high a standard the agriculture of that day had reached, but also as showing how much information can be contained in a few words. As to its being an antiquated book—and a book written before the days of Christ might quite properly be considered a trifle old-fashioned,—you must not take too much for granted; for as good agriculture, in whatever age, consists in turning the laws of nature to our own account, any agriculture that is based on a knowledge of these laws can never be very much out of date. Cato and other good farmers of his time knew the value of deep and thorough tillage, of the conservation of moisture and of the use of legumes; they knew the values of different feeds and the effect they had upon the manure as well as upon the stock. They knew—a point upon which many present-day farmers are strangely weak—the value of bookkeeping, and Cato tells us plainly that if the farmer is to succeed and know what he is doing he must keep books. He says, "Keep an account of the cash, of what produce is used by the family, of what is sold, of the price and of what is left over." His book proves how carefully he kept his own accounts, for he tells us such things, for instance, as how much grain and hay and litter are required to carry an ox

Gas, Automobile and Traction Engineering



Regular Winter Quarter commences November 26. No vacation during holidays, except Christmas and New Year's Days. Special Winter Term for short course students begins Jan. 6, 1913. The young man who completes either one of these courses is sure of a job, with good pay. In the West there is a continual demand for young men with a technical knowledge of gas, traction engines and automobiles. Each course may be finished in three months. You can learn more about an engine at **Highland Park College** in three months than in that many years at an apprenticeship. Students work right in machine shops, traction engine house and auto garage. Repair and drive gas and steam engines and automobiles. Gas Engine Course may be taken with either the Traction Engine or Auto Course without extra tuition. Small tuition fees. Low cost of living. Largest garage and machine shops in the country. No entrance examinations. Send for catalogue. G. H. LONGWELL, Pres., Highland Park College, Des Moines, Iowa

Mention this magazine when writing advertisers.

EXCURSION

TICKETS ON SALE DEC. 1-31, 1912 **CANADIAN NORTHERN RAILWAY** ANNOUNCES **REDUCED FARES** TO ALL POINTS IN **EASTERN CANADA** Choice of Routes—Three months Limit With Steamship Connections to the **Old Country and Europe** Choice of Routes—Five months Limit Apply to agent Canadian Northern Railway for all information, or write for Illustrated Pamphlet to: **R. CREELMAN,** Gen. Pass. Agt., Winnipeg, Man.

Mention this magazine when writing advertisers.

Watches and Diamonds On Credit We trust you will enjoy our BEAUTIFUL LARGE CATALOG, FREE FOR THE ASKING. Diamond, Ruby and Sapphire Watches in Gold and Silver. High Grade RAILROAD WATCHES. FINE WHITE SWEET DIAMONDS, mounted in all styles. Discounted Diamond Rings, Studs and Pins. High Grade Gold and Silver Jewelry. **A Square Deal** All Sold on Our Easy Credit Terms and submitted under our ABSOLUTE GUARANTEE TO BE EXACTLY AS REPRESENTED. Square Deal Miller, Pres. MILLER HOFFER COMPANY, 6 Hooper Bldg., Windsor, Ontario. The Original Watch and Jewelry Credit House of Canada. **A Square Deal**

Mention this magazine when writing advertisers.

through the feeding season—a thing that a great many pretty good modern farmers could not tell with any great accuracy. Many of the things he tells us have a curiously modern ring, making it hard to realize they were written so long ago. Thus, in a book of Professor Burkett's that I have just been reading, he lays great stress—as he surely should—on the importance of thorough tillage. Cato, speaking to us across the space of two thousand years, says, in discussing the same subject. "What is good agriculture? First, to plow thoroughly; second, to cultivate; third, to manure." Many of the operations for which he lays down rules are done in exactly the same way now, and a man could, for instance, plant his asparagus-bed by Cato's rule as successfully as by that of any other gardeners of today.

Sometimes I wish that I might go back for a while, like Mark Twain's Connecticut yankee in King Arthur's court, and talk with some of these old-time farmers. But perhaps it would tax the imagination less to fancy Cato's spirit revived and visiting some up-to-date farm. You may be sure the old gentleman would find himself very much at home, despite the changes that have taken place in the two thousand odd years since his own farming days. He would examine your self-binding harvester with interest and admiration, but would probably explain to you that in his day the cheapness of labor made such a thing less necessary than now. He would praise your alfalfa-field and remark that he himself always used it in a rotation of crops. Then he might inquire of the exact profit on your dairy or your beef cattle and ask to see your books. Would you have them ready to show him?

Will You Go Home For Christmas?

Twenty-six years ago, or in 1886, the Canadian Pacific Railway, which in that year had completed its line from Montreal to Vancouver, announced its first excursion from the Canadian West to Eastern Canada, to enable those hardy pioneers, who had come to the Prairie Provinces (then there was only one, Manitoba) and the Territories, to return at a reasonable rate to their old homes in the East for the Christmas season.

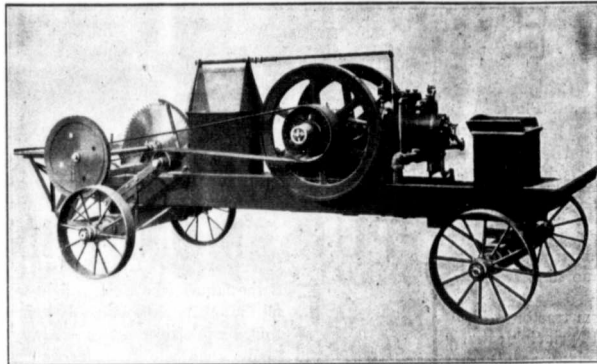
The success of this was so great that every year since, this great railway has repeated the excursion, and this year is no exception to the rule. Commencing December 1st, and daily until December 31st, round trip tickets will be on sale to all points east of Port Arthur in

Ontario, Quebec and the Maritime Provinces at remarkably low rates; these tickets will be good to return within three months from date of sale, and if this is not long enough, an extension of the return limit may be had on payment to the agent in the east of \$5 for each 15 days extension desired.

The advantages of the Canadian Pacific Railway over other routes are obvious; briefly they are: Through trains to Toronto and Montreal, through standard and tourist sleeping and dining cars, and shortest route by many hours and many miles. Sleeping cars will run through without any change from Edmonton, Saskatoon, Yorkton, Calgary, Swift Current, Moose Jaw, Regina, Weyburn, Estevan, Lyleton and many other places to Toronto and Montreal.

BUILT FOR SERVICE

AROUND THE FARM



The Little Brother to the Oil Pull

FALK KEROSENE ENGINES

Stationary and Portable—will successfully take care of your farm work. Three-Five-Ten-Fifteen-Horsepower.

These Engines are the only small stationary style fitted with the Secor-Higgins System of Oil Combustion, burning kerosene, the cheapest operating fuel known—the same system of power production that makes the *Case* Tractor foremost among tractors. That's the secret.

Falk Engines may be mounted on truck or skid so that they may be moved short distances, for feed-grinding, for corn-shelling, for turning cream separators, for pumping water, for running washing machines, grindstones, and for fanning mills.

Ask your dealer for our booklet describing these engines more fully—or write us direct:

RUMELY PRODUCTS CO.

(INCORPORATED)

Power Farming Machinery

General Offices: La Porte, Ind.

CANADIAN BRANCHES:

- CALGARY, Alta.
- BRANDON, Man.
- EDMONTON, Alta.
- ESTEVAN, Sask.
- REGINA, Sask.
- SASKATOON, Sask.
- TORONTO, Ont.
- WINNIPEG, Man.
- YORKTON, Sask.

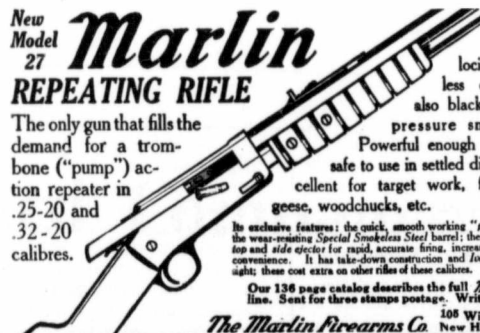


Ad. 326

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

New Model 27 Marlin REPEATING RIFLE

The only gun that fills the demand for a trombone ("pump") action repeater in .25-20 and .32-20 calibres.



Shoots high velocity smokeless cartridges, also black and low pressure smokeless. Powerful enough for deer, safe to use in settled districts, excellent for target work, for geese, woodchucks, etc.

Its exclusive features: the quick, smooth working "pump" action; the wear-resisting Special Smokeless Steel barrel; the modern solid-top and side ejector for rapid, accurate firing, increased safety and convenience. It has take-down construction and Ivory Guard front sight; these cost extra on other rifles of these calibres.

Our 136 page catalog describes the full Marlin line. Sent for three stamps postage. Write for it.

The Marlin Firearms Co. 108 Willow Street New Haven, Conn.

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

BLATCHFORD'S CALF MEAL

The complete milk substitute, raises calves without milk, prevents scouring, insures early maturity, raises & feeds calves at the cost of one. Send for free booklet, how to raise calves cheaply and successfully without milk.

STEELE BRIGGS' SEED COMPANY, WINNIPEG, Man.

Tractor Trials in South Africa

Western Canada is not the only place where motor competitions are held even if it can boast of holding the largest of such events in the world. From far South Africa comes the following information which is sent out by the Port Elizabeth Agricultural Society under whose auspices the event is held.

Field Trial Competitions for Farm Tractors and Ploughs

This society will hold a competitive Field Trial within the vicinity of Port Elizabeth at the farm "Perseverance" during the week 24th to 29th March, 1913, for "direct" Motor Tractors and Ploughs to be shown actually at work. The undernoted prizes will be offered for:

1. The best farm tractor working on the "direct" principle; that is hauling themselves, as also a plough or ploughs or other such farm implements as may be attached to them £100
2. The best disc plough suitable for haulage by "direct" tractors to be shown at work £25
3. The best mouldboard plough suitable for haulage by "direct" tractors to be shown at work £25

Conditions of Entry

Entries must reach the secretary of the Port Elizabeth Agricultural Society P.O. Box 502 Port Elizabeth, by noon on February 15th, 1913, accompanied by an entrance fee of ten pounds, ten shillings for each tractor entry and three pounds three shillings for each plough entry.

A photograph, illustration or general drawing of each tractor or plough entered for competition must accompany the entry as also a declaration plainly setting forth the selling price of the tractor or plough entered, complete and erected F.O.R. Port Elizabeth. A declaration showing the actual cost of fuel or fuels and lubricating oils at Port Elizabeth used by the Tractor must accompany the entry.

Late entries will be received up to noon on Monday, March 10th, 1913, upon the payment of an extra half fee for each entry.

Conditions of Trial

Exhibitors must convey their machines and implements, fuel and all requisites for the trial at

Woodlawn Subdivision

1. Lies south of City on St. Mary's Road
2. Every street graded and gravelled
3. Sidewalks and electric lights now being installed
4. Asphalt road now constructed more than halfway and will be completed to Woodlawn next year
5. Sharp advances in price are bound to result from such extensive improvements
6. Write for our beautiful booklet and marked plan

STEWART & WALKER, LTD.
202 Sterling Bank Bldg.
WINNIPEG MAN.
Phones M4817-4818

Mention this magazine when writing advertisers.



PUTS MONEY IN YOUR POCKET

FOR the farmer who needs a light-weight, handy tractor, the Gas Pull will fill the bill to perfection. It weighs but 11,000 lbs. and will do the work of from six to sixteen horses. Always ready for work, economical to use. It will handle your belt-driven machinery and your farming implements, even to threshing or shredding. As easily handled as a team of horses.

Ask your dealer, our nearest branch or us for handsome catalog telling about its construction and use

RUMELY PRODUCTS CO., Inc.

POWER-FARMING MACHINERY

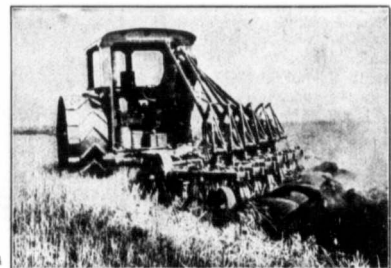
General Offices: La Porte, Indiana, U.S.A.

CANADIAN BRANCHES:

Brandon, Man.
Calgary, Alta.
Edmonton, Alta.

Estevan, Sask. }
Regina, Sask. }
Saskatoon, Sask. }

Toronto, Ont.
Winnipeg, Man.
Yorkton, Sask.



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

their own expense to the Field Trial Ground at Perseverance (Perseverance Railway Siding).

Each exhibitor must be represented by a responsible man in charge of his competitive exhibits, who shall on arrival at the Field Trial Grounds report himself to the steward in charge.

Upon application to the steward in charge of the Field Trial Ground, suitable spaces will be pointed out to the exhibitors, upon which they may test and practice their machines and implements during the week prior to the Field Trial Week.

Any indiscriminate ploughing or interference with the ground set apart for the "public trial" will disqualify the owner of the plant from taking part in the competition.

Engines must be drained, or otherwise cleared of fuel, water

and lubricating oils by midnight previous to the day on which the trials are to take place, and no filling up with fuel, etc., no heating of any sort, will be allowed until ordered by, and under the supervision of, the Steward in charge or one of his duly appointed assistants.

Exhibitors' representatives in charge of competing machines, etc., must obey the directions of the society's officials, and any neglect on their part to do so, may disqualify "the plant" in charge of the representative concerned.

The Trials

Any size of plant may compete, but the society wish to express their opinion "that engines of from 24 to 50 brake horse power on the pulley, when driving as a stationary engine will prove large

enough for most buyers requirements."

The "draw bar pull" may be tested. Engines fitted with wheels which enable them to travel on ploughed lands, which can at the same time exert a satisfactory proportion of their power in hauling implements, etc., will have a marked advantage over those engines which can only exert this proportion of effective work when on hard or undisturbed ground.

Judging will be by points. On the morning of the trial, the Steward in charge will appoint a time for the representatives in charge of each competing "plant" to get ready for work, and an official will take a record of the time taken in preparing the plant, as also of the quantity of fuel, lubricating oil, water, etc., supplied. When the practical test,

PROCLAMATION

BE IT HEREBY RESOLVED AND DECREED that Thursday, November 28th, 1912, be set aside by all owners and operators, and all builders and sellers of **The Red River Special Line** of threshing machinery as a day of Thanksgiving for the bountiful crops of the year, threshed and to be threshed; for the large amount of Red River Special Machinery built and sold; for its effectiveness and capacity to thresh and save the farmer's grain; for the labor and profit it has furnished to the workers of the world; for the homes it has built and equipped for threshermen and mechanics; and the joys and comforts it has brought to their wives and children. ¶ But more than all should we be thankful because it is **good**; because it returns a dollar for every dollar it costs; because it fills its owner's heart with pride and his pockets with coin. ¶ And—lest we forget—let us be thankful because it has **saved the thresh bills** of thousands and thousands of farmers.

Nichols & Shepard Company

Battle Creek, Michigan

Sole Builders of The Red River Special Line of Red River Special Threshers, Nichols-Shepard Traction Engines, Oil-Gas Tractors, Universal Self Feeders, Stackers, Weighers and Supplies

Branches with full stocks of Machines and Repairs: REGINA, SASK., CALGARY, ALTA., WINNIPEG, MAN.

under the direction of the judges and other officials has been completed, a record will be taken of the balance fuel, lubrication oil, etc., held by each competing "plant."

All machines competing in the practical trial must be exhibited after the trial at the Society's Show Yard for the period April 1st to 4th, 1913.

The Judges' award will be made during the first day of the society's 1913 show, viz. April 1st.

The standing show rules and regulations of the society will apply to this trial where they are not in conflict with the above mentioned rules.

James Woodin,
Secretary.

Learn Gas Traction Engineering

There are two sides to Gas Traction Engineering — the theoretical and the practical. It is not often that an opportunity presents itself whereby both can be learned at the same time but in the course offered by the Manitoba Agricultural College at Winnipeg, Dec. 9th to Dec. 22nd, this is the case. The course offered is most practical and is in the hands of men who are experts in their line. You as an owner of a tractor cannot afford to miss this and if you are intending to own or operate one of these machines you certainly ought to avail yourself of the opportunity.

This magazine can and does most conscientiously recommend this course. It will pay you big. See the add at the bottom of this page.

A New Tractor for Western Canada

On another page of this issue will be found the announcement of the Farmers Tractor Sales Co. This is a new tractor that is just being put upon the market in Canada and from demonstrations recently made it looks good. It is light, weighing but 7,800 pounds, yet viewed from the standpoint of power is very efficient. It will pull 4 plows in stubble and 3 in sod travelling at a speed of 2½ miles per hour.

The motor is of the double opposed type and the entire tractor is a model of simplicity.

The small farm tractor is rapidly assuming a position of enviable popularity among the farmers of Western Canada and the "Farmer's Tractor" seems to be a step in the right direction.

Have you seen

"The Tractioneer", the handsome high-art poster-drawing showing the *Oley* and its driver. A copy will be sent you upon receipt of a dime to defray the cost of wrapping and mailing. They're going fast.



GOOD FOR ALL POWER-FARM WORK

WHEN you buy an *Oley* tractor you buy a power engine that for economy in operation has no equal. The famous Secor-Higgins System of oil combustion is found on no other. This system makes it possible for the *Oley* to operate on the cheaper oils. Crude kerosene or distillate in the *Oley* works just as well as high-priced gasoline—and at one-fourth the cost. The *Oley* won the title at the Winnipeg Motor Contest last July: "The Most Economical Engine on Earth." It is "The Only Sweepstakes Tractor," winning in every entry, on all important points.

IF YOU ARE INTERESTED we want to send you our handsome booklet "Toiling and Tilling the Soil." This is free for the asking.



Ad. No. 329

Rumely Products Co.

(INCORPORATED)

Power-Farming Machinery

La Porte, Indiana

Canadian Branches:

CALGARY, Alta.
BRANDON, Man.
EDMONTON, Alta.
ESTEVAN, Sask.
REGINA, Sask.
SASKATOON, Sask.
TORONTO, Ont.
WINNIPEG, Man.
YORKTON, Sask.

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

Cold Weather Troubles Solved

Cold weather has troubles for the man who owns a water cooled gasoline engine or an automobile. Water is an absolute necessity in such machines for cooling the cylinder walls and unless it is thoroughly drained in freezing weather a cracked water jacket or cylinder is the result. Such an accident is to say the least expensive, and oftentimes it lays up the engine for days.

The latest relief from this trouble is "Alaska Radiated

Fluid." This is a preparation that is placed in the radiator and serves its purpose in the coldest weather. Just think of the sense of security this gives you. It is inexpensive and one filling will last a whole season by adding a little water occasionally.

Investigate it! See the add elsewhere in this issue.

One of the Irish Members owes either thanks or a grudge—I'm undecided—to Mr. Steel Maitland M.P. The latter, who is the Chief

Intelligence Officer of the Conservative Party, made the grave blunder, in a speech, of describing Mr. MacVeagh, M.P. as a Scottish member; whereupon one of the Scottish Clubs in London invited the Irishman to be their guest, and during the evening he was presented with—a set of bagpipes! Who says the Scots have no sense of humor.

Don't board with the devil if you wish to be fat.

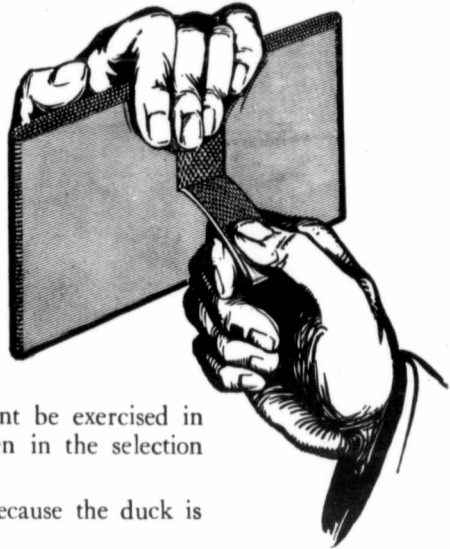
Do You Want to Become a Gas Traction Engineer?

The Manitoba Agricultural College is giving a special Two Weeks Winter Short Course in Gas Traction Engineering from December 9th to December 22nd, 1912. You will learn to operate all the various types of Gas Tractors on the market. Every day will be well filled with practical work from 8.30 a.m. until 5 p.m. Besides learning to operate gas engines, the course will include work in belt lacing, babbitting, soldering, pipe fitting, blacksmithing, key fitting for pulleys, etc.

For further information write President's Office, Manitoba Agricultural College, for the illustrated short course circular.

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

What to look for in Threshing Belting



All Thresher Belting looks pretty much alike. But the similarity ends there. A careful examination will show vast differences.

That is why it is so important that careful judgment be exercised in the choice of belting. A little time, a little care taken in the selection means money saved in the long run.

Goodyear Thresher Belting will not rot or harden because the duck is protected from moisture.

GOODYEAR
THRESHER BELTING
Black Diamond Red Cross

The duck in all belting is covered with a substance called "friction." In Goodyear Belting the friction is rolled into the duck under heavy hydraulic pressure. This process holds the layers of duck together so strongly that they are practically inseparable.

No moisture can get between the layers. And both duck and friction are protected by a thick cover.

Goodyear Belting will not slip off the pulleys because the cover is finished with a rough surface. It grips.

The strong pulling-power of Goodyear-Belting is due first of all to the duck used, which has an extra strong warp.

The strong friction used in Goodyear Belting toughens the duck—makes it wear longer—adds to its pulling-power.

Goodyear Belting will bend without breaking. It bends easily. It does not break or split because the friction and cover are tough and pliable.

There is long wear in the thick, tough cover of Goodyear Belting. Its toughness adds to the pulling-power. It will not crack. It has a hard-wearing surface yet it is quite pliable. Note how it protects the edges of the cover and friction. The cover is vulcanized on and is practically seamless.

The duck used in Goodyear Belts is weighed and tested for pulling-power. The friction is tested for consistency and adhesion. The cover is tested for toughness. All Goodyear Belting is properly cured and all stretch is taken out. Every Goodyear Belt is given a severe pulling-power test before it is allowed to leave the factory.

Following these tests for strength, careful laboratory tests are made to satisfy us that the quality of the materials is up to the Goodyear standard.

Then, too, Goodyear Belts are tested at every stage of their making, and a record of the tests made on each belt is kept on file at the factory.

Goodyear Thresher Belting is made in two weights—"Black Diamond," a heavy weight belting, and "Red Cross," a lighter belting. The only difference is in the weight. The lighter weight belting is less expensive.

Do you want to give more thought to the choosing of your Thresher Belting; Write our nearest branch for Booklet.

Goodyear Tire & Rubber Co., of Canada, Ltd.

Head Office: TORONTO

Factory: BOWMANVILLE, ONT.

BRANCHES IN WESTERN CANADA.

Winnipeg, Man.—41 Princess Street.

Regina, Sask.—2317-2319 South Railway Street.

Calgary, Alta.—1012 Second Street East.

Vancouver, B.C.—1213 Granville Street.

Victoria, B.C.—855 Fort Street.

NOT ONE THRESHER BELT RETURNED IN 1911.

\$155.22 represents the total amount paid out for adjustment of claims by our Mechanical Department during the year ending Sept. 30th, 1911.

This was not for Belting alone but the sum includes claims on all such goods as rubber hose, packing, belting of all kinds and other rubber articles.

During the first four months of the present year starting on October 1st, 1911, in spite of a 50% increase in business, this Department has paid out in adjusting claims only \$23.93.

The only claim made on Thresher Belting amounted to \$1.50. And in this case the Belt was damaged in transit.

Not one Thresher Belt was returned to us in 1911.



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

Conducted by
Professor
P. S. Rose

Practical Talks to Threshermen

Talk No.
LXIII.

THERE is this much to be said in favor of the monopoly of the wind stacker business by the Indiana Manufacturing Co.: In the first place they spent enormous sums of money educating the farmers and manufacturers to the use of the staker and at the same time carrying on a great deal of experimental work. After the demand was created, and it was created against

We are not offering this argument in defence of monopoly, but merely give the facts as any historian should in reviewing the subject.

The next patent after the Buchanan patent of importance was granted to J. W. Nethery, March 21, 1893, serial No. 493734. This machine, illustration of which appears in one of the accompanying figures, differed from the

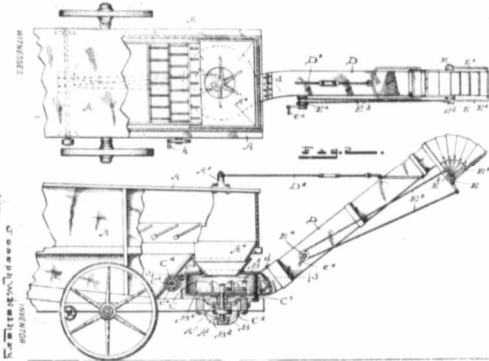


Fig. 131

tremendous opposition, they allowed the various tractor companies to build wind stackers on commission, charging as stated in the last lesson, thirty dollars for each stacker. They had been careful to purchase all the patents bearing on the subject and consequently their licenses were protected by all of the patents that had been issued. This undoubtedly saved them and their customers a great deal of litigation and at the same time put them in possession of every detail of improvement that any of the inventors had conceived. Such a policy as this, while tending toward monopoly, has the advantage of developing the machine in the quickest possible time.

It is a matter of record that within a very few years after the stacker was invented it reached its present stage of perfection, thus proving that the policy adopted worked to the advantage of the art. There may have been some evils in connection with the business. Possibly prices were maintained at a high level but we doubt if it made the price of the complete rigs more expensive. Every manufacturer knew that his competitors had to charge exactly the same price, \$250, for a stacker, and if he wished to meet competition he could do so by cutting his profits on some other part of the outfit, as many of them did.

Buchanan patent in a number of important details. In the first place, the fan was placed horizontally and the straw passed directly into the fan casing through a chute especially provided for that purpose. This principle of having the straw pass directly into the fan has come into quite general use and is the type of stacker which has been adopted by a large number of the thresher companies. None of them at the present time, however, place the fan in a horizontal position. Six patents in all were granted to Mr. Nethery covering various details relating to the construction of the straw delivery tube and its rotation and elevation. In a patent taken out in 1894 Mr. Nethery makes use of a worm and worm wheel at the base of the delivery pipe to rotate it in a horizontal direction. In other patents he followed Buchanan's ideas in placing the fan back of the straw chute instead of compelling all the straw to pass through the fan. The possession of these patents and the Buchanan patent secured the Indiana Manufacturing Company in their rights and every company is still paying royalty.

A large number of inventors contributed to the perfection of the wind stacker and none of them have more patents to their credit than F. E. Landis of the Geiser Manufacturing Company, S. D. Felsing and E. D. Gustafson of

Maplebay, Minnesota, were the inventors of the Maplebay wind stacker. Their first patent was granted in 1897. A company was organized to build the stackers and a considerable business was developed. The factory is located at Crookston, Minnesota, and are still doing a good business. Although there are six independent stacker companies but all of them that manufacture wind stackers still pay royalty to the Indiana Manufacturing Company, although they are using some of their own patents covering certain details of construction. In addition to these independent concerns most of the larger thresher companies make their own wind stackers. In 1895 A. A. Russell and H. A. Russell took out patents on a stacker and organized a manufacturing company. They are still doing a thriving business under the name of The Russell Wind Stacker Company, of Indianapolis. The Fosston Manufacturing Company, St. Paul, Minnesota; Heineke and Company, of Springfield, Illinois; The Pella Stacker Company, of Pella, Iowa; and the Sattley Stacker Company, Indianapolis, are the six companies still engaged in the stacker business. Heineke & Company and the Sattley Stacker Company both manufacture the Sattley stacker

development of the stacker. He began experimenting in the late '90's and made application for his first patent in November, 1898. In his machine the stacker fan is placed at the side and the straw is delivered into the fan by means of an especially constructed chute. By placing the axis of the fan in a horizontal position he is enabled to drive with a straight belt, thus avoiding beveled gears or quarter turn belts. He also devised mechanism for swinging the straw chute automatically backward and forward together with special means for telescoping the stack. The stackers built for the Avery Company's separators all contain the Bartholomew improvements.

Why Ice Floats in Water.

Water is the sole exception to the otherwise universal law that all cooling bodies contract and, therefore, increase in density.

Water contracts as its temperature falls, and, therefore, becomes heavier and sinks until it reaches 39 degrees. At this temperature water is the heaviest. This is the point of its maximum density. From this point it begins to expand. Therefore, in winter, although the surface may be freezing at a temperature of 32 degrees, the water at the bottom of the pool is six or seven degrees warmer.

Suppose that water, like every-

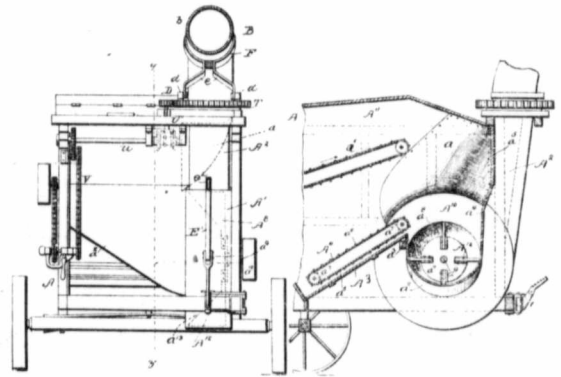


Fig. 132

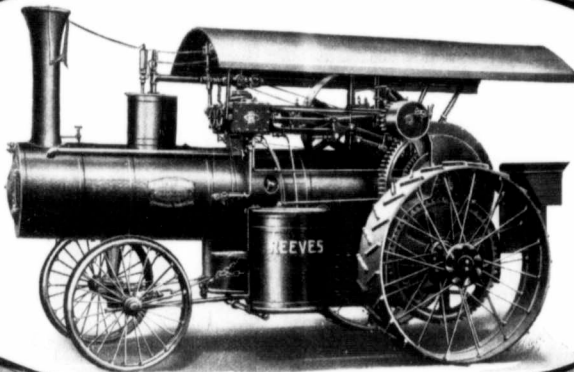
which is made in two styles, one an all riddle machine, and the other a combination blower and riddle. In the latter the straw is first elevated by a blower a part of the way and delivered to the swinging riddle which conveys it to the straw pile. The Pella Stacker Company make only a riddle carrier.

Mr. J. B. Bartholomew was another inventor who aided in the

thing else, had gone on contracting as it cooled until it reached the freezing point. The heaviest water would have sunk to the lowest place and then become ice. Had the water when at the bottom turned into ice, the stones would have locked it in their interstices and held it there, and before the winter was over the whole pool would be entombed in clear, beautiful crystal.

REEVES

CANADIAN
BRANCH:



REGINA,
SASK.

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:

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

Reeves & Co., Columbus, Ind.

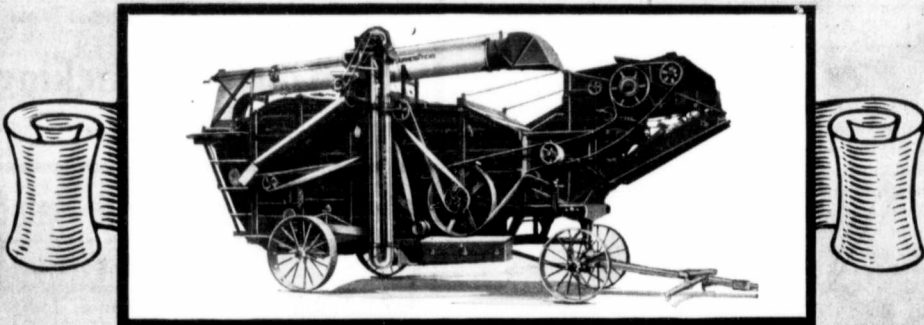
Dear Sirs:—Have you on hand lower pan for 40x60 separator No. 1052 bought in 1907? If you have, let me know and send price. This is the first repairs I have had to buy in eleven years. I run this separator six falls in Illinois and five falls in Dakota, and it is still in first-class shape excepting 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 came 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

Emerson-Brantingham Implement Company

ROCKFORD, ILLINOIS, U.S.A. The Largest Line of Farm Machinery in the World

Tudhope, Anderson Co., Canadian Sales Agents, Winnipeg

REEVES

The Thresherman's Question Drawer

Answers to Correspondents

Q. R.J. Would a crown sheet patch riveted on the inside of the sheet be safe? It is cracked between four flues. Would it hold with bolts and a nut on the end, or can it not be drawn tight enough with a bolt?

A. The way to patch the crown sheet of a firebox is to cut the damaged part out and fit a patch on the hole, allowing two inches for a joint. All around the hole drill 11-16-inch holes, one inch from the edge of the patch and two inches apart. Mark the holes on crown sheet, through the holes in the patch, drill the holes in crown sheet for $\frac{3}{4}$ -inch tap. Tap the holes in crown sheet and countersink them in the patch to fit patch bolts. The patch bolts have a head like a wood screw, but instead of a slot in the head they have a small square end for screwing them in, which is cut off after screw is in place. Screw all the bolts up tight before chipping off square end and then calk the joint to make it water tight.

Q. L.B. Why is the boiler problem getting to be such a serious one? I know of some real old boilers which have their first set of flues. In modern boilers the flues last from one to five seasons. Is it the material and workmanship, or in the different way they are handled?

A. When the "real old" was built, it was large enough to run its engine to do the work which was required of it at that time, which was, say, a separator. It could do this work quite easily from 60 lbs. to 80 lbs. boiler pressure. If these old engines are run at the same rate now or at a slight advance in pressure they are still durable engines. By and by, and one after another, the automatic stacker, the pneumatic stacker, the band cutter, the bagger and weigher were hitched to the separator, and practically the same size engine and boiler is doing this additional work today. When the engine is found to be too small the safety valve is reset. The boiler is made heavier, the engine is thickened at its weak places, but the same general dimensions are maintained. The tubes have the same spacing that they had, the water space around the firebox about the same, only a little less, due to the extra thickness of the boiler plate. The engine having to do much more work, thus the boiler has to evaporate more water, and the more water evaporated the more sediment in the boiler. The pressure raised from, say, 80 lbs.

to 150 lbs., will make about 140 degrees higher temperature in the boiler, thus a hotter fire. In some cases of spacing of tubes and water space around firebox, the space is so scant that the extreme heat drives the water away from the sheets and from between the tubes and thus causes trouble.

Q. J.D. Is freezing injurious to steam boiler? If so, in what way? Is it liable to cause any unseen injury that would render the boiler unsafe? What pressure would ice exert per square inch? How much does water expand in freezing?

A. Is it better to open up throttle or valve after steam has gone down in freezing weather?

A. Freezing a boiler injures it. In a firebox boiler, if the bottom and sides freeze solid, the sheets are stripped over the stay bolts. Sometimes the water is run out of a boiler, and mud is left in the bottom and sides, which, when frozen, will also strip the threads from the stay bolts. Water expands when frozen $8\frac{1}{2}$ degrees. In this case the expansion will take place in the direction of the weakest place, so if there is three inches space between the sheets, the expansion will be something like one-fourth of an inch. This amount would only take place in the bottom of a water boiler providing the water is well up on the sides.

Water will freeze in the boiler when the temperature gets below freezing point. To prevent this a slow fire should be kept up. In case of a moderate freeze, say 25 degree F., very little fire in the boiler will take it safely through the night, especially if there is a moderate steam pressure on the boiler in the evening.

Q. H.Y. What would you consider the standard h.p. of these different engines and boilers?

Engine No. 1. has boiler waist size 28-inch; length of tubes, 78-inch; number of tubes 42, diameter 2-inch; length of firebox, 40-inch; width of firebox, 26-inch; height of firebox, 32-inch; size of cylinder, 8 x 10-inch.

Engine No. 2: Length of firebox, 36-inch; width of firebox, 26-inch; height of firebox, 32-inch; length of tubes, 78-inch; diameter, 2-inch; number of tubes, 42; waist size, 29-inch; cylinder, $8\frac{1}{2}$ x 10.

Engine No. 3: Waist, 28-inch; firebox, length 40-inch, width $25\frac{1}{2}$ -inch, height 37-inch; number

This Oil Pump Will Outwear the Engine

The simple construction of the Madison Kipp Model 10 Oil Pump makes it at once the most reliable and the most durable pump that can be placed on an engine. Its strong, rugged design and few working parts are alone a guarantee of its effectiveness and durability but it has other features that stamp it as the PERFECT LUBRICATOR.



The MADISON-KIPP

is the pioneer line in automatic lubrication—the pump illustrated has reached its high state of perfection through years of patient labor.

The Madison-Kipp will pump without adjustment, the extremely thick oil of winter and the thin oil of summer and force the oil against any pressure required.

The Madison-Kipp pump positively will not freeze. It works equally well at 20 deg. below zero and 90 above zero. No valves, no springs or stuffing boxes to wear out.

The Madison-Kipp is more durable, economical and constant than any other device on the market. They easily pay for themselves in one season in oil saved.

Model 10-In any number of feeds from one to ten.

Seriously; don't you think it would pay you to investigate the Madison-Kipp Line? Write for complete literature and DO IT TO-DAY.

THE MAYTAG CO., LIMITED

Sole Agents for Western Canada. WINNIPEG, Man.

Manufactured by the
MADISON-KIPP LUBRICATOR CO.,
Madison, Wis.

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

WRITE TO

The Garlock Packing Co.

117 Market St. E., Winnipeg.

For catalog and prices on canvas, leather and rubber belts, water and steam hose, babbitt metals, etc., and Genuine Garlock Packings.

The Garlock Packing Co.

TORONTO

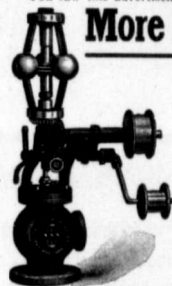
HAMILTON

MONTREAL

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

More Power From Same Engine

Why do two engines identical in build show difference in power? You just notice the governors and see what make is on engine that is doing best work.



PICKERING
"THE GOVERNOR WITHOUT JOINTS"

We fit every build of engine and give our guarantee.

