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THE CANADIAN THRESHERMAN & FARMER

CANADA'S FARM MACHINERY MAGAZINE
WINNIPEG CANADA

FEBRUARY, 1912



John Deere Engine Plows

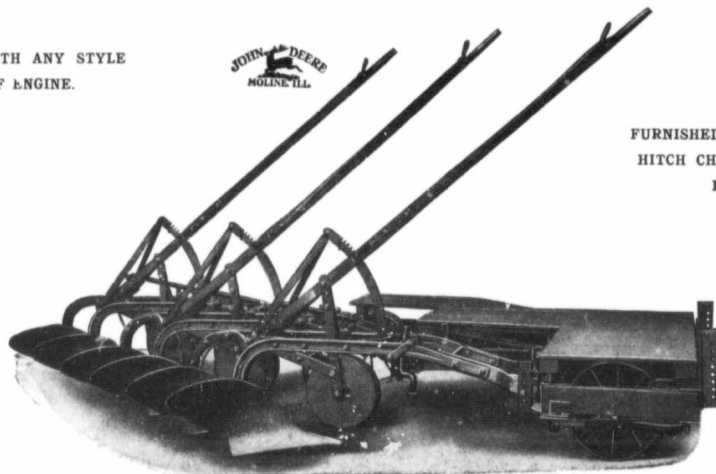
With Quick Detachable Shares

CAN BE USED WITH ANY STYLE
OR MAKE OF ENGINE.



FURNISHED COMPLETE WITH
HITCH CHAINS READY FOR
ENGINE.

EACH
LEVER
LIFTS TWO
BOTTOMS.



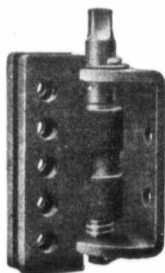
MADE WITH 4, 6, 8, 10, 12 or 14 BOTTOMS

The Money in Engine Gang Plowing

On many quarter-section farms an engine plowing outfit brings solid profits. On larger farms it is absolutely necessary if one is to get the best he can make out of the land. Getting first rate plowing done in time has everything to do with the crop results. Short seasons will not fit in with horse power except at a ruinous cost. The increased product from soil that has been properly handled when in the best condition for plowing will in a season or two pay for the complete outfit of engine and engine gang plow. In a perfect seed bed uniform work is imperative. You'll always get it with big crops from a John Deere Engine Gang.

The Two Bottom Lift

One man can easily handle all the bottoms. They are built in pairs and each pair of bottoms will rise over a hummock or go down into a depression without disturbing the others. Attaching Beams and Bottoms in pairs gives plenty of spread between the clevises, preventing winging and passing around obstructions instead of over them. With the John Deere Two Bottom Lift you get absolutely uniform work. There are no slanting furrows and the plows cannot tip.



Quick, Detachable Shares

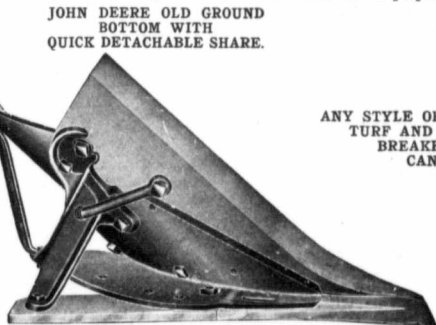
John Deere Engine Plows are equipped with quick detachable shares that can be put on or taken off in a small fraction of time required for ordinary shares. Only one nut to remove. An eyebolt attached to the share passes through a hole in the bracket and one nut holds the share firmly in place. A lug on the share fits into a slot on the land side of the frog. This holds the share rigid and true.

The Screw Clevis

Each clevis on a John Deere Engine Plow is provided with a screw adjustment which raises or lowers the beam points just the amount needed. This adjustment can easily and quickly be made while the plow is travelling. Screw clevises are a great convenience in giving the plows exactly the right set, and are operated by an ordinary wrench, though a handy socket wrench for the purpose is furnished with each plow.

JOHN DEERE OLD GROUND
BOTTOM WITH
QUICK DETACHABLE SHARE.