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

The Pickering Governor Co.

PORTLAND

CONN., U.S.A.



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

of tubes, 36; length of tubes, 84-inch, diameter 2-inch; cylinder, 9 x 12.

2. Will an engine, say 7 x 10 cylinder, give out as much power on a 12-h.p. boiler as the same size engine, 7 x 10, would on a 15-h.p. boiler? Both boilers having the same steam pressure, say 110 lbs.

3. Are boilers always rated by the heating surface? If so, how many square feet of heating surface is considered a horse power?

A. It is presumed that you have in mind nominal h.p. As you give no conditions under which these engines are to run, all we can do is to make a comparison between the sizes given in question. We will base our calculations on Engine No. 1, and call it a 13-h.p. both in cylinder and boiler, and if it is 13-h.p., No. 2 boiler would also be 13-h.p., as there is very little difference in the size, and the cylinder of No. 2 would be 14 1/4-h.p. No. 3 boiler would be 12 1/2-h.p., and the cylinder would be 16-h.p.

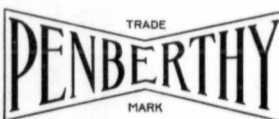
There is a great difference in the rating of engines made in this country as each manufacturer has a different standard to figure from. Some carry higher pressure than others; some run at different speeds and different points of cut-off to accomplish the same results. Some boilers have to be fired harder than others. As the power of a steam engine is very flexible, there is usually a wide range as to the amount of work which can be done.

2. A 7 x 10 cylinder is generally termed as a 10-h.p. There would be no difference in the power if put on a 12 or 15-h.p. boiler. The difference would be the larger boiler would steam the easier.

3. Boiler should always be rated by heating surface. Twelve square feet of heating to a nominal h.p. is considered good practice in this country, but some manufacturers give more and some less.

Q. P.B. My engine has Woolf reverse gear. When engine is in center the valve moves 1-16-inch. If I move eccentric on shaft it will not move one center, but turn it over to the other center, and it makes valve move 1/8-inch. Dead center being found with a transit sent by the company. That is, the valve moves when the reverse lever is moved back and forth. Can you tell me what the trouble is? Is it possible to set a valve when valve moves 1-16-inch as above described?

A. Part of your trouble is in the setting of the reversing shaft. It is either too high or too low. It is more likely too high, as the crank shaft wears down and the reversing shaft does not. You can either fix this by raising the



PENBERTHY

Safeguard

Automatic Water Gage

Mechanically Correct

"The Safeguard will Guard Your Safety."

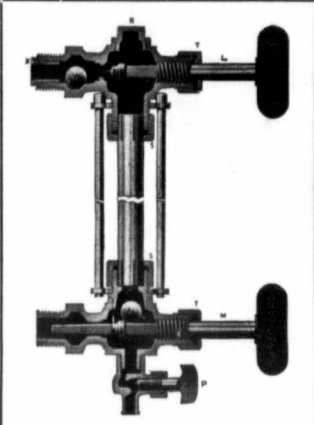
This mechanically correct gage assures absolute safety and protection against the dangers which result when the glass is broken in an ordinary gage.

The upper seat is designed to leak for purposes solely of sureness of operating at the proper time. Only dry steam escapes and in small quantity, hurting no one. The leak equalizes the pressure in the glass and the boiler pressure, and the Balls Cannot Stay Seated Unless Glass is Broken. This fact is positive and any gage not made to leak on the upper arm is unsafe. The lower seat is made absolutely tight and when glass breaks the ball seats instantly and Not a Drop of Water and No Steam Escape to injure anyone.

It operates on any pressure from two pounds up, is tested to 300 pounds, is very simple and strong, and is self-cleaning by the action of the blow-off vibrating the balls.

You need the "Safeguard" in your boiler room—try it.

Manufactured by
Penberthy Injector Co., Ltd.
WINDSOR, ONT.



This Automatic Water Gage is made with Special 1/4-inch drip connection for the conditions of Western Canada and has been accepted by the Government of Alberta under Register No. 441, and in Saskatchewan under Register No. 2170.

PRICES

1/4-inch and 3/8-inch sizes, \$3.00 net. 1/2-inch size, \$3.50 net.

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

crank shaft box or lowering the reversing shaft box. To find out which way to move this you can put the engine on its center and have some one pull the reverse lever backward and forward while you watch the movement, and the right way and part will suggest itself. Between the moving of the crank shaft, or tumbler shaft, and the eccentric you can get the valve to stand still, while the reverse lever is moved backward and forward. From your description of the case we think half of the error is in the location of the reversing shaft to the crank shaft and the other half is in the location of the eccentric.

Q. D.L. Why does the link on my engine run perfectly quiet under the belt or going backward, but going forward it rattles and shakes reverse lever in quadrant?

A. Your link evidently fits too tight at one end, and possibly too loose at the other. In most links the link works up and down over the block while engine is running. This motion is not very much, but if it is held rigid by the block fitting the link too tightly, the motion will come to the reverse lever and make it work in the joints.

Q. S.B. How shall I set the eccentrics on an engine, center crank, link reverse and each eccentric independent of the other?

The engine I am running has a link motion. One of the eccentrics slipped on the shaft. Is there any rule for setting them?

A. The first thing to do is to divide the valve. Throw the reverse lever to the extreme end of the quadrant. Now turn the eccentric (which is connected to the end of the link which is in line with the valve rod) to one end of its travel. Note the port opening, then turn the eccentric to the other extreme and note the port opening on that end. Now move the valve so that the port opening will be the same on both ends. Then place the reverse lever at the other end of the quadrant and see if the port opening is the same on both ends. If it is not, the adjustment should be made on the eccentric rod. After this the engine is put on dead center and the eccentric moved in the direction indicated by the reverse lever till the valve opens the port at the end in which the piston is located. The eccentrics are now set. The engine may be turned to the other center to see that the proper lead is on that end also, and in case of any discrepancy in the work it

can be corrected by going over the form again.

To simply set a slipped eccentric, put the reverse lever at the end that will bring the eccentric rod in line with the valve rod, put the engine on dead center, and proceed to turn the eccentric the direction indicated by the reverse lever till the proper lead is obtained at the end of the cylinder at which the piston is located. Turn the engine over and watch the port opening, running both forward and backward to see that you have not made any mistake.

Q. T.A. How can I get the slide valve in my engine steam tight?

A. Slide valves and seats are made steam tight by scraping them to a true surface with a scraper, according to the indications of a true surface. The valve and face should be trued up separately. The valve is scraped first in the following manner: Take a little red lead or lamp black mixed with a little oil, and smear it over the surface plate with your fingers, wiping it nearly dry with the palm of your hand. Then slide the valve over the surface plate and wherever the dressing on the surface plate rubs off on the valve face it

should be scraped down, as the marks on the valve face indicate the high places. Continue this operation until the spots become close together and get to be quite a number of them. It is not safe to have a large spot on the valve which you cannot mark by rubbing it on the surface plate, as it may be quite hollow at the spot. When the spots are close together it follows that the places between the spot cannot be very low. After the surface of the valve is thus made straight the valve seat is treated in the same manner, by using the valve to mark the seat instead of the surface plate used to mark the valve. Rub the dressing (oil, or red lead or lamp black) on the valve and slide the eccentric and proceed to reduce the high places with a scraper indicated by the dressing. A good way to make a scraper is to grind off the end of a scraper and also grind the teeth of the file off at the end. The cutting edge of the scraper should not be as a knife edge, but a square edge, just like the end of a board.

Q. R. J. Which is the best for a traction engine, a single or double connection lubricator; and how should they be connected, to the steam pipe or to the steam chest of the engine?

A. A single connection lubricator is the most convenient to connect, as there is but one connection to make; but is generally believed that it is not as sure in its work as is a double connection, as, there being but one connection, the pressure is the same on the tube which supplies the water as it is on the discharge tube for the oil, there being nothing to force the oil into the steam but gravity. The water being heavier than the oil, and there being a little more head to the water than to the oil, the oil is forced into the steam in this way. One can readily see that a little obstacle in the way will cause the lubricator to fail to supply the oil.

If a double connection lubricator is connected so that the connection for the water supply is taken from the steam pipe between the governor and the boiler, and the lubricator proper is connected to the pipe between the governor and the steam chest or directly to the steam chest, the lubricator will have an advantage, in that it has more pressure on the water supply pipe than it has on the discharge end. Since the water supply is a separate connection, it can be built above the lubricator and thus get a greater head of water, and if the water or steam pipe of the lubricator should be connected to the same part of the steam pipe of the engine by having the water

pipe built up considerably higher than the lubricator, the double connection lubricator will have the advantage over a single connection lubricator in that gravity can help more, due to the greater head of water, and thus overcome more of the troubles which are so common to the cylinder lubricator.

Q. L. A. If feeding too much oil, as well as not enough, has a tendency to cut rings and cylinder, will water passing through the cylinder destroy the oil and cut the cylinder and rings? How much oil is required in running ten hours, cylinder 8 1/4 x 11?

A. Too much oil will never cut the piston rings. Dirty water caused by foaming of the boiler will cut the rings, but not clean water. One pint of oil should be abundant to run an 8 1/4 x 11 engine ten hours.

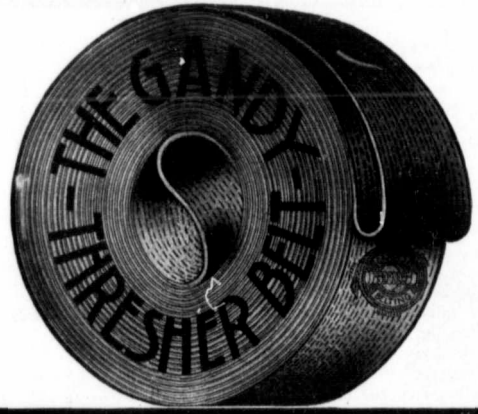
Q. C. W. How can one of the small cup lubricators be made to flow regularly? I can fill this and turn it on full opening and find in the course of an hour that it has not gone out of the cup at all while the engine is running, but as soon as shut off it will all run out. Can you explain to me a way in which my trouble can be overcome, if it can be?

A. The cup in question is a plain oil cup with nothing but a filling plug and a valve to shut off the pressure while filling, and same to leave oil flow down. There are cups of this kind made with a little equalizing tube to allow the pressure to get on top of the oil. This makes the oil balanced and it can then run down. But without this tube the pressure holds the oil up in the cup, and as soon as the steam is shut off the engine pumps a vacuum in the steam pipe or steam chest of the engine, and thus the oil is drawn out of the cup.

Q. L. G. I have a cone screen in my stack, and when I use it, it retards the draught so that the boiler steams very hard. Can there be anything done to help the steaming quality of the boilers when using the screen?

A. The draught can be increased by reducing the exhaust nozzle. Another way to help the draught while using the screen is to invert it. Instead of having it to extend downward in the stack, turn it upward. Thus the smoke will have an easier outlet and you will find the draught much stronger, and good results may be had in this way without reducing the exhaust nozzle.

If the frame on which the screen is fastened will not permit of being reversed, the screen can be taken off and fastened on the top side of frame.



Save on Belting!

Reduce Your Belt Bills

This threshing season is about over. Now is a good time to investigate ways of lessening next year's expenses.

The Gandy Thresher Belt

The Gandy Thresher Belt is not affected by sun, rain, temperature changes, etc.; will not stretch or slip, transmits more power and wears longer. That's why every one of these many satisfied users depend on Gandy and consider it the standard. You can depend on it, too.

Write for samples and booklet today, so you will be able to decide this question before next season reaches you.

Write us now on the attached coupon.

THE GANDY BELTING CO.
733 W. Pratt St. - BALTIMORE, MD.
New York Office: 88-90 Reade Street

Return This Coupon Now
 Gentlemen: Send me samples booklet, etc.
 Name _____
 Address _____
 State _____

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

Are You Bothered with Hot Water?



If you are having trouble with your Ejector making your water too hot for your Injector to handle easily, it will pay you to try the D.-S. Special Cold Water Ejector No. 77.

Guaranteed to raise more water than any other Ejector and raise the temperature less.

Ask your dealer, or write us.

DESMOND-STEPHAN MFG. CO., Urbana, Ohio
Manufacturers of THE "FLEXIBLE" MODEL U INJECTORS

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

WRITE FOR 1912 CATALOGUE

LUNKENHEIMER SUPERIOR STEAM BOILER, VALVES AND FITTINGS

Conform with the new Canadian Boiler Regulations, which are approved for use in Western Canadian Provinces, including British Columbia, Alberta and Saskatchewan.

The line approved includes Globe, Angle, Cross, Check, Gate, Blow-off and Pop Safety Valves, Water Gauges, Gauge Cocks, etc. A complete list of official registration numbers covering the above will be sent upon request.

The supremacy of Lunkenheimers Products is universally acknowledged, and to maintain this reputation, the highest type of skilled labor is employed, and only new material of the very highest grade is used.

We guarantee our goods to be of the very Highest Quality, and a Lunkenheimer Guarantee is a real, definite quantity, and not an empty use of the meaning of a guarantee.

All correspondence and enquiries receive prompt attention, and immediate shipments are insured, as large stocks are carried.

Our products are carried in stock by most supply houses. Those that don't carry them can get them for you, but if they will not, write us.

THE LUNKENHEIMER COMPANY
Largest Manufacturers of High-Grade Engineering Specialties in the World.
General Offices and Works: New York: 64-68 Fulton Street 8 Stos: 138 High Street
Cincinnati, Ohio, U.S.A. Chicago: 186 N. Dearborn Street London, S.E.: 35 Great Dover Street [32

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

Oliver Tractor Gangs Best For Large and Small Farms



Getting the plowing done is not much more important than getting it done at the right time. In point of labor and time saved in getting a big acreage plowed and seeded quickly, the tractor and gang plow show a decided advantage. In one Canadian province 640 acres of virgin sod were broken with three gang outfits in nine days. It would have taken a six-horse team with two gangs 128 days to have done this work. With a tractor and gang plow the owner was not only able to plow and plant the 640 acres at the right time, but he did it at about one-sixth the cost of doing the same work in the same time with horses.

The tractor and gang plow is just as convenient on a 160 acre farm as it is on a large farm, the difference being only in the size of the outfits. One man with a four or five bottom plow and a tractor can turn over from eight to twelve acres per day, which makes short work of plowing on the ordinary farm. An Oliver plow and an I H C tractor make the best combination for either a large or small farm.

Catalogues and full information of the line of Oliver plows will be sent on request by the nearest branch house.

WESTERN CANADIAN BRANCHES

INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

At Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Lethbridge, Alta.; North Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Weyburn, Sask.;
Winnipeg, Man.; Yorkton, Sask.

Q. G. H. My engine, when pulling a reasonable load, runs smooth and all right; but when pulling a heavy load, it pounds and knocks. What do you think is the matter?

A. The knocking or pounding of engine when working under a heavy load may be due to the fact that there is considerable play or looseness in the main crank shaft bearing. This bearing should be kept adjusted as closely as possible without causing it to heat. The main box cap should rest firmly upon the liners or shims and the nuts screwed up firmly so there will be no play or movement of the cap. The wrist pin brasses should also be keyed up as closely as possible and great care should be taken to adjust these boxes gradually so that they will not heat. The cross-head pin brasses should be adjusted as close as possible.

The best way to adjust this box is to remove the strap and wrist pin brasses and then adjust the boxes. Try to move the rod vertically. By doing this there will be no danger of getting it too tight.

If the engine still knocks after these parts have been looked after, it might be possible that the piston head is loose on the piston rod. To find out if this is the case it is necessary to remove same from the cylinder, and by

tapping the head with a hammer you will notice at the riveted end of the piston whether it shows any looseness. If the piston is loose in the head it ought to be sent to the factory for refitting. This, however, can be done in the field.

We would recommend making a small wood fire, placing the head with the rod upon the coals so that the head will become heated. It does not require very much heat for it to expand. The piston should then be driven in as firmly as possible and allowed to cool, and the riveted end should be riveted more firmly.

It occasionally happens that the piston is loose in the cross-head. To fasten this, tighten up on the clamping bolt, which will set the cross-head tightly upon the piston rod, and screw up the jam nut tightly against the cross-head.

Q. G. M. What do you think are the best pulling engines made, the ones with driving wheels set entirely behind the boiler, or in the middle of the firebox? I think the one best with the axle bolted in the middle of the firebox. I think you want the drivers where they can have weight enough to hold them to the ground, and not so they will fly around like the fly-wheel. Am I not right?

A. Sometimes an engine with the axle in the middle of the firebox is the best puller and at other times the engine with the axle at the rear end of the boiler is the best puller. It all depends on the condition of the road, the length of the boiler, and where the engine and tanks are mounted on the boiler. A short boiler with the axle in the center of the firebox will usually raise up in front when pulling a very heavy load, and a long boiler with the axle at the rear end of the boiler will slip its drivers when pulling a very heavy load. This is the tendency of those two types of engines, but there are some of both classes which do very well, and it would be difficult to say which one is the best.

Q. C. W. A. I would like information in regard to testing a boiler with cold water pressure. Some parties here have been filling up their boilers with water and building a fire in them to make the water expand. This will put on as much pressure as they desire. I hear they always find leaks in their boiler.

A. We know of no better way to test a boiler than by means of cold water pressure. A hand force pump can be used and connected with suitable piping to any opening in the boiler, then by pumping in the water, as

much pressure can be applied as is desired. In getting ready for this test it is necessary to have an accurate steam gage to register the pressures, then see that the boiler is filled completely full of water and that there are no air pockets either in the top of the steam dome or any other place. The pressure should be applied gradually by means of a pump until it rises fifty per cent. above the steam pressure desired. If there is no sudden drop of the steam gage hand and no distortion of the plates, the boiler may be considered safe. It is no sign of weakness to find that the water leaks slightly around a rivet or stay bolt or even at one of the joints. The method of expanding the water with a light fire is entirely satisfactory, and is employed by a good many people. Care must be observed, however, or extremely high pressure will be the result, and the boiler may be damaged.

A good time this holiday period, a time of jerks and buffeting and of collision with odd circumstance, and extremely useful in that it does throw one out of the rut of ordinary life, rendering the mind less automatic, and, with any luck, more alert.—Mr. W. Pett Ridge in "The Queen."

MEINRAD RUMELY

BLACKSMITH AND PIONEER

How the unparalleled expansion of farming in the middle West a half-century ago led to a scarcity of hands and horses, and the romantic story of how the want was supplied by an immigrant

Reprint from The American Leader, Sept. 26, 1912

FOUR HUNDRED AND TWENTY YEARS AGO, a bold European sailed from Palos and landed at San Salvador. From the day Columbus left his cockleshell to take possession, America has been a heritage of the emigrant from European shores. Peasant and noble, proud and poor alike, have claimed America as their opportunity. The only native American, the Indian, has been pushed aside to make way for the strong blood of the Celt and the Slav, the Teuton and the Scandinavian.

In America we know no foreigner. The foreigner of to-day is our business man tomorrow, and our ruling statesman in a twinkling. The story of the Rumely Company, which employs five thousand people in a business built up in two generations from an emigrant's blacksmith shop, is only one of many that might be told—stories of how centuries of daily schooling in industry and frugality have fitted the European new-comer to become a master of men in this land of bounteous harvests.

As a boy in Baden, Meinrad Rumely knew from bitter experience what it meant to thresh wheat with a flail and winnow it from the chaff by hand. As a young man, driven out of his home-land in 1849 with Carl Schurz through the failure of a war for free government, he came to America, his mind filled with the memories of the drudgery of peasant life. He worked in Ohio in a shop where crude machines were built that took the power of a horse and made it separate wheat from straw, and when he finally set out to find a location of his own, his whole pent-up ambition was to make a threshing-machine that would forever remove the burden of the flail.

Afoot, he visited the towns of Indiana, among them La Porte. Across Wisconsin he tramped, then Iowa, Missouri and Illinois—a pioneer searching for opportunity in what was then the borderland of the West. La Porte—the gateway—lingered in his memory, and in 1853 he came back to set up the little shop and work out his dream.

Three years later, with the help of John Hanna, who lives to tell the story, he built three threshing-separators. They cut the parts by hand, chipping the key-ways in the shafting, fitting and testing, so that the neighboring farmers who came with gold in their pockets to buy, might save their grain with an ease never hoped for in the Old Country. Then, another three years later, came the proud, crowning day when the Rumely separator won the gold medal over thirteen other threshing-machines at the United States Fair in Chicago.

Westward went the wheatfields, into Illinois and Iowa, into Nebraska, Minnesota and the broad prairies that had been called the Great American Desert. Farmers no longer could drive their teams to the growing factory, and exchange gold for machines to thresh their crop. And so Meinrad Rumely had to build branch houses, and ship separators over slow railroads to follow the harvest.

A great civil war called men to lay down their flails and shoulder muskets. Armies had to be fed and Europe clamored for the new, cheap wheat from the United States. So spread the threshing-machine, that did the work of dozens of men and furnished cheaper, cleaner, better grain to the world.

The Rumely factory welcomed the laborer from the Fatherland. For twenty-five years Meinrad Rumely worked conscientiously to bring one workman after another to him from across the sea. The immigrants built homes and schools and churches in which the father-tongue is still spoken. They worked in the shops, and after every harvest there was a grand time of reckoning, when the wages that could be paid only in part during the year, were fully met with the wheat-money that came pouring back from the granaries of the West.

Little by little the factory grew. Surrounded by devoted workmen, Meinrad Rumely built up a business with a half-dozen branches, and a yearly output of three-quarters of a million dollars. His machines were sturdy, with a "Dutch" appearance that amused competitors; but one of those same competitors, now a prominent editor, bewails the fact that in the seventeen years in which he fought for business with Meinrad Rumely's salesmen, he never got back a Rumely separator in trade. Only a few years ago a farmer came to the factory, saying to Dr. Edward A. Rumely, now General Manager, "My father bought a separator of your father, and his father bought two separators from your grandfather, Meinrad. Now, all I want to know is when you can ship the machine."

Other factories built separators, and grew steadily. Abram Gaars was one of these, and he and Rumely were both friends and competitors. Abram Gaar had descended from Andreas Gaar, who, curiously enough, had been driven by persecution from Illenschwang, near Dinkelsbuehl in Bavaria. The Gaars were members of the First German Lutheran Church in America. Their stock settled in Pennsylvania, and spread in succession through the valleys of Virginia, Kentucky, Indiana and then on, like the harvests, across Illinois, Missouri and Texas to the Pacific Coast.

Abram Gaar worked as a young man in the Old Spring Foundry, at Richmond, Indiana, and with his father, his brother and a friend named Scott, took the plant over for debt in 1849. It had been established a baker's dozen years before to make water-wheels—water-wheels to run factories that were built by immigrants who came just as the first Gaar did, and pushed on to opportunity in the West, peopling the river valleys as they went. Gaar-Scott and Company built separators, and were among the first to build steam threshing-engines, which were used also in the newly opened oil-fields of Pennsylvania.

Again, a French architect, dissatisfied with the conduct of affairs in the War Department where he was engaged, renounced allegiance to France and came to the United States. His grandson, Meinrad La Fever, designed and built some of the earliest engines ever used in place of horses for threshing grain. Around Meinrad La Fever was built the Advance Thresher Company, at Battle Creek, in Michigan; and a few years later an Englishman, John Abell, copied the Advance engine and established in Canada what became the American-Abell Engine and Thresher Company, Limited.

La Fever, Gaar-Scott and Rumely built well, and soon not only the labor of the flail had been entirely lifted, but the horse was taken off his weary circle and an engine took his place, with a belt instead of a tumbling-rod.

Out on the prairies the land heaped its riches upon the settler. McCormick's work bore fruit. The harvest came and wheat fields widened as men realized that one man with a binder could do the work of dozens with sickles. The plow and the harvester called the horse, and the horse abandoned the threshing machine to the cheaper power of steam. Faster and faster the horses plowed, with wider plows, and greater and greater grew the harvests. Bigger and bigger became the separators, and these four pioneers had also to build bigger engines to run them.

Then came the time when population increased faster than yield, when foreign demand for wheat called for the sudden turning of thousands of acres more than could be plowed and tended with the horses at hand. Then, and not until then, was steam called to the aid of the American plowman. The cry for more plowing-power came with a swift rush that manufacturers could scarcely realize. Some men lost years waiting for the supposed fancy to pass, but those with vision, who saw the future needs of Europe and our own cities, who knew the limitations of animal-power, and who applied to the farm the same analysis that they gave their own business, saw that mechanical power must bring reorganization to the farm, just as it had come in actually to create wide-spread manufacturing and transportation, the other two fundamental human industries.

Out on the prairies, under the sod, lay wealth for farmers, a fortune for manufacturers, a recipe for building cities and railroads, and all the ingredients for the making of a great western empire. Settlers scattered far and wide had unearthed treasure for themselves, but even as great industrial cities have never been built without commerce or power, just so the West never came into its own until steam appeared to lift the shackles of toil from the farm laborer and let him rise.

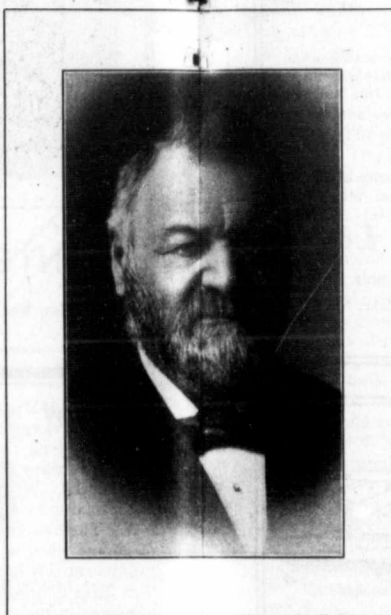
Rumely, Gaar-Scott, La Fever, Case, Abell and the factories of other men gave the farmer steam-engines that did his work, but only engines that were heavy, unwieldy and expensive to operate. The Great American Desert had been found habitable, the soil fertile; but dry-farming methods had to be used and there was no abundance of water to turn into steam in a boiler and squander on the atmosphere. Coal was heavy, costly and inconvenient; thus the coming of the stationary gasoline-engine and then the tractor for plowing and cultivating at last brought mechanical power within the reach of thousands of farmers whom steam never could have freed from drudgery.

But freeing the farmer was not—is not—an easy task. He must have workmen or toil himself. There came a time when the immigrant no longer went directly West to the farm and opportunity. The great manufacturing cities of the East now form a screen that has caught and held him, while the fields call in vain. Power made the eastern factories possible, and power applied to the street-car and subway makes possible the centralization of great groups of people. Power has linked great cities together with the railroad and the steamship, and power in all these instances drew away from the farm the laborer who rebelled against its monotony and weariness.

Yet all these must need be fed, and, in spite of the farmer, his horses and his harvester, hunger made itself felt in the price of foodstuffs. Every acre put under the plow means wheat for two people, sometimes three. One plow-horse's work for one day means one acre, but horses have become scarce and men to drive them scarcer, with each year, so more and more farmers have turned to the steam-engine and gasoline-engine to cultivate the acres that have meant profit to them and bread for the world.

Meinrad Rumely died and his sons and grandsons took up the work. Perhaps more than any other, Dr. Edward A. Rumely, who has been educated in a German university, saw into the future and formulated in words the tremendous part that mechanical power was to play in the development of agriculture. He saw that the farm must eventually take more power than all the factories and all the railroads combined, for the farm must manufacture its raw materials into a finished product, and not merely mine with great quantities of power all the stored-up fertility of the soil. He saw that more horsepower hours must be spent in deeper plowing, in pulverizing the ground, in cultivating, harvesting, threshing and baling the crop, and in hauling it to market.

The tractor had already demonstrated its greater economy as against the horse and now arose a question as to the type of tractor that must solve fully the question of farm power for the immediate generation. The price of gasoline has risen to three times its former price, while kerosene and cheaper oils could be bought for 4 and 5 cents a gallon instead of the 20 and 25-cent price of two decades ago. Dr. Rumely saw that the



RUMELY

LA PORTE

greatest of the world's power markets could not be opened on the scarcest of all liquid fuels—the gasoline that automobiles and motor-trucks, motor-boats and the stationary gasoline-engine have made almost prohibitive in price.

But no investor except John A. Secor had ever been able to produce an oil-engine that had as good regulations as the best steam-engine, that had the flexibility and the light weight of the ordinary gasoline-engine and that would positively burn low-grade kerosene and even cheaper oils perfectly, at all loads, in all temperatures, and under every conceivable condition.

The Rumely Company grew deeply interested in the oilburning engine and then in Secor. Working unitedly, boldly and vigorously, the Rumely heirs began to lay a conscious far-sighted plan for the supplying of the mechanical power that the farm-world was beginning to demand. For the first time in its history outside capital was taken into the Rumely business. From a quarter of a million to a million, then to two million, then to three, the capital rose, and with these resources a daring step was taken.

Risking everything, the company took John A. Secor away from his successful work in New York City to design an oil-tractor that would take the place not only of the horse, but the steam engine and the gasoline-tractor. His work was successful from the very start. In less than two years the output of the Rumely Tractor, as it was called, grew from nothing to 75 tractors a week, and the factory which Meinrad Rumely left with 400 hands became one of over 2,000 workmen.

But even large factories are prosperous only when work-men are continuously and pleasantly employed. Plowing and threshing come at certain stated seasons of the year and at other times those salesmen must be idle who sell only threshing and plowing machinery. The complete farm machinery organization must have a varied line of machines, and an export business, so that factories and salesmen can be kept busy throughout the year. The little town of La Porte could not possibly house the necessary laborers to build these machines, and so, in 1911, the capital stock of the company was again increased, this time to twenty-two million dollars, and with the proceeds from the sale of that stock were purchased the plants and patents of Gaar-Scott & Company, the Advance Thresher Company, and the American Abell Company, Limited. This giant concern ranking third in the United States in production of farm machinery, now employs 5,000 people. Its factories have been running night and day all year, but even then, the enormous crops in the Northwest have left it hundreds of separators short of the quantity needed to harvest safely the present season's crop. The little shop of Meinrad Rumely, with its output of three separators in 1857, has grown almost beyond the limits of imagination into an enormous business which sells over thirty different kinds of steam-engines, a half dozen different gasolines and kerosene-tractors, a dozen types of threshing-separators, and bewildering variety of clover-hullers, hay-balers, corn-shellers, corn-huskers, cream-separators, stationary gasoline- and kerosene-engines, plows, land-rollers, pumps, saw-mills, feed-grinders—every item in the list capable of being operated with mechanical power, and all to save the farmer from drudgery which haunted Meinrad Rumely's early years. Next year enough Rumely tractors will be built to plow, seed, harvest, thresh and market 3,500,000 acres of wheat, which at twenty bushels to the acre will make bread and pastry for ten million people. Meinrad Rumely and his associates have sent an immigrant's name around the world to stand as a symbol for labor-saving machinery. The immigrant himself lived to become a figure of national reputation.

The story of Rumely is the story of thousands, repeated on a larger scale. He worked and planned and saved, but that is not all. America is the emigrant's future. Old Leonard Gaar, aged seventy-six, wrote from Bavaria, before any of the factories had reached their present greatness and without ever having seen America, "It is astonishing how the family has prospered. I think that Andreas Gaar never would have given such wealth to this family so long as he lived in Europe. There you must say, the Lord has prospered them in a strange land." We who are here—who have seen—marvel how wonderful is our opportunity.

The pioneer prospered. Gold-fields had no part in his story. He came to America—went west and worked—and saw to it that his lifework was founded on service to the farmer, the greatest of all producers. Today the West offers opportunities as great for those who assert their rights to the soil and push on to pioneer vast fields of endeavor that are yet untouched.



The Discharge of Rockets to Keep off Hail

The enthusiasm with which hail guns were first greeted has given place to a certain scepticism, which is invading both the practical and scientific world, in consequence of the negative results obtained in Italy and France by experiments conducted on a large scale. But the principle of the researches, which consists in disturbing the motionless stratum of the atmosphere where the hail is formed by a storm of sound waves, remains untouched; only the means employed appears to be insufficient for the purpose. The gaseous missile rises with difficulty in a denser medium. The wind carries away the resulting great air-waves more or less horizontally, according to its strength, as occurs in the case of those caused by bell-ringing.

As regards other means which could be adopted as an efficacious remedy for hail, the writer suggests replacing the harmless charge of detonators in the form of guns, by a discharge of rockets capable of rising to a height of some hundreds of metres into the air. The fuse is regulated so that the rocket explodes among the clouds.

In support of the efficacy of this scheme, the writer cites two very instructive cases of storms when the hail destroyed whole districts, sparing, however, places where rockets had been let off. On August 1, 1904, a severe storm descending from the summit of the Grand Muveran, in the Upper Rhone Valley, passed along the upper portion of the lake of Geneva, following the right shore, without being able to leave it, as far as Lausanne. It then passed through the Morges depression, in Canton Vaud, devastated the wide plain watered by the Venage, hurled itself against the Dent de Vaulion, rebounded from these steep slopes, entered the basin of the Thièle and finally lost itself in the lake of Neuchâtel. Within the devastated zone, two small communes only, like two islands, escaped damage, the communes of Echichens and Lonay, where alone rockets were used.

For the same reason, during the storm of June 10, 1910, the four

communes of Esparron, Pontevès, Roquettes and Roquebrune (France) were spared by the hail.

The writer gives interesting details concerning the manufacture and use of the rockets. The following are some of his most important conclusions:

Hail-prevention rockets must, in the first place, be capable of exposure for a certain time to rain with impunity; it is therefore necessary to provide them with a water-proof covering and also to protect their fuse. They should be able to rise high enough to explode just under the storm clouds, i.e., at an altitude of 1,475 to 1,650 feet.

The firing may be done by individuals, or collectively. In the first case, a man with a stick provided with two rings of flattened iron wire, which serve to support the projectile at the moment of setting fire to it, could protect 40 acres by letting off in the middle of his property at least four rockets reaching an average height of 1,650 feet. The cost would only be from \$1.80 to \$2.40.

In the second case, the advantages are even more evident and greater. The places for the operation must be carefully chosen, and strategic positions selected by reference to the map and the ground; they should be placed at intervals following the habitual course of the storms.

If in the great experiments carried out at Castel Franco, the guns for averting hail, instead of being scattered about at random over this vast area had been placed along the course of the storms, that is to say along the deep valleys which descend into the Venetian plains from the Carnic Alps, the results would probably have been very different.

The writer followed these principles in the choice of suitable places for letting off the rockets, in order to protect the basin of Gannat. Each firing post protected an average area of 620 acres, i.e., ten times as much as if it were isolated. The total cost of the guns and explosives for three consecutive years, for eighty firing posts, did not exceed \$1,200, i.e., an average of \$40 per post. Calculating that 12 projectiles are let off annually at each post, the

The World's Record

IN MILK CATTLE

counts for little if there is not perfect machinery in the dairy to take care of the milk product. It is the "yellow gold" of the butter fat that is of real consequence. The



"MAGNET" Separator

Seems to know this, and with almost human intelligence and more than human accuracy discovers and delivers to the dairy man the last atom that can be found in the milk.

EASIEST OF ALL TO OPERATE

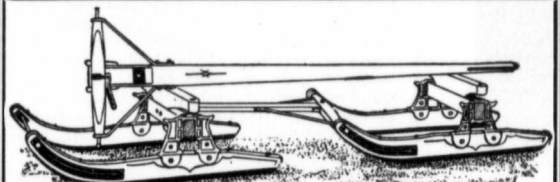
Again and again the strength, solidity and uniformly excellent work of the "Magnet" has been proved on the farm and in record-breaking International Contests. Its square gear as distinguished from the ordinary "wobbling worm" is the admiration of every practical man who sees it. Let us send you details of forty facts about the "Magnet" that sets far ahead of any other separator in use to-day.

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

The Petrie Mfg. Co., Ltd.

Head Office and Factory: HAMILTON, ONT.
Winnipeg, Calgary, Regina, Vancouver, Montreal, St. John, N.B.
Edmonton, Alta.

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



We Are Just As Particular

about the materials, workmanship, and finish of our 2', 2½', and 2½' Gregg Malleable Knee Farm Sleighs as we are of the 3', 3½' and 4' Gregg Malleable Knee Logging Sleighs.

If you are going to buy a new sleigh this winter, insist upon getting the best. Your dealer can get the Gregg Malleable Knee Sleigh for you, which is guaranteed to be the strongest, easiest running sleigh made.

Write For Descriptive Matter
GREGG MFG. CO. LTD., WINNIPEG, MAN.

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

Be Prepared!

Every stable should have a supply of reliable horse and cattle remedies on hand for emergencies.

Dr. Clark's White Liniment is valuable in a hundred and one ways. Read what Chas. W. Colvill, Clarkville, says:—"We used your **Dr. Clark's Fire Blister** on an old mare that was hardly able to get around. She was stiff and crippled with both sweeney and spavin; now she is running around fine. It is good stuff. Next time I go to town I am going to get some **Dr. Clark's White Liniment** and **St. John's Horse Worm Powders**."

DR. CLARK'S FAMOUS AND RELIABLE VET. REMEDIES ARE SOLD BY ALL DEALERS

The Martin, Bole & Wynne Co., Winnipeg, Can.



Send for 160 page Vet. Book or Animal Doctor Free!

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

total annual expenditure would be met by \$480.

In any case, these results could not be obtained at a lower cost, and these experiments deserve serious consideration.

A Suggestion for Improving Dairy Herds

"It is alleged," says Dr. A. S. Alexander, of Wisconsin, "that more than 90 per cent of the bulls in use in the dairy districts are grades and scrubs. This lamentable state of affairs indicates plainly that the results of forty or more years of writing, teaching, preaching and persuading against the use of such undesirable males, are unsatisfactory and that some practical plan of actual improvement should now be introduced. Only by the general use of pure bred dairy breed bulls can dairy cows be graded up and improved in quantity and quality of milk production. The general use of such bulls and employment of better methods of feeding and management would in a comparatively short time increase the present yearly average butter production of the Wisconsin cow from 175 to 350 pounds or more. Two top crosses of dairy breed blood have produced a grade cow that yielded 630 pounds of butter in one year. Some scrub cows produce only 90 pounds of butter a year. The 175 pound butter cow hardly pays for her board and care. The 90 pound butter cow is kept at an actual loss. Only profitable cows should be kept.