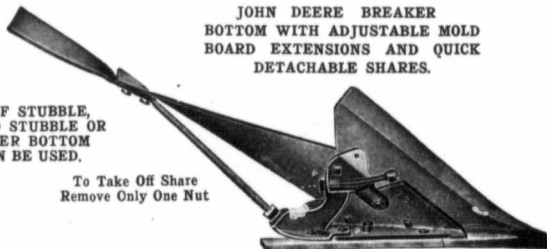
SHARE
QUICKLY
REMOVED
BY TAKING
NUT OFF
EYE BOLT.



ANY STYLE OF STUBBLE,
TURF AND STUBBLE OR
BREAKER BOTTOM
CAN BE USED.

To Take Off Share
Remove Only One Nut

JOHN DEERE BREAKER
BOTTOM WITH ADJUSTABLE MOLD
BOARD EXTENSIONS AND QUICK
DETACHABLE SHARES.



Write for free Illustrated Booklet on Engine Plowing
and all it means

JOHN DEERE PLOW COMPANY, LTD.

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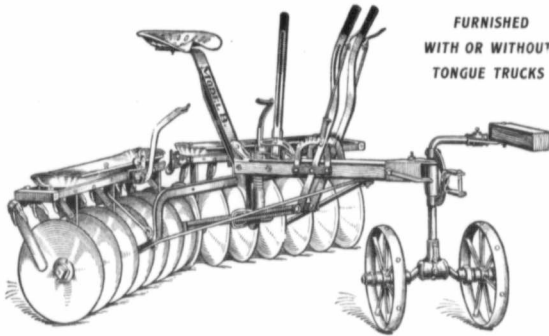
Saskatoon

Lethbridge

The Price ^{Of} All Success

Lies in Employing the Right Means

Natural conditions of soil and climate will play their part in making the crop of 1912; but let them be what they will, failures will certainly dog the footsteps of the man who thinks he can make his seed bed "any old way," and scatter the seed grain after the manner of his forefathers. The JOHN DEERE DISC HARROW will bring the soil instantly into perfect condition to receive the seed, and a VAN BRUNT DISC DRILL will place every kernel exactly at the right depth for certain germination.



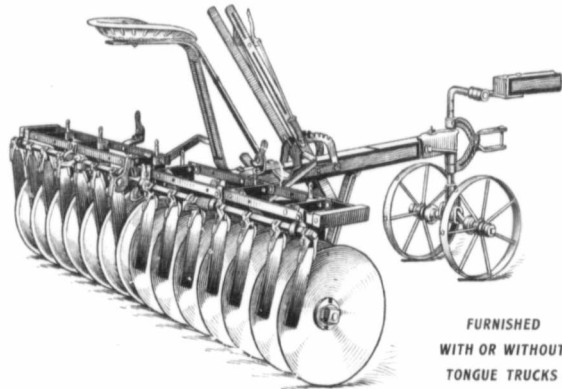
FURNISHED
WITH OR WITHOUT
TONGUE TRUCKS

Deere Model B Disc Harrow

This fine out-throw disc harrow is a perfect implement for any service, and is peculiarly adapted to work on uneven or stony ground. Its flexibility enables it to conform to any surface and to cultivate it evenly. The gangs act independently and every movement is under perfect control. When either gang of a MODEL B passes over an obstruction, it rises while the other remains at work, as though nothing had happened. The gangs may be set at any angle or each at a different angle to suit conditions. There need be no skipping rough places in the "middle." Other special features of MODEL B are: Easy double spring seat, high frame out of dust, adjustable disc scrapers, lightest possible draft.

Deere Model K Disc Harrow

The DEERE MODEL K OUT-THROW DISC HARROW is slightly lighter than Model B, but still possessing many of its distinguishing points of superiority. Frame is made from a single piece of heavy steel, and the implement throughout is constructed on the most substantial lines. Frame bars, crossbars and braces are all steel securely rivetted and bolted together. Made in 6, 7 and 8-foot widths, this is one of the most efficient two-lever harrows at work today. Hard Maple oil-soaked bearings are used on this harrow. The Disc Blades are of the very finest steel, and the Double Angling levers make it one of the most successful machines for lapping lands or hillside work.