"Pure bred bulls would be used were they everywhere available. They are not available now. They should everywhere be made available. This should be accomplished by the use of creamery company capital. It would be a legitimate and profitable investment of capital.

"The parties vitally interested in this matter are the producer of milk and the buyer of milk. If the producer had better cows, sired by pure bred dairy bulls, he would make more and better milk at a greater profit. This would mean more and better supplies and better profits for the owners of creameries, cheese factories, condensing factories, skimming stations and milk distributing stations.

"The creamery and factory owners should buy pure bred bulls and maintain them where they can readily be used by their patrons. The service fees, calculated at cost, could be deducted from the patrons' creamery checks. The danger of disease being spread by the bulls would be slight and easily prevented by sanitary precautions. All male calves produced should be 'vealed.' All heifers should again

be mated with pure bred sires. Continuous grading up should be done and no cross breeding practiced.

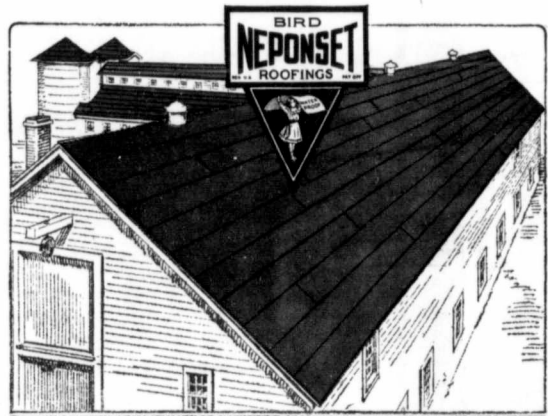
"Such introduction of pure bred bulls would quickly eliminate grade and scrub bulls, set the right example, encourage owners of dairy herds to own and use pure bred bulls and in time lead to the ownership of pure bred dairy cows by the creamery companies. Wisconsin needs and should put into practical use every pure bred dairy bull produced in her domain. Hundreds of such bulls are now sold out of the state each year. The plan proposed would lead to the home use of all of the bulls we produce.

"Let us stop merely advising the cow owner to use a pure bred bull; place a pure bred bull where he can use it and then get him to use it. If this is done improvement will be sure, rapid and profitable."

The Horse on the Farm

Some years ago when visiting the fairs, I became much interested in the qualities of the heavy draft-horses then being imported. In order to get at the views of the importers on the subject, I cultivated the acquaintance of many of them.

I had experimented on my English farm with Percherons, Normans, Clydesdales and Belgians, and had come to the conclusion that the first two of these breeds were admirably fitted for the heavy hauling of cities; that the Belgians excelled for railroad and other construction work because of their aptness for keeping out of danger and of learning to guide themselves in the work required of them, and that the Clydesdales were good both on the farm, from heredity, and on the road because of their weight and docility. I had also made up my mind that none of these, whether thoroughbred or the produce of stallions of any of the four breeds on English mares, were exactly what I wanted on a farm where a good deal of heavy clay was to be found. I suppose I was prompted to these rather costly experiments, extending over a period of five years, by the youthful conviction, so common to all of us, that we know it all better than our grandfathers; and in face of the fact that among the ten horses in the farm stable were two in full work, one twenty-eight years old and the other thirty-two, bred by my granddad, and their ages proved by his carefully kept stud-book. These two, I admit, were somewhat favored by our old horsekeeper who had tended them as colts, but were still almost as capable of doing a day's work as any of their younger stable



Not a Leak in 13 Years
From a section where the climate is hard on roofing comes this letter:

"John Tupper built a lumber shed 13 years ago and roofed it with

NEPONSET PAROID ROOFING

The building is now partly pulled down and the roof has sagged. There are low parts where the water stands after a rain, but the water evaporates without going through the roofing. No attention has been given to the repair of this roofing for 13 years, and still it does not leak."

The economical roofing is the one that you know will last. Actual records prove that NEPONSET Paroid Roofing is the real rival of best shingles in long wear. It costs less to buy and less to lay—in addition gives fire protection.

The U. S. Government has used over a million square feet of NEPONSET Paroid Roofing on the Panama Canal alone. Farmers are buying it for their biggest and best barns.

Remember the name, NEPONSET Paroid, the roofing with the record. Make sure that you get it. Sold only by regularly authorized NEPONSET dealers—leading hardware and lumber merchants.

Send for Blue Print Barn Plans—FREE

They are the kind of plans that appeal to every Canadian farmer.

NEPONSET Roofings are made in Canada.

F. W. BIRD & SON, 436 Heintzman Building, Hamilton, Ontario

Established 1795

Winnipeg

St. John, N. B.

Vancouver, B. C.

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

INTERNATIONAL STOCK FOOD
Makes Cows Give More Rich Milk.

International Stock Food conquered England, just as it conquered Canada and the United States, by proving to the Dairy Experts that it is the greatest milk producer and health restorer in the world.

The test was made on three cows from the dairy herd of S. W. Hackney, Esq., Leeds, England, Chairman of the Yorkshire Federation of Dairy Farmers.

Quantity and quality of milk was tested for a certain time—then "International Stock Food" was added to the regular feed.

INTERNATIONAL STOCK FOOD showed an increase in Milk of 14.2 pints daily, and 1.21 pounds of butter daily.

This proves that International Stock Food, added to the regular feed will increase the quantity and improve the quality of milk from every cow.

It shows that International Stock Food aids digestion and keep cows in better condition. It proves that International Stock Food is a money-maker for the farmer—that every farmer who owns one, or a hundred, cows should feed International Stock Food every day.

Make the test yourself—weigh the milk you are getting now—then feed International for a few weeks, and weigh again. Then you'll see how International Stock Food will make money for you.

International Stock Food Co., Limited
Toronto, Ont. *A copy of our \$3,000 Stock Book free on request.*



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AUSTIN
Well Digging and
Prospecting Machinery

Rock Drilling, Hydraulic Jetting, or Hydraulic Rotary Machines to drill any depth in any formation. Operated by steam or gasoline engines, or horse power.

Write for Illustrated Catalogue No. 15.
AUSTIN MANUFACTURING COMPANY,
CHICAGO.

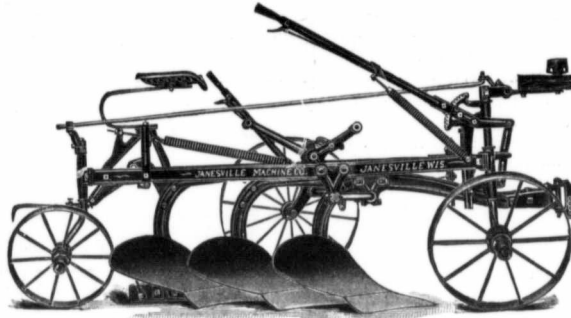
Canadian Sales Agents—BURRIDGE COOPER CO., LTD., Winnipeg

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JANESVILLE

THE QUALITY LINE

Wins National Plowing Match at Wheatland, Ill. Wm. Fairweather takes Sweepstakes Prize for 6th time with Janesville. We also took 10 out of 14 possible prizes at match. No other Plow Bottom can do such work as Janesville. Only Plow built especially for Canadian conditions which has met with permanent success. The Champion Dreadnought Plow of the World. Goes in and out of the ground point first — levels itself automatically — same action as found in walking plow — any boy able to drive, can handle Janesville Driving Plows. Considered by experts the best and most satisfactory horse plow sold in Canada.



Get our proposition

JOHN WATSON MFG. COMPANY (Sales Agents) WINNIPEG

THE JANESVILLE MACHINE COMPANY, JANESVILLE, WIS., U.S.A.

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

mates. They were thoroughbred English Shire horses.

By the end of five years I had gotten rid of all my foreigners, and till I ceased to farm I adhered firmly to the farm-horse beliefs of my ancestors, which were that the Shires are the best all-round horses for general farm purposes, whether thorough-bred or gotten out of good roomy twelve to fourteen hundred pound mares by pure-bred Shire stallions. They will stamp their nature and appearance on all their colts. I will now give my reasons for that belief.

But first let me give the one single reason given me by my friends the importers, why they, for the most part, ignored the existence of the Shire horse. It was that American farmers had a deep-rooted objection to the long and shaggy hair extending from knee and hock down to the hoof, so marked a characteristic of the breed. One man, whose sons today are doing a most successful business as importers of all these breeds, including Shires, said: "My dear sir, I'm after the money. Of course, I know the good old Shire is the best farmer's horse in existence, but I'm not going to make enemies by bucking up against any man's prejudices, and so driving him out of my barn. The hair is queer to look at, and

we hate to be 'guyed,' but you and I know why nature put it there, and custom has taught us how to take care of it."

The following, then, are my principal reasons for preferring these to any other horses, especially for small farms where steam is inadmissible, and please, good reader, do not cry "English prejudice," for I've lived over here fifty years, and I hope have gotten rid of all that stuff.

The Shire horse, then, is, I think, by heredity very handy and active on arable land. He seems to pick his way over ridge and furrow with none of that heavy, crooked and uncertain gait so often to be observed in the continental breeds. Centuries ago, when the Norman was the knight's warhorse, or a few years ago, when he and his Percheron brother were ridden along the roads to Paris by postillions, "Dobbin" was plodding soberly along ridge and furrow, and his descendants have learned the trick of keeping the straight line.

The Shire horse is light and quick in movement, a fast walker and with a great knack of throwing his weight into the collar when needed—and at no other time. He is tractable, good-natured and learns while very young the verbal directions of his driver.

The Shire is hardy, hard of bone, shapely, short-backed, close-ribbed, with good oblique shoulders, a well-carried head, fine eye and wonderfully good constitution. If well fed on good oats and hay, he grows amazingly during the first two years of his life. He is a good but not a gross feeder and endures changes of climate without injury, as is proved by his popularity in the English colonies, and which is now rapidly extending to the South American republics, and I hope, for our own sakes, to this country.

If properly cared for, the hairy part of his legs washed and thoroughly dried and the rest of him thoroughly groomed when he comes in from work, he will last longer than any horse under the sun, except the Arab and the English thoroughbred.

To sum up the matter to a practical conclusion, I have a firm belief that the farmer of moderate acreage, who has a good roomy mare of any breed, say, of from twelve to fifteen hundred pounds, and wants to breed a race of good farm-horses for his own future use, can mate her with nothing so good as with a well-bred English Shire horse.

L. M. Godfrey.

The Disc Harrow

The disc harrow, if properly used, will turn the farmer more profit than any other tool which he owns, and it is equally true that if this implement is misused it will cause a great deal of loss.

Every farmer should understand thoroughly why he disks. The mere going over the ground with a disk harrow doesn't necessarily mean that the farmer is deriving any benefit from it, nor does it mean that he isn't. The farmer must understand the relation of moisture to the soil and growth of the plant and what is necessary to conserve the moisture. This is essential to the farmer's greatest success, no matter where he farms.

Plants require food, water and air. These must be given in the right amounts to nourish the growing plant. Before the seed is deposited in the ground, the seed bed must be in the proper physical condition. Different crops require special seed beds, but as a general rule the small grain crops require a shallow, finely pulverized seed bed on top, and compact, firm soil underneath. Larger crops, such as corn, require a deeper seed bed. But in both cases moisture and air conditions must be carefully observed.

Up to the present time the disk harrow has been the most practical implement for the farmer to use in preparing a perfect seed bed. It has been demonstrated time and time again, that farmers who thoroughly disk the stubble immediately after the grain is harvested, plow a few weeks later, disk the ground the next spring as soon as they can get into the field, and follow it up at intervals to keep a soil mulch on the surface until sowing time, have harvested from five to twenty-five bushels more per acre than their neighbors who did not follow this method.

All farmers know what a cloddy field means. When ground is in this condition, a disk harrow must be used, but how many farmers realize that if the ground is thoroughly treated with the disk harrow in the right manner, they never would be troubled with clods?

Generally speaking, clods are the result of two causes. First, the ground is plowed when too wet and bakes in the heat of the sun. Second, the ground is plowed when too dry.

The great percentage of cloddy ground comes from the too dry plowing. The farmer who follows the binder with a disk harrow, thoroughly pulverizing the ground, puts it in the right physical condition to bring moisture from the subsurface to soften the hard ground. This makes plowing easier and turns over a moist stubble free from clods.

While the farmer is following the binder with a disk harrow, he is also conserving moisture for the next year's crop. If the stubble is left standing, the ground cracks constantly increase and the moisture evaporates more readily, drawing out before the winter season approaches, a great percentage of the water that is left in the ground after the crop is harvested. A great many farmers, particularly in the semi-arid regions, have used the disk harrow, partially following the rules laid down by dry farming authorities, and having met with dismal failure, they have condemned the disk harrow. The trouble of these farmers was with themselves and not with the so-called system of dry farming, nor with the disk harrow. It requires water to grow crops. Those farmers who made this failure undertook to disk the ground after it had become thoroughly dried out. Moisture cannot be conserved if it isn't in the ground. If those farmers who made this failure will take special pains to follow the correct principles of farming during the year when they have rainfall, they need not worry about their ground drying up and

THE CANADIAN LIGHTNING ARRESTOR AND ELECTRIC COMPANY



LIGHTNING!

has destroyed millions of dollars worth of property in Western Canada this year—and it has not been a bad year of Electrical Storms.

At a very trifling cost we will absolutely protect you. No building that has been made lightning-proof by our 99% pure copper cable has ever been damaged by electricity. We will positively refund amount of all damage caused by lightning to any building and its contents which has been installed with our system. We have been ten years in business and we have yet to meet our first claim because it is impossible for lightning to injure a building equipped with the Townsley System. You are not safe one day the year through while your buildings are unprotected.

Write us at once for full particulars. Agents wanted in Western Canada.

Canadian Lightning Arrester & Electric Company Limited
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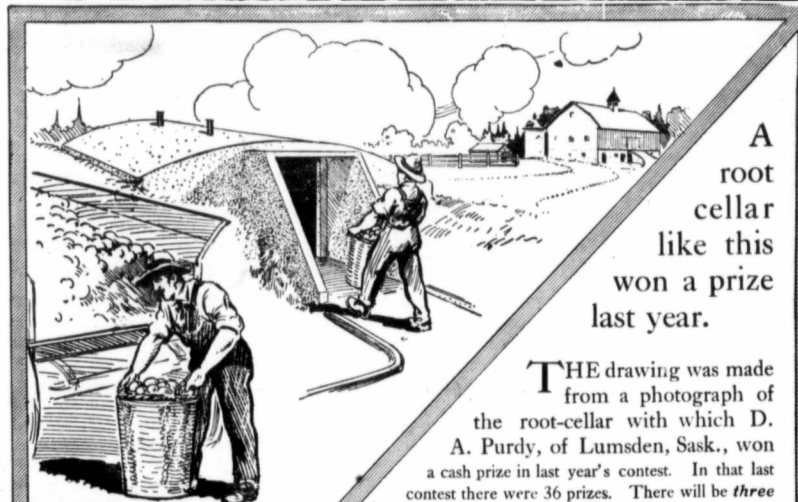
GUAR-
ANTEED

PRO-
TECTION

99%

PURE

COPPER



A root cellar like this won a prize last year.

THE drawing was made from a photograph of the root-cellar with which D. A. Purdy, of Lumsden, Sask., won a cash prize in last year's contest. In that last contest there were 36 prizes. There will be three times as many prizes (108) in the

1912 FARMERS' PRIZE CONTEST

THUS you will have three times as many chances of winning a cash prize. You do not have to use any certain amount of Canada Cement to win a prize. There are absolutely no "strings" to this offer.

There are twelve prizes for each Province (three of \$50; three of \$25; three of \$15; and three of \$10) and you compete only with other farmers in your own Province and not with those all over Canada.

It makes no difference whether you have ever used cement. Many of last year's winners had not used it until they entered the contest. When you write for full particulars, we will send you, fr. e, a book, "What the Farmer Can Do With Concrete," which tells everything you need to know about concrete. It is absolutely free, and you are under no obligation to buy "Canada" Cement or to do anything else for us.

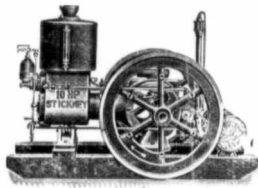
WRITE your name and address on the coupon, and mail it, or use letter or post card, and we will send you at once the book and full particulars of the 1912 Prize Contest.

Address Publicity Manager

Canada Cement Company Limited

82-92 Herald Building, Montreal



The Stickney Gasoline Engine

The service you get OUT of an engine depends absolutely on the service the FACTORY PUTS INTO IT. And the Stickney Gasoline Engine represents MAXIMUM efficiency at MINIMUM EXPENSE for power and upkeep. Built to give PERFECT service and give it CONSTANTLY. THOUSANDS of satisfied users ready to testify that the STICKNEY GASOLINE ENGINE is the BEST engine for pumping water, grinding grain, sawing wood or operating a threshing machine.

The Toronto Grain Grinder

is the very best you could buy, for it offers you a STEADY GRINDING machine that will grind more grain in a day's work than ANY other. Can be depended upon to do the work, and do it economically and right. A thorough success. Get at the points—write for Catalogue.

The New Chapman 2 H.P. Gasoline Engine

Before you install a small Gasoline Engine of any kind for your pumping, learn what it costs to operate the Chapman 2 H.P., and how LITTLE attention it requires. It is the STRONGEST, the SIMPLEST, the most ECONOMICAL small engine in existence. We cannot do justice to the many important points in a brief advertisement. Write us for the detailed Catalogue, it tells WHY the CHAPMAN is a THOROUGH SUCCESS and the BEST VALUE for the money EVER OFFERED.

The Canadian Pole Saw

"THE BEST SAW YOU EVER SAW"

A leader in its class—known from coast to coast to have made good in the face of the strongest kind of competition. Write for Catalogue.

Pneumatic Pressure Tanks and Pumps, Wood and Steel Tanks, Troughs, Aylmer and Toronto Pumps, Pipe and Fittings, Well Casings. Everything in Water Supply. Feed Cutters, Aylmer, Standard and Truck Scales.

Write for Catalogue and Prices

Chapman Well Drilling and Dempster Boring Machinery

used all over the Country by Well Drillers—prosperous men—making from \$1800 to \$6000 per year. BETTER Well Drilling and Boring Machinery cannot be made; it is the very latest, simplest and best; built to drill wells in ANY formation, ANY size or depth, doing the work RAPIDLY and SURE.

There are a whole lot of things we want to tell you about the Well Drilling and Boring business and the profits to be made. We have a special proposition to make to those who apply to us AT ONCE. Send us your name and address so that we may tell you the complete story.

Aylmer Pitless Scales

The STANDARD of mechanical construction, known everywhere as the best Pitless Scales obtainable. Their SURE and ACCURATE service is explained by their PERFECT construction. The best Scales made for weighing Hay, Grain and Stock.

ONTARIO WIND ENGINE AND PUMP COMPANY, LIMITED

TORONTO

WINNIPEG
CALGARY

MONTREAL

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

blowing away, or about the disk harrow being a failure.

It is a well known fact that dry farming cannot be conducted without the use of the disk harrow, because the disk puts the soil in the proper condition to drink in all of the rains and conserve the water for future use, as well as to retain that moisture which is already in the soil. This has been demonstrated so many times that there is no question about it. The farmer who has trouble with his ground drying up and blowing away after he disks it, whether he knows it or not, has done his work after the moisture is gone. It is the same thing as locking the barn after the horse is stolen. Every operation that a farmer performs with a disk harrow, both directly and indirectly, conserves moisture. Killing of weeds, stirring of the soil for aeration and warmth, are all directly connected with moisture conservation. From this, it goes without further reasoning that the farmer who makes a thorough study of the amount of moisture it requires to grow any given crop and uses the disk harrow to conserve that moisture, must of necessity raise that crop, as far as moisture is concerned. The conservation of moisture depends upon the breaking up of capillary connection on the surface of the ground, and having the soil particles in the subsurface in the proper physical condition for capillary attraction. This condition is to have the ground free from air spaces, large lumps, large foreign substances, such as corn stalks, corn stalk roots, bunches of manure, unpulverized straw, etc. These foreign substances prevent the particles of soil from becoming compact and firm; a firm, compact soil is necessary for capillary attraction.

The farmer who thoroughly understands these things and sees to it, when the seed bed is prepared, that there is nothing in the ground to prevent the compactness of the soil particles, and who keeps the mulch on the surface, need not worry about crop failure. This means the use of the disk harrow to cut up the corn stalks and roots, to slice the stubblefurrow before the plowing is done, and then before the crop is sown, to disk the ground every time a little crust begins to form and so break up the capillarity with the surface. If the farmer lives in a district where it is necessary to practice dry farming, and discovers that he hasn't moisture enough in the ground to grow a crop in any given year, plowing of the ground, summer fallowing with a disk harrow to drink in all the summer's rain, will put him in a position to grow three crops in five years in the worst times. The farmer who lives where the rainfall is abundant, by following this method will never have a crop failure, even in those years when he thinks the season is dry.

Alfalfa Maxims

- 1—Alfalfa must be inoculated.
- 2—Alfalfa cannot stand wet feet.
- 3—Alfalfa needs a well drained soil.
- 4—Alfalfa is a poor weed fighter the first season.
- 5—Alfalfa does not thrive when not cut.
- 6—Alfalfa should be cut when one-tenth in bloom.
- 7—Alfalfa should not be cut too late in the season.
- 8—Alfalfa roots go deep.
- 9—Alfalfa is the prince of drouth resisters.

10—Alfalfa needs a deep, well packed seed bed.

11—Alfalfa does best on manured soil.

12—Alfalfa is best seeded without a crop.

13—Alfalfa should be seeded with a drill.

14—Alfalfa should not be pastured until well established.

15—Alfalfa should not be pastured in the spring, when starting growth.

16—Alfalfa boards itself and pays for the privilege.

17—Alfalfa adds humus to the soil.

18—Alfalfa sod plows hard.

19—Alfalfa sod produces good crops.

20—Alfalfa yields are large.

21—Alfalfa hay represents quality.

Cato, a Roman Farmer

The latter-day farmer, especially if he prides himself on being up-to-date in his farming methods, is very apt to think that agriculture, in the better sense of the word, is a new thing, and that the farming of ancient times was haphazard and crude. Perhaps this very general impression is owing to what took place in the early days of our own country. Men sowed and reaped, repaying nothing to the soil, till it ceased to yield good crops. Then they worked their way westward to repeat the work.

But it will not do to judge ancient agriculture by what was done in a new country whose fertility, though soon enough depleted, gave rise to false hopes and led planters to believe it was inexhaustible. As a matter of fact, agriculture, from the dawn of history, has, on the whole, kept pace pretty evenly with civilization, dropping to a low ebb when

A Lame Horse Is Worse Than No Horse at All

For You Have to Keep on Feeding a Lame Horse While It Is Not Earning a Cent for You. Don't Waste This Money.

Mack's \$1,000 Spavin Remedy Will Positively, Permanently Cure Any Kind of Lameness.

Have you a lame horse? You can't afford to keep it and you can't sell it. You can put it out of its suffering—or you can practically give it away. Losing money any way you figure.

Maybe you have tried to cure it—and now consider it incurable. Here is a \$1,000 guarantee that you can cure it, cure it quickly, and make it as sound as it ever was.

Mack's \$1,000 Spavin Remedy has saved many a horse for years of hard, useful work, that veterinarians gave up. Whether it is spavin, ringbone, thoroughpin, curb, capped hock, shoe boil, sprung knee, ruptured tendons, swollen or any other cause of lameness, Mack's \$1,000 Spavin Remedy will cure it. If it does not, your money will be refunded—every cent of it.

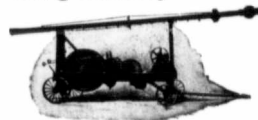
If you can't get Mack's \$1,000 Spavin Remedy at your nearest druggist's, send us \$2.00 and we will ship it to you direct, express prepaid, and send our \$1,000 Guarantee Bond to refund your money if the cure is not made.

If you have any doubts what is the cause of the lameness, use the coupon below and our expert veterinarian will diagnose the case and tell you just exactly what to do to bring about a permanent and speedy cure. Don't delay. Every day you put it off your horse may become worse, and you are losing money besides. Our free book, "Horse Sense No. 2," should be in the hands of every horse owner. McKallor Drug Co., Elmhurst, New York.

On picture of horse mark with an X just where swelling or lameness occurs, then clip out coupon and mail to McKallor Drug Co., Elmhurst, N. Y., with a letter telling what caused the lameness, how long horse has been lame, how it affects the animal's gait, age of horse, etc. We will tell you just what the lameness is, and how to relieve it quickly. Absolutely no charge. Write today.

Lyman & Sons, Distributors to Drug Trade

Mention The Canadian Thresherman and Farmer when writing advertisers.



civilization would, and again advancing in days of greater enlightenment. How much agricultural knowledge, how many important truths, have thus been lost we cannot tell; but of this we are sure, that in certain periods of the world's history agriculture flourished and occupied the attention of learned men to an extent little dreamed of by many farmers of to-day.

Some two hundred years before the Christian era, when Grecian civilization had reached a standard which, in many respects, has never since been equalled, and when Rome had borrowed this civilization and had become the foremost power in the world, there was born in Tusculum a boy who was later to become a world-famous personage. His name was Marcus Porcius Cato, since known to every schoolboy as Cato the Censor, and more, perhaps, than any other figure in Roman history as the example of those stern virtues for which Rome, in her better days, was famous. On his father's farm in the Sabine hills this boy grew up, learned agriculture and, becoming a man, set up in farming himself, just as many farmers' sons do to-day. As to his methods, he not only believed in the best agriculture, but in persistently applied labor and economy—two things that are still pretty important ones in farming. We are told by his biographer, Plutarch, that he wore rough clothes, worked in the field with his men and ate the same food as they did. Throughout his long life he continued to live simply and to do more or less work with his own hands. "When the other citizens were frightened at labor and enervated by pleasure, he was unconquered by either," says Plutarch, "not only while young and ambitious, but when old and gray-haired, after his consulship and triumph, like a brave wrestler who, after he has come off conqueror, continues his exercises to the last."

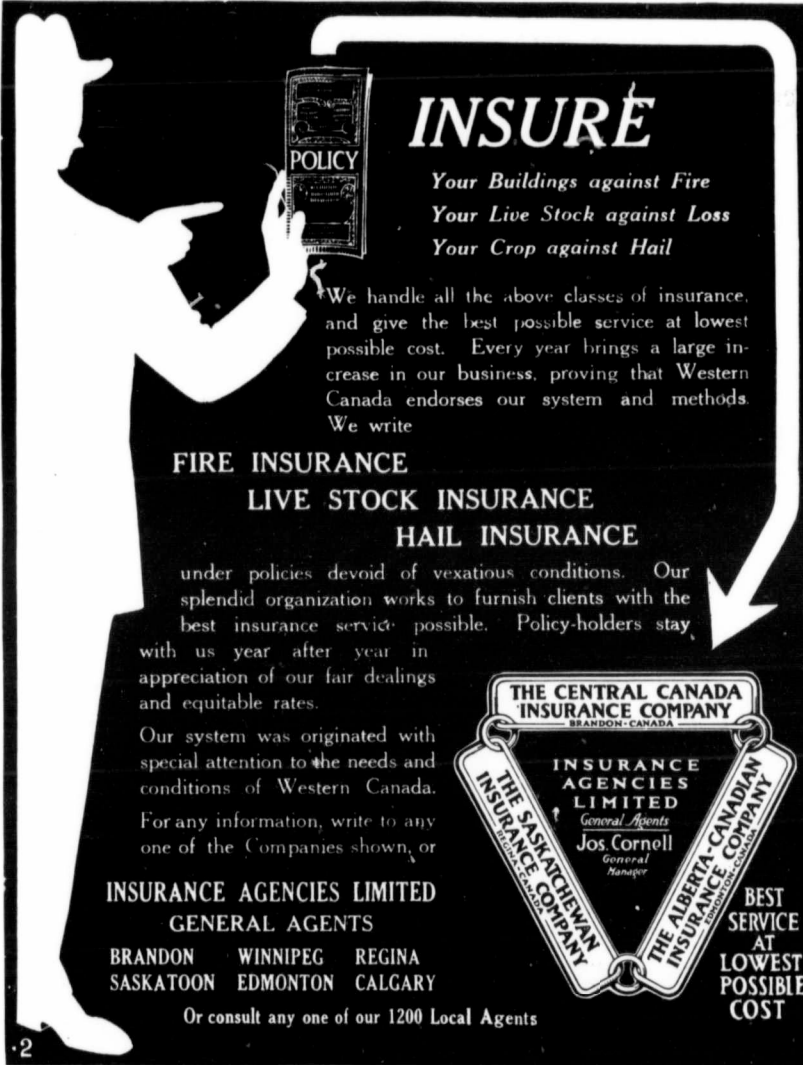
For Gas Engine Dealers

The gas engine dealer should stand in the relation of an adviser to his customers. He should know absolutely just what every engine he handles will do.

There is no difficulty in ascertaining the facts, and the dealer need not be a mechanical wizard to have the latest, most accurate and reliable information along gas engine lines.

Gas engine manufacturers have very complete data regarding their engines. This is in simple form, readily grasped by any business man without the need of special training.

The various agricultural and gas engine papers are continually exploiting the "new things" in



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We handle all the above classes of insurance, and give the best possible service at lowest possible cost. Every year brings a large increase in our business, proving that Western Canada endorses our system and methods. We write

FIRE INSURANCE
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under policies devoid of vexatious conditions. Our splendid organization works to furnish clients with the best insurance service possible. Policy-holders stay with us year after year in appreciation of our fair dealings and equitable rates.

Our system was originated with special attention to the needs and conditions of Western Canada.

For any information, write to any one of the Companies shown, or

INSURANCE AGENCIES LIMITED
 GENERAL AGENTS
 BRANDON WINNIPEG REGINA
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Or consult any one of our 1200 Local Agents

THE CENTRAL CANADA INSURANCE COMPANY
 BRANDON-CANADA

INSURANCE AGENCIES LIMITED
 General Agents
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THE SASKATCHEWAN INSURANCE COMPANY
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THE ALBERTA-CANADIAN INSURANCE COMPANY
 CALGARY-CANADA

BEST SERVICE AT LOWEST POSSIBLE COST

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

the gas engine field, and a man who really wants to serve his customers will read these papers and find out for instance who makes the best tractors, who the best carburetor, what is considered the best grade of oil for farm gas engines, what is the latest and most universally approved system of ignition, etc.

Regarding the ignition, this is one feature of the gas engine business that has always been a difficult one for the dealer. In the past the majority of the engines have been battery equipped, which meant sooner or later the batteries had to be renewed. And the connections, etc., required some little electrical knowledge the user did not possess. Often the coil, switch, or other part would give trouble and the purchaser would come back at the dealer under the engine guarantee for him to make good, and it is pretty hard that the average engine dealer and

for the dealer to explain that the "engine guarantee" does not cover the ignition apparatus.

All this has been changed by the universal introduction of the slow speed engine timed alternating current magneto of the built-in type. This is really a part of the engine, eliminates battery, coil, and their wiring, all friction wheels, belts, and speed governors, and results in reliable ignition of such a nature that the gas engine manufacturer is willing to guarantee the ignition the same as he does the engine.

Gas engine dealers should specify "magneto equipped engines" because they eliminate ignition trouble with its consequent kick, dissatisfaction and lost sales. Magneto ignition costs no more than the other kind. A magneto should be specified that has a visible method of timing; that is, one that the operator can ascertain in is proper

time with the engine by simply looking at it without having any measurements or adjustments to make.

Dealers should remember that the proper installation and upkeep of an engine probably means the sale of two or three more in that same vicinity, and they should consequently study the subject so as to help their customers, as in so doing they will help themselves.

A Written Guarantee

of profits given on investments made with us
 This is a Real Guarantee

STEWART & WALKER, Ltd.
 Sterling Bank Building, Winnipeg.
 Phones Main 4817, 4818.

Mention this magazine when writing advertisers.

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

NOVEMBER
1912

FARMER GOOD INTENTION

Charles: That was a clinking "good roads" meeting in the School-house last night. I never expected to see half the crowd there, but I fancy the wet we have had in the tail end of the season has woken up the boys to the necessity of getting rid of a lot of the surface water that collects at some awkward points. It was a regular "experience meeting," and old man Gammidge was telling of his success with the corrugated steel culverts he put into that dropsical bit of the road about half a mile from his house. He saw them tested at Brandon one day early in the summer, and in one case a 40,000 tractor and six loaded wagons were hauled over it again and again without apparently budging it an inch; and there was only about ten inches of gravel on top of the culvert. I saw him after the meeting and he said it was by a long chalk the most satisfactory and cheapest way he knew whereby a bit of wet, sunken road could be turned into a first-class highway. He got his from Winnipeg. Had seen them advertised a lot in the States and quite a few of them in use down there.

Father: I had my eye on Gammidge's bit of road making from the day he started and have watched it right along. It has fairly got a severe test, for what with that wet we've had and those three new heavy tractors that have come into the district lately, it could hardly be expected to sustain a greater weight on its ribs. Now that the grain is all in and before the final freeze-up, I think I'll order up a couple of lengths from the Winnipeg people, and as soon as they are at the depot, we'll get a few of the boys together and fix the business up as fast as we can. If we can get them finally laid and the road nicely graded on top, it will make a mighty difference to our past experience when the snow commences to clear in the spring. I spoke to the Reeve a day or two since and he said everybody was in favor of getting that S. M. road-grader except old "Good Intent," and he was for holding off until we saw how his plan of road-grading worked out. The boys all laughed at him, the Reeve said, and no wonder. He's been talking for the past two years about that "plan" of his, but the only bit of it that has materialized is that few yards close to his barn-yard, and it's a disgrace.

Mother: Have you boys been reading the reports of that Dry-Farming Congress at Lethbridge? Didn't you see that the Manitoba women have come out first with their exhibit from the "Home Economics" Society? I thought they would at least make a respectable showing if they didn't send in much more than our people here got together. I have never seen a better demonstration of women's work at any local show than our neighbors and their girls had brought together at the school-room the day it was to be sent off, and I am told that there wasn't a poor donation sent in by any single society. It's a nice bit of heartening that, and I am real glad of it, for if there is one thing that deserves all the encouragement it can get, it is the "Home Economics" Society. They are doing a fine work, and if they do nothing more than stimulate the girls and show them some of the pleasantries of the country life, they have justified their existence. Mrs. Fraser deserves great credit for her work here. That woman's single-handed work is wonderful when you think of the crowd she has to look after at home, and better behaved and better cared for children are not in the district.

John: Yes, I was reading that last report in The Herald about the Lethbridge Convention, and I see that the boys of Manitoba Agricultural College have captured the first position in grain judging. I should like to have been there to see the wheat that won the championship and the other grains that must have come very close to it. Bob Watt was telling me his father was there for two days and enjoyed it although there was some little time lost that might have been economized for the sake of those, like himself, who came from long distances and could only put in a short time. But I suppose it is a very difficult job getting everything exactly dove-tailed into line at these big conventions. It was the "Marquis" again that did it, and I see the whole crop of the prize-winner has been sold to one of the Seed Companies at \$4.00 a bushel. I think that little plot we grew is not one hair-line behind the best that has been grown yet, and after I have thoroughly cleaned it, I mean to make a bold exhibit of it at the Brandon Winter Fair.

Father (after a lengthy perusal of the Farmer's Weekly): Well, I can't see much in those conventions anyway. I've been reading the account of this Lethbridge affair in this rag of a paper—over two pages of it—and, upon my word, I am not a bit wiser than when I started. There's all sorts of receptions and speech-making and no end of time taken up with election of officers and fighting for the next place of meeting, and so on, but I'm jiggered if I can see one little bit of real meaty stuff in it for a farmer who finds it all he can do to make ends meet. A lot of those fellows and women folk must have a mighty lot of time they don't know how to use up to spend the time they do in this way. What does it all amount to anyway? They chatter and listen to each other till they get about played out at the end of the show, and then they go home possibly a little less fit for their real work than when they started out. I've had my time, I can tell you, at these so-called "Conventions," and I never yet found myself a bit the better for attending them. Never went as a delegate but it was against my will.

Charles: Father, you are positively the "limit," if you know what I mean by that. That's a nice thing to say when Watkins offered to take you as his guest. I can quite understand your failing to find any "meat" in that paper. To begin with—you started to read it with the idea in your head that there was nothing it could enlighten you upon. Then, secondly, how could you expect any newspaper to give you a live idea of all that was said and done in the course of those meetings? Think of the programme they had to go through, not made in the belief that all delegates who came could or would feel interested in it all, but that there would be something in it that would "touch the spot" in the individual case of everyone who attended, and who could rest or enjoy himself in other ways till the next item of interest came round. Furthermore, what newspaper printed in Canada could possibly print the full text of all those addresses? and even if it could, what is a printed story to the satisfaction of having listened to the living men like Worst, and Bedford and Murray, and chaps of that stamp?

Mother: That's right, Charlie. I can't understand you at all father. You'll neither help yourself nor let anyone else help you to the good things that are going. I don't agree with you one bit in what you say about those public meetings. What good do they do? Well, there was a man showed a sample of wheat at Lethbridge for growing which he got a prize of a \$2,500 tractor, as well as the honor of the thing, and then he sold 250 bushels of his crop at \$4.00 a bushel for seed. That was one thing the Convention did, and I daresay you will admit that your own nephew did not disgrace the family by being one of the winning team of the Manitoba Agricultural College boys in the grain judging contest at that same Convention. And I was told on the authority of an independent lady who was there that no city crowd of women could have produced a more sensible and attractive exhibition of women's work than the Home Economics Society of Manitoba showed and got first prize for. Next time you turn down a chance of the kind, I go with Charlie and you'll do the best you can while we're away.