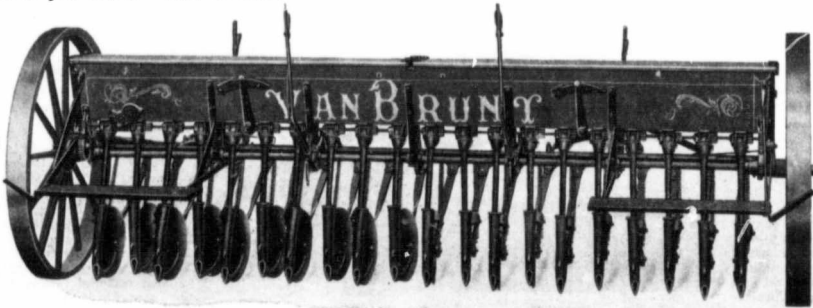


FURNISHED
WITH OR WITHOUT
TONGUE TRUCKS

THE VAN BRUNT DISC DRILL

The great original seeding machine, on which so many specious imitations have been built. But the "VAN BRUNT" could not be hidden in a ten acre field full of competitors, and it is stronger and more durable by far than the others, with less dead weight on its axles by from 30 to 400 pounds. THE NEW BOOT DISCHARGE plants the seed with unfailing uniformity at the correct germinating depth. Not a grain will be wasted if you use a "VAN BRUNT."

LIGHT
DRAFT
WITH
NEW BOOT
DISCHARGE
STICKS AT
NOTHING



BOOT AND
DISCHARGE
WITHIN
INSTEAD
OF WITHOUT
CIRCLE OF
DISC

VAN BRUNT NEW MODEL 12, 14, 16, 18, 20, 22, 24 Single, Double Disc and Shoe, Interchangeable.
Write for complete literature of our Tillage Tools.

JOHN DEERE PLOW COMPANY, LTD.

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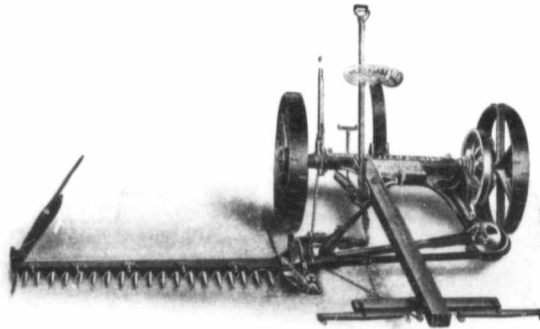
Saskatoon

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Lethbridge

For the Ingathering of 1912

The World's Stand-By in Hay Tools is the Dain Line.
The hay crop becomes more valuable every year.
To make the best of it you have got to use the
best tools—in fact the DAIN LINE.



A Powerful Keen Cutter—Cuts 4½, 5 and 6 ft. Simple, strong, durable, easily operated.

Dain Vertical-Lift Mower

The only perfect Vertical-Lift Mower

With the greatest cutting power of all hay harvesters, it has the best arranged gears, the strongest supported cutter bar, the only practical cutter bar re-aligning device, and the most perfect tilt of any implement used in the hay field.

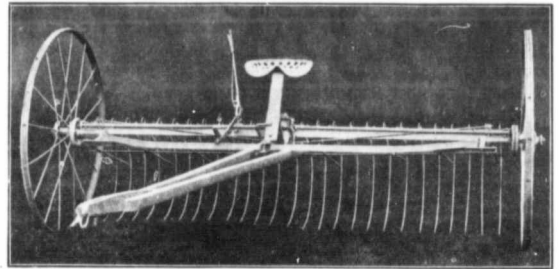
Extremely light draft—free from side draft—drive wheel being very high with broad faced rims. The cutting apparatus by means of an adjustable coil spring is carried on the wheels, avoiding friction on the ground and utilizing for power every pound weight of the machine not used on the cutter bar.

The DAIN Steel Rake

A self-dump rake that has no rival for simplicity and lasting quality. Dump rods are ¾ inch diameter of high carbon steel. Reversible individually; also interchangeable and again reversible, and, therefore, having four times the durability of the ordinary type of dump rod.

Tooth Holders are in two sizes to accommodate a minimum or maximum of teeth; also of various sizes of teeth, so that extra holders are necessary.

Absolute Control of Lever. The teeth can be adjusted by driver from his seat without stopping the team, and it is not necessary to remove cotter pin or bolt. By the lever, however, teeth can also be elevated to a carrying position and held there; hence the "lever of absolute control."



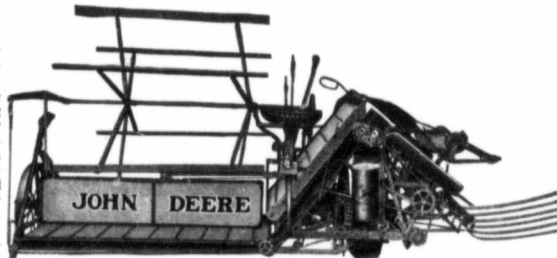
The Dain Self Dump Steel Rake with Special Re-inforced Rigid Frame. Practically everlasting.

JOHN DEERE LIGHT DRAFT BINDER

Greatest harvester operating today. Will handle long short or tangled grain and handle it gently all the time. Specially built for hard work and continuous service. Solid steel deck, three packers and a durable, accurate binding attachment, also roller twine tension that handles even or uneven twine. Strongest frame of any binder.

Why it is the Best

It is clean cut and without any "patched in" features—every necessary detail is provided for. Frame is not riveted, and will not loosen. Drive wheels have a 10-inch face, giving ample traction and support for machine when working in soft ground. Grain wheel has 3-inch tire—on ordinary binders it is only 2¼ inch. Roller bearings provided wherever necessary. The only binder with all Steel corners which are infinitely stronger than the ordinary wooden evener. Outside reel support and tongue truck furnished with 7 and 8-foot machines.



Why it is the Cheapest

Because it lasts much longer than some machines that scarcely vary in price, and twice the time that a machine costing a few dollars less would remain effective in the harvest field. It is so carefully constructed, so perfect in its alignments, there are no kicks and kinks to stop the progress of the machine when cutting the crop. In this way time is saved, and money saved in repairs that are not wanted. There is quality and strength in every bit of material employed and the workmanship is of the very best throughout.

Let your next binder be a John Deere. Write for complete literature of our Harvesting Implements.

JOHN DEERE PLOW CO. LTD.

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The John Deere Ironclad

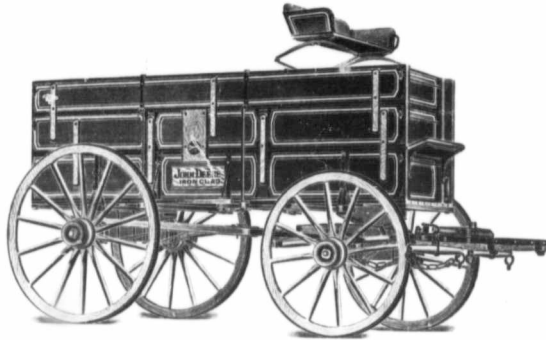
The Wagon

that has never belied its looks. Its face is fair, but its performances—its work—are at least fully equal to all it promises.

Remember that, unlike almost all other farm implements, the farm wagon is not in use only a week or two in the season.

It is on the go all the time doing the lion's share of the drudgery in winter and summer, rain or shine. Therefore, get a wagon with a strong constitution.

The Wagon with a **STRONG CONSTITUTION.**
The greatest armour-plated fighter among farm implements.



The Wagon

that does the biggest job with the least draft on the horses; that stands the worst abuse without a word of complaint, and comes up smiling like a new thing when it has had its evening bath.

The John Deere "Ironclad" is made of selected air seasoned oak and hickory, gears ironed to strengthen every joint and protect every place where severe strain or wear comes. The greatest armour-plated fighter among farm implements.