Biggs, the Implement Man: I write to inform you that it is impossible to get any delivery of that plow in time to be of any use to you this season. First of all, you ordered too late. My folks have had such a run of trade this year that everything they have been able to make in the way of an agricultural implement has been bespoke and shipped as soon as it was ready to be sent out. - can't give you a date even now and will do nothing until I hear from you, as you may be able to dig up one elsewhere—possibly a second-hand one, although I suspect you've got a bit "fed up" with your experience of second-hand stuff. By the way, that old note is still pigeon-holed, and I wish you would either clear it up or pay a sensible portion and let us renew for the balance. I haven't had a dollar from you since last fall, and I am finding it very rough sledding in these days. I hate to have to ask you as your wife has been so kind to my folks, but you know that will hardly rid my burden of an unpaid note for \$350.

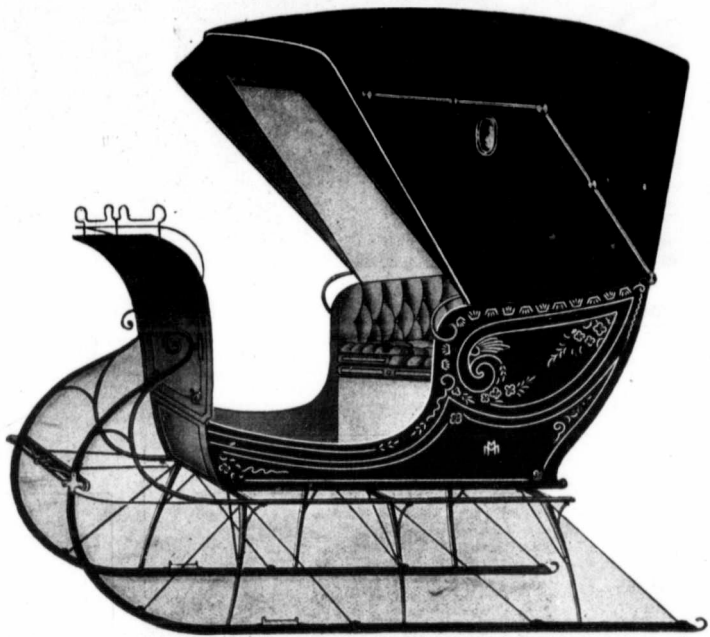
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The "Glengarry"

■ This elegant Cutter, with closed top, and wide extension hood is the last word in carriage building for winter travel.

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It has earned its name of "The Prairie Monarch" by the universal satisfaction of delighted owners, and their appreciation of its merits and advantages over anything else of the kind on the market.



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THE SLEIGH FOR SERVICE

Wood Bunk Manite

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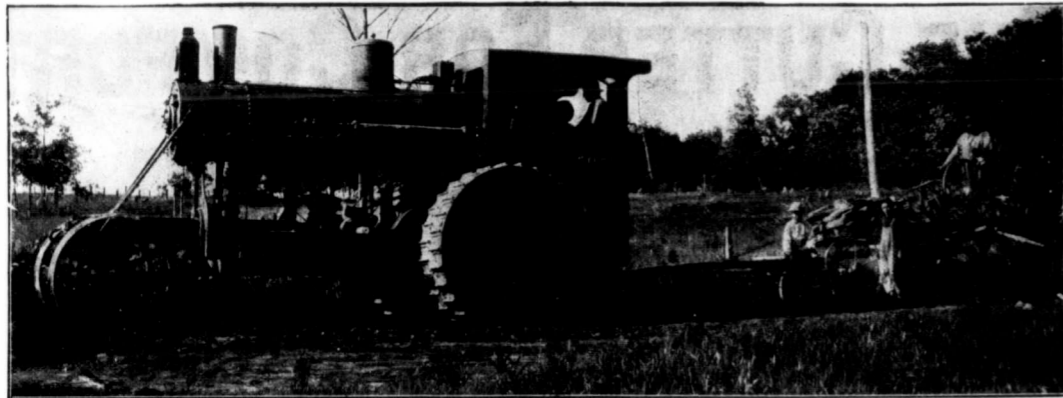
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8,000 to
12,000 lbs.**

Built for Heavy Work and Lots of it

This great roadster is built for heavy teaming and draying, and with 5-foot logging links makes a good sled for ordinary work in the woods. Benches are of one piece, protected by irons which fit between pins. The pins are spread at top so as to allow runners the necessary oscillation. These sleighs are heavily ironed throughout and handsomely finished. They run unusually easy as the links are placed in just the right position to avoid digging in either front or heel of runners.

Canadian Moline Plow Co., Winnipeg, Man.

Branches : Regina, Calgary, Edmonton



Grading Roads with an Avery Double Under-mounted Engine

This is a good way to make a nice bunch of extra money. With an Avery Under-mounted Engine you've got the power, and the screw shaft guide makes it easy to handle.

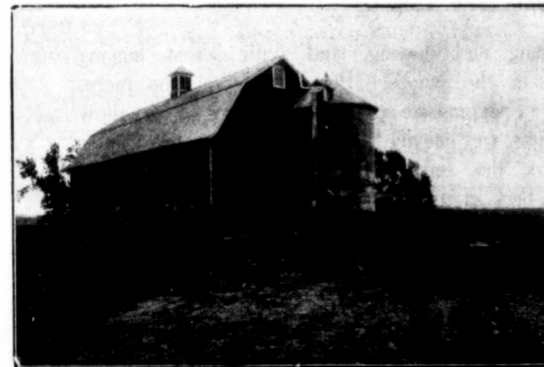


Front View of an Avery Gas and Oil Tractor Plowing

An Avery Tractor is so simple any man or boy can run it with a little training, and because of its light weight it travels over softer ground, doesn't pack it, and saves fuel.

Running an Ensilage Cutter with an Avery Gas and Oil Tractor

An Avery Tractor is wonderfully handy for doing all kinds of ordinary belt work, such as running an Ensilage Cutter, Feed Grinder, Clover Huller, Saw Mill, Sheller, Shredder, Clover Huller, Thresher, etc.



The Avery Line

Consider these points and see if our claims are not based on facts where we say that the Avery Line is the Most Up-to-date and Improved Line of Threshing, Power Farming, Grading and Hauling Machinery built today.

The Avery Double Under mounted Steam Engine is the only Under-mounted Engine built. It lasts longer, pulls harder and is easier to handle.

In 27 Field Tests Avery Separators saved an average of 99 9-10 per cent—the best proven grain-saving record ever made.

Avery Gas and Oil Tractors are the simplest Tractors built and the lightest weight considering the power they develop. They don't pack the ground or waste fuel moving useless dead weight.

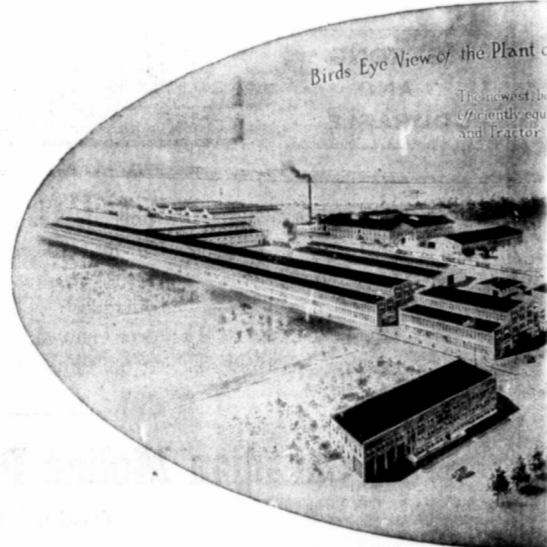
Avery No-man Automatic "Self-lift" Plows so far outclass the Hand Lever style that there isn't any comparison.

Avery Gasoline Farm Trucks are the only Combination Gas Farm Wagons and General Farm Power Machines built.

These facts certainly clearly prove that when you buy an Avery Machine you get the Most Up-to-date and Improved Machine of its kind built.

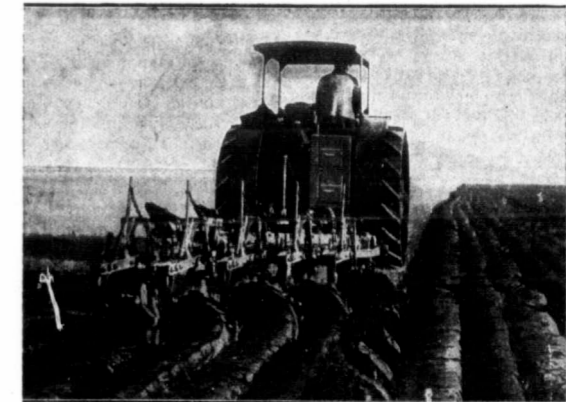
If these facts about the Avery Line and the Avery Company appeal to you, write or call on us for full information about the machinery you need.

AVERY COMPANY, 675 Iowa Street, Peoria, Illinois
 REGINA, CALGARY, WESTERN CANADIAN DISTRIBUTORS
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Threshing with an Avery "Yellow Fellow-Grain Saver" Separator

An Avery Separator will thresh and clean any kind of grain or seeds—it's guaranteed and backed up by field tests.



The Avery Company

The men who design Avery Machinery work in their shirt sleeves. Our designers are practical men who go right out into the field. They investigate your needs carefully and are constantly open to your suggestions. Doesn't this appeal to you as being the way in which a machine ought to be designed? They have worked out more original and improved features than any other company building this line of machinery.

The standing order originally given to every workman by our first president, Mr. R. H. Avery, and which has been continued ever since and always will be continued, is not to put into a machine a piece of material that he wouldn't put in if he were building the machine for his own use. That's the kind of material you want in the machinery you buy, isn't it? Well, that's why we use that kind of material—because we believe you want it.

And after an Avery Machine is designed to meet your needs and built of the right kind of material it is tested out in every possible way—at our factory—in public contests and in special tests under special conditions.

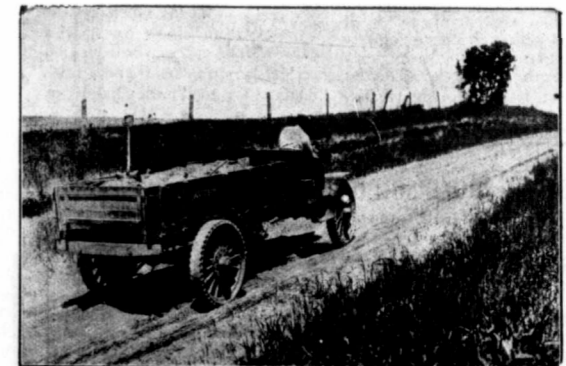
And back of it all—the Avery Company stands behind its machinery with the strongest guarantees ever given—by any company selling this class of machinery. That's what you want, isn't it?—a company to stand behind the machines they sell you? Well, that's just what we do.

An Avery No-Man Automatic "Self-Lift" Plow at Work

This plow saves you the expense of the wages and board of a plowman; it saves hard, back-breaking work, lifting and lowering the plows by hand levers, and it saves time at the ends. Besides all this it does a fine job of plowing.

Hauling with an Avery Gasoline Farm Truck

This Truck is built especially for use on country roads and in the field. It does hauling, belt work and field work.





NO. 1 HARD

November 2, 1912.

Western Farmers need no better reminder of the rapid extension of the Wheat Belt than a moment's study of the October inspections at Winnipeg, totalling 29,019,625 bushels of wheat; 6,125,600 bushels of oats; 2,419,200 bushels of barley and 1,543,000 bushels of flax. A phenomenal grain movement indeed! The high percentage of contract grade has been well maintained. But it has been a month of almost steadily declining markets for all grains, though wheat and barley had a nice upturn when war in the Balkan States broke out.

The completion of the October wheat contracts saw the expected slump in cash wheat. The October option this season worked down a range of thirteen cents from the high point of last July. Spot wheat has brought premiums longer this season than ever before. The delay in the crop movement was the chief reason for this. But with a big Atlantic freight demand, ocean rates have stiffened, resulting in lower prices for our producers. Recent storms on the Lakes will mean a trip less for many boats, and their rates are also increased; this likewise mitigates against better prices. Farmers with No. 4 and 5 wheat to market might notice that the spreads these grades of wheat bring under 1 Northern are much less than they will likely be later in the season.

Looking over the season's grain crops of the world, it is found that yields approaching the normal are more noticeable in the North-western agricultural parts of North America than anywhere else. This field includes our Canadian West and the Northwestern States lying between the Mississippi River and the Pacific Ocean. There was not only a large production here but with late favorable weather it is largely secured with high average quality. In the grain growing countries of Europe the quantity is not so much at fault as is the quality,

caused by unusual moisture in the time of harvesting and threshing. Russia, so much looked to for additional supply by Western Europe, had small crops in 1911 and wet crops in 1912.

With conditions such as this, the flour demand on both sides of the Line has been good, and with cheaper food stuffs the inevitable broadening of the market has resulted. Bakers have been best buyers, displaying a healthier trade situation than if distributors were loaded up. Disturbed as all Europe is by the war, she is not buying in a panicky way, realizing that America's surplus is big and must find a steady outlet on a broad merchandising basis as rapidly as transportation facilities permit. The chief factor therefore is the consumptive demand, with fewer speculative influences in evidence than for some years past.

And with the freeze-up a still heavier delivery of grain at primary points will come. True, the Southern route, via Duluth, will be opened shortly, but no domestic market can result, and it is only a transportation matter.

OATS.

The Winnipeg October option was congested and a private settlement, it is said, was arranged between the "Longs" and "Shorts." But it meant good prices for the time being with one or two dealers now loaded up with high priced oats, some of which will likely have to yet find a market. The outlook is for slightly lower prices, especially when the movements from the oat districts become heavier as they likely will after the hard weather sets in.

BARLEY.

Europe finds her supply of good barley quite deficient, and the Balkan war means much smaller exports from those fine barley States. The carry-over from 1911 of Malsters was small and a brisk demand for good barley has set in,

Donald Morrison & Co.
ESTABLISHED 1904

GRAIN COMMISSION

**711 T Grain Exchange
WINNIPEG**

WE handle Wheat, Oats, Flax and Barley on commission, obtaining best possible grades and prices. Our work is prompt, accurate and reliable. Let us handle YOUR shipments this season. Daily or weekly market letter on application.

REFERENCES: Bank of Toronto, Northern Crown Bank and Commercial Agencies.

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

FARMERS! SHIP YOUR GRAIN TO THE CANADIAN ELEVATOR CO. LTD. GRAIN COMMISSION MERCHANTS, WINNIPEG

It is as much our business to give satisfaction as to secure grain shipments. We watch the grading of each car and allow liberal advances on all bills of lading.

Ship your Grain to Us!

Take advantage of our experience. We never sacrifice grain that farmers ship us. We know How and When to sell on bulges, and we avoid selling on declines. Our business has been built up on our motto:

"Good Returns to Farmers"

WE HAVE BEEN ESTABLISHED FOR TWENTY-EIGHT YEARS—DON'T YOU BELIEVE OUR EXPERIENCE COULD BE MADE VALUABLE TO YOU?

Our commission is ONE CENT per bushel—too small to pay anything to agents. We have no agents; you get THE FULL NET PRICE at which your grain is sold, less our 1c per bushel commission.

If your car is loaded and you cannot wait for shipping instructions, and if you are on the C.P.R. or G.T.P. Ry., ship to "McBean Bros., Fort William." If on the C.N.E. ship to "McBean Bros., Port Arthur."

If at all possible we strongly advise loading direct from your wagon into the car, thus preserving the identity.

NOTE—A large yield of Grain this fall does not mean low prices. Europe needs every bushel of our Grain, and we will be willing to pay good prices for it. Should prices get below fair legitimate value, don't sacrifice. Write us for advice.

McBEAN BROS.

ESTABLISHED SINCE 1884—AND STILL AT IT.
GRAIN EXCHANGE WINNIPEG, MAN.
REFERENCES: BANK OF HAMILTON, WINNIPEG, MAN.

Consign your Grain to a firm that will look after your interests: call for re-inspection when necessary — obtain highest market prices, and make prompt returns:

Central Grain Company Limited

Bonaed COMMISSION MERCHANTS Licensed

707 Grain Exchange Winnipeg, Man.

Car Tracin and Claim Department in connection. Send us samples of your Grain, we will look after the grading and advise you promptly. The permanent success of our business depends on our customers' continued satisfaction.

Paid-up Capital: \$150,000

References: Any Bank or Commercial Agency



You'll Feel as Happy as This Man Does—

If you ship your grain to US!

Thirty Years' Experience

selling grain means Top Price to You.

We advance liberally and remit immediately grain is sold.

GIBBS COMMISSION COMPANY

SUCCESSORS TO GIBBS-ROBINSON

GRAIN COMMISSION MERCHANTS

LICENSED WINNIPEG BONDED

Members Winnipeg Grain and Produce Exchange, New York Produce Exchange, Montreal Board of Trade, Calgary Grain Exchange.

Wheat and Oats Have Weakened

The tremendous grain movement and higher Lake and Ocean freights have meant lowered markets. Farmers, with your greatly increased harvesting and threshing expense, it is certainly a time when YOU NEED TO MAKE THE LAST EIGHTH OUT OF YOUR GRAIN. Our long experience and the care and attention we give each shipment will result in higher returns to you. A quickly growing patronage goes to show that growers value such experience and aggressiveness in their behalf. We make returns the same day as grain is sold. A liberal advance, if requested, is sent at our expense when bill is received.

Get our prices on barley before shipping. They will surprise you. Highest bids phoned or wired on request.

Remember the congestion about the close of navigation. The service we can give you insures every possible car wanted sold being sold, and delivered, ere the prices drop.

Ship your grain to the firm who can get you the best results

BLACKBURN & MILLS

(A. M. Blackburn)

(D. K. Mills)

531 Grain Exchange - - Winnipeg, Manitoba

Licensed

TELEPHONE, MAIN 46

Bonded

References: The Royal Bank of Canada

and should continue until the close of navigation. Prices are good and barley might well be marketed quickly.

FLAX.

The unprecedented movement and general high grading has brought lower prices, with prospects of a still further decline unless the vote next week in the United States broadens the market by relieving the tension an impending Election always brings in monetary circles.

A teacher was reading to her class and came across the word "unaware." She asked if any one knew its meaning. One small girl timidly raised her hand, and gave the following definition:

"Unaware is what you take off the last thing before you put your nightie on."

A distinguished German, having waited for some time for the attention of the methodical old clerk at the St. Andrew's Golf Club, in Scotland, finally fumed out:

"How long haf I to wait for attention? I am der Baron von Hofheimer-Gellschaft!"

"We hae no time for that sort o' thing here," burred back the old clerk, barely looking up from his writing. "Ye'll play at ten o'clock o' th' morn, under the name Ferguson."

A negro bricklayer in Macon, Georgia, was lying down during the noon hour, sleeping in the hot sun. The clock struck one, the time to pick up his hod again. He rose, stretched, and grumbled: "I wish I wuz daid. 'Tain' nothin' but wuk, wuk from mawnin' tell night."

Another negro, a story above, heard the complaint and dropped a brick on the grumbler's head.

Dazed, he looked up and said: "De Lawd can' stan' no jokes. He jes' takes ev'rything in yearnist."

To the Grain Shippers of Western Canada

If you want highest prices for your grain, liberal treatment and quick returns, you will ship your grain to your own order Port William or Port Arthur, and mark on your Bills of Lading: "Notify the N. Bawlf Grain Company Limited, Winnipeg." Ship us a car on trial and we know that you will be a satisfied customer.

The N. BAWLF GRAIN CO. LTD., 702 Grain Exchange, WINNIPEG

NICHOLAS BAWLF, President

W. R. BAWLF, Vice-President



If your purpose has Vanadium strength and you go into the automobile question without prejudice and with a determination to make your dollars serve you to the best possible advantage—you'll come out with a Vanadium-built Ford.

Every third car a Ford—and every Ford user a Ford "booster." New prices—run about \$675—touring car \$750—town car \$1000—with all equipment, f. o. b. Walkerville. Get catalog from Ford Motor Company of Canada Limited, Walkerville, Ontario, Canada.

Special Winter Pants



Order a pair for Winter wear. Made in England from finest quality moleskin. Seams overlapped and strongly sewn. Cut in latest style with seven distinct features of merit. Extra high back, watch pocket, rule pocket, two hip and two front pockets, and back strap. Besides being good for extraordinary wear, moleskin is of such close texture that the keenest wind falls to penetrate. Colors: black, brown, grey. Every pair guaranteed for six months—delivered free \$3. Waist size: 32, 34, 36, 38, 40, 42, 44. Be sure to mention size required. ALSO TRY THIS VALUABLE SAMPLE. Send us \$1.35 and we will ship you a pair of our Genuine Scottish Hand-Knit Pure Wool Socks, and pay all delivery charges. Give size of boots worn. Catalogue of British-made goods FREE on request.

Scottish Wholesale Specialty Co.
125-128 Princess St., Winnipeg

Mention this magazine when writing advertisers.

Congress of Farm Women at Lethbridge, Alberta, October 22-26, 1912

Reported specially for the Canadian Thresherman and Farmer by Mrs. R. W. McCharles, per Manitoba Home Economic Societies

THE second International Congress of Farm Women opened at Lethbridge, Oct. 22nd, 1912, in Knox Church by President Mrs. Stavert, of Winnipeg, with the largest gathering of delegates ever before assembled in Western Canada.

Occupying the platform with Mrs. Stavert, were Mrs. Bulyea, wife of Lieutenant Governor of Alta.; Mrs. F. N. Downer and Mrs. J. Burns, both of Lethbridge. Following the invocation of the Rev. A. G. Cameron, Pastor of Knox Church, the Cardston choir sang two pleasing numbers. Mrs. Stavert introduced Mrs. Bulyea who welcomed the Congress for the Dominion. Mrs. Downer on behalf of the Women of Lethbridge extended a hearty welcome to all visitors and hoped they would enjoy their visit.

President's Address

It is my great privilege and pleasure to welcome you to Lethbridge and the sessions of this congress on behalf of the officers, local and executive boards, and the various committees of this organization. Many of you, perhaps the majority, have come great distances to be with us to-



Better Butter And Better Prices

These are the two big reasons why you should use Windsor Dairy Salt.

If you make your living out of the butter you sell, then anything that will make the butter better will make more money for you.

WINDSOR DAIRY SALT

has proved its quality and superiority in thousands of dairies and in hundreds of contests.

Successful creamery men have used and are still using Windsor Dairy Salt—because it gives them the best results always.

Are YOU using it?

71D

Mention this magazine when writing advertisers.

day and we want you to know how deeply we appreciate your presence and how heartily we greet you. It is a tremendous undertaking to gather the rural home interests from the four quarters of the Globe in a year's time, yet so splendidly have the farm women's organization and extension departments of the Agricultural Colleges and the various nations co-operated with our work that we are today able to sit beside many of our near and far neighbors in this great gathering. I should like to take this opportunity to thank the Press, who have so generously given pages of publicity to this movement and enabled us to reach many more farm homes than we could have done in any other way.

Since the meeting held last fall in Colorado Springs, when the temporary organization of this body was made permanent, our earnest endeavour to better rural home conditions universally (for which purpose we came into existence) has steadily been maintained and strengthened. I have been overwhelmed at duties by a realization of our part in the world's work and the intense amount of good we can and must accomplish. While climatic conditions may change or influence crop production, the rural home and its problems are pretty much the same the world over, the only difference being the manner in which the problems are met and mastered.

Each nation, state and province has its own particular way of solving these problems, and that is why it is good for us to come together in such a convention as this and compare notes.

We want you to take part in every one of these meetings, and urge that you participate in the three-minute discussions which will follow each subject as it is presented.

I now take pleasure in declaring the Second International Congress of Farm Women convened.

President J. A. Widstoe brought greetings from the International Dry Farming Congress, stating that the congress needed the co-operation of the women, that the men's work can not be done as it should unless the work of the women was given more attention. It was becoming more and more to be realized that the work of men would not advance unless the women were kept side by side with them. "I am not ashamed to state that I am a women's rights man" he said, for in our state the govern-

EASTERN EXCURSIONS

26th ANNUAL SERIES

December 1st to 31st, inclusive

VIA THE

CANADIAN PACIFIC RAILWAY

RETURN LIMIT THREE MONTHS

Extension of return limit on payment of \$5.00 for each 15 days. Stopover allowed at any point east of Fort William.

Return Fares from and to a few of the principal points :

FROM \ TO	Toronto Hamilton Sarnia Windsor	Montreal Ottawa Belleville Kingston	S. John, N.B. St. Stephen St. Andrews Moncton	HALIFAX
Brandon.....	42.70	47.70	62.20	66.15
Calgary.....	59.90	64.90	79.40	83.35
Edmonton.....	59.90	64.90	79.40	83.35
Fort William.....	40.00	45.00	59.50	63.45
Lethbridge.....	59.35	64.35	78.85	82.80
Medicine Hat.....	56.25	61.25	75.75	79.70
Moose Jaw.....	48.45	53.45	67.95	71.90
Port Arthur.....	40.00	45.00	59.50	63.45
Regina.....	47.15	52.15	66.65	70.60
Saskatoon.....	49.60	54.60	69.10	73.05
Swift Current.....	51.75	56.75	71.25	75.20
Weyburn.....	46.40	51.40	65.90	69.85
WINNIPEG.....	40.00	45.00	59.50	63.45
Yorkton.....	45.60	50.60	65.10	69.05

Corresponding excursion fares from all stations, Port Arthur to Calgary, Alta. and Midland, B.C., to all stations east of Port Arthur in

Ontario, Quebec, and the Maritime Provinces

Through standard and tourist sleeping cars and dining cars to Toronto and Montreal.

3 Through Express Trains Daily 3

The "Imperial Limited" to Montreal and Toronto

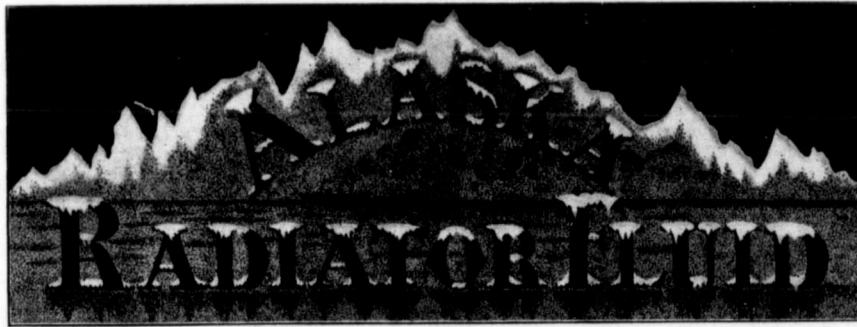
The "Eastern Express" to Montreal

The "Toronto Express" to Toronto

For booklet of information and full particulars as to fares, train service, tickets and sleeping car reservations apply to nearest Canadian Pacific Railway ticket agent or write to :

- C. B. FOSTER
District Passenger Agent
WINNIPEG
- J. A. McDONALD
District Passenger Agent
BRANDON
- J. E. PROCTOR
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REGINA
- R. G. McNEILLIE
District Passenger Agent
CALGARY

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



WILL NOT FREEZE

Guaranteed to do no injury to the cooling system.

WILL NOT BOIL

Absolutely prevents the freezing of radiators

GAS TRACTORS AND AUTOMOBILES CAN BE USED DURING THE COLDEST WEATHER

One filling lasts a whole season. Freezing point 49° below zero F. by actual tests. The cooling properties are of the best for its boiling point is higher than that of water. Boils at 239° F. by actual tests. Is a watery solution saturated with chemicals that will not injure in the least any part of the cooling system and does affect the rubber hose connections. Unlike Alcoholic Mixtures, Alaska Radiator Fluid is always uniform in strength, for its essential elements never evaporate.

BULK - - - - - 75c. IN 44-GAL. STEEL DRUMS - 84c.

PRICE F.O.B. WINNIPEG
We stock Alaska Radiator Fluid at four Western points at Winnipeg price plus carload rate of freight
We agree to allow \$3.00 for the steel drums when returned

Continental Oil Company, Limited

WINNIPEG, Man.

Branch Offices: REGINA

SASKATOON

LETHBRIDGE

CALGARY

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

the earnings of the factory girl 50 per cent. Countries that give women work and pleasure will be the nations farthest ahead. Think of the thread of kinship between you and the women of the southern seas. Let us each work out our own destiny and show to the world that the arts of peace are greater than the arts of war.

Miss Irma Mathews of Oklahoma delivered a most excellent address on "Our Farm Homes."

She claimed that every farm home should have six work days, one day for rest and two long evenings to ourselves, to spend as pleasantly as possible, and that the farm home should not be disturbed, by visitors on Sunday thereby causing it not to be a day of rest. She asked if we had stopped visiting our neighbor since we had got the telephone, and described the few moments

talk over the phone that took the place of the visit. She said it was a poor substitute as "You miss her smile and the clasp of her hand." Farm homes in many cases are just kitchen and bedroom. She said women should have an eye for the beautiful and dress as nicely as they did before marriage. A gentleman told her not long ago that he appreciated his wife dressing up for him now as much as ever he did.

She told a story of a boy who had succeeded in his studies and was to receive his degree and asked his mother to be present. She came in her sunbonnet. He met her and found a seat for her at the front. She said how much more we would admire that boy if he had told his mother, "You are to be there, and I want you to dress your best and look your prettiest."

She told of the work of one old gentleman in starting a reading circle a few years ago and the other day one of the family who did not take one magazine then gave an order of \$57 for magazines, and the mother in that home said: "My mission on earth was to be John's wife and my baby's mother."

A friend may well be reckoned the masterpiece of nature.—Emerson.

Horse Meat and Magnetos

A recent copy of the Gas Review says: "People of this country must either learn to eat horse meat or else change to mechanical power. Horse keep is too expensive for power purposes only."

What has the magneto to do with all of this? Simply that the invention of the slow speed alternating current engine timed magneto made the small gas engine and the engine is so rapidly supplanting available for the farm use, planting the horse and furnishing power to the farmer at such a low cost that the farmer can no longer afford to keep horses for work purposes only.

Twenty-five per cent of the farm lands of the United States are given over to producing food for the horses that are used for tilling the remaining 75 per cent. These horses serve no other purpose except that of machines. They eat, whether they work or not, and a good portion of the year are idle.

Now the gas engine only eats while it's working, but up to the time the magneto came into general use the gas engine was so complicated on account of the battery, switch, and coil necessary, that the average farmer could not use it unless he had some electrical knowledge. The

magneto has eliminated this complication, and consequently the gas engine can be used by anyone and is rapidly supplanting the horse on the farm, just as the automobile did for pleasure use.

The common fluency of speech, in many men and most women, is owing to a scarcity of matter and a scarcity of words; for whoever is a master of language, and hath a mind full of ideas, will be apt, in speaking, to hesitate upon the choice of both; whereas, common speakers have only one set of ideas and one set of words to clothe them in; and these are always ready at the mouth; so people come faster out of church when it is almost empty than when a crowd is at the door.

We have just enough religion to make us hate, but not enough to make us love one another.

It has somehow or other happened, from time immemorial, that many of the best and ablest philosophers, who have been perfect lights of science in matters of theory, have been wholly unable to reduce them to practice.—Dickens.

Life is not bearable with a woman until it is unbearable without her.—J. H. McNulty.

Deer Lodge Subdivision

1. Portage Avenue asphalted to and beyond this property
2. Sewers are now being installed
3. Sharp Boulevard passes through it
4. Building restrictions ample
5. Twenty-five new houses will be completed within a year
6. Large profits ensured to those who buy now

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LION BRAND

Rubber Belts

AND THE

MAPLE LEAF

Endless Thresher Belts



have stood the test for more threshermen in Western Canada than all other brands combined. Every belt we make is a belt that grips, a belt that pulls and a belt that wears. These are the only things that interest you as a purchaser. These are the things wherein the "LION" and "MAPLE LEAF" brands have made good.

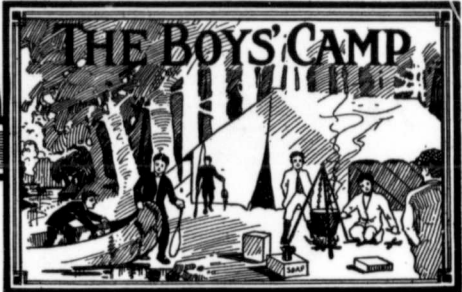
Result : SATISFIED CUSTOMERS

Because they get what they pay for

You cannot get a better belt at any price, and you can only get one as good by insisting on having one of the above brands. Any thresher company will supply you if you insist. They all carry them as a part of their regular equipment.

Winnipeg Rubber Company Limited

WINNIPEG NOT IN ANY TRUST OR COMBINE CALGARY



Girls' Cozy Corner

THE SWAMP-SONG

By Leslie Clare Manchester

In the shalow shining waters
There is heard a twilight tone;
There is heard a swamp-song rising
With a weirdness all its own.
There is heard a music trembling
On the roads along the shore,
In a base and in an alto,
In a treble, sweeter, lower.
'Tis the music of the ma, hee,
'Tis the voice of piper, clear,
Calling, calling to each other
In the courses far and near.

Ah, behold them! What a chorus,
Gaily dressed in green surtout;
Ah, behold them just before us
From the still depths peering out;
From the white of lotus blossoms
Anchored on the waters still;
From the shadow of the branches
Leaning from the willowed hill.
Yes, behold the mottled pipers
With their music starward flung,
Near, oh, hear the deep song welling:
"Chug, ca-chug," and "Chung, ca-
chung."

When the chill is on the river
And the frost is on the mead,
When with snow the pines are bowing
Low their stately heads indeed;
There is naught but silence sleeping
On the marshes gray and sere,
There is naught to break the stillness
Till the blooming of the year.
Then, oh, then a chord awakens
As with green the boughs are hung;
Then we hear the swamp musicians:
"Chug, ca-chug," and "Chung, ca-
chung."

Girls' Letters

Miami, Man.

Dear Cousin Doris and Members,—
Here I come again to the Cozy Corner.
I saw my last letter in print and got
a prize for it. I like the book very
much, which is named "The Girls of St.
Wades." My oldest sister and I kept
house for a week. My mother went up
west to visit an aunt. It was the first
time we have ever been left alone with-
out a woman in the house. Then my
uncle, who was helping papa to thresh,
took Mabel and I out to see our
grandma. The day before mama went
away, papa and uncle were taking an
engine down town and they broke
through a bridge. It was late at night
before they got to town. I will close
with a riddle or two.

How many pretty girls all in a
straight line would it take to reach
New York?

Two hundred and thirty-five; because
a miss is as good as a mile.

Niddy Nody, two heads and one
body.

Wheelbarrow.

This is all this time, so good-bye.
From your loving cousin,—Mary Cor-
den.

Arcola, Sask.

Dear Cousin Doris, — I am going to
join your interesting club. I wrote to
your club once before, but I never saw
it printed; so I will try again. We
live on a farm seven miles north of
the post office. My father takes the
Canadian Thresherman and Farmer, and
I like reading the children's page very
much. We have five horses and three
cattle, and four pigs, and about twenty
hens. There are nine of us in the
family. I can play cards and quite a
few of games. I have a sister going
to high school and she will be going to
the Normal next year. She soon will
be a teacher. I and three of my
brothers are going to a country school.
I am ten years old. I must close now.
Wishing to see my letter in print be-
fore long, I remain, yours truly,—
Esther Butt.

Sanford Dene, Sask.

Dear Cousin Doris,—This is my first
letter to your Cozy Corner. I have been
out in Canada nearly eight months. I
left England the end of March. I like
to read the letters that the boys and
girls write to your corner. I have four
pets—a dog, a cat, a puppy and a kiten.
I am very fond of reading books. I
am nearly thirteen years old. I will
now say good-bye. Wishing the club
every success, and hoping that my let-
ter will pass the waste paper basket, I
remain, your affectionate cousin,—Doris
Fyne.

Stratheona, Alta.

Dear Cousin Doris,—This is my third
letter to the Girls' Cozy Corner. My
last letter was not published, so I
thought I would try again. My father
has been taking the Canadian Thresh-
erman and Farmer for quite a while. I
like to read the girls' letters. I am go-
ing to school. I am in standard VII,
and I am fifteen years old. I have two
brothers and one sister. The last time
I wrote I was telling you about a pet
dog. Well, he died, so I got another
pet, which is a parrot. She can say
quite a few things. Some are—"Pollie
wants a cracker" and "Pollie, put the
kettle on," and some other little words.
She calls me in the morning, and some-
times I think it is my mother calling.
Well, that is about all the pets I have.
I have a large rink in our back yard,
so I haven't far to go to have a skate.
Stratheona is quite a large place now.
We have street cars and quite a few
automobiles. My father owns one. I
like reading very much. On my last
birthday I got the full set of Mildred
books. I think they are fine. I have
read quite a few books. Well, I guess
I will have to close. Hoping to see my
letter in print, I remain, your cousin,—
Letta Green.

Ogema, Sask.

My Dear Cousin Doris,—This is my
first letter to the Girls' Cozy Corner.
My papa takes the Canadian Thresh-
erman book. I like to read the letters in
it. I have a brother; he is 13 years of
age. I am eleven. I don't go to school
now; it is six miles from our place, and
is too far for us to go to. I am in the
fourth grade at school. I went to
school in Weyburn, Sask., for three
years. I have a little niece; she is five
years of age. She goes to school in
Milestone, Sask. We have a little
puppy for a pet. He will sit up; he
will speak. His name is Boyed. I like
to go sleigh riding. We live on a farm.

We have twenty-five little pigs. I have
one of them myself. And we have four
horses, two cows, and thirteen chickens.
One of our big roosters died of cold
this winter. What is your little girl's
name? I would like to know. Well,
Cousin Doris, I can't think of any more
to write. I hope to see my letter in
print. I will wish your cozy corner
every success. I remain, your cousin,—
Inez McMullen.

My little girl's name is Monona. I
am pleased that you are interested in
her.—C. D.