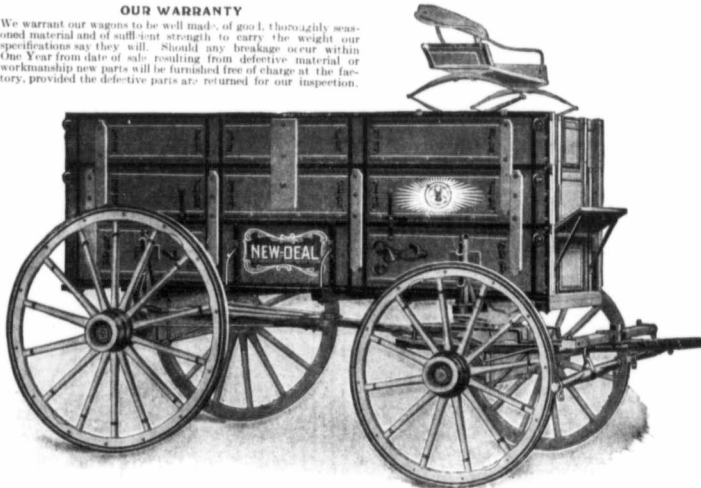
Men have told us that our wagon looks good after two or three years' of hard wear—better, in fact, than many cheap wagons after as many months. We **KNOW** this to be true, and that our "IRONCLAD"

Lasts Longer Than Any Ordinary Wagon

Write for Descriptive Catalogue

THE WAGON FOR WORK AND WEAR IS THE

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

Don't buy a wagon for your farm work until you have seen the "NEW DEAL" and have read the brief guaranteed details of its exceptionally strong construction. If the very best material that grows and painstaking care on the part of skilled mechanics count for anything, there can be nothing better than the

New Deal Wagon

You don't buy a wagon for a season, but in the hope that it will be the "same old wagon" when the youngest on the farm is hoary with time. The **NEW DEAL** is designed to escape the wear and tear of all the friction that human skill can get rid of. And we have succeeded beyond all expectations.

Write for our Catalogue.

NEW-DEAL WAGON WITH TIP TOP BOX

JOHN DEERE PLOW CO. LTD.

Winnipeg Regina Calgary Saskatoon Edmonton Lethbridge

Good Roads! Good Roads!



OVERHEARD ON A PARTY-LINE.

HARRY: "Hello, Bill!—Harry's speaking. Did you hear about that accident last night?"

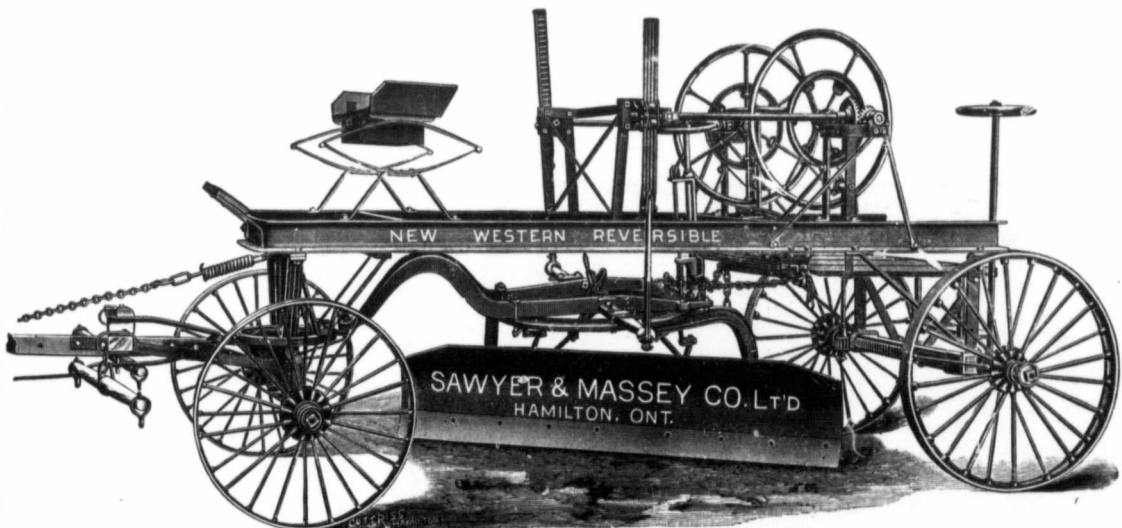
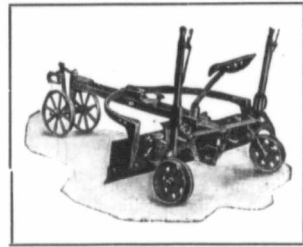
BILL: "No! What was it?"