Waldeck, Sask.

Dear Cousin Doris,—This is my first
letter to the Girls' Cozy Corner. My
father takes the Canadian Thresh-
erman and Farmer. I always read the
letters in the Girls' Cozy Corner as
soon as we get the paper. I have two

WATCHES WITH FOBS

FREE



This unprecedented offer is now
open to every Boy and Girl, every
Lady and Gentleman, to take ad-
vantage of promptly. We will give
you absolutely free your choice, or
both, of these handsome and ac-
curate Watches with Fob attached.

The Gentleman's Watch is the latest
thin model, stem wind and stem
set, with a genuine Swiss Precision
Movement, Solid Silver Nickel Case,
highly polished, fancy Dial with or-
namented hands, protected by a heavy
bevelled French Crystal. The Lady's
size is also the newest thin model,
stem wind and stem set, with the same
quality Swiss Precision Movement
as in the man's size, highly polished,
Solid Silver Nickel Case, beautifully
ornamented Dial with fancy, Gold
hands, and clear French Crystal. The
beautiful Fob is the newest design,
Solid Rolled Gold Plate throughout,
fancy Mesh Pattern with Safety
Chain attachment. The Suspension
Clasp, Ornament, and Pendant Signet,
are all handsomely engraved. We
give you your choice of either of
these Watches with Fob attached
for selling only 24 of our fast-selling,
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**National Skirt, Suit and Millinery
Company, Limited, Toronto**

The only mail order house in Canada
making garments to special measurements

No. 772. Lady's Automobile Muskrat Coat. 50 inches long, made
slightly semi-fitting front and back with deep storm collar and wide
lapels, or deep shawl collar, as desired. Closed with three large but-
tons and loops. Made of first quality Canadian Muskrat skins
cut diamond shape and perfectly matched. Deep
cuffs and satin lined throughout. A handsome stylish
coat that will keep you warm in the severest weather. **\$72.50**

No. 774. Beautiful Muskrat Muff made of the same fine grade
skins as coat No. 772. Pillow style, handsomely **\$10.00**
striped and lined with best quality satin.

We guarantee you satisfaction. If when you
receive it you are not satisfied, return the garment to
us and we will refund your money. We also prepay
express on every order. We invite you to compare
our prices with those of our competitors; only by
doing so will you appreciate the wonderful values we
offer. Send for a free copy of our catalogue. When
ordering kindly mention this journal.



brothers and one sister. I had four brothers, but one got sick and died, and Henry, another brother, got burned in the fire. We all go to school, except the baby brother. There are two stores in Waldeck, one post office, two machine shops, two livery stables, and a lot of other buildings. My father is keeping the butcher shop now. I would like to see your little girl in the paper, Cousin Doris. I will close, remaining your friend. Hoping to see my letter in print.—Marie Loewen.

Elkhorn, Man.

Dear Cousin Doris,—I wrote to the Cozy Corner a long time ago, but did not receive a prize. I go to school every day. There are eleven going to school these days. I read the Cozy Corner and think it is very nice. For pets I have two dogs and four cats. I have two sisters and three brothers. I nine years old and soon will be ten. My teacher's name is Mrs. Thomson. We play a lot of games in the winter. I live about two miles and a half from the school. I drive in the winter to school. I hope to see my letter in print and hope to get a prize.—Alice Armstrong.

Khedive, Sask.

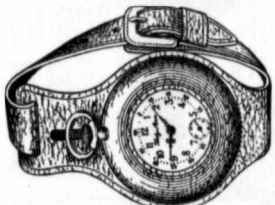
Dear Cousin Doris,—This is my first letter to your club. My father takes the Canadian Thresherman and Farmer. I like to read the Children's Cozy Corner. For pets I have two dogs and one cat. I have one sister and one brother. We live a mile and a half from town. I go to school every day. I have a mile and three quarters to walk to school. I am nine years old. I guess I will close. I cannot think of any more.—Winnie Suitor.

Canadian Boys' Camp

KISSED HIS MOTHER

She sat on the porch in the sunshine
As I went down the street—
A woman whose hair was silver,
But whose face was blossom sweet,
Making me think of a garden,
When in spite of the frost and snow
Of bleak November weather,
Late, fragrant lilies bloomed.
I heard a footstep behind me,
And the sound of a merry laugh,
And I knew the heart it came from
Would be like a comforting staff
In the time and the hour of trouble,
Hopeful and brave and strong,
One of the hearts to lean on.
When we think all things go wrong.
I turned at the click of the gate-latch,
And met his manly look;
A face like his gives me pleasure,
Like the page of a pleasant book.
It told of a steadfast purpose,
Of a brave and daring will;
A face with a promise in it,
That, God grant, the years fulfill.
He went up the pathway singing,
I saw the woman's eyes
Glow bright with a wordless welcome,
As the sunshine warms the skies,
"Back again, sweetheart mother,"
He cried, and bent to kiss
The loving face that was uplifted
For what some mothers miss.

WRIST WATCH FREE



A beautiful small size LADIES' WATCH in handsome LEATHER BRACELET given FREE for selling only \$4.00 worth of the loveliest Christmas and New Year Cards and Folding Booklets at 3 for 5c. These are the very latest and most exclusive designs. Embossed and lithographed in all the natural colors. Appropriate notices and verses.

Many of our agents sell a dozen packages in one house. Don't miss this wonderful chance. Write to day. You may not see this advertisement again. COBALT GOLD PEN CO., Dept. 224, Toronto, Ont.

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We want you to compare. Why Pay \$100.00?

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Write for our new free illustrated Machine Catalog, No. 67, and Record List.

WINNIPEG PIANO CO. 295 PORTAGE AVE. WINNIPEG.

LARGEST PIANO AND GRAPHOPHONE HOUSE IN CANADA.

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

That boy will do to depend on;
I hold that this is true—
From laas in love with their mothers
Our bravest heroes grew.
Earth's grandest hearts have been loving hearts.
Since the time the earth began;
And the boy who kisses his mother
Is every inch a man!
—Christian Intelligencer.

Boys' Prize Letter

Sperling, Man., Sept. 28, 1912.

Dear Cousin Doris—I have been an interested reader of the Thresherman for several years, and have often resolved to write, just to help the boys' page out. I have never seen an age limit set in this club and I fear I may be too old to join now. I am seventeen years of age but the younger boys seem satisfied to let the girls beat them, so I thought I would try anyway. I enjoy reading the Girls' and Boys' pages and I like Cousin Doris' letters very much. I think it would be very nice if you would take your share of the space each month, and surely all the boys will say the same. We have two engines, one steam and an "Oil Pull." I like running either of these engines better than driving horses. We only use the steam engine for threshing but the Oil Pull we use for both plowing and threshing. I like reading and read quite a few books each winter but during the summer we don't have much spare time in the house. Among my favorite books are "Old Curiosity Shop," "Last of the Mohicans," "Uncle Tom's Cabin," "Deerslayer," and "Young Folks Abroad." I play the violin and like all kinds of good music. I would like to correspond with members of our clubs if they would write first. Well, Cousin Doris, if I am too old or if my letter is too long throw it away. I will close now. Wishing the camp and the editor every success.—John H. Golden.

5 Wonderful Presents
Consisting of 9 PIECES
FREE
Girls! This is the Greatest Offer Ever Made.

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1. BIG PARIS BEAUTY DOLL, NEARLY 16 INCHES TALL, beautifully dressed, with picture hat, fancy dress, shoes, stockings, lace-trimmed underwear, etc. Truly a princess among dolls.
2. MAGNIFICENT, REAL, ALL STEEL, FOLDING DOLL GO-CART. The very newest and finest carriage for dolls, beautifully finished throughout, all steel frame and real steel wheels and axles, making it practically unbreakable. When not in use it folds up small and can be put away, just like any \$10.00 BABY CARRIAGE. Any girl would be proud to own such a handsome Doll and Carriage.
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5. This great little 5 piece Fairy Kitchen Set, the loveliest little pastry and baking set you have ever seen.

NATIONAL PRODUCTS, Limited
Dept. D. 120. — TORONTO, ONT.

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

Mikkelsen Found.—Capt. Ejnar Mikkelsen, a Danish arctic explorer, and Engineer Iversen, who for a year had been given up for lost, were found on July 17th by a crew of Norwegian fishermen at Bass Rock Island, near Shannon Island, on the east coast of Greenland. They arrived in Aalesund, Norway, on July 27th. Captain Mikkelsen was at the head of an expedition, organized in 1909, to find the records left by Mylius Erichsen, who had perished with two companions while mapping the northeast coast of Greenland in 1907. He left King William Land in March, 1910, and succeeded in finding

the reports, which Erichsen had placed in cairns. He spent the winter near the coast, and waited on Shannon Island the next year for a boat to take him off but the ice extended so far from shore that no boat could approach. He and his companion passed the second winter amid great hardships, but they had ammunition enough to kill game for food. Dressed in skins, and with hair and beards that almost hid their faces, the two men bore so little likeness to human beings when the fishermen found them that at first the rescue party mistook them for wild beasts, and came near shooting them.

ROBIN HOOD FLOUR



ROBIN HOOD MILLS, LIMITED. MOOSE JAW, CALGARY.

"IS DIFFERENT"

(NOT "JUST AS GOOD"—BUT BETTER)

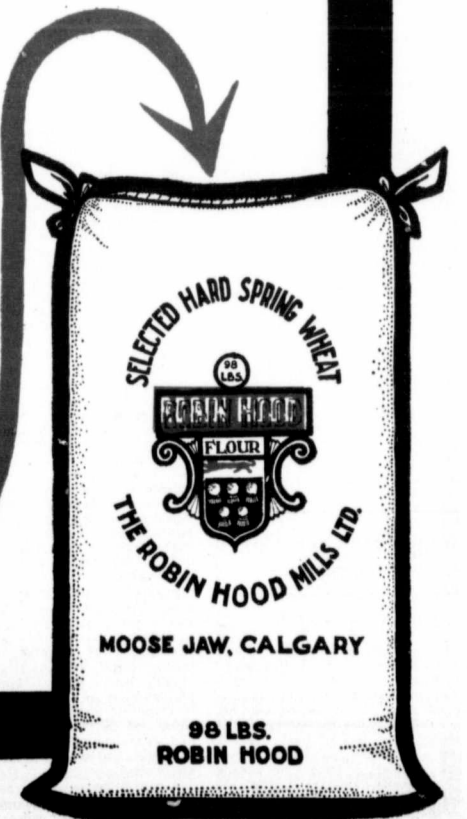
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RISK.



This
Guarantee
in Every
Sack





Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



THE GIFT OF THANKS.

By H. Bedford-Jones.

With some there dwells the thought,
and only this.

The God sent inspiration of the day;
A space their souls can sense some
angels kiss,
To give, mayhap, a prayer. It is their
way.

With some the thought gives utterance
to the word.

Nor fears, half-ashamed, to bid a
brother pray;
So are their souls, beneath the world-
grip, stirred
A space to gratitude. It is their way.

With some the soul halts not at word
or thought,

Nor may the bouden time its impluse
stay;

And these, who do not as they must
but ought,
Translate God's breath to deeds. It
is their way.

E. PAULINE JOHNSON THANKS THE READERS OF THE CANADIAN THRESHERMAN AND FARMER

The Bute Street Hospital,
786 Bute Street,
Vancouver, B.C., Oct. 3, 1912.

To the Editor of The Canadian
Thresherman and Farmer.

Dear Sir,—Some few weeks ago you made an announcement in your columns about me being ill at this hospital, and also about my recently published book of "Legends of Vancouver" being on sale. I conclude from the generous response that I have had in orders for this book that your publication must have a very wide and influential circulation; and I beg to thank you for the delightful and gratifying result your announcement has brought me. It would please me very much if you would thank your readers through your columns for me, not only for the financial aid their hearty response has brought to me, but also for their sincere and cheering letters which have meant so much to me through this tedious illness. When I retired from the public platform, I naturally thought that I should soon be forgotten when other entertainers stepped in to take my place, but my old friends have stood by me most loyally, and their fidelity has touched me deeply. I beg once more to thank you for having been the medium through which I have received such pleasure and benefit.

Faithfully yours,
E. Pauline Johnson (Tekahionwake).

Going Her Own Gait

By Pearl Richmond Hamilton

(Continued from last month.)

With the memory of her father's words burning deep into her discouraged heart, Kathleen walked for blocks with an aimless destination. The bracing breath of fresh air seemed to spur her onward and gave her the strength that she needed from lack of food. For a moment she walked more slowly, then the gnawing teeth of hunger bit fiercely into her empty stomach — and she hurried onward. Scores of people passed her—well-dressed women and prosperous

men, the charwoman on her homeward way and the street cleaner with his rectangular tin lunch box; the newsboy calling — "Evening papers — three for five!" the happy mother with her little three-year-old tucked snugly in the go-cart. Everyone seemed to be going somewhere, but Kathleen was headed to anywhere. Still the crowds passed her, but not one person in the big city had a word for the young girl who was "going her own gait."

Kathleen stopped in front of a window display of a grocery store. O, the food within her reach—yet without it. The teeth bit into her stomach again and her mouth moistened as she looked at a basket of apples and slices of cooked ham. While the teeth gnawed at her stomach the icy frost stung her fingers.

"Are you alone in the city?" Kathleen turned and looked up into the face of a friendly man who had spoken so kindly to her.

Kathleen answered timidly, "Yes," and then trembling, started to go.

"Wait a minute, girlie. Come over with me for a good square meal. You look hungry. I tell you the city is mighty hard on a strange girl who has no friends." Kathleen hesitated, but something in the steely expression of his dark eyes repelled her, and she exclaimed: "No, thank you—I must go on."

And Kathleen hurried toward the lonely street—on to the lonely house—and up to the lonely room. She bolted the door and fell into a little rocker exhausted. The mingled odor of beef-steak and vegetables in the hall nearly drove her insane. She stuffed the key-hole in her frenzied hunger. Over the cot the family group seemed to stare at her in cold indifference — all but mother. She said: "God bless you child—be a good girl." This seemed to comfort her and she fell asleep.

The next morning was Sunday and the clock downstairs slowly ding-ding a wheezy eight when Kathleen opened her eyes and looked about the dark, cold room. She brushed her black skirt and pinned the black ribbon belt around her waist, then sat down to eat the soda biscuits from the paper bag. After her crumbly breakfast she spread the quilt smoothly over the cot, pinned her plain black straw hat on and took from a nail the thin jacket that matched her skirt. As she passed through the hall the fumes of bacon and eggs sent a mocking challenge to her gnawing stomach. Kathleen was hungry and very, very hungry.

Out on the street the bright rays of the sun reminded her of the warm kitchen at home where "Mother" baked hot cakes for breakfast. Bob the Baby pulled at her heartstrings, and stomach muscles and heart muscles carried on lively rivalry in that tired body.

Down the street came an automobile with two men in the front seat. She recognized one of them as the man who spoke the night before. In the back seat a young girl in a big tweed coat was warmly tucked under a heavy rug. She smiled at Kathleen. The automobile stopped and the stranger of the evening before stepped down and held his hand out to her.

"Come on, girlie, for a ride. We're going out to the Lodge for breakfast, and we'll snow you a good time today." He tipped his hat like a real gentleman and waited.

A woman passed them, and Kathleen longed to ask her for advice!
The girl in the seat called: "Come on,

Miss; we're going to have the best time ever—hot breakfast, a ride, and all kinds of good things."

An invitation like this to a lonely, hungry girl is more tempting than most people realize. All the forces of Nature were urging her onward. Yes, she would go this time and get rid of the aches and pains of hunger and loneliness.

Just as she stepped forward she opened her pocket book to take out her handkerchief when a paper fell out. The words: "For the Lonely Girl" caught her eyes and she stopped, turned quickly and walked into the church across the street. The automobile honked on to find another lonely girl on another street.

Kathleen stopped when she entered the church and read the card: "For the Lonely Girl. If you are lonely and discouraged and ready to yield to temptation, come to the Young Women's Club Room of our Church and we will do you good. Luncheon and tea are served every Sunday, and every girl who is alone in the city is invited."

Kathleen, with card in hand, walked down the long aisle, on through the vestry and into the girls' club room. Immediately she embraced a home-like atmosphere. In a corner a girl played softly on the weathered oak piano. In the centre of the room several girls were seated at the long table writing letters. Near the radiator, which sent out real heat, two girls lay on the couch reading. Over the flame of a small gas stove a teakettle sang a song of welcome that soothed Kathleen's tired soul. A tall girl, with a face that radiated spiritual beauty, took plates and cups from the cupboard in the corner and put them on the long table. This was a hint to the girls to take up their writing material until the tablecloth was spread. Two girls jumped up and helped lay the table while the others resumed their writing. Just then, the tall girl with the sweetly beautiful face, put her arms around Kathleen and said: "We're so glad to have you with us. Now, you may write a letter home, or play the piano, or sit near the heat and read. Do anything you want, for this is home for you, my dear, and we are your friends."

Kathleen was so dazed that she simply sat down near the heat and stared. Finally a dish of hot beans, sandwiches, cake, fruit and tea were all placed on the table and the beautiful invitation, "Come on, girls," was readily received, and they all moved up to the table.

Kathleen's hunger was almost beyond control, but others understood and apparently did not notice it, for they had welcomed hungry girls at their table before.

The cordial atmosphere banished all embarrassment and Kathleen enjoyed her luncheon.

About two o'clock other girls began to come, until the room was crowded. Then a woman began to address them. She dropped one remark that went straight to Kathleen's heart: "Things done for love are found in simple places and prove that life's best experiences are within the grasp of everybody. The peace of society depends on justice. At some dark turning of the lane a girl needs a friend. The instant there enters into the life of a girl the inspiring influence of another life, she awakens to her own possibilities. Loving words will linger on the mind and echo where the heart was once poor and bare."

Kathleen listened and felt that she understood. At a dark turning of the lane she needed a friend. Why did she

refuse the automobile ride? Why did she go to the club room? Did a little voice within her breast echo "God bless you dear — be a good girl." Ah, the character of a girl tastes of the soul that mothered her!

The next morning Kathleen went to the factory with a light heart, only to be met at the machine with the news, "There's no work today, girls; business is slack. You need not come back till Wednesday."

Kathleen's heart spirits dropped like lead. No work—and they were paid by piecework. What could she do during those two idle days? They owed her five dollars from last week. If she only had that she could manage. But the girls walked heavily down the stairs and out—and the manager went back to his office and chuckled at the credit side of his ledger, for the wages held back and unfinished bundles which were never paid for. Days like this went down in the bank book in the same of dollars. In the Great Ledger Book of Eternity, however, his ledger sheet was written with a pen dipped in the blood of the souls of girls.

Kathleen made up her mind to lose her five dollars and hunt for another position. She bought the morning paper and went down to a well-known employment agency. Outside, rough men in boots heavy with mud and clothes greasy with dirt rudely jangled over prospective jobs. Near the entrance a man in a brown suit tipped his Stetson hat as she accidentally looked in his direction. The employment agent directed her to a hotel where waitresses were wanted. Fortunately the only dress she had was black; so she secured the position. At noon she performed her duties rather awkwardly and the blush of embarrassment nearly overcame her. "Roast beef, potatoes, apple pie, coffee," Kathleen ordered, as she set down a tray of dirty dishes on the table in the kitchen. A cook looked at her and breathed a remark that stung her with shame. During this short day she had heard more questionable language than she had heard in all her previous life.

"Even though the place is blue with poisonous suggestions, I'll endure it. They cannot influence me," she remarked to the next waitress.

At her table two men asked her for the menu, and as she handed them the card the one who searched for it very courteously thanked her and exclaimed: "Why, here is the girl who refused an automobile ride."

Kathleen stared. Yes, there he was. "You'll soon get tired of this game, little girl and you'll be glad enough to come out with the rest of them for a good time."

Kathleen took the order and said nothing.

For ten long weeks she endured every insulting suggestion that a girl of pleasing appearance can possibly experience, but a little voice whispered always: "God bless you, dear—be a good girl."

One day a big man came in to the lunch room. He wore a big coon coat and a fur cap which masked him completely. But as soon as he hung his coat and cap on the hook Kathleen stood paralyzed with surprise. It was Dick Martin. He never looked so big and manly and noble before. All the purity and strength of a clean country environment had stamped his personality with the marks of genuine manhood. A tender appeal from his honest eyes went straight to her heart. There are times when the silent forces of an honest personality preach sermons too



MOONEY'S BISCUITS

BISCUITS MUST BE FRESH TO BE PALATABLE

MOONEY'S BISCUITS ARE THE FRESH BISCUITS

Fresh enough to take the place of the bread and biscuits you bake yourself.
Because the **MOONEY** system is so perfect that every biscuit is shipped the same day it leaves the oven.

The big Winnipeg factory is so close that your grocer gets **MOONEY'S** in a few hours—no long haul—no deterioration.

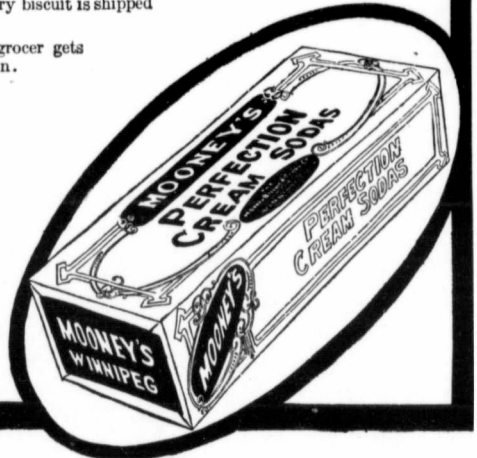
Besides the demand for **MOONEY'S**—the popular biscuit—is so great that his stock is always changing.

MOONEY'S never grow stale on the grocers' shelves,
That's one reason why

MOONEY'S PERFECTION SODA BISCUITS

are fresher, crisper and more appetizing.

Ask for the big package or a sealed tin and judge for yourself.



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sacred for words. And Dick Martin, as he sat down at the little square table, created just this kind of a feeling in the heart of Kathleen. The lunch room faded before her eyes into a hazy distance and only one person remained, and that was Dick Martin.

Listlessly she took the order, passed by another table where the dissipated features of the automobile tempter shot a "loop-the-loop" glance at her, and on into the kitchen.

Dick Martin ate his dinner and walked out and Kathleen with heavy heart began to clear the table. She lifted the plate. Could it be possible that Dick Martin had left a tip? She picked up the bit of paper and read: "My dear little Kathleen,—I have come to take you home. Your father passed away yesterday and left the fruits of a life of toil in stock and land. Your mother wants you to come home and I want to build a home for you near her. Will you come?"

Kathleen dropped into the chair. "His last words to me were," she repeated, "Remember, if you take the bit in your own teeth, you'll travel your own gait. You needn't call on me if you get into trouble. I'm tough with you." And she could not mourn. "Mother's last words, 'God bless you, dear—be a good girl,' have saved me."

Kathleen went to the head waiter and gave up her position. "I am going to marry a man who has been true to his future wife," she explained, and passed on and out to where a man in an automobile waited for her. Dick Martin reached for her hand and they drove on through the crowded city, out into the blessed country where men and women heed the lessons of Nature. Back in the lunch room the head waiter said seriously as he shook his head: "I wish there were more like her."

The sand dunes of the Sahara desert move about 50 feet each year.

Both the Chinese and Japanese manufacture alcoholic beverages from rice.

Mothers' Corner

HIS MOTHER

By George Lawrence Andrews.
Wondrous was his might and fame,
As he thrilled the world with song;
None there were but knew his name,
Mightiest of Fame's great throng.

Not a grieved or wounded heart,
But found comfort in his words;
Of all things he seemed a part—
Fields and streams and singing birds.

Many asked from whence his power
All of life to feel and see;
Surely such a wondrous dower
Gained from wondrous source must be.

But not one that wondered ken
How one of the wives of men
Prayed and longed while first he grew,
Dreaming dreams beyond their ken.

"We are today what we are because our past has been what it was; what we will be in the future depends upon what we now are." Nor is this all. We are now, by our voluntary choosing of this or that line of conduct, forming character and creating spiritual tendencies which shall be transmitted to our descendants; thus we are linked not alone with the past, but with the future. Is not this thought an inspiring one to every mother? By every weakness which she helps her child to overcome, by every inspiration which she fans into flame, is she upbuilding not only her child's character, but is benefiting all after generations.

Elizabeth Harrison.

Parents should bear this in mind, that children lose respect very soon upon hearing them disagree, using bitter, cutting words to each other. This is inflicting the first actual pain these baby hearts have been called upon to bear. The child experiences conflicting emo-

tions, which end in pity for one parent and contempt for the other. O parent, pause; consider before you lose this hold on the little being who has heretofore considered you perfect! Let there be unanimity of purpose in act, word and deed, before these little creatures, who are susceptible to every new impression, if you would preserve their love and respect.

Anon.

Each of us have now, or hold in loving remembrance, a glorious Mother. In our early youth Mother was all in all, but is it not a fact that as we grow older we become forgetful of her goodness and less thoughtful of the happiness we should be giving her in return for her tender devotion? This should not be a duty service, but one of pure love, and no matter how earnest are our efforts, we cannot repay her the joy and pleasure she gave us during our childhood days. Someone has forcefully said, "I would desire for a friend, the son who had never resisted the tears of his Mother." 'Tis only such sons that get the full sweetness out of life. Permanent success and happiness do not come as a reward of ingratitude, disrespect and lack of affection for Mother. The reverse has been, is now, and always will be true. The same old-fashioned, sweet Mother love must ever be the foundation for permanent, ideal home life. Without it the structure will fall and can never again be replaced.

Samuel Francis Woolard.

Rheumatism

The following recipe for rheumatism is an old English remedy that has cured many: 1 oz. sulphur; 1 oz. cream of tartar; ½ oz. rheubarb; 1 dram gum guaiacum; ½ small egg spoonful every morning in milk.

Giving Baby Water to Drink

"Does a baby need a drink of water at the age of one month or is that too young? How much water should she have at a time?" Mrs. S. M. G.

A baby needs water several times a day from the day it is born. Within an hour after it is born it should be given a teaspoonful of warm water. Babies get thirsty the same as grown people do, and milk does not satisfy the thirst. Frequently babies cry from thirst and the mothers think they are hungry and overfeed them. If the baby cries at other than the regular feeding times, try putting a little cool (not cold) water in a bottle and give that to the baby. Be sure there is enough water in the bottle so that the baby does not suck wind. Water will not harm a baby, so do not be afraid of giving it too much, only do not give ice water nor water containing sugar. The baby may be fed from a teaspoon instead of the bottle.

Wash for Eyes

"I would like to ask advice concerning baby's eyes and a mouth wash. Will you kindly inform me what is best and how it should be used as a wash both for eyes and mouth of a ten-weeks-old baby?" Mrs. J. G. B.

The best wash for both eyes and mouth is a solution of boric acid. Get five cents worth of boric acid crystals. Put a teaspoonful in a cup and pour on boiling water. Let stand until cool. If the crystals are not dissolved entirely, more water may be added when needed.

Milk Scab

These sores or scabs often come on the forehead and face of otherwise healthy children. They may be caused by the milk of the mother being too rich or by changes of food in the bottle or nursing baby.

They heal quite readily and do not usually leave a scar. The sores must be washed with cuticura soap. Carbolic acid salve will soon heal them.

If they are persistent after the child cuts some teeth and is weaned, a laxative must be given occasionally until the skin is clear. The milk must be diluted with water and a little salt added if the face does not readily heal.

Hernia or Rupture

"I have a little boy three years of age who is suffering from a rupture. Although it was present at birth it did not bother until he was a year old. He was fitted with a truss which seemed to be all right at first. He is a very active child and lately has been bothered a great deal. Last week he was confined in bed for two days. He cried a great deal and would say, 'I cannot stand it any longer.' One morning I noticed that he had a rupture on the other side, too. Shall I buy him another truss, or is it necessary for him to be operated upon? Is there not some kind of medicine that would cure his rupture?"

There is no medicine that will cure a rupture, and in a case of this sort it is better to have the operation at once. The condition is a parting of the muscles which allows the bowels to push out under the skin. It is about the same as if you had a tear in the lining of your dress which might allow the underclothes to push through between the lining and the dress goods. You see that the treatment would be to sew up the lining and that is what is done in the operation for rupture. Rupture means a tear in the lining or muscles. The operation is not serious and there is little danger.

Catarrhal Inflammation of the Eyes.

The membranes of the eyes are exceedingly delicate, and an inflammation will set up with apparently very little reason. A slight cold will produce redness of the eyes, and a discharge that sticks the lids together at night. This condition needs careful attention. If this inflammation does not receive attention, it becomes catarrhal, and may affect the eyes seriously. In itself, it is a simple malady and can be easily healed. Some soft old linen, absolutely clean, must be used to wipe away the discharge. The cloths should be burned immediately after using. The eyes should be washed morning, noon and night with a weak solution of boracic acid.

The necessary care must be given immediately when there is inflammation of the membranes of the eyes. Any negligence on the part of the mother might let the inflammation increase to such an extent that the eyeball would become involved.

Vaseline crowded into the nostrils at night will relieve the catarrhal inflammation of nose and throat and indirectly help the eyes.

No other member of the family must use towel, handkerchief or napkin that has been used by this child.

Neither should the child with sore eyes be permitted to sleep with other children. Every precaution must be taken not to infect another child.

—From the Mother's Magazine.

Many letters come in every week asking for the little booklet on "Helps for Expectant Mothers" which is sent free to every wife who requests it. This is an important feature of this department and is helping many women.

Home Economics

MY TASK

By Florence Jones Hadley

A home-keeper? Ah, yes, dear heart, and more, Keeper of hearts for those love gave to me, Upholding weary hands that else might fail, Smoothing a little head upon my knee. A home-keeper am I—this is my task: To make one little spot all snug and warm, Where those, so bruised and beaten by the day, May find a refuge from the night and storm. Gladly I serve—love makes the serving sweet, I feel no load—love makes the burden light; A happy keeper, I, of home and hearts, Serving, I reign — a queen by love's own right.

I want to thank the societies for the splendid reports they are sending in. These reports keep the different societies in touch with one another and help the lonely woman in the West. We receive many letters from them expressing their appreciation of the reports and the very interesting and instructive papers published. The Home Economics Societies of Manitoba are very progressive and are a power for good all through the province as well as through Western Canada, for these reports spread the good work throughout the entire West. A society of this kind is sure to reap a great harvest of helpfulness when under the direction of Principal Black, of the Manitoba Agricultural College. He is a man who has the interest of the farmers at heart and is doing everything in his power to promote agricultural prosperity in this great garden of possibilities. Then, too, the officers of the Manitoba Home Economics Society are efficient and able. They instill in their work the spirit of genuine Western progressiveness. F.R.H.

SWAN LAKE

Another very interesting meeting of the Swan Lake Home Economics was held on Saturday, September 28th. The turnout was not quite as good as usual, which was accounted for by the heavy fall of snow and rapid thaw of the previous 24 hours. The usual business having been transacted, the corresponding secretary read several communications from Mrs. McCharles re the Lethbridge Exhibition, but after discussion it was regrettably decided that particulars had been received too late for the society to send an exhibit, and the president promised to telephone Mrs. McCharles to that effect.

Mrs. C. K. Wilson read her promised paper on "Banking." It was short, bright and entirely to the point and gave much necessary information and many hints of value both to those who have, and those who have not, money in the bank.

Mr. W. H. Holland also contributed some practical hints on banking, and then gave an entirely new note to the meeting by exhibiting a model of a Radiometer, a scientific toy invented by Sir William Crookes, of England, some 38 years ago. The radiometer is an instrument consisting of four plates of mica, bare on one side, the other coated with lamp black and delicately mounted on the point of a needle so that they can freely rotate. These are enclosed in a glass globe from which the air has been exhausted. When exposed to the sunshine or other light, the vanes rotate more or less rapidly according to the intensity of the light. Unfortunately it is only a scientific toy, and not likely to be of practical use, but to the scientist it is of much interest and gives scope for considerable thought and study.

Mr. Holland also claimed the interest of the meeting by telling of various small experiments which could be made in the household, especially in the matter of the retention of heat by different metals. He also promised to prepare a paper on "Science in the Household" for an early date.

EMERSON

We ask the pardon of the Emerson society for publishing this report so late. The report was mislaid, hence the delay.

At the June meeting of the Emerson Home Economics Society there was a good attendance. The subject for the day was "Remunerative Hobbies for Women." Mrs. W. Ballantyne read extracts from a paper on "Bee-keeping." These were full of helpful, uplifting thoughts, expressed in choice language, and gave many present the desire to commence bee-keeping. Mrs. D. A. Fraser then read her paper on "Poultry Raising as a Remunerative Hobby." She gave many practical hints on poultry and her experiences with an incubator, which were listened to with interest and mirth. The remainder of the meeting was spent in planning for a picnic, which took place a few days later. This was an enjoyable event, and a sum of money was realized. The society intend to open a rest room in the fall with the proceeds from the outing.

BULBS

Winter Fragrance and Spring Loveliness
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These Bulbs are for Fall and Early Winter planting—they cannot be obtained in the Spring.

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CARMAN

The Carman society met on Wednesday October 16, in the Baptist Church. The church was well filled as the High School girls were invited. A splendid paper was read on "Diseases." This paper was written by a doctor in Carman and contained much useful information and help. Such papers as these are of very great value to home-makers. This society at Carman is in splendid condition, and very interesting programmes have been enjoyed during the year. Mrs. Fender, the president of the society, is largely responsible for its great success. The society is to be congratulated on having a president of such ability and energy. They are planning a rest room in Carman, and it is to be hoped that they will succeed in their ambition. For these rest rooms are very helpful in a town as they help the women in the country as well as those in town by promoting sociability. Then, too, they bring business to a place, because a man will drive farther to trade if his wife and family have a place to stay while in town.

Refreshments were served at the end of the programme. It was a great pleasure for the editor of this department to meet the women of the Carman society, as they are progressive women, who are ambitious to be of service to the community in which they live. Carman is a town that immediately gives the stranger the impression of prosperity, for its buildings are substantial and there are many beautiful homes. The writer feels deeply indebted to Mrs. Cochran for the beautiful hospitality of her home. Mrs. Cochran is an ideal home-maker. Her youthful appearance makes it difficult to believe that she is the mother of four sons and two daughters—three of whom are grown—but she has learned the secret of youth in the beauty of mother-love. Her home is filled with a happy, helpful atmosphere that makes everyone better for having been there. Human nature never comes so near the Divine as when a home-maker pours out the full flood of her thought and love to her husband, her children and those who are allowed to tarry awhile within her family circle. The memory of the few hours spent in this Carman home leaves an impression of a genuine picture of ideal home life. Such homes as this will build a strong nation, for the success of any country is dependent on its home life. The houses in and around Carman suggest to the stranger that "Home" is the biggest and best factor in the community, and we predict for Carman splendid possibilities.

Pearl Richmond Hamilton.

MINNEDOSA

The Home Economics Society held its September meeting at the home of Mrs. R. H. Dyer. The cold weather unfortunately prevented tea being served on the lawn. Owing to threshing being general throughout the district, the attendance was not quite as large as usual. At the close of the business part of the meeting the members discussed matters in connection with the Home Economic exhibit that was to be sent to the Dry Farming Congress at Lethbridge. It was decided to send contributions from Minnedosa the next day.

Dr. Harrison gave a most interesting lecture on "Hygiene and Sanitation," and it is to be hoped that many of the hints he gave will be put into practice during the coming winter. Among other things, Dr. Harrison condemned the common drinking cups in schools and other places as being a frequent cause of spreading infection, and urged that efforts should be made to have covered water tanks in the schools, as it was most unsanitary to leave water exposed to dust, etc., all day. He also was most emphatic in urging members to use their utmost efforts to exterminate flies, and gave instances showing how largely they were responsible for the spread of disease. With regard to hygiene, Dr. Harrison gave many useful suggestions regarding the care of consumptives, and said that, provided the disease was taken in time, it could be cured. He emphasized the need for personal care in such cases, and was insistent in the need of fresh air night

and day. Another point worthy of notice was the stress laid on the need of ventilation in the majority of houses, especially in winter. A useful suggestion offered was that a cold air shaft should be made to carry fresh air direct to the furnace. Dr. Harrison commented on the unnecessary amount of dust raised in sweeping when nothing was used to lay the dust, and remarked that the old-fashioned method of sweeping with tea leaves had its advantages.

VIRDEN

Our society is still adding to its membership and the interest is well maintained. We held our meetings at the homes of our members in the country during June, July and August—the last was at Col. Hosmer's, and you may know we had a very pleasant time. We have discussed the Dower Law and the

conditions regarding succession duties, and have come to the conclusion that the former is not just nor fair to the women of this province, the women who have borne the burden equally with our men.

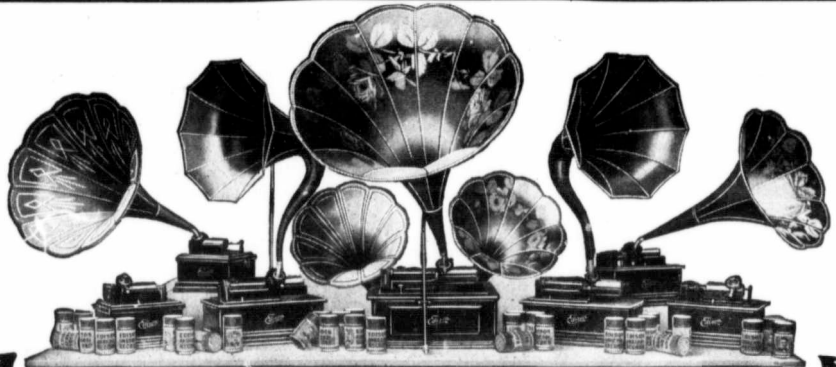
At Mrs. Hosmer's we had a description by one of our members of pioneer life in Virden—from the arrival of the first woman up to the present time. This was very interesting, and showed what had been done by the women for love of husband and home. Many women have left father, mother and a comfortable home in the East or elsewhere to make their homes here, with all that it meant in the early days—so different from the conditions now. Last month we had a visit from Mrs. Colin Campbell, who spoke to us on the work of the Daughters of the Em-

pire—a very interesting subject. We had a "full house."

We have prepared and sent out a very nice exhibit from Virden to help the provincial exhibit at Lethbridge. The hand-work was valued at \$400. The home economics societies are such a help and pleasure to our women that I would like to see every woman a member of one. They not only get help, but they give help.

VALLEY RIVER

The members of the Home Economics Society of Valley River attended the lectures given in the Demonstration of the Agricultural College Special at Dauphin on July 1st. The addresses were greatly appreciated. The importance of underlying principles of all work, whether cooking, dressmaking, or dairying, being the points most strongly



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brought out, and consequently providing us with something that will replace the monotony of daily life with interest whenever we remember to apply the principles. One always has this feeling after coming in contact with the college speakers: that life on the farms may be progressive and not merely a means of living. The interest grew as the work proceeded, and some of our party expressed a wish to go on with the train and see and hear more. The description of the object in training the girls who attend the college was also very interesting.

BENITO

A very interesting event took place in Benito on Thursday, Oct. 3rd, when Mrs. E. C. Salisbury, Professor of Household Science of the Manitoba Agricultural College, organized a branch of the Home Economics Society with a membership of twenty-six. The meeting took place in the Orange Hall with Mrs. E. H. Smith in the chair. In a few well-chosen words, Mrs. Smith welcomed Mrs. Salisbury to our town and asked her to address the meeting. Mrs. Salisbury responded. In a very interesting manner she explained the object of the society and told us something of the work accomplished by the society. Her address was very much appreciated. A branch society was formed with the following officers: President, Mrs. E. H. Smith; first vice-president, Mrs. J. T. Douglas; second vice-president, Mrs. E. L. Holden; secretary-treasurer, Mrs. I. E. Hunt; directors, Mesdames Meldrum, Harris, Fawcett and Black.

The inaugural meeting of the society took place on October 24 in the Orange Hall. An excellent programme, which was arranged by Mrs. Wm. Meldrum, was greatly enjoyed.

NEEPAWA

For lack of interesting material I have sent no report for several months. June meeting was dropped in favor of the "Special Train" from the College, as it came about the same date. In July we had planned and arranged for a picnic to be held at the home of our president, Mrs. J. H. Irwin, but on account of her illness on the date for which it was advertised, we were forced to cancel it. August we took a holiday, and on Sept. 21st, although it rained heavily, several members braved the weather. The paper given by Mrs. Jas. Hall, "Butter Making and Keeping," was full of good points. The discussion was led by Mrs. Pollock. First, select the proper type of cows and have them tested. Keep them in healthy stables and pastures, giving salt regularly and food that will produce butter. In milking, cleanliness and regularity are the essentials. Separating must be done immediately, but do not add the cream to what you have in store until it has cooled. Cream should be kept in a cool, dry and well ventilated place. All utensils must be thoroughly washed and scalded after using. After churning, wash the butter three or four times; then salt, and let stand four hours. Mix again. For packed butter more salt may be used. Pack in crocks, leaving no crevices. Over the top place a cloth covered with a good thickness of salt, then a tight cover, and keep in a cool, dry place. Many consider June butter the best for packing, but good butter can be made at any time with the proper care. The meeting closed after partaking of light refreshments. The "Cheese Puff" served by the hostess of the day was new to some and I will just give the recipe in closing. One tablespoonful butter in pan and beat 2 tablespoonfuls flour in ½ pint milk and stirred into hot butter until thick. Take off stove and stir in 6 tablespoonfuls grated cheese and yolks of 3 eggs. Salt and pepper. Beaten whites stirred in last. Bake almost 20 minutes until set.

MORRIS

The last meeting of the Morris society was most interesting. Miss McLean, one of the Morris teachers, gave a paper on her recent trip to the Old Land. This was one of the most successful meetings the Morris society has held. Three musical selections were given and all enjoyed them. (I wish we might have the paper by

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Miss McLean for publication, as it would be very helpful to our readers—P. R. H.)

DELORAINE

On July 1st the society had a tent and served lunch at the Turf Club Grounds and cleared ninety dollars, which they intend using next year to carry on the work of beautifying the cemetery. Some voluntary work has already been done this fall.

The meeting in July took the form of a picnic, which was held in The Grove on Mr. Will. Steedsman's farm. The ladies all had a very enjoyable afternoon, only marred by a thunder shower which soon passed over. A dainty lunch was served by Mrs. Steedsman.

This society have donated some prizes to the Deloraine Agricultural Society. One prize is for best dressed fowl by girl under eighteen years of age; also best cake made by girl under eighteen; another for best patch put on by girl under twelve.

At our September meeting the topics of pickling and canning were taken up. Some very helpful suggestions were given, also some recipes, two of which will be found below.

Corn Pickle: Choose green corn when cobs are about three or four inches long, enough to fill four quart jars. Then take ½ gallon vinegar, ½

oz. ginger root, ½ tablespoonful tumeric, ½ tablespoonful curry powder, 3 small red peppers, 1 teaspoonful ground mace, 1 teaspoonful mustard, ½ cup brown sugar. Let this come to a boil, then drop in corn, and allow to stand in a warm place to heat through. Bottle when cool.

Chutney Sauce: Four lbs. ripe tomatoes, 4 lbs. sour apples, 2 lbs. stoned raisins, 2 lbs. brown sugar, 8 ozs. salt, 3 ozs. ground ginger, ½ oz. cayenne pepper, 4 ozs. small onions, 2 ozs. ground allspice, 1 oz. nutmeg, juice of 3 lemons, 2 quarts vinegar. Chop tomatoes, apples, raisins and onions as fine as possible and boil all together for one hour and bottle when cool.

MIAMI

Following is the report for Miami Home Economics Society for September:

The principal theme of interest at our September meeting was the long and short methods of making bread. Different ladies explained their methods of making bread and gave some of the bread to be examined and tasted. One explained how convenient and sanitary her bread mixer is to use. Many questions were asked and some very useful hints on bread-making given. An unexpected treat for the members was a cake baked by Violet Hannah, the

eleven-year-old daughter of one of our members. As a result of this youthful baker's exhibit, the society decided to have a cake day in the near future for girls under sixteen years of age. We also had some fine music in the form of a violin and organ duet.

The society received thanks from Dr. Stewart and staff of Ninette Sanatorium for flowers sent from our flower show. One of the members kindly offered some fine, large flags for decorating each month. Another member read a paper on "The Influence of Environment," which I am enclosing. As usual, one member was added.

ENVIRONMENT

(This excellent paper was read at the Miami meeting.)

The two great factors in making men and women are: inheritance and environment; our parents and our surroundings. That great natural law—grapes from grapes, thorns from thorns, figs from figs, thistles from thistle—is from everlasting to everlasting. Good environment, good grapes; poor environment, poor grapes; but always grapes. Yet we have witnessed the transformation of the pestiferous thistle into an ornamental plant by cultivation and surroundings. We have seen the condemned thorn exalted to a chosen shrub among the trees and shrubs of the cul-

tivated park. Such is the power of environment. But the trail of the thistle is yet in its seed, and the tradition of the thorn tree lurks at its roots. Remove the care and cultivation, and it is soon thorn and thistle again. It all goes to show the importance of environment, and as human beings are as much influenced by their surroundings as any plant in the vegetable kingdom, we can readily see how necessary it is to consider the most desirable conditions for the welfare of the race, particularly for the development of the boys and girls, who are so soon to be the men and women of Canada.

I purpose to speak to you today on the physical, mental and moral environment. I will begin with the physical environment. Famous writers have spoken of its force, recognizing its significance and influence upon conduct, also drawing attention to the fact, "How National Characteristics are developed by physical conditions of the country," and our observations show us that even local conditions have their influence. This being the case, we inquire, "What physical conditions, geographically considered, are best for the human race?" Why do we speak of the hardy Norseman, or the brave mountaineer, except it be that the cold of the north and the danger of the mountains develop hardihood and courage. There is no accident about this; it is the law of Nature. The artistic Italian and the lazy negro are products of climate, the environment of birthplace. There is no chance about these things. They are geographical conditions. Then, where is the country we would choose for one's birth? Where do we find the environment which should constitute, should build up, perfect or ideal men and women? And why "Canada is the place we would select for our birthplace." Why? Because there is in this Dominion every environment favorable to the building up of the Character of ideal men and women. The cold of the north—hardihood; the wide prairies—deep thought; the mountains and hills—courage; the river and lakes—romance. The love of the beautiful and our perfect summers should develop the artistic temperament; and our bounteous harvest times, with their beautiful Indian summers, should be a beautifying influence in the developing of character, producing an artistic element peculiar to the North American. Fortunate, indeed, is the child whose birthplace is Canada. There is something more important than the country of one's birth, namely, the home of one's birth. The environment of the first twelve years of a child's life is the controlling influence of its destiny. You think this a daring statement? Have you ever met a Scotchman or an Irishman who did not show the brogue, the accent, the peculiar expressions even of his countryman? The manner of thought is no less established than the manner of speech. It is when the mind is young and malleable that the impression is firmly made. Besides, in the first twelve years of a child's life the foundation of bodily health is established, for an essential element in success is health. Consequently, a child should be well nourished, should have the sanitary environment of fresh air in abundance, nourishing, non-stimulating food, exercise, and plenty of sleep. There are the factors in physical environment. It is the environment that goes toward making health or disease, and it is the condition we are in when we leave that home which determines whether we become healthy or diseased citizens. The body must be fed, those elements which supply the needs of the body. We know how to feed our animals, and if we were getting children ready for the market we would show more wisdom in our manner of feeding them. If we feed them properly, they grow properly. It is just the same with a child.

Now we come to the mental environment of the home. This decides what the men and women will think who come from that home. If the mental attitude is high, noble, generous, if it is represented by the so-called cardinal virtues, then the men and women will be great, noble and true. If in this province alone, the heads of families introduced in their homes perfect physical and mental environment for the next

twelve years, there would be laid the foundation of such an army of strong men and women that we would need no Canadian navy at all. If in addition to the physical and mental environment, there should be added the perfect moral environment, it would be the most perfect array of men and women any age or nation has produced.

We are also very apt to have a different moral standard for the girl than for the boy. This is where we make a mistake, for what is bad for the girl is bad for the boy. We cannot build up a good race if we have two standards. If your neighbor has been cheated by some clever trickster, do not hold it up as a smart act because you owed that neighbor a grudge. Now, that standard we have actually heard in places. People think they are doing something clever if they are beating someone else. We want to get something for nothing. No matter where it is, this sort of thing runs through the human race, that wish—to be a little bit better than the other fellow—and it is wrong. It never seems to occur to us that we want to do better than the others, that we want to do the thing that is right, rather than the thing that is smart. We have set the standard of smartness on top. There should be only one standard, that of morality and goodness. The only thing that counts is, whether we are good and true.

We have every physical environment in this country. We have the hardihood of the north; we have the romance of the south; we have everything to make us strong physically, and it is up to the women to produce in their homes, that ideal environment which makes people wise and good and true.

We will now consider for a few moments, the environment of women. In our home we must consider the influence it is going to have upon the growing child, because the environment of the early years of a child's life is the one that stays with it. The trees we sat beneath, the flowers that we picked, and all those beautiful memories are the ones that go with us through life. But as we grow older, this changes, and it is wonderful how we can adapt ourselves to our surroundings. There is no other creature that can adapt itself like the human being.

Now, we maintain in environment, that which is good for the boy is good for the girl; what is good for the man is good for the woman. We are all human beings, men and women, struggling wisely or unwisely toward the goal of happiness, and the nearest route to this pole of bliss is the common-sense one of bodily health, mental vigor, useful labor and love for one another.

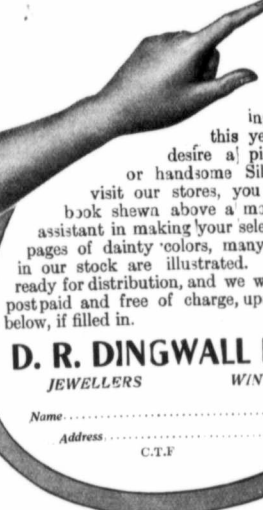
BIRTH

INFLUENCE OF ENVIRONMENT

Paperby Mrs. Whitworth, Birth Home Economics Society.

There are two aspects of environment to be considered, viz.: the external surroundings of our homes, and the atmosphere within. To take the first point, we, as country dwellers, for the most part have not the same problems to meet as those who live in our towns and cities. There they have a great many things to contend with of which we who live on our free open prairie know nothing. Even residents in the villages and small towns have little more than the country dwellers to consider. I often hear people say "When we get a fine new house we are going to have this and do that," and are careless of the surroundings of the small shack or house which is doing duty until better times bring the new home. The house is never so small or insignificant but that it can be made to look attractive externally. Cultivate in the children a sense of beauty and order and induce them to take a pride in making the best of one's belongings. Walls need to be covered with creepers, and flower beds and a well-kept yard or lawn makes a wonderful difference. Teach the children to love flowers and grow all you can so that their early recollections of home and childhood days will have sweet associations. How many of us there are who come from the old country to whom the sight of a spray

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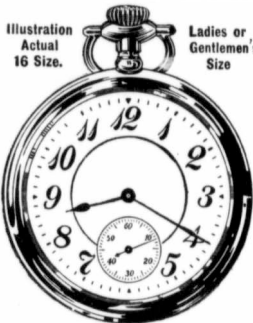


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of mignonette or a sweet William or some other old favorite will bring a flood of feeling too deep for words? And I venture to say that we may never know how the sight or odor of some familiar flower of childhood days may at some time in our son's lives bring back memories that may help them in some time of stress or temptation. We are all anxious to have nice houses and elegant surroundings, but they are not so actually essential when all is said and done to a refined environment. Let us determine to make the best of what is already ours.

When starting life on the farm, let the matter of the house site have due consideration, not only for sanitary reasons, such as choosing a spot that will drain well, etc., but have regard for appearance. Have the house a sufficient distance from the stables, even if it makes a longer walk between in cold weather. Then the house yard can be kept tidy and be laid out to advantage. Start to make the home not simply a place to live in. Aim to make it the dearest spot on earth to our children, a place they will be reluctant to leave, and always look back to with the tenderest of feelings. The mother has a great deal resting on her. Not only does she like to see the outside of the home attractive, but she must not forget to give sanitary laws some thought and attention, and should see that children form clearly habits and understand something of the importance of fresh air and plenty of water. Although so much is said and written in the present day about keeping windows open, etc., there are many of us yet who apparently dread an open window, especially at night. If we wish our children to be strong and healthy we must pay attention to these points. After attending to the outward appearance of our homes and their inward healthfulness, the most important part yet remains. That is to surround our children with a high moral and intellectual environment; to equip them for their battle with the world. First and foremost, do not forget that religious instruction must be a part of their environment. Habits of church and Sunday school attendance cannot be formed too early, and, mothers, do not expect the teachers to do it all. Take time yourselves to teach them a little; lessons learned at the mother's knee stay with them for always. And now what I am going to say will possibly bring a murmur of dissent from some. Some may say, "We have no time for it." I want to emphasize this, that a mother should make it her endeavor to Read everything—travel, scientific research, modern inventions. Then you will be prepared to instruct and inform your children. It is a good plan to introduce some subject at the evening meal, or later if there is time, and lead them to discuss it. Children will not, as a rule, read much else but stories if left to themselves. At school they are to busy with their lessons, and if they are to know what is going on in the world about them, it rests largely with the mother. I know how difficult it is on a farm where there are cows to milk and chores at night to find time for these matters, but much can be done if mother will arrange her work so as to allow the evening meal to be free to give her time to her family. Not only attending to their physical wants and giving an eye to their table manners, but also to direct the conversation into channels in which instruction can be given and made enjoyable. In the summer there is really little time, but in the long winter evenings much can be done. Let me make a plea for more music in our homes. If the mother is unfortunately not able to play an instrument, let it be an object to attain an organ as soon as convenient so that the children may learn to play it. It is from the ranks of country-raised boys that many great men have sprung, and there is no better atmosphere for raising strong, sturdy clear-headed men than that which surrounds the farm home. It is our duty as mothers to see that we environ our children with the protecting influence of a happy home life, which influence will come to their help in many a tight place in years to come.

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Recipes

MUSTARD PICKLES

Prepare a quart each of small, whole cucumbers, large cucumbers sliced, green tomatoes sliced, small button onions and a large cauliflower divided into flowerets. Add four green peppers chopped fine. Make a brine of four quarts of water and a pint of salt. Pour this over the mixture of vegetables and let stand for twenty-four hours. At the end of this time heat it just enough to scald it and turn into a colander to drain. Mix a cupful of flour, six tablespoonfuls of ground mustard, a tablespoonful of tumeric with enough cold vinegar to make a smooth paste. Add a cupful of sugar and sufficient vinegar to make two quarts in all. Boil this mixture until it thickens and is as smooth as salad dressing. Stir constantly to prevent scorching. Put in the vegetables and cook until well heated through. This is a reliable recipe for a mixed pickle.

SWEET CUCUMBER PICKLES

Wash clean the green cucumbers; soak in brine over night; in the morning rinse, and cook until tender in a syrup made of three pints of sugar to one quart of vinegar, and two tablespoonfuls each of cinnamon bark, mace and pepper grains. Seal in glass jars.

TOMATO JAM

Take six pounds of tomatoes to five pounds of sugar and four lemons. Remove the skins from the tomatoes, put the sugar over them and let stand for half an hour. Cut the lemon in small pieces, being careful not to get in any of the seeds or they will make it bitter. Put it over the fire and let cook until it is thick and smooth. Stir so it will not burn. It is best to cook on the back of the stove so as to cook very slowly.

CARROTS, FRENCH STYLE

Scrape and slice enough carrots for four people, and cook them in water until tender. Met one tablespoonful of butter in a saucepan, add the drained carrots and fry them for a few minutes in the butter. Sprinkle with flour, and turn the carrots several times. Add one tablespoonful of minced parsley and two of chopped onion. Nearly cover with beef stock, season with salt and pepper and cook gently for twenty minutes. Thicken with the yolk of an egg beaten with a little soft butter. You can substitute water and beef extract or a bouillon cube for the stock.

MARBLE CAKE

For the white part use three quarters of a cupful of butter and one and one-half cupfuls of fine sugar beaten to a cream. Add one-half of a cupful of sweet milk, one-half pint flour, one-half of a teaspoonful of baking powder, one-quarter of a teaspoonful of almond extract, and lastly the whites of four eggs beaten to a stiff, dry froth.

Dark part—One-half cupful butter, one cupful of brown sugar beaten to a cream. Add one-half of a cupful of milk, two and one-half cupfuls of flour, one teaspoonful baking powder, four egg yolks beaten, one level teaspoonful of cloves, one-fourth teaspoonful allspice. Drop alternate spoonfuls of the white and dark batters in a greased pan and bake for thirty-five to forty minutes in quick oven. Ice when cold.

LAYER WHITE CAKE

Cream half a cupful of butter (packed in solid) and two cupfuls of sugar; add two and a half cupfuls of flour sifted with two even teaspoonfuls of baking powder, and stir until like cornmeal; then add one cupful of cold water and whites of four eggs beaten stiff. Bake in three layers. Spread lower layer with boiled frosting and sprinkle over this almonds which have been blanched and split lengthwise with scissors; then spread more frosting over almonds. Treat two layers thus, merely frosting the top layer, and strew with almonds. Two cups of boiled frosting and one cupful of almonds will be required.

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APPLE DUMPLINGS

Two cupfuls of flour (level) measured after sifting once; one teaspoonful of butter, two-thirds cupful of milk, three level teaspoonfuls of salt. Sift together the flour, baking powder and salt three times. Rub in the butter with the tips of the fingers; add the milk, stirring all with a silver knife. Toss on a floured board and roll out to a little less than one-half inch thick. Peel the apples, take out the cores, cut in quarters or slice them, and place on one-half of the dough, sprinkle over a little sugar and cinnamon or grated nutmeg, fold over the other half of the dough, pinching together the edges. Place in a buttered steamer and cook over boiling water for twenty minutes. Serve with foamy sauce.

Foamy Sauce—Cream half a cupful of butter, add to it one cupful of powdered sugar, the unbeaten white of an egg, and any flavoring you choose. Add slowly one-half gill of boiling water, one gill of sherry, or a teaspoonful of water over the fire and stir until frothy.

Foamy sauce may be made a long time before using if the hot water is not added until just before serving.

WHEAT GRIDDLE CAKES

One and a half cupfuls of sour milk, one egg, two teaspoonfuls of flour, one teaspoonful of salt, one teaspoonful of soda, dissolved in a little hot water. Cook on a hot griddle.

APPLE PUFF

Peel and grate enough apples to make two cupfuls. Beat the whites of four eggs very stiff with four tablespoonfuls of powdered sugar, stir in quickly the grated apples and two tablespoonfuls of lemon juice. Turn into a pudding dish and bake for half an hour. Eat as soon as baked with a hot custard sauce.

Sanitation in the Home

The three essentials of a home are health, comfort and beauty. It is strange that though health is the most important it is the most often neglected. The enemies of health are dust, dampness and darkness.

To avoid dampness the house should be situated on rising ground, on sandy loam if possible for it drains itself.

Sunshine is a great destroyer of germs and we should therefore try to get as sunny an exposure as possible; this is best obtained by having the house facing south-east or south-west instead of due south. Each room in the house thus obtains a greater share of sunshine. A wind break is good, but enough trees to shade the house is very harmful.

However, as everyone does not build the house they live in, the best thing to do is to make the best of what they

have. The cellar is the chief place where dampness and darkness are found. Vegetables are stored there and go rotten. Nothing is worse than the odor of decaying vegetable matter and as air rises it is very important to have a well sealed roof to the cellar to prevent the gases rising to the upper rooms. The vegetables should be removed at once when no longer fit for use.

Dampness in a cellar is usually due to bad drainage, but it can be a little improved by putting lime on the floor to absorb the moisture.

One of the most difficult problems of keeping a house sanitary is that of ventilation in winter time. The best method of heating and at the same time bringing in fresh air is the ordinary hot air furnace if it is fed by a cold air shaft from outside. The cold air shaft should be the area of the hot air registers minus one-sixth to allow for expansion in heating. In this way fresh air is brought in without causing a cold draught. Keeping the air in the house fresh is a great saving on wood, for dead air is very hard to heat.

Another simple method of ventilating is to cover a frame with flannel and shut the window down on it. An old mosquito window with flannel stretched over it would be very good. The flannel allows the fresh air to enter and at the same time it prevents a draught.

It has been discovered that there are 2,000 dust particles in 1 cubic inch of pure country air, in a city 3,000,000, and

in an ordinary living room 10 times that number. Just think of 30,000,000 dust particles in every cubic inch of air we breathe! If we keep this in mind I think we would be more careful to ventilate our houses. A room 18 ft. square by 10 ft. high only contains enough pure air to last one person one hour. After that he is breathing the same air over again. How many people would eat after another person? And yet they think nothing of breathing impure air that other people have finished with. Why are we more careful of our stomachs than we are of our lungs?

Sleeping rooms require more ventilation than any other, for while the body is repairing the wastes of the day we breathe out more carbonic acid gas. The fires and lamps in a house use a great deal of oxygen. One gas burner uses as much as two people and a lamp as much as four. If the oxygen supply is insufficient the appetite fails and the circulation becomes sluggish. In fact, the whole vitality is lowered and diseases are easily contracted.

Another important subject is proper drainage. Typhoid and diphtheria are usually caused by impurities in drinking water. In order to give an idea of how typhoid germs will work into food I cite an instance where the cause of an epidemic was traced to a cake. The sewerage that entered the lake was infected by typhoid and the cows drank the water and all the people who used their milk contracted the disease. It is dangerous to have a well where drainage from a house might soak in. The top of a well is often of boards not properly put together. It is very important to have the cover water-tight to prevent dirty water dripping in. A filter will remove odors and cloudiness from water, but not germs. If water is impure it is safest to boil it. Boiled water tastes flat, but the flavor may be returned by letting the air enter it by pouring it from one vessel to another.

If you are in doubt as to the purity of your water a simple test is to fill a clean jar three parts full of water, seal it up tightly and let it stand for three or four days. If the odor is very strong there is organic matter in it.

Most of the disposals from a house verify the fact that there is no waste in nature—food wastes go to animals. Old food should not be kept about, for it attracts flies and produces bacteria. Pig manure should be occasionally rinsed with chloride of lime and a cover kept over them. A little coal oil in the bottom will keep off the flies and will not harm the pigs.

Coal ashes are splendid for walks and wood ashes for gardens and hens.

The removal of organic wastes is very important. The old fashion leaching method has proved dangerous. By far the most satisfactory system is the septic tank. The tank is built of cement with two compartments. The sewage pipe enters the first where there is no air, one kind of bacteria acts on the sewage, turning solids to liquids. When there is a certain amount in the first tank a valve discharges it into the next, another kind of bacteria works on it there and the two kinds of bacteria in contact with each other purify it and it is drained off pure water. The tank may be under ground or above. It will not freeze for the action of the bacteria keeps the water warm. The only expense is the valve, which costs from 15 to 20 dollars and the cement. The size of the tank is determined according to the number of occupants in the house. When once installed it lasts a life time and is never known to get out of order.

If a few of these suggestions were followed we would have less disease in the country. Think what it would mean to have consumption stamped out of our land, and the only way to do it is to have proper sanitary homes.

Going to a Dead Circus.

(From the Youth's Companion.)

The other day a young woman teacher took eight of her pupils through the museum of natural history.

"Well, my boy, where did you go with your teacher this afternoon?" asked the mother of one of them on his return.

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As an advertisement we will give these awards absolutely and unconditionally free to the persons sending the neatest correct solution of the "TWENTY-ONE PROBLEM." There is positively no lot or chance connected with the solution of this problem. It is a contest of skill. The neatest correct solution of the problem will be awarded the Piano, and the other awards will be distributed in the order of merit. Everybody who sends in a correct solution will be awarded a prize.

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The gentlemen who have consented to act as Judges are a guarantee that the awards will be distributed to those who are entitled to them.

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"There is nothing noble in being superior to some other man. The true nobility is in being superior to your previous self."

The people who talk of dying in the last ditch are precisely those who, when the time comes, will be found comfortably perched on the first fence.—Sir Horace Plunket.

Some men start out to rise in the world, and land at the top—in an attic.—No man Selby.

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There's a mystic individual, with neither home nor name, But yet he's ever-present and important, just the same; He's the "man around the corner," and his presence you will feel If you happen to be interested in some mining deal.

He wields a wondrous influence, his power is supreme; He's been the means to quickly put through many a little scheme; He's never been jailed, though he has sold full many a yellow brick Since gold was first discovered in the hills of Cripple Creek.

We're told he's made an offer double what we're asked to pay And that we'll have to give an answer quick, and not delay; If he had purchased everything that he has longed to get, By this time he would have the whole blamed district in his net!

He's been here since the early days, he'll stay unto the end; And to the shrewd promoter he has been a loyal friend; Though no one ever sees him, his presence all can feel.

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Fational Products, Ltd., Dept. F 119 Toronto, Can. Mention this magazine when writing advertisers.

Questions and Answers

Continued from page 23

throttling governor is supposed to admit charges in regular succession, but grades them light or heavy according to the load. Either of the above is supposed to be automatic in its action. The hit - and - miss governor is generally regarded as the most economical of the two.

(h) Not unless by means of previous priming or by retaining charge as in some automobile motors, or by means of compressed air starters.

(i) It is possible to increase the compression in the cylinder by increasing the length of the connecting and at the expense of the crank compression.

(j) See your question A. Engine would have the same power exactly, but the increased speed of the driven machinery from the 16-in. pulley on the engine may require more power than the engine has, and therefore it would put the engine at a disadvantage.

(k) Yes; your figures and slipping conclusion are correct. No doubt the face of the 5-in. pulley is worn very smooth, and since there is but very little belt surface for the belt to hold on to, it allows slipping under the load. Belt dressing may help you, or larger pulleys on both the engine and saw mandrel, so as to give greater belt friction surface on the mandrel pulley, may overcome your trouble. Ten inches on saw mandrel and 28 inches on engine will give you same speed

proportions with double belt surface.

(l) Thirty-inch driver on engine to 10-in. driver on saw will give you saw speed of 1,230, provided your engine has power to handle this increased speed.

(m) Yes, to the extent of additional friction, caused by the additional shafting, beltings, etc.

(n) Watt is: The unit of work done by one ampere of current when forced by one volt of pressure. Seven hundred and forty-six watts equal 1 horsepower. Hence, amperes, multiplied by volts, equal watts. A cell with 16 amperes and one and a half volts is equal to 24 watts. $(16 \times 1\frac{1}{2}) = 24$, or $24/746$ horsepower. Ohm is: The unit of resistance. About equal to the resistance offered by a pure copper wire 1/20-in. in diameter, and 250 feet long. Volt is: The unit of electro motive force or pressure. Ampere is: The unit of current strength, or the current carried in one second by the force of one volt through a circuit, when the resistance is one ohm.

(o) With suitable coil the 30-ampere battery ought to have longer life.

(p) Crown is considered best.

(q) You are probably burning up your oil. This would be indicated by much smoke from the exhaust. You must be your own judge in a great measure as to the number of drops per minute required by your engine. Some engines seem to do better with more, others less oil.

(r) No.

JUDGE BARCLAY'S WIFE

A COMPLETE SHORT STORY

MRS. JUDGE BARCLAY she was called, and no one thought to call her anything less. At the instant of this tale she sat in the crude, log-built cabin that did temporary duty for a court in the small township of Selville, which lay at the head of what was locally termed the "gold-creek."

Her husband, assisted by the Sheriff and a number of his posse, accompanied by a number of miners, was trying a young miner named Jem Turrill; and the old Judge's face showed a strong tendency to mercy as he looked down from his raised seat of packing-cases at the sullen face of the young man before him.

On her part, Mrs. Judge Barclay was trying to catch the Judge's eye, to "stiffen his backbone," as she would have phrased it; for she had dealt with him often and bitterly concerning his undue tendency to mercy. A hard-faced, big-boned, childless woman of sixty, she was vigorous,

and a ruler of men, her husband in particular, except on this one point, which pertained to mercy. Judge Barclay, however, had once been sheriff, and had practical knowledge that the capital sentence given in court was but the precursor of that dread scene where a rope, and too often a fine man, kicking his life away, formed a dreadful conjunction in his memory. Many and many a man had he seen pass outward this way; yet, with pleasure it may be told that such experiences had not brought callousness.

But Mrs. Judge Barclay knew nothing of what I might term the practical side of Justice. She failed in Realization. She attended constantly at the courts where her husband presided, and would listen with critical severity to her husband's "handling" of the case, and see no further than the given sentence. Too often, she would listen, with a sort of impatient half-contempt in her heart at old Judge Barclay's constant temper-



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ing of Justice with good human mercy; and always after any special evidence of this trait in him, she would consider it her duty to "stiffen his backbone," as she termed it—a process which occasionally included the unloading upon the Judge of some rather brusque comments, bordering almost on the contemptuous.

As a result of his wife's constant attitude, old Judge Barclay had more than once found himself dealing out sentences that were sterner than his heart considered the needs of the case to require. This wife of his strung him up, as it were, to a sort of concert-pitch of austerity.

But such stringing up was only temporary, in every case; and after the Court had ended the old with his own kindly nature, the Judge would have a bad time while, perhaps, that he would be walking back to his log hotel with his wife, nodding absently to her comments of somewhat grim approbation. Perhaps, once in a way, he would wake up to the whole meaning of the situation, with, maybe, something of a vague half-bitterness towards his wife, and a desire to show her somewhat of the things that lay actually "behind the sentence"—the human agony and shame and degradation of the poor human in the Machinery of Correction.

Once, indeed, he had made the attempt; had silenced her with a sudden sternness that had astounded her, and brought a sudden novel respect for him into her general feeling of Proprietorship. But he had failed entirely, as he worked slowly and earnestly, striving to pull up for her inspection the deep roots—the principles—out of which grew the had no particular gift of speech and had striven with logic, where only the wand of emotion might have helped him, to reach down to the sunk wells of pity that lay so deep in the frozen womanhood of his grim and childless wife.

His effort merely earned the retort that "evildoers must take their physic, or else quit their bad ways." And further, that if he had not the "stomach for his duty," he would be better employed doing other work "maybe nursin' babbies!" (What an inverted expression of the pain of her denied motherhood lay in this tilt at the Judge! Though it is more than probable that the Woma never realized it.)

And now she sat in the logshanty court, and stared with cold eyes of complete condemnation from Jem Turrill, the prisoner, to her husband, the judge, and so back again to the prisoner, her brain taking the evidence, piece by piece, and her stern reasoning

breeding in her an impatient contempt for the look of compassion which old Judge Barclay occasionally turned upon the sullen and youthful Jem.

Jem Turrill was certainly a rather sullen-looking young lout; but, for all that, he was possessed of a more wholesome heart and better abilities than a casual look at his face suggested, the poor effect he produced owing itself probably to his constant sullen expression, which put onlookers immediately out of sympathy with him. He was given to occasional heavy drinking-bouts, and he gambled inveterately, but also he worked hard, and he had a very real affection for his old mother, whose love for him had for so long been pitiful in his hungry anxiety to aid and coax him to steady ways without angering him.

Her affection had brought her West, among the mining towns, that she might be near to him. She had come one evening a few months prior to the event I am relating, and the son had welcomed her with a curious mixture of honest joy and equally honest shamefacedness, lest the other miners of his acquaintanceship should view the matter from the standpoint of the "maternal apron-strings." Yet the over-youthful Jem need not have troubled; his comrades neither thought nor cared one way or the other about the new arrival, except, it might be, to envy him the possession of a competent house-keeper and cook in his little, rough shanty. And, as I have said, though a wayward, sullen youth, his affection for his mother was genuine and curiously intense, after its own peculiar fashion.

But of all this Mrs. Judge Barclay was unaware. It is to be doubted whether she even realized that the youthful thief and murderer—for these were the counts on which he was standing his trial—so much as possessed a mother; whether, indeed, such a dreadful creature could possibly have been born of woman! If she herself had borne children, she might have understood many things, and she would not have been sitting there. As it was, she sat there, calm and logical and utterly impatient of the "sentimentality" of her husband's expression as he viewed the sullen-looking young reprobate before the Court.

And young Jem Turrill was in very sore trouble, indeed, though far less a guilty-souled man than the woman or the Court believed him. Indeed, by the woman and the Court he was already foredoomed to condemnation; but old Judge Barclay saw a little deeper, and was striving, some-



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that inefficiently, to elicit such replies from the prisoner as would present his case in a less dreadful light. But young Jem only stood like a clumsy oaf, protesting with sullen earnestness his innocence to the old Judge who desired to believe him, and to the Court that entirely disbelieved him. Once, in the midst of his protesting of innocence he stopped, and looked suddenly at Mrs. Judge Barclay—the one woman in the court—as if he had an abrupt thought that she perhaps might understand that he was innocent of the worst. The action was born of a sudden, rather hopeless instinct, that became instantly wholly hopeless, as his look met her grim, unflinching gaze, as merciless as that of any man present. And with a hopeless little half-drunken shrugging of his shoulders he had turned from her, and once more faced the old Judge, whose leaning towards mercy he perceived firmly.

The details were brief enough. He had been up at the shanty of one Duncan Larsden, playing cards, during the past night (it was early morning still). Pistol-shots a little before dawn had brought up the Sheriff and a couple of his men, who found Larsden dead, with a bullet-wound in his head. Young Jem Turritt was gone, and with him, as was shortly proved, at least two hundred ounces of Larsden's gold. The Sheriff took up the hot trail, and ran the young man down within two hours, and already he was in the court, being tried for his life. Indeed, so speedily had events moved that his old mother at that very moment awaited him in the shanty with a newly cooked flap-jack, and a freshly opened tin of salmon, all unaware of the dreadful news that was falling.

As I have said, Jim sullenly but vehemently protested his innocence. When caught by the Sheriff he was found to have on him a one-hundred-ounce bag of gold dust, in addition to the nuggets of the dead man. The gold dust he was easily able to prove his own property; at least, it had been his on the previous evening. His version was that Larsden had lost his two hundred ounces of nuggets to him, and had then staked his claim against the three hundred ounces of gold that Jem held. Larsden had won, but even as he declared himself winner, two aces had dropped out of his sleeve, and Jem had rounded upon him as a cheat—a swizzler. At the accusation, Larsden had drawn on him, but his "gun" had missed fire, and Jem had got home a good, useful shot before the other man had time to pull the trigger a second time, and

Duncan Larsden had slipped out noisily into the twilight of life. Jem had then got a sick fright that the affair might look bad for him, and, like a silly young fool, had proceeded to make it immediately ten thousand times worse by bolting with the gold. Possibly, if he had been more sober, he would have seen the folly of his action in time, but regrets were useless: he had bolted, and been found with the "stolen" gold upon him.

It is true that, in young Jem's favor, it was found that a mis-fire cartridge occupied one of the chambers of Larsden's revolver, but this was not exactly evidence; and against this one favorable item was the fact that the young man had gone off with the two hundred ounces of gold that had not been his the previous evening. This was the thing that condemned him; there was no thought of mercy on the part of

the jurors; there had been far too much thieving in the township of late; it was a matter that vitally affected each and every one of them, for some had gold in their shanties or tents, and others hoped some time to be in a like pleasing condition. The result of such interests, dealing with such evidence, was a foregone conclusion—young Jem Turritt was sentenced to be hanged at next morning at dawn; the gallows a tree just outside of the north end



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of the township. It had been used previously for the same purpose, having a convenient bough.

As Jem was led out of the shanty where the Court had been held, he turned suddenly and stared fiercely at Mrs. Judge Barclay; she was, as I have said, the only woman there.