HARRY: "You know that bad spot down by the slough, about two miles from town on the main road, which we were all of the opinion should have been put in shape last year, but which we neglected to attend to? . . . Well, Charlie Baird and his Uncle Tom drove into it in the dark. Both of them are badly hurt, and the team is cut up in bad shape as well."

BILL: "Gosh! That's a nasty affair, and it looks as if it will hit us fellows pretty hard."

HARRY: "You're right there, Bill. You know, I think it is up to us to pay the bill, and I can tell you it will cost us a lot more before we have finished than we could have bought a good grader or two for, and put all the roads in the municipality in good shape." We have certainly got to get busy and get that work done this spring—and say—you know—it was decided last year that the Sawyer-Massey Reversible Grader was away ahead of all others, and we'd better get it. Now, I hear they have reduced their prices for 1912, and as I happen to know they had far more orders for their machines last year than they could supply, we had better get the councillors together and fire in our order right away, for we cannot afford to have our roads in this rotten condition another year, what do you think?"

BILL: "Well, doesn't that beat all! You're right, Harry, that work has got to be done, and it is well-known the Sawyer-Massey Grader has them all beaten, and as you state they have reduced their prices, its absolutely no use considering any other. The other fellows decided upon the Sawyer-Massey last year, so we can consider this grader question settled, and we will get our order into the SAWYER-MASSEY COMPANY at once."



For details of the reliable Sawyer-Massey line of Road Machinery, write

Sawyer-Massey Company, Limited

Manitoba Branch, Winnipeg, Man.

Sask. and Alta. Branch, Regina, Sask.

A MAGAZINE FOR THE FARM AND HOME



THE CANADIAN THRESHERMAN AND FARMER

Vol. XVII.

WINNIPEG, CANADA, FEBRUARY, 1912.

No. 2.

The Automobile and the Farmer

By A. C. EMMETT.

THE advent of the automobile on the farm in Western Canada has been full of significance. Most farmers now use the motor car as a matter of common sense and economy, and



He Walked.

the time is not far distant when the farmers will form co-operative societies for the purchase of large motor trucks for the haulage of their products to market.

One of the greatest trade developments that the world has ever seen, has been that of the automobile industry, and it now ranks as the third largest industry in the world. A feature of the latest development has been the efforts of certain manufacturers to place a machine on the market peculiarly adapted to the needs of the agricultural community, and possible of use as a general utility vehicle, for the carrying of either passengers or produce as occasion may arise.

This is obtained by the provision of two types of bodies, quickly detachable, one for touring and pleasure purposes, and the other for the transport of freight and farm produce.

In a period of less than ten years, the automobile has taken a prominent place in the home and business life of Western Canada.

The early pioneers of the movement, in looking back over the few years that have passed since the first automobile made its appearance as a novelty and toy, merely for the use of the leisured, wealthy man, recall the almost general hostility shown towards what was described as an invention of the devil and a source of danger to those who were driving horsed vehicles.

In these more enlightened times, however, the automobile has received proper recognition and today it is hard to find a man who can truthfully declare that the mechanically propelled vehicle does not provide a good

Not only does it do this, but it also provides an untiring steed, that can be taken out at any time without any fear of overworking it. This makes it possible for the farmer and his family to get much needed recreation when the day's work is ended, and brings them into touch with friends, even twenty miles distant, who would not otherwise be visited except on very rare occasions.

With the earlier type of cars there was always more or less uncertainty regarding their ability to keep running without expert mechanical attention, but with the wonderful advance in engineering construction, a record of 20,000 in one season, has become common, and the expense of upkeep has been confined mainly to the renewal of tires and the supply of the necessary gasoline and lubricating oil.

The announcement of the 1912 models shows an even greater tendency on the part of manufacturers to place in the hands of buyers a car that is to all intents and purposes automatic.