"Hey!" shouted the sullen Jem, with an extraordinary flash of analytical inspiration. "You'm a hard-hearted old brute, you be! Sittin' there an' thinkin' proper to have me murdered, you old hag!"

He was hustled away, for old Mrs. Barclay was well enough liked and thoroughly respected; and the only effect of the young man's outburst was to fix more firmly on her mind, and on the minds of all of the others, that he was but a brutish creature, and better hanged soon than late. Even old Judge Barclay was conscious of a momentary flash of anger against him for his address to his wife.

And so the young man went out to the little log-built lock-up, where he was to fret away the hours that remained.

Meanwhile, someone told his old mother.

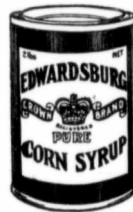
At daybreak next day, however, when the Sheriff visited the lock-up with a number of his posse to lead young Turrill to his own grim version of under-the-green-wood-tree, he found the men he had left on guard comfortably ensconced within the lock-up, in a state of beatific drunkenness, but Jem, the condemned (but soul-guiltless) murdered, was distinctly not there.

Explanations from the guard were confused, and the Sheriff twisted the key on them, in turn, whilst he organized search parties for Jem Turrill. The search-parties were not a success, and it seemed that Jem had got safely away, but the Sheriff was an obstinate man, and, having arranged a hanging, was determined that a hanging there should be. He stuck, therefore, to the search, but adopted a new method: he watched the comings and goings of Jem's old mother. Meanwhile, old Judge Barclay, having a day of rest before him, chose to go fishing, accompanied, as ever, by Mrs. Barclay. He was in a restful and contented frame of mind. He was fishing, though secretly, glad to know that Jem had escaped. He was glad, too, that whatever he thought of the man was less glibly than he had shown.

It was in the afternoon, just as old Judge Barclay was having an exciting moment with an exceptionally big fish, that both he and his wife heard a woman screaming somewhere among the trees on their side of the river.

Keep Your Children Healthy

During the cold weather by giving them plenty of



**Crown Brand
Corn Syrup**

That nourishing, heat producing food with the delicious flavor.

Crown Brand is the ideal table syrup—clear as strained honey—and absolutely pure.

It adds immeasurably to the enjoyment of Griddle or Buckwheat Cakes, Biscuits, etc.

Children love Crown Brand—it satisfies that craving for sweets—and they can eat all they want of it because it is so easily digested.

Next Time Try Crown Brand—Your Grocer Has It

THE EDWARDSBURG STARCH CO.
LIMITED
MONTREAL—CARDINAL—TORONTO—BRANTFORD—VANCOUVER

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FREE MAGNIFICENTLY DECORATED DINNER SETS.

2500 LADIES have received these magnificent dinner sets from us, ABSOLUTELY WITHOUT ONE CENT OF COST, and are delighted with them.

LET US PUT ONE OF THESE BEAUTIFUL SETS OF DISHES INTO YOUR HOME WITHOUT ONE CENT OF COST TO YOURSELF.

These sets are the highest grade of fine imported English china, the famous Royal Alexandra pattern, handsomely decorated in rich floral designs, the newest decoration, and **WARRANTED FULL SIZE FOR FAMILY USE.** Every piece is stamped. It is a set you will be proud to own. Carefully packed in strong boxes free, and we arrange to stand payment of all transportation charges.

SEND NO MONEY. Just your name and address on a postal card, and we will send you our two big catalogues of the famous National Products, and over 500 premiums of magnificent china, cut glass, furniture, silverware, jewellery, etc. that you can obtain **ABSOLUTELY FREE** by helping us.

We gave away last year, to ladies in all parts of Canada, premiums to the amount of nearly \$50,000.00. If you have never had a National premium, start to-day by securing this magnificent Dinner Set. Write and get the catalogue to-day. A postal card will do.

National Products, Ltd. Dept. D 117 Toronto, Ont.

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**Have you Renewed
Your Subscription ?**

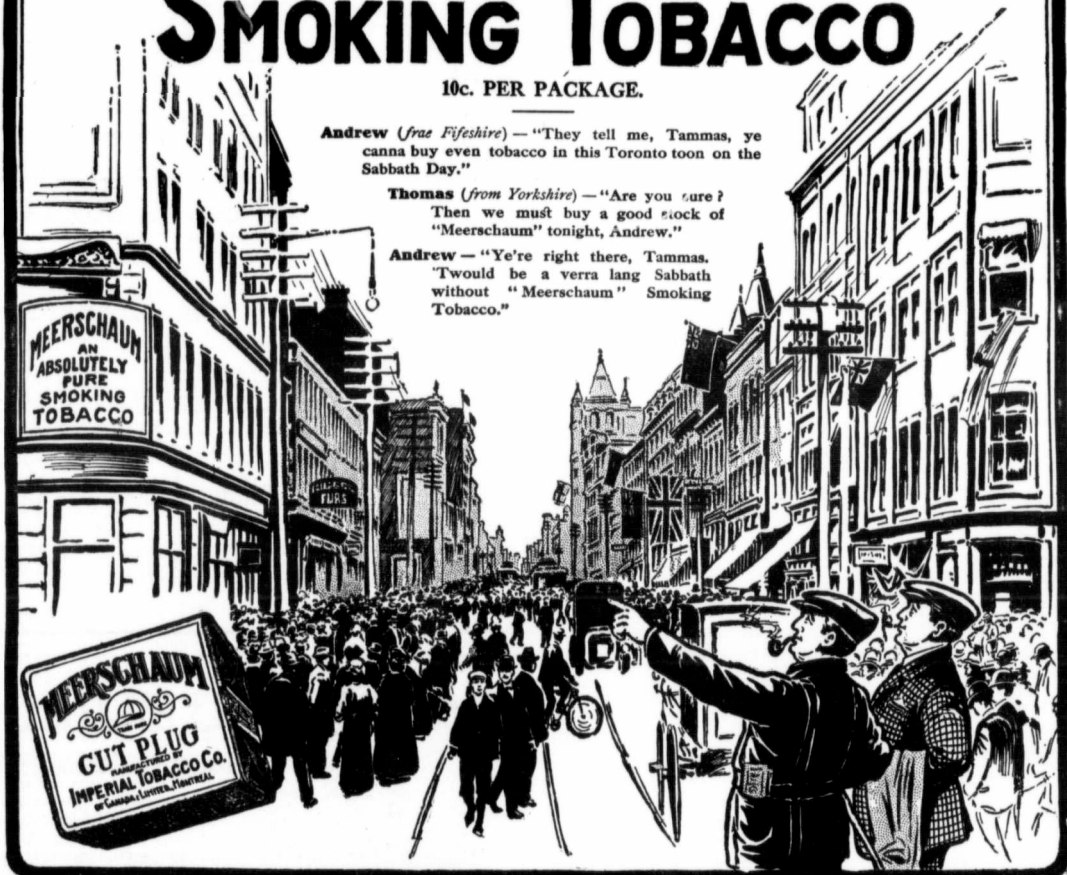
MEERSCHAUM SMOKING TOBACCO

10c. PER PACKAGE.

Andrew (from Fifeshire) — "They tell me, Tammas, ye canna buy even tobacco in this Toronto toon on the Sabbath Day."

Thomas (from Yorkshire) — "Are you sure? Then we must buy a good stock of "Meerschaum" tonight, Andrew."

Andrew — "Ye're right there, Tammas. 'Twould be a verra lang Sabbath without "Meerschaum" Smoking Tobacco."



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

The Judge handed his rod to his wife, and ran off in the direction of the sound. Mrs. Judge Barclay consigned the rod to the river-bank, and followed him. The screams continued, and the old Judge began to run, breathlessly, and his wife also, with a sudden, new-born feeling of something that was worse than discomfort stirring peculiar emotions within her. They dashed on among the trees, guided by the screams, and burst through into a small clearing, in the midst of which stood a solitary oak; and she had view of a painful and dreadful sight—Justice, the Fetish of all-perfect man, about to accept a victim.

There was a group of men under a great bough of the oak, and one of the men was trying to throw a rope up over the branch; and even as the old Judge and his

wife ran across the clearing, he succeeded. Whereupon several of the men ran and caught hold of the dangling end, and proceeded to haul the slack over the branch. Mrs. Judge Barclay saw them, all in a moment, as it were, that the other end of the rope was fast about the neck of a man who had his back turned to her, and she experienced a peculiar little sick feeling, as Nature began to have birth in her. She was still hastening towards the group as she discovered these details, and in almost the same instant she discovered that the screaming came from a woman who was held by a couple of the men.

Her glance went again to the others. Several of them had stepped back a little from the noosed man, and had their Smith and Wessons in their hands. She recognised the Sheriff, and knew

that the man with the rope about his neck was Jem Turrill. She did not know that they were going to shoot poor Jem full up with lead as soon as he should have swung sufficiently to get the "taste of the hangin' into his heart." Nor, if she had realized the fact, would she have understood that mercy was really at the back of the men's attention—mercy with a vengeance instead of the gentle mercy of a woman, but mercy nevertheless. And so came Mrs. Judge Barclay, to the group of men intent about their work.

The condemned lad (for he was scarcely more) stood pale and grimly silent, swallowing constantly and dreadfully at the dryness that seemed to fill his throat, and looking with wild eyes at the woman held by the two men, for it was his old mother.

"Help! Help!" she would scream, and fall into a sudden, trembling silence, quivering so that her quivering shook the two brawny men who held her, so callously determined. And again her scream would ring out madly, "Help! Help!" crying to any god that might be listening. Maybe one harkened.

Mrs. Judge Barclay stood a moment, looking at it all with wider eyes than she had ever opened before, seeing it, and at last beginning, with a horrible sickness in all her being, to understand something of what old Judge Barclay, her husband, had never been given words or skill to "make seen" to her.

The mother's cry broke out again, fierce and terrible and almost past humanity in its white-hot intensity. "Help! Help!" And she began to struggle, almost

**If You Have a Motor Car
Jaeger Motor Coats and
Usters will Interest You**

**They are Very Comfortable!
Very Stylish! Well Made!
Durable!**

A Jaeger Double Fleece Coat gives greater warmth and does not induce perspiration like a leather or fur coat.

See them at the Jaeger Stores in their attractive variety.

Dr. JAEGER SANITARY WOOLLEN SYSTEM

364 Portage Avenue, Winnipeg, Man.
316 St. Catherine St., West, Montreal
231 Yonge Street, Toronto, Ont.
And from JAEGER Agents throughout the Dominion

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Guaranteed Tacks and Small Cut Nails
ALSO MAKE A SPECIAL FEATURE OF
Brass Plating and Electro Tinning.

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Dominion Tack and Nail Co.,
Limited,
GALT, ONTARIO

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Does not chafe, overheat or draw end of stump.
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**SYNOPSIS OF CANADIAN NORTH-
WEST LAND REGULATIONS**

Any person who is the sole head of a family or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duty—Six month's residence upon and cultivation of each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre. Duties—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price \$3.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,
Deputy of the Minister of the Interior
N.B.—Unauthorized publication of this advertisement will not be paid for.

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GUS PECH
POUNDRY AND
MANUFACTURING
COMPANY
Manufacturers of the
Celebrated
**MONITOR WELL
AUGERS AND
DRILLS**
Write for prices
and Illustrated
Catalogue.
LE MARS, IOWA
U.S.A.
Branch House:
REGINA, SAS.

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like a maniac, with the two big men who held her. And the dreadfulness of it all! . . . It was she, his own mother, who had innocently led the posse to where her son was hid. They had watched her, as I have told, and had followed her, secretly, as she slipped away quietly through the woods, taking a towelful of flap-jack and "tinned goods" to Jem's hiding-place. She it was who had managed the escape for him by conveying drink to the men or guard, and she it was who had found the hiding-place for him, and she it was who had brought him food; and now she had brought him to his death. She began to scream incoherent words and to give out scarcely human sounds, and her struggles became so fierce that her clothing was ripped literally into ribbons of cloth and cotton in the hands of casually determined men who had held her off from going to her son.

Old Mrs. Barclay stared, suffering at last in understanding of the stern and deathly intention that informed the group of men "about their business," and with her heart growing sick with the horror of human pain that seemed suddenly to emanate from that one plague-spot of tragedy, and fill all the earth. Her grim old face had grown ghastly under its pale tan color. . . . This was Justice, the Justice that she had so constantly hammered into her husband the need of dealing without shrinking. . . . This madly desperate mother, and this lad, barely out of his 'teens (she was seeing sanely at last), standing noosed within a few yards of her, and already, as it were, looking at his mother from the other side of the Eternity of Death. . . . And the Sheriff's men (the men of Death they seemed now to her) all around, so dreadfully purposeful and obdurate to the voice of Natural Pity that waited at them out of the lips of the crazed mother. . . . This was what she—she, Anna Barclay, had urged her husband to many and many a time! She had never known—never, never! . . . She could almost have screamed her denial. . . .

No wonder John had been always so inclined towards mercy. . . . My God, were there often such scenes as these going on in the same world? . . . Was there often this weight of terror and complete horror, bred into being by the deliberate doings of man, for any purpose whatever—call it Justice or by any other name? . . . This dreadfulness—this terror that choked her! This . . . And suddenly she found her voice. "Stop!" she said, with a voice as deep and hoarse as a man's. "Stop!" . . . She waved her

WINCHESTER
Repeating Shotguns
Trap shooting brings out the shooting qualities of a gun. Winchester Repeating Shotguns last year won both the professional and amateur Season's Averages. This shows they are reliable in action and close, hard shooters. These qualities make them excellent for bird shooting, especially for the quick, fast flyers. Winchester guns are well built and finished and will give good service for years. They are sold by all dealers. Send postal for complete illustrated catalog.
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Capital and Reserve, \$2,800,000.00

The strain and worry of managing Estates will all be borne for you by this Company.
A PRIVATE Executor may die or become incapable of acting before the completion of the Trust. A Trust Company is PERMANENT and will survive the longest Trusts.
This Company's financial strength and expert staff ensure responsible and capable administration.
We act as Trustee, Executor, Administrator, Guardian, Liquidator, Assignee, Financial Agent
SAFE DEPOSIT VAULTS SAVINGS DEPARTMENT MONEY TO LOAN
ARTHUR STEWART, Manager, Winnipeg Branch, 323-325 Main St.

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FIRE INSURANCE
The Liverpool-Manitoba Assurance Co.
All Policies Guaranteed by
THE LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY, LTD.
Northwest Branch - WINNIPEG, Canada
Agents wanted in unrepresented districts. S. N. RICHARDS, Local Manager

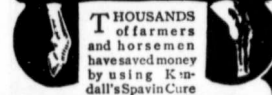
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WHEN YOU BUILD
When you build, first consider well your plans. We will send, prepaid and duty free, to Canadian customers, two famous Hodgson cloth-bound books showing Bungalows, Cottage and House Plans, each containing over 225 pages and more than 300 designs, including floor plans, upon receipt of \$1.
The regular price of these books is \$1 each. Every design is by a licensed Architect; Mr. Fred. T. Hodgson being a resident of Canada and member of the Canadian Architects, F.A.I.C. Many of the houses are the last word in architectural beauty. Adapted to every purse and every taste. Every design a typical modern home, with approximate cost to build given. Complete

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for these cheap and moderate-priced homes may also be obtained from us at about \$5 per set, and from which any carpenter can build. If made to your order, an architect would charge from \$50 to \$75 for any one of them, and it would be no better. If you purchase a set of our plans, we will rebate the \$1 you paid for the books. To any prospective builder this offer is easily worth ten times the cost. Address:
FREDERICK J. DRAKE & CO.
Architectural Department
1325A Michigan Ave. Chicago, Ill.

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Kendall's Spavin Cure The Old Reliable Horse Remedy



THOUSANDS of farmers and horsemen have saved money by using Kendall's Spavin Cure for Spavins, Curb, Ringbone, Splint, Bony Growths and Lameness from many other causes. These men know that Kendall's is a money saver and a horse saver. We can prove it by thousands of

Grateful Letters From Users

LANGHAM, SASK., DEC. 15th, 1911.

"I have a large stock of horses and am a user of Kendall's Spavin Cure. I must say that I always had the best satisfaction from its use, and can recommend it to any horse owner." **JOSEPH PFUND.**

PIGION LAKE, MAN. DEC. 24th, 1911.

"I have used Kendall's Spavin Cure for five years. I find it a sure cure for Spavins." **WILLIAM GRANT.**

Price \$1 per bottle—4 bottles \$5. Ask druggist for free book "Treatise on the Horse" or write to us.

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MILD, SWEET, MELLOW AND JUICY

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MENJETS

Mends all leaks instantly without the use of Heat, Solder, Cement or Rivet, in Granite-ware, Aluminum, Hot Water Bags, Tin, Copper, Sheet Iron, all Cooking Utensils and Rubber Goods. Any one can use them; fits any surface. Assorted sizes in each package. Full size box, 25 cents. **AGENTS WANTED. FREEBORN SPECIALTY CO., Dept. C, Winnipeg.**

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hands a moment incoherently, fighting to take control of the fierce passion of horror and agony of pity that beat through every fibre of her, possessing her. "Stop!" she said again; and then managed to say: "How dare you! . . . Oh, how dare all you men be met together here to do this—to do such a thing—to do such a thing—" She stopped abruptly, and stared at the men, as if they were things incredibly monstrous; and they, on their part, looked round at her and the Judge, only then aware of their advent.

"Let him go at once!" said old Mrs. Judge Barclay, speaking again, as her voice became once more a controllable possession. . . . "Let him go to his mother. . . . Let them both go."

Across the ring of men the mother had fallen suddenly on her knees; her mouth was babbling breathless words of prayer, her hands outstretched at arms' length, her fingers twining and intertwining madly.

"Save . . . him!" came her voice at last, no louder than a hoarse whisper, yet having a strange quality that seemed to make the very leaves above them stir and rustle. And, with the two completed words, she pitched forward, out of the relaxed hands of the two men who held her, on to her face, with a little thump, her forehead and nose plunging into the trampled mud beneath the tree.

There came a queer, little inarticulate cry from Jem, and he began to fight desperately, bound hands and feet as he was, towards where his mother lay on her knees and face; but the Sheriff and one of the men caught him and dragged him back beneath the over-reaching bough. The Sheriff signed hastily to old Judge Barclay, and the Judge put his arm about his wife to lead her away. But she tore from him, and faced the Sheriff.

"It'll be all right, mum," said that man. "You go along quiet now with the Jedge. We ain't goin' to hurt Jem more'n the flap of a fly's tail. Don't ye worrit . . ."

"You're going to hang that young man as soon as I've gone!" burst in Mrs. Barclay, very white-faced, but with now a strange shining in her eyes. "That's what you mean to do!"

"Yep," said the Sheriff, scratching his head, and trying to catch Judge Barclay's eye. But Judge Barclay was looking only at his wife, with something that was new in the way of his look.

"Yep," said the Sheriff again. "Jem's boun' to hang, sure, r'm, but we ain't goin' to hurt him worth a mench. We'll turn 'm



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"The best for you
is the best for us."

Sawyer-Massey Co. Limited

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Plaster Board—the fireproof plaster lath and sound deadner

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WINNIPEG, MAN.

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LIMITED

WINNIPEG, CANADA

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Jobbers of

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Agents for

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Gasoline Engines, Pumps and Scales.
HUNTLY MANUFACTURING CO.
Monitor Grain Cleaning Machinery.
TAYLOR FORBES & CO.
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Discount to

DEALERS

\$1.00

By Mail



Do not guess at your speed

Buy a Tabor Stop Motion Counter

THE GRANT MANUFACTURING AND MACHINE CO.
110 SILLIMAN AVENUE - BRIDGEPORT, Conn.

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Family Group Photos a Specialty

AT

STEELE & CO., LTD.

MAIN ST. AND BANNATYNE AVE.

WINNIPEG

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3

Leading Brands

Sold everywhere throughout Western Canada

DREWRY'S Refined Ale

(Registered)

Extra Stout

AND

Redwood Lager

These well known malt beverages are brewed from barley malt and hops only. Always uniform in quality and flavor.

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What the Internal Bath Is Doing for Humanity

Under our present mode of living the large intestine cannot get rid of all the waste that it accumulates—so it clogs up, and then biliousness, constipation, is the result, and that lack of desire to work, to think.

This waste in the colon, as we all know, is extremely poisonous, and if neglected, the blood takes up the poisons—and brings on countless very serious diseases—appendicitis is directly caused by waste in the colon.

If the colon is kept clean and pure you will always feel bright, and capable—never blue and nervous—always up to "concert pitch."

There is just one internal bath which will keep the colon as sweet and clean as nature demands for perfect health—that is the J. B. L. Cascade.

Many thousands are using it, and doctors prescribing it with great success all over the world.

This "assistant-to-Nature" treatment is interestingly described in a booklet "Why Man of Today is Only 30 Per cent. Efficient" which you should send for. It will be sent free by Chas. A. Tyrrell, M.D., Room 754, 280 College street, Toronto.

Mention this magazine when writing advertisers

Desires Increase Your Sales!
 Take a Look at the **Strite Governor Pulley**
 It's the original and the only thing for driving cream separators with gasoline engines. Once tried, always used. **TRY ONE.** More in use than all others combined. Costs no more than imitation. Also see about our friction clutch pulleys.



WHITE GOVERNOR PULLEY CO., 310 S. 3RD ST., MINNEAPOLIS

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 Write for booklet, circulars, terms, etc.
FETHERSTONHAUGH & CO.
 FRED. B. FETHERSTONHAUGH, K. C. M. E.
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 Portage Avenue, WINNIPEG,
 209-10 Bank of Nova Scotia

Mention this magazine when writing advertisers

off nice an' easy. You go along of the Jedge now . . ."

But he never finished his piece of excellent and practical advice, for, with a bound astonishing in so elderly a woman, she came at him, and he gave back helplessly, not knowing how to cope with such an attack. Yet she had no meaning to strike him. Instead, before he knew anything beyond his bewilderment, she had opened his holster and twitched out the heavy Smith and Wesson; then, with a leap, she was back from him, facing the group.

"Hands up!" she screamed, her voice cracking and her old eyes literally blazing. "You shall not murder that boy! Not whatever he's done! Hands up, I say, or I'll surely snoot at you!"

The old woman's expression was so full of a desperate resolve that the men's hands went up, though maybe a little hesitatingly and doubtfully. Yet they had gone up, and up they remained, as the muzzle of the heavy weapon menaced first one and then another. For suddenly it was very clear to the men that the woman was wound up to such a pitch of intensity that she would shoot first and do the thinking afterwards. It is true that several of the men held their revolvers in their hands. But what could they do? They could undoubtedly have snapped off shots at the old woman, but they were not going to shoot old Mrs. Judge Barclay—the thought was below their horizon of practical things. Neither would it have done to have attempted to rush her, for there would have been, most surely, one or two sudden deaths achieved in the operation, and the after-situation also would have to be faced; so, as I have told, they kept up their hands, and watched the old woman with quite as much curiosity as rancour. They were very practical men.

Old Judge Barclay, however, failed to realize the entire earnestness of the situation, and, after a moment of stupefaction, began to run towards his wife in vast distress.

"Anna, Anna!" he cried out. "Anna, my dear, put that down and come away!"

But she ripped round at him: "Stand back, John!" she shouted shrilly. "I shall shoot!"

But the old Judge still failed to realize, and continued to come towards her.

"Stand back, John, or I shall shoot!" she screamed. "I'm fair wound up, an' you'll make rae do murder! Stand back, John!"

As she spoke, she fired the pistol to frighten him; and because she had never fired a pistol before, she had no suspicion that the reason her husband's hat flew off was that the bullet had passed

For Farming Purposes Hillcrest Steam Coal
Is the Most Economical
 Because "Hillcrest" "the best coal in the Rocky Mountains," contains less slate, rock and other foreign substances. It will plow more land per ton than any other Coal.
Order some now and try it HILLCREST COLLIERIES, LTD.
 Hillcrest, Alta.
 You saw this advertisement in this magazine. Don't forget to say so when writing.

Why Don't YOU Use Guaranteed Sawyer Canvas Thresher Belts?

Are guaranteed to be free from defects. They are always pliable and are both waterproof and weather-proof. For full information write for Booklet L. SAWYER BELTING CO., Cleveland, Ohio
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There Is No String To This Pipe

 It is absolutely FREE to subscribers who take advantage of this offer

The Weekly Free Press and Prairie Farmer
 Winnipeg
The Canadian Thresherman and Farmer
 Both including Pipe for the nominal sum of **\$1.25**
 The lowest price at which these two papers will be offered this year is \$1.25. It makes no difference whether you take the pipe or not, the price is the same. While the supply of these pipes lasts they will be given away free to all who subscribe. Better get your order in early and be sure of a good smoke.
 1911.
 Weekly Free Press and Prairie Farmer. Winnipeg, Man.
 Find enclosed \$1.25, for which send the "Weekly Free Press and Prairie Farmer" one year, and the "Canadian Thresherman and Farmer" one year, together with pipe, to the following address:
 Name _____
 Town _____
 Province _____ P.O. Box _____
 You saw this advertisement in this magazine. Don't forget to say so when writing.

Well Drilling Machines

Over 200 styles and either deep or shallow wells in any kind of soil on wheels or on gines or horse styles, for drilling or rock. Mounted on sills. With engines, strong, simple, durable. Any mechanic can operate them. Send for catalog.

WILLIAMS BROS.,
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OF CANADA
Established 1875

Capital Subscribed \$ 6,460,000
Capital Paid Up 6,460,000
Reserve Fund 6,460,000
Total Assets 73,000,000

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Brandon Portage la Prairie Winnipeg

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Balgonie Broadview North Battleford
Rosethorn Fort Qu'Appelle Prince Albert
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Interest allowed at Current Rates
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Winnipeg Branch
N. G. LESLIE, Manager.

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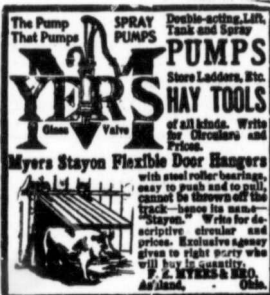
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Specialist in procuring Canadian and Foreign Patents

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SPRAY PUMPS
Double-acting, Lift Tank and Spray

MYERS' HAY TOOLS
Store Ladders, Etc.
of all kinds. Write for Circulars and Prices.

Myers Station Flexible Door Hangers
with steel roller bearings, easy to push and to pull, cannot be thrown off the track—keeps its name—Station. Write for descriptive circular and prices. Exclusive agency given to right party who buy in quantity.

J. MYERS & CO.,
Atchison, Mo., U.S.A.

Mention this magazine when writing advertisers



THE ORIGINAL PECH Boring Machine
THE OLD RELIABLE
Easiest to operate
Bores Faster
Most Durable

Improved Up-to-date Drilling Machines

DESCRIPTIVE CATALOGUE FREE
Cherokee Mig. Co., Dept. A. Cherokee, Iowa.

Mention this magazine when writing advertisers

ERZINGER'S No. 2 CUT PLUG
Leads them all. It's the Best Dollar Tobacco sold anywhere.

JOHN ERZINGER
McIntyre Bldg. - 293 Portage Ave.
Phone 69 Phone 2677

Mention this magazine when writing advertisers

clean through the crown of it, just grazing his bald, old head. If she had thought at all about the displacing of the hat, she would merely have supposed that his sudden start at the shot accounted for it.

The old Judge came to an abrupt stand, his face grown very white, but he said not a word more, and his wife took no further notice of him, not even insisting on his putting up his hands. She wheeled round sharply again upon the Sheriff and his posse, and discovered the Sheriff half way across the grass towards her; for he had thought to catch and disarm her whilst her attention was taken with the Judge. The old woman's eyes blazed as she saw how nearly he had succeeded.

"Back!" she screamed at him, and in the same instant fired. The Sheriff reeled a moment; then steadied himself, and thrust his hands earnestly above his head. The bullet had struck him full in the stomach, but the huge buckle of his belt had turned it, so that it had glanced out through his shirt again harmlessly, a mere half-flattened little chunk of lead.

"Get back to the others!" ordered the old woman, in a voice high and tense. "Turn your backs, all of you!"

As one man the posse faced about.

"Go off a bit from the young man!" said Mrs. Judge Barclay. "Stop there—Keep there!"

She ran swiftly to the prisoner, whirled him round on his heels with one vigorous hand, and pulled out the sheath-knife, which had never been removed from his belt. She slashed at the thin rope about his wrists, and all the time she kept a strict watch upon the line of masculine backs before her. She cut the rope at last, and his hands also, but not badly; then pushed the knife into his cramped fingers, and the lad proceeded to cut loose the lashings about his ankles.

"Now, go!" said old Mrs. Judge Barclay fiercely, as he stood free.

"An' mind an' sin no more! Go!"

She almost shrieked as he stood and stared at her; and she pointed to the horses of the posse. He looked swiftly towards his mother; but the Judge's wife beat him with her free hand fiercely, pushing him towards the horses. And suddenly he obeyed, and began to run stiffly towards the animals.

When he reached them he displayed a little of that sense and ability which I have hinted lay cloaked so securely below his somewhat habitually sullen expression, for, having freed all the reins, he gathered them into his hand, and mounted the finest of the horses, which belonged to the Sheriff; then, leading the rest, he went off at a fast trot.



For the Modern Baby Bunting

Daddy doesn't go out to hunt for rabbit skins. He is less romantic, but more practical.

He buys a

PERFECTION SMOKELESS OIL HEATER

and all during the cold Fall and Winter months his house is kept warm and cozy for his wife and babies.

A Perfection Oil Heater is almost indispensable when there are children in the home. Every home has uses for it.

Made with nickel trimmings, plain steel or enameled, turquoise-blue drums. Ornamental. Inexpensive. Lasts for years. Easily moved from room to room. At dealers everywhere.

THE IMPERIAL OIL COMPANY, Limited
Winnipeg, Montreal, St. John, Halifax and Queen City Division, Toronto.

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

Sawyer-Massey Co.

NOT IN A COMBINE!

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

The Only Attachment

For a Traction Engine that increases its power, or saves a corresponding amount of fuel and water is manufactured by

The Gould Balance Valve Company

KELLOGG, IOWA

Send for Catalog. Agents Wanted for 1913

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

Warranted to Give Satisfaction.
Gombault's
Gaustic Balsam



Has Imitators But No Competitors.
 A Safe, Speedy and Positive Cure for
 Curb, Splint, Sweeny, Capoe Hook,
 Strained Tendons, Founder, Wind
 Puffs, and all lameness from Spavin,
 Ringbone and other bony tumors.
 Cures all skin diseases or Parasites,
 Thrush, Diphtheria. Removes all
 Bunches from Horses or Cattle.

**As a Human Remedy for Rheumatism,
 Sprains, Sore Throat, etc. it is invaluable.**
 Every bottle of Gaustic Balsam sold is
 Warranted to give satisfaction. Price \$1.50
 per bottle. Sold by druggists, or sent by ex-
 press, charges paid, with full directions for
 its use. If send for descriptive circulars,
 testimonials, etc. Address
 The Lawrence-Williams Co., Toronto, Ont.

Mention this magazine when writing advertisers



\$1500 to \$5000 Per Year

have been made by hundreds of people operating the "American" Drilling Machines, 40 years' experience, 80 regular styles and sizes and the output of the world's largest manufacturers of this kind of machinery make

"AMERICAN" MACHINES STANDARD

Made in types for every kind of earth and rock drilling or mineral prospecting, equipped with any power, or operated with your traction engine. Our new 100 page Catalog Free.

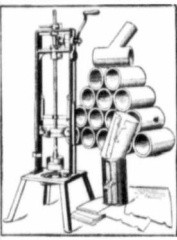
THE AMERICAN WELL WORKS

General Office and Works:
AURORA ILL., U.S.A.

Chicago Office:
 First Nat. Bk. Bldg.

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MAKE YOUR OWN TILE



Cost \$4.00 to \$6.00 Per 1,000 Hand or Power Send for Catalog

FARMERS' CEMENT TILE MACHINE CO.
 WALKERVILLE, ONT.

Mention this magazine when writing advertisers

The line of silent men began to stir uneasily, and old Mrs. Judge Barclay steadied them with her voice. For a space of fifteen minutes, timed by her old-fashioned gold watch, she stood on guard. At the end of that time the Mother of Jem came to, and lifted a muddy face, stiffening sharply into terror with suddenly returned memory. She hove herself up giddily on to her knees, and glared upwards and around her, expecting dreadfully to see something that swayed, writhing, above her from the great branch.

Said Mrs. Judge Barclay: "Your son's gone, ma'am. He'll be well down the trail by this."

Her voice began to shake curiously as she spoke, and suddenly she reached her breaking-point and collapsed, settling all in a heap on the muddy ground. She never heard the dazed, crazy words of fierce gratitude that the other woman gave out as she bent over her, aiding the old Judge to lay her down straight.

Old Mrs. Judge Barclay came round some minutes later, to find her mouth uncomfortably full of bad whisky, and her husband still anxiously loosening garments that Jem's mother had already loosed quite sufficiently. His clumsy old fingers shook as he fumbled, and she put up a sudden hand of tenderness, and caught the fumbling fingers, and held them with an almost hysterical firmness. In a little she rose to a sitting position, and looked round at the ring of vigilance men who stood, each with his whisky-flask in his hand, ready, as it might be thought, to insure that the supply of restorative should not run dry.

Presently Mrs. Judge Barclay spoke.

"Now," she said, turning her white, plucky old face towards the Sheriff, "if you must hang somebody, hang me, not a bit of a young boy like that!"

But they hanged neither old Mrs. Judge Barclay nor young Jem Turrill, for the latter got clear away. And concerning the former, if the truth must be known, the Sheriff and his men entertain for her a respect few women have ever screwed out of their somewhat rugged-natured hearts. Moreover, they kept the affair strictly quiet, for it was not one in which any of them was able to discover undue credit to himself. As for old Judge Barclay, he had nothing of reproach for his wife. In his heart he was unfeignedly thankful that young Jem had got away; and equally glad, in another fashion, that Providence or kind chance had ordered it that his wife should witness the working of the unmitigated Justice that she had so often upheld.



"MAKING GOOD"

Sawyer-Massey Machinery is covered by a very strong guarantee that it will make good and do well the work for which it is designed.

So this is why it pays us to endeavor to give you as nearly trouble-proof machinery as possible, rather than be forced to send you free repairs and furnish you the services of an expert from time to time.

While our machinery may look substantially the same as it did a year ago, yet the specifications will tell you a story of continued re-designing, improving, strengthening, simplifying.

By putting the service into our machinery that you have a right to expect, we automatically cut down our own and your cost of doing business; and we both make money.

SAWYER-MASSEY CO.
 LIMITED

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

Alex. Naismith, Pres. Wm. Paterson, Vice-Pres. C. D. Kerr, Treasurer

The WAWANESA MUTUAL INSURANCE COMPANY

HEAD OFFICE: WAWANESA, MAN.

A. F. KEMPTON, Secretary-Manager

Amount of Insurance in force Dec. 31st, 1911 - - - - - \$31,243,598.00
 Assets over Liabilities - - - - - 522,944.15

THE NUMBER OF FARMERS INSURED 21,543

The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts

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

The Occidental Fire Insurance Co.

Head Office: WAWANESA, MAN.

A. NAISMITH, President R. M. MATHESON, Vice-President
 A. F. KEMPTON, Sec. and Mgr. C. D. KERR, Treasurer

Subscribed Capital - - - - - \$500,000.00
 Security to Policy-holders - - - - - 640,817.29

Full Deposit with Dominion Government
 Agents wanted in unrepresented districts

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

Household Expenses

If the head of your home were removed—would the comfortable daily routine go on as before?

Life Insurance will answer the question.

Over 34,000 persons have found the best reasons for entrusting their Insurance to

The Great West Life Assurance Co.

Head Office: WINNIPEG.

Lowest rates—highest profits, Over \$79,000,000 now in force

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



Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

ENGINEER MACHINIST—Wants position in Manitoba for threshing season. Can do own repairing and capable of keeping engine in first class shape. State wages with reference to H. H. The Canadian Thresherman and Farmer, Winnipeg.

BUYERS, ATTENTION!
THE GEORGE WHITE & SONS COMPANY, LIMITED, BRADTON, MAN.

- 2—25 H.P. White tractors thoroughly rebuilt and in good shape. Each... \$100
 - 1—16 H.P. American Advance tractor \$ 700.00
 - 1—18 H.P. Minneapolis tractor... \$ 600.00
 - 1—20 H.P. Brandon Cornell, Portable \$400.00
 - 1—20 H.P. White tractor... \$1200.00
 - SEPARATORS—Second Hand**
 - 1—Altman & Taylor, 28x50, all attachments... \$ 400.00
 - 1—40x22 Waterloo separator, all attachments... \$ 400.00
 - 1—30x60 Goodison separator, all attachments... \$ 300.00
 - 1—30x60 American Abell, all attachments... \$ 325.00
 - 1—30x56 Peabody separator, all attachments... \$ 300.00
 - 2—32x66 Great West separator, all attachments... \$ 200.00
 - 2—White Challenge separators, thoroughly rebuilt, all attachments. Each... \$ 600.00
- Write us re new goods—We have the best.

GAS ENGINEER wants position on Hart-Parr or Kimmly Oil Pull. Thoroughly experienced. Not a correspondent throttle puller! J. H. Nugent, Gravelbourg, Sask.

STEAM ENGINEER wants position plowing season 1912, Saskatchewan License. Strictly temperate. Reference: State make and size engine. Wages. Chas. L. Simpson, Box 834, Regina.

FOR SALE—Two portable steam engines, 12 and 16 H.P., also two separators, 30 Bell City and 30 Sawyer-Massey, all in good shape. \$150 each. Must be sold. G. T. Grant, Ituna, Sask.

LICENSED ENGINEER MACHINIST (not a throttle puller) would like a plowing or threshing engine this season. State wages. Apply, Box C. K., care of The Canadian Thresherman and Farmer, Winnipeg.

35 H. P. FAIRBANKS-MORSE Gasoline-Kerosene Engine. Worked only 12 days. Suitable for plowing. Also 32-30 Goodison Separator with Feeder, Bagger and Blower. Price for all (including 5 barrels gasoline tank) \$350. Terms to suit. Wm. Paterson, W. Wages, Man.

WANTED—to buy a small second-hand threshing machine. Write particulars to Geo. E. Wood, Alford, Saskatchewan.

FOR SALE—40 H. P. Flour City Engine and 10 plow John Deere Gang. Price and terms on application to Luck 127, Elbow, Sask.

EXPERIENCED ENGINEER wishes job steam plowing outfit for coming season. Also can do during threshing season. Apply to H. H. Wages, to D. McDonald, Red Jacket, Sask.

WANTED—Position on steam plowing outfit for the season of 1912, as engineer, and obliging. Yours truly, R. H. Hargreaves, Melville, Sask.

HOW TO START YOUR GAS ENGINE in the coldest weather, first clip. No hot water, (save time.) Formula 50c.
P.S. For your information, this Formula is a liquid, very high explosive, will operate in coldest weather. I use it myself at all times in cold weather.
J. W. BARRON, 2112 Louis, Brandon

WANTED—Position as engineer on steam tractor, braking or plowing. Sober, industrious and responsible; fifteen years experience on steam engines. Emergency repairing performed. Satisfaction guaranteed; references furnished. O. Selah, Sisseton, North Dakota.

FIREMAN wants position on Steam Plowing or Threshing engine, preferably in Sask. In reply, please state wages and probable length of run. Geo. Meike, Biatche P. O., Que.

FARMS WANTED—We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property. Free. American Investment Association, 15 Palace Building, Minneapolis, Minn.

WANTED—Position as engineer on Hart-Parr, considerable experience, state wages. Apply J. H. Nugent, Caron, Sask.

FOR SALE OR EXCHANGE FOR AUTOMOBILE OR HORSES
Ore 18 H. P. John Abell Simple Tractor Engine, McDonald and McCrindle, Glen Ewen, Sask.

POSITION WANTED—Spring till winter driving gasoline engine. Rumely preferred, experienced electricity and gasoline plowing on prairie. Good character, abstainer, work long hours if necessary. Reply, stating wages offered. Engineer, care Canadian Thresherman.

BE AN ENGINEER—The Heath School of Tractor Engineering (by correspondence) offers you a thoroughly practical course in Tractor and Stationary Engine Engineering for safe engine study. Send for prospectus and full information to E. H. Heath Co., Limited, Winnipeg.

FOR SALE—One Gould Balance valve for 22 or 25 H. P. Gaar-Scott engine. J. Reynolds, Yellow Grass, Sask.

FOR SALE—30 H. P. Flour City Gasoline tractor engine, price \$2000.00, plowed 400 acres. As good as new. For terms, etc., write to Glennie & Hodger, Macdonald, Man.

FOR SALE—Hawkeye Band Cutter and Self Feeder, used one season. Size 36, inch. First fifty dollars takes it. G. W. Vincent, Cor. Arlington and Ellice, Winnipeg.

WANTED—Engine gang, six or eight bottoms; must be in good repair. Box 70, Morse, Sask.

FOR SALE—Case 25 H. P. engine, fitted with contractor's tank and coal bunkers. Engine was reduced this fall and a new cylinder and head chest put on. Is in 1st class running order. Also case separator, 44x66, in good repair. \$1600.00 says and delivery will separate. This is a bargain. Apply J. T. Taylor, 775 Corydon Ave., Winnipeg.

FOR SALE—One 33-inch Waterloo Feeder. Used 24 days. Cor. Heinrichs, Box 1. Lowe Farm, Man.

FOR SALE—Lots in 34th St. James, close to several large manufacturing plants. Price \$250.00 each. Easy terms. 672, Win. reg.

FOR SALE—We have lots rent in Transcona. Hurry! Hurry! if interested. Box 3079, Winnipeg.

FOR SALE—Five acre improved fruit ranch on the Okanagan Lake, B. C. For sale or exchange for Winnipeg property. Box 3079, W.ipeg.

WANTED—Position as Engineer on a steam traction outfit. Fully experienced. Can furnish references. Address J. E. Peach, Clava, Man.

WANTED—Gasoline Tractor engineer for "Flour City 40." Must have had tractor experience. References required. Good pay. Also want woman cook for cottage; also man for garden and dairy. W. H. Dawson, Jr., Goldfield, Alta.

TWENTY HORSE GAS ENGINE, Separator, five furrow plow, stable and break bottom, to forty-five acres. First class running order. Three thousand takes lot. Apply, "Thresherman" Canadian Thresherman and Farmer, Winnipeg.

MACHINICS, experienced in Gasoline Engines, and also possess running Rumely, International, etc. Both have worked with Rumely Separator. International Companies, understanding all matters in connection with these products. Communicate with Geo. Hart, 707 St. Scoville Ave., Oak Park, Ill.

"A SNAP"—FOR SALE—John Deere engine gang, 8 breaker bottoms, 1910 make, in first class condition, will plow 300 acres. Apply to Neil Wright, Box 155, Wells, Good, Man.

FOR SALE OR TRADE FOR GOOD LAND—One 35 H. P. Double Cylinder Steam Engine with 10 Bottom Cokeshutt Plow. All in first class shape. Elias Ojstern, Warren, Man.

WANTED—Position on steam plowing outfit, first class, experienced. Frank Campbell, Marquette, Man.

FOR SALE—Imported English Bull Dog "Lucky Barge," big winner Winnipeg Winter Show 1911—Cheap. M. Cochran, Imperial Bk., Winnipeg.

WANTED—Position as Engineer on steam traction outfit for threshing or would take both ends. Can do own repairing. Nine years experience. Best of references and certificate for same. Am strictly temperate. Address E. F. Shupe, Maple View, Ont.

WANTED—Gasoline Tractor, Separator, and Plows, one or all. Write giving Make, Size, Age. Price and terms to Box 51. Dayland, Alta.

LIVE IN A MILD, WARM CLIMATE—The Fraser Valley of British Columbia, near the big city of Vancouver. Grass keeps green all winter. First class farmers. Residents have running water, bathrooms and telephones in their houses. Splendid high schools and churches. Fast electric tram service into Vancouver. Railroad station only a quarter of a mile away; splendid driving roads. Farmers with 5 acres make from \$100 to \$200 a year. One year crop in berries, poultry and small fruits. I can sell you a 5 acre farm for from \$50 to \$200 down, the balance \$10 to \$20 a month. If you want to know just how they make big money there write me, W. J. Kerr, Ltd., 1711 Columbia Street, New Westminster, B. C.

FOR SALE—Threshing machine, also engine gang plow. For particulars apply to W. L. Barker, Box 1714, Calgary.

WANTED—Catalogues of Steam and Gasoline, Threshing and Plowing Outfits. Address G. H. Lewis, Coxy Nook, Sask.

FOR SALE—Massey-Harris warehouse in good order, work at Saskatoon. Agency guaranteed for first class man. Apply care of Canadian Thresherman and Farmer.

WANTED TO BUY Steam Traction Engine about 20 H. P. Address W. W. Kennedy, Magyar, Sask.

GAS ENGINEER desires position with reliable farmer, April to November; operating engine, Box 171, Lumsden, Sask.

ENGINEER WANTS POSITION on ploughing outfit for coming season. Holds third class certificate, four seasons' experience. Strictly temperate. Apply to R. McGhie, Caron, Sask.

WANTED—Position on plowing engine for autumn as fireman. Am holder of diploma from Heath School of Engineering by correspondence and could run engine if necessary. Would prefer to work at Saskatoon. Apply, stating wages, to H. E. M. Mahon, Box 11, Kinley, Sask.

FOR SALE—Avery; 1911 model 30 h.p. Albern special under-mounted engine, equipped for plowing. Cokeshutt engine gang, 8 bottom. Both run 8 & 6. Also new 36 x 60 Avery separator with feeder and blower. All 3 for \$3,800.00 cash. No trade considered. Davy C. Purfurst, St. Paul, Minnesota.

160 ACRE FARM FOR SALE OR TRADE—For Tractor Plowing outfit. Land is quarter mile from town of Ladysmith, Man. Andrew Dests, Hanlan, Man.

FOR SALE—Small separator complete with all attachments. \$400 cash. Box 13, Welby, Sask.

WANTED—Gasoline-Kerosene Tractor. Write giving make, size, age, price and terms. Box 24 Colonsay, Sask.

- FOR SALE**
- 15 Horse Case Simple Portable Engine... 20540
 - 15 Horse Case Simple Portable Engine... 15833
 - 15 Horse Compound Portable Engine... 13424
 - 18 Horse Simple Traction Waterloo... 323
 - 10 Horse Portable Sawyer-Massey... 8299
 - 10 Horse Portable Sawyer-Massey... 1419
 - 20 Horse Simple Traction Sawyer-Massey... 1619
 - 20 Horse Compound Traction Engine, Case 7936
 - 20 Horse Simple Traction Engine, Case... 17721
 - 20 Horse Simple Traction Engine, Case... 16912
 - 32 Horse Simple Traction Engine, Case... 19019
- J. I. CASE, THRESHING MACHINE COMPANY, Winnipeg, Canada.**

EXPERIENCED Licensed Engineer and Traction Plowman wants position for the coming season. Eight years practical experience in steam traction work. Will consider position in Man., Sask., or Alta. Charles Rondeau, Saint Leon, Man.

WANTED—By holder of second class certificate position as engineer; have also good knowledge of steam engines. Address care of Box 148, Oxbow, Sask.

FOR SALE
SECOND-HAND REBUILT MACHINERY.

- Two 25 H. P. Simple J. I. Case engines.
 - One 15 H. P. Simple J. I. Case engine.
 - One 15 H. P. Compound J. I. Case engine.
 - One 10 H. P. Compound J. I. Case engine.
 - One 32x54 Wood Case separator.
 - One 28x24 Wood Case separator, with wind stacker, self feeder and weigher.
- J. I. CASE THRESHING MACHINE CO., Calgary, Alberta.**

FOR SALE

We have on hand at present a very full line of Rebuilt and Second-hand Engines and Separators which we are offering at attractive prices. Write us fully what you are thinking of buying, when we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully repainted and look exactly like new. If you write us at once we are sure to have the size you almost want.

We also have a thoroughly Rebuilt 25 H. P. Saw Mill Engine. Can hardly be distinguished from new goods. Will hold up.

SAWYER-MASSEY COMPANY LIMITED
Winnipeg, Man. J. I. Case.

BARGAINS

- 1—32 H.P. Port Huron engine, rebuilt and in first class shape.
 - 1—American-Abell 20 H.P. engine, rebuilt.
 - 1—Minneapolis Separator 44x72, rebuilt. With all connections.
 - 1—32x54 Avery Separator complete, just rebuilt.
 - 1—30x60 Avery Separator to be rebuilt complete.
 - 2—Avery 30 H.P. double undermounted engines.
 - 1—30 H.P. Northwest engine, not rebuilt, cheap.
 - 1—J. I. Case steel, 42x60 separator complete with all attachments.
 - 1—42x70 Avery separator, will be rebuilt in time for next fall's work.
- If you are interested in second hand goods please write and let us know what you want as we are making deals almost every day, and feel sure that we can fix you up with almost anything you want, either in new or second hand goods.
- HAUG BROS. & NELLEMMOR Co. Ltd.**
WINNIPEG.

FOR SALE
30.75-H.P. Gasoline-Kerosene Engine. New, secure on a trade. Also eight-bottom Cokeshutt plow, slightly used—a bargain. Address, Caswell Manufacturing Co., Box 3079, Winnipeg, Canada.

FOR SALE—Second hand repairs for Gaar-Scott Separator, size 36-60. Will sell for less than half price. Fred Crump, Two Creeks, Manitoba.

FOR SALE—Hart-Parr plowing engine. John Deere and furrow plow, all complete and 9-inch Ideal Duplex Feed Grinder. Full particulars apply to H. J. Wilbur, Morris, Man.

FOR SALE—One 20 H.P. double cylinder Nichols & Shepard tractor engine, and one 32x52 Red River special separator complete, feeder weigher, blower, etc.; run five seasons; in good running order. Box 155, Russell, Manitoba.

FOR SALE at sacrifice price—Good second-hand steam plowing and threshing outfit located 32 mile south Winnipeg, Manitoba. Address Owner, Box 184, Mapleton, Blue Earth County, Minn.

FOR SALE—Hart-Parr engine, seven bottom Cokeshutt breaker; also stubble plow, three discs, three fine rans, wagen, harness, two loggers, blacksmith tools. Plowed but 2000 acres, now at New Dayton, Alberta. Guaranteed in good workable condition or no sale. Cost \$3000; now offered for \$2000 on good terms. Am no farmer. Dr. Beck, Clarkfield, Minnesota.

FOR SALE—A BARGAIN—Hawkeye Self-Feeder, 36 inches. Run only one season. In good condition. 555 Burnell Street, Winnipeg.

FOR SALE—32 H. P. Reeves Steam Engine, only plowed 320 acres. Cheap for quick sale. May consider a trade. Apply L. M. Armstrong, 314 Donohoe-Block, Tel. 1454, Regina, Sask.

A SNAP FOR SALE—One Double Cylinder 35 h.p. Geiser Steam Traction Engine specially built for plowing and threshing, complete, in first class condition. Apply Burridge-Cooper Co., Ltd. Winnipeg.

GASOLINE TRACTOR FOR SALE—I have first class 30 H. P. Gasoline Tractor for sale. This tractor is manufactured by Kinard-Haines, Minneapolis, whose Gas Tractors have carried over more Diplomas and first class prizes in Western Canada. Having disposed of my farm, I will sell this tractor right. Buy now so as to have use of it for threshing season. Write for particulars. Address W. D. Weedy, Brandon, Manitoba.

SALESMEN WANTED—Threshermen or engineers to sell oils, greases, belts, packing, lacing, paints, etc. First class opportunity for agricultural men. O. L. Doy, Cleveland, Ohio.

FOR SALE—AT A BARGAIN—Seven Furrow Cokeshutt Gang; also six breaker bottoms, all in good shape, plus plow, less than \$500 each. Address Box 31 Dominion City, Man.

WANTED now for Western trade, good men only, to sell our well known lines of specialties in fruit and ornamental trees, shrubs, seed potatoes, etc. Outfit free, exclusive territory, pay weekly; whole or part time engagement. Write Pelham Nursery Company, Toronto, Ont.

WANTED—Experienced and Licensed Engineer wishes position on Gasoline Tractor for season with reliable party, industrious and sober. Address George Merking, Leofeld, Sask.

ENGINEER WANTS POSITION on plowing engine in Sask. or Alberta. Had 4 years experience. Can do own repairing. Graduate of the Heath School of Engineering. State wages. Chas. B. McEln, Summerberg, Sask.

WANTED—Excellent opportunity for energetic salesman; highest salary paid to right men to represent an old established company and demonstrate and sell their Cream Separator. Reply in writing, stating salary, age, experience and references, to P. O. Box 255, Regina.

GAS ENGINEER would like position on plowing outfit. Thoroughly experienced. Emergency repairing performed. Best references. State make and size of engine. Wages. J. R. Hislop, Pelly, Sask.

WANTED—Good Separator, man also experienced Engineer to run an "Oil Pull". Plowing at night time. 45c. M. C. Wilson, Box 23, Gravelbourg, Sask.

SALESMEN—are drawing two to six hundred dollars per month. Traveling with their own teams. Selling our Lubricating Oils, Greases, Paints and Specialties, direct to the consuming trade. Now is the time to take orders for immediate and spring delivery. Inland Oil Works Company, Winnipeg, Canada.

40-HORSE ENGINEER—Wants position on steam plowing outfit this season. Holds certificate 40-Horse-Power in Saskatchewan. References given. Strictly temperate. When replying please state make and size of outfit and how old engine is; also wages offered. Apply Chas J. Kallio, Pantalon, Sask.

IMPLEMENT BUSINESS—For sale. Must sell on account of poor health. Good location and business. A. E. Eckland, Brock, Sask.

FOR SALE—Forty Horse Gaar-Scott Engine, first-class condition. Will demonstrate. J. O. Smith, Ellis, Man.

WESTERN CANADIAN IMPLEMENT DIRECTORY

EXPLANATION.—First find the Implement Wanted and the Number opposite will be the Number of the Concern, in the first column, that handles it.

1—AMERICAN SEEDING MACHINE CO., Winnipeg.

2—BEATTY BROS., Brandon.

3—BELL ROBT. ENGINE & THRESHER CO., Winnipeg.

4—BRANDON PUMP & WIND MILL WORKS, Brandon.

5—BRITISH CANADIAN AGRI. TRACTORS, Saskatoon.

6—BUFFALO PITTS CO., Moose Jaw.

7—BURRIDGE-COOPER CO., Winnipeg.

8—CANADIAN FAIRBANKS CO., Winnipeg, Calgary, Saskatoon Vancouver.

9—CANADIAN HOLT CO., Calgary.

10—CANADIAN MOLINE PLOW CO., Winnipeg.

11—CANADIAN RUBBER CO., Winnipeg, Vancouver.

12—CANADIAN STOVER CO., Brandon.

13—CANADIAN SWENSONS CO., Winnipeg.

14—CASE, J. I. T. M. CO., Winnipeg, Regina, Calgary.

15—COCKSHUTT PLOW CO., Winnipeg, Regina, Calgary, Edmonton.

16—CRANE & ORDWAY, Winnipeg.

17—DEERE, JNO. PLOW CO., Winnipeg, Regina, Calgary, Edmonton Saskatoon, Lethbridge.

18—DE LAVAL SEPARATOR CO., Winnipeg.

19—DOMINION SPECIALTY CO., Winnipeg.

20—DUIS GEO. & CO., Winnipeg.

21—EMPIRE CREAM SEPARATOR CO., Winnipeg.

21 1/2—GARDEN CITY FEEDER CO., Regina.

22—GAS TRACTION CO., Winnipeg, Saskatoon, Calgary.

23—GENERAL SUPPLY CO., Winnipeg.

24—GOODYEAR TIRE & RUBBER CO., Winnipeg, Regina, Calgary.

24 1/2—GOULD, SHAPLEY & MUIR, Winnipeg, Regina.

25—GRAY-CAMPBELL CO., Winnipeg, Brandon, Moose Jaw, Calgary.

26—HAUG BROS., & NELLEMECO CO., Winnipeg, Calgary, Regina.

27—HARMER IMPLEMENT CO., Winnipeg.

28—HAIT PARR CO., P. la Prairie, Regina, Calgary, Saskatoon.

29—HERO IMPLEMENT CO., Winnipeg.

30—INT. HARVESTER CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon, Brandon.

31—LISTER R. A. & CO., Winnipeg.

32—LOUEN HARDWARE & SPECIALTY CO., Winnipeg.

33—MANITOBA WINDMILL AND PUMP CO., Brandon.

34—MASSEY-HARRIS CO., Winnipeg, Regina, Calgary, Edmonton, Saskatoon.

35—MAYTAG CO., Winnipeg.

36—McLAUGHLIN CARRIAGE CO., Winnipeg.

37—McRAE ALEX., Winnipeg.

38—MELLOTTE CREAM SEPARATOR CO., Winnipeg.

39—MINNEAPOLIS STEEL AND MACH. CO., Regina.

40—MOODY MATHEW & SON, Winnipeg.

41—NEEPAWA MFG CO., Neepawa, Winnipeg.

42—NICHOLS & SHEPARD CO., Regina, Winnipeg.

43—ONTARIO WIND ENGINE & PUMP CO., Winnipeg.

44—PETRIE MFG. CO., Winnipeg, Calgary, Vancouver, Edmonton.

45—PIONEER TRACTOR CO., Calgary.

46—RAYMOND MFG. CO., Winnipeg.

47—REEVES & CO., Regina.

48—RENFREW MACH. CO., Winnipeg.

49—RIESBURY PUMP CO., LTD., Brandon.

50—RUMELY M. CO., Winnipeg, Calgary, Saskatoon, Regina.

51—SAWYER & MASSEY CO., LTD., Winnipeg.

52—SHARPLES SEPARATOR CO., Winnipeg.

53—STEVENS BRUSH CUTTER CO., Didsbury.

54—STEWART SHEAF LOADER CO., Winnipeg.

55—TUDHOPE-ANDERSON CO., Winnipeg, Regina, Calgary.

56—VIRDEN MFG. CO., Virden.

57—VULCAN IRON WORKS, Winnipeg.

58—WATERLOO MFG. CO., P. la Prairie, Regina.

60—WATS N JNO MFG. CO. Winnipeg.

61—WESTERN FOUNDRY CO., Saskatoon.

62—WESTERN STEEL & IRON CO., Winnipeg.

63—WHITE, GEO. & SONS, Brandon.

63 1/2—WINNIPEG CEILING & ROOFING CO., Winnipeg.

64—WINNIPEG RUBBER CO., Winnipeg.

BUGGIES AND CUTTERS.

Armstrong Buggies and Cutters... 15

Barris Buggies and Cutters... 61

Bayne Carriages Co... 37

Brackville Buggies and Cutters... 17

Dominion Carriages (Transfer Agents)... 6

Greer Buggies... 62

Henry Buggies... 10

McLaughlin Buggies and Cutters... 36

Munro-McIntosh Buggies & Cutters... 10

Reidner Buggies... 17

Tudhope Buggies and Cutters... 55

CREAM SEPARATORS.

Blue Bell... 30

Champion... 55

Earl... 30

De Laval... 18

Empire... 21

Magnet... 44

Massey... 34

Mellotte... 31

National... 46

Sharples... 15

Standard... 48

CULTIVATORS AND STUMP PULLERS.

Climax Stiff Tooth Cultivators... 15

Cockshutt Cultivator... 15

Deere No. 2 Cultivator... 17

Hoary's Cultivator... 30

Elk (2 Horse) Cultivator... 17

Fleury's Cultivator... 17

Frost & Wood Sculler... 15

Harris Cultivator... 21

K. A. (2 Horse) Cultivator... 30

McCormick Cultivator... 30

Massey-Harris Corn Cultivator... 35

Paria Sculler... 49

Sylvester Cultivator... 55

Verity Cultivator... 34

DISC AND DRAG HARROWS.

Ajax Drag... 17

Bassell Disc... 17

Boss Drag... 40-42-40

Canadian Moline Boss Drag... 10

Canton Disc... 33

Case, J. I. Disc and Drag... 27

Cyclone Wheel Disc... 17

Cockshutt Disc and Drag... 15

Cockshutt Lever and Clip... 17

Deer Disc and Drag... 17

Deere King Boss Drag... 17

Deere King Boss Drag... 17

Deering Disc Harrow... 30

Defiance Jr. Disc... 62

Economy Disc... 17

Emerald Disc and Drag... 54

Evans Disc... 1

Fleury's Steel Channel Drag... 17

Fleury's Clipped Drag... 17

Fleury's Disc... 17

Fuller and Johnston... 61

Grand Detour Drag and Disc... 60

Hosier Wheel Disc... 1

International Diamond and Lever... 30

Massey-Harris Disc and Drag... 34

McCormick Disc... 30

Moline Flexible Drag and Lever... 10

Noxon Disc and Drag... 64

Harris Disc and Drag... 49

Scotch Diamond Drag... 5

Superior Wheel Disc... 1

Universal Drag... 17

Universal Tongue Trucks for Disc Harrows... 17

Watson Drag... 60

Wilkinson Drag and Disc... 61

Windsor Disc... 15

FEED AND ENSILAGE CUTTERS AND PULPERS.

Cockshutt Feed Cutters... 15

Cockshutt Pulper... 15

Fleury's Feed Cutter... 17

Geiser Feed Cutter and Grinder... 7

Massey-Harris Feed Cutter... 34

Watson's Feed Cutter... 60

Watson's Root Pulper... 60

FEED GRINDERS.

Brandon... 6

Challenge... 60

Cyclone... 9 & 7

Daisy... 7

Diamond... 55

Fleury's... 17

Goodley's... 17

Manitoba... 37

Maple Leaf... 44

Ontario... 15

Scientific... 60

Shover Ideal... 10

Windsor... 30

Victor... 60

Watson's Ideal... 60

GARDEN IMPLEMENTS, INCUBATORS AND POULTRY SUPPLIES.

Chatham Incubator... 25

Cyphers Incubator... 60

Fountain Aspergry... 53

Iron Age (Garden Implements... 53-61

Maxwell... 55

Planet Jr. Garden Tools... 41-55

CLEANERS, FANNING MILLS AND PICKLERS.

Acme Pickler... 6

Automatic... 19

Chatham Fanning Mills... 25

Foster Fanning Mill... 17

Hero Fanning Mill... 29

Hero Pickler... 29

Superior Fanning Mills... 27

Windsor Grain Cleaner... 19

Wonder Fanning Mill... 13

GASOLINE ENGINES.

Avery Tractor... 26

Brand... 6

Buffalo Pitts, (Tractor)... 6

Caters... 14

Case Tractor... 14

Fairbanks (Stationary, Portable Tractor)... 8

Fleur... 30

Fuller & Johnson... 61

Gade... 7

Gas Tractor... 22

Geiser (Stationary, Portable Tractor)... 7

Gilson... 28

Hart-Parr Tractor... 24 1/2

Holt Caterpillar... 9

Ideal... 24 1/2

International... 30

International (Traction)... 30

Ivel (Traction)... 62

Manitoba... 20

Minneapolis... 20

Master Workman... 60

Nichols & Shepard... 42

Ohio (Traction)... 58

"Oil Pull" Rumely (Tractor)... 57

Massey-Harris... 34

Pioneer (Tractor)... 45

Rustin Procter (Tractor)... 5

Saxony Massey (Tractor)... 57

Stickney... 43

Stover (Stationary, Portable, Tractor)... 12

Sylvester... 63

Twin City "40" (Tractor)... 38

Universal Gas Tractor... 58

Watrous... 68

Waterloo Boy... 7

HARVESTING MACHINES.

Champion... 30

Deering... 30

Frost & Wood... 15

Massey-Harris... 34

Massey-Harris Reaper... 34

Massey-Harris Corn Harvester... 34

McCormick... 30

Noxon... 55

HAY LOADERS, HAY PRESSES, HAY TOOLS, MOWERS, RAKES, SWEEP RAKES, HAY STACKERS AND BEAF LOADERS.

Admiral Hay Press... 15

B. A. J. Hay Press... 15

Buffalo Hay Press... 51

Canton Hay Press... 30

Chatham Hay Press... 30

1 Champion Mower... 30

1 Champion Side Delivery Rake... 25

Dain Hay Loader and Stackers... 17

Dain Hay Press... 17

Dain Side Delivery Rig... 17

Deere Hay Loader... 17

Niering Hay Stackers... 30

Deering Sweep & Hay Rack... 30

Deering Mower... 33

Frost & Wood Mower... 15

Tedder... 15

Frost and Wood Champion Hay Loader... 15

Cockshutt Horse Power... 15

International Hay Stackers... 30

International Sweep Rake... 30

International Hay Press... 30

Jenkins' Sweep Rake... 10

Keystone Hay Loader... 30

Louden Hay Tool... 32

Massey-Harris Mower... 34

Massey-Harris Sweep Rake... 34

Massey-Harris Hay Tedder and Loader... 34

Massey-Harris Side Delivery Rake... 34

McCormick Hay Stackers... 30

McCormick Mower... 30

McCormick Sweep & Hay Rake... 30

Noxon Mowers & Rake... 55

Stewart Sheaf Loader... 54

Success Hay Loader... 10

Tiger Steel Rake... 15

HORSE POWERS AND JACKS, SAW MILLS, WOOD SAWS AND TREAD POWERS.

Caters Wood Saws and Jacks... 4

Deering Horse Power... 15

Hosier... 17

Fleury's Horse Power and Jacks... 17

Fleury's Wood Saws and Tread Powers... 17

Geiser... 15

Gaar Scott Saw Mills... 50

Geiser Saw Mills and Horse Powers... 7

Gold Shapley & Muir Wood Saws... 15

Horse Powers, Tread Powers Bevel Jacks... 51

LAND ROLLERS AND PULVERIZERS.

Acme Pulverizers... 17

Canton Land Roller... 30

Canton Packer... 30

Campbell Sub-Surface Packer... 30

Cockshutt Land Roller... 15

Cockshutt Pulverizer... 15

Cockshutt Combined pulverizer and Sub-Soil Packers... 15

Deere Land Roller... 17

Fleury's Pulverizer... 49

Pultons Sub-Surface packer... 10

Hilborn Land Roller... 55

Moline Pulverizer... 64

Moline Parallel Pulverizer... 10

Verity Land Roller... 34

Verity Pulverizer... 34

Watson's Flexible Pulverizer... 60

Watson's Land Roller... 60

Western... 61

MANURE SPREADERS AND LITTER CARRIERS.

B.T... 2

Clover Leaf... 30

Corn King... 30

Hawkeye... 35

Kemp... 15

Mandit... 10

Louden... 32

Massey-Harris... 34

National... 30

Success... 17

GANG PLOWS, ETC.

Canton... 30

Case, J. I. Engine Gang... 27

Case, J. I. Engine Gang... 27

Canton Mogul Engine Gang... 30

Cockshutt Engine Gang... 15

Deere... 17

Deere Engine Gang... 17

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Emerson Engine Gang... 55

Geiser Engine Gang... 7

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Massey-Harris Engine Gang... 30

Moline Engine Gang... 10

Moline Engine Gang... 30

National... 49

Railroad Grading & Rooter Plows... 58

Verity... 34

PORTABLE GRAIN ELEVATORS.

Cyclone... 17

Gopher... 27

North Star... 17

Tugart... 7

Winnipeg Ceiling & Roofing Co... 63

Wizard... 27

POTATO AND BEET MACHINERY.

Aspinwall Potato Planters and Sprayers... 15

Aspinwall Sorters and Cutters... 15

Deere Potato Planters and Beet Tools... 1

Dowden Potato Harrow... 17

Egan Potato Slicer... 30

Evans Potato Planter... 1

Eureka Potato Planter... 17

Fleury's Potato Planter... 17

Moline Knocker Potato Dig... 10

Splitstoser Sprayer... 17

RIDING ATTACHMENTS, BARROW CARTS, WHEEL BARROWS AND HAND CARTS.

Cockshutt Wheel Barrow... 15

Cockshutt Harrow Cart... 15

Deere Harrow Cart... 17

Elipse High Harrow Cart... 27

Emerson Harrow Cart... 55

Fleury's Wheel Barrows... 17

Fuller & Johnstone Harrow Cart... 61

Kramer Rotary Harrow... 17

Naylor Harrow Attachments... 27

P. & O. Harrow Cart... 30

P. & O. Hand Cart... 30

Racine Rotary Harrow... 14

Success Harrow Cart... 30

Verity Wheel Barrow... 34

Watson's Wheel Barrow... 60

ROAD SCRAPERS AND ROAD MACHINES.

Cockshutt Scrapers... 15

Good Roads Machinery... 15

Indiana Road Scrapers... 15

Russell Elevator... 30

Standard Reversible Grader... 17

Toronto Pressed Steel Scrapers... 61

Sawyer & Massey Reversible Grader... 51

SEEDING MACHINES.

Cockshutt... 15

Deering... 30

Frost and Wood... 15

Hosier... 17

Kentucky... 1

Massey-Harris... 30

McCormick... 30

Monitor... 10

Supply & Muir... 15

Sylvester... 55

Van Brunt... 17

THRESHING MACHINERY, SELF FEEDERS, WIND STACKERS AND ATTACHMENTS.

Advances... 50

American Abell... 50

Autman & Taylor... 30

Avery... 26

Case J. I... 14

Cuddy Steering Device... 62

Diota Weigher (Ask Any Threshing Co.)... 14

Dreadnought Engine Guide... 50

Garr Scott... 50

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Garden City Feeder... 21

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Brown Wing Carrier (Ask any Threshing Co.)... 40

Neepawa... 41

Nichols & Shepard... 142

Parson's Feeder... 35

Perfection Weigher (Ask any Threshing Co.)... 17

Reeves... 47

Mandit... 10

Ruth Feeder... 35

Sawyer Massey... 51

Waterloo... 58

Watrous... 59

Watrous Justice Measure... 56

White Geo. & Sons... 53

White Wings Feeder... 35

THRESHERS' SUPPLIES.

Brown Wing Carrier (Ask Any Threshing Co.)... 8

Canadian Rubber... 11

Crane & Ordway... 17

Diamond Stephen... 17

General Supply Co... 23

Goodyear Tire & Rubber Co... 24

Thresher Supplies Carried in Wagon... 17

Madison Kipp Lubricators... 35

Canadian Creamery... 35

Maytag Co... 35

Ohio Injection Co. (Ask any Threshing Co.)... 35

Penberby Injector & Brass Goods... 35

Handled by all Leading Jobbers and Thresher Companies... 35

Winnipeg Rubber... 94

WAGONS AND SLEIGHS.

Adams Farm Trucks... 15

Adams Lorries & Heavy Team Gears... 15

Adams Wagons & Sleighs... 15

Anderson Metal-lined Trucks... 55

Avery Wagons & Grain Tanks... 28

Bain Wagons & Sleighs... 39

Canadian Creamery Wagon... 30

Chatham Wagon... 10-64

Cockshutt Metal Wheel Truck... 15

Columbus Wagon... 30

Davenport Wagon... 17

Eureka Steel Wheel Trucks... 27

Fish Bros. (Glasgow) Wagon... 55

Genuine T. G. Mandt Wagon... 10

Grand Detour... 60

Gray Light Farm Sleigh... 30

Hamilton Wagon... 30

Hamburg American Wagon... 64-60

Metcalf Wheel Truck... 17

Millburn Wagon... 30

New Deal Wagon & Sleighs... 17

New Deal Farm Truck... 17

New Maline Wagon... 17

Northern Sheet Metal Wheel Truck... 17

Old Dominion Wagons & Sleighs... 30

Peoria Wagons & Sleighs... 30

Reynold Wagon... 36

Shaws & Gravel Spreading Wagon... 58

Webber Wagon... 30

Winona Wagon... 36

WELL LIFTING MACHINERY.

Austin... 0

Brand... 6

Kelly & Tannhill... 43

Sparta... 8

Standard... 45

WIND MILLS, TANKS AND PUMPS.

Caters Pumps... 4

Caters Star Windmill... 4

Canadian Air Motor... 43

Chicago Aeromotor... 27-7

Florence Pump... 4

Goodley Shapley & Muir Wind Mills and Pumps... 24

Hayes Pumps... 35

Londen Pumps... 34

Manitoba Pumps & Wind Mill... 33

Manitoba Tanks... 30

Ontario Pumps... 43

Riesbury Pumps... 49

You Need This Dollar Earning Knowledge



2,000 FARMER STUDENTS

Last season, nearly 2,000 students were enrolled in our Correspondence Course in Traction Farming and Engineering. Over 900 attended the Hart-Parr practice schools. The cut shows a group of them in session at Regina, Sask., Canada, Feb. 20th to 29th, 1912.

Practical Course of Home Study

This Correspondence Course is the only practical course ever offered to practical farmers. It comprises 15 lessons in bound booklet form. Lessons that teach you—right in your own home—all about the detail construction, operation and care of gas tractors, and how to do power farming better and cheaper. Text written in simple language, by acknowledged experts. Technical terms explained in a way that everyone can understand.

Get This Money-Making Knowledge

Each lesson brimful of helpful, money making, money saving information and pointers. Entire course worth many dollars to prospective buyers, tractor owners and wage earners.

Take this course. It teaches you how to select the best tractor. How to regulate the fuel, operate levers, control speed, make proper adjustments and repairs, without the help of experts. Shows how to lay out fields, make all kinds of hitches. Teaches tractor owner how to become an expert traction engineer and earn for a good paying position.

Students' Free Practice

Then the practice school begins. Here you get to use their knowledge. Here you get to use your own. With the engine right before you, you learn all the details and all the other things that are necessary. Expert instructors are on hand to correct your errors, and make you a better tractor operator.

These practice schools are held at practically all the leading correspondence courses.

Location of Schools

This season, practice schools will be held at the following locally located points.

In United States

- Aberdeen, S. D.
- Fargo, N. D.
- Grand Forks, N. D.
- Wichita, Kan.

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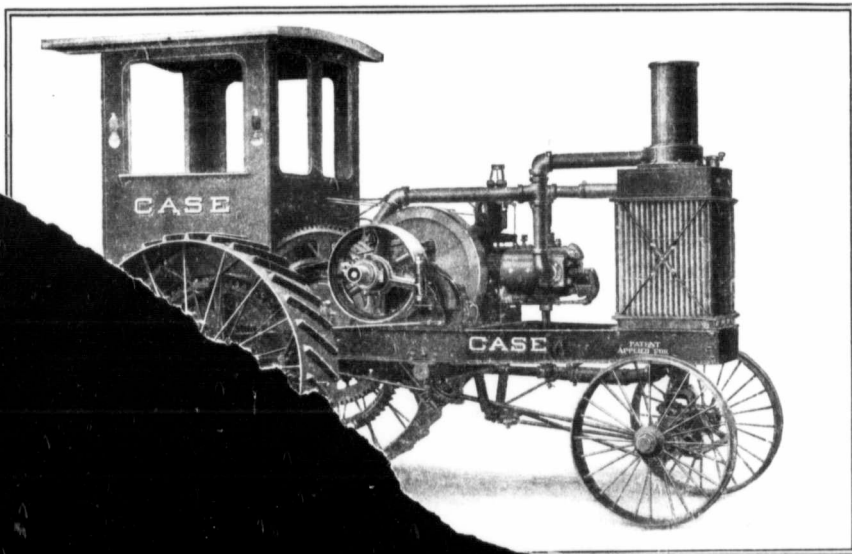
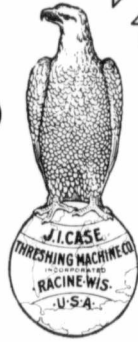
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Get These Seven Facts Straight In Your Mind



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