He Rode a Horse.

sound investment for the man whose time is money.

To no class of men does the modern, medium priced automobile offer more value than the farmer. It provides a means of quick and cheap transport between his farm and the neighboring towns where his business has to be transacted, and allows of his doing all the necessary work in less than one-third of the time that he was compelled to spend when he was dependent on the horse drawn vehicle, for his many journeys.



The Buggy Next Came Into Use.

The provision of mechanical means for the initial cranking of the engine is practically a universal feature of all the different makes, and the lubricating devices have been so constructed that all the owner has to do is to see that the gauge shows a

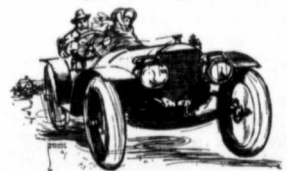
sufficient quantity of oil in the storage chamber provided for this purpose.

This simplification of two of the most important features of a car has made it possible for a woman to take out a car without calling for help from the male members of the family, and thereby provided a means for attention to matters connected with the farm, which would otherwise have necessitated the loss of valuable time by the father or brother.

The purchase of a car has also become an easy thing, for even the man of only moderate means, as there are many different makes to select from, at prices ranging from \$850 to \$1500, which is very little more than the cost of a first class team, harness and buggy, and when the fact is borne in mind, that the car when not in use does not require feeding and attention, the ultimate cost will be found to be less than that incurred in the upkeep of a driving team.

Utility.

With the provision made by many manufacturers for the conversion of a car into either a light delivery van or a touring car, an added feature of usefulness has been provided for those who find it necessary to carry farm produce to town and return with the necessities of life. Milk, butter, eggs, poultry, and even



And Now it's the Auto.

cattle can be safely and quickly carried to market, with less chance of injury and a better chance of being fresh, when transported by the swiftly moving car, than when dependent on the team, which, under the most favorable conditions, cannot be expected to average much more than seven miles an hour, where the distance travelled is over 20 miles. With the car such a trip can be made at an average speed of 15 miles an hour, thereby ensuring the saving of half the time, otherwise spent on the road between the farm and the market town.

When not in use for the purposes of transport, the car's usefulness is by no means ended, as, by the simple expedient of jacking up the hind wheels, the car can be utilized to perform a hundred tasks that would otherwise require a great deal of manual labor. Pumping water, grinding feed, running churns, cream separators, fanning mills, wood sawing outfits, etc., etc., are only a few of the many tasks to which a car can be put, if it is given careful attention in the matter of lubrication and other details necessary to ensure the sweet running of the engine.

To the boy on the farm the car becomes an object of the greatest interest, and there are today many young fellows with a natural aptitude for mechanics; who take a delight in the proper care and maintenance of an automobile, and who find the dull routine of the old farm life considerably enlivened and their horizon enlarged by the presence of an automobile on the homestead.

With the ever growing demand for gas tractors in Western Canada, the value of an automobile becomes an important factor, as the gas tractor has many points in common with its more speedy brother, and a knowledge of the mechanical features of the car, places the farmer in the position of being able to more readily understand the operation and care of the gas tractor.

The Portable Engine.

Turning from the automobile and its part in farm life, the most interesting feature of the development of the gas engine, is the number of small, well designed one to four horse power portable engines that are marketed this year.

Mounted on a small platform, fitted with wheels and a handle to move it from place to place, it becomes almost an indispensable feature on a well equipped farm. Where no car is kept, or where the owner may not care to use an automobile for the purpose, the small engine makes a most efficient farm hand, and goes about its work with a vim and a

vigor which is often unattainable when the human engine is depended upon to do the work.

The hired man may be ever so willing, but he will never succeed in turning out such a day's work in chopping feed, turning the cream separator, churning the butter and cleaning the oats as the little mechanical servant will do, and do well at a daily cost of

work on the road as the big luxurious models that sell from \$4,000 to \$8,000.

In this type of car the use of a block motor is the prevailing feature. All four cylinders are formed in a single casting, with integral water jackets. To simplify the cost of manufacture, the intake and exhaust manifolds are cast right in with the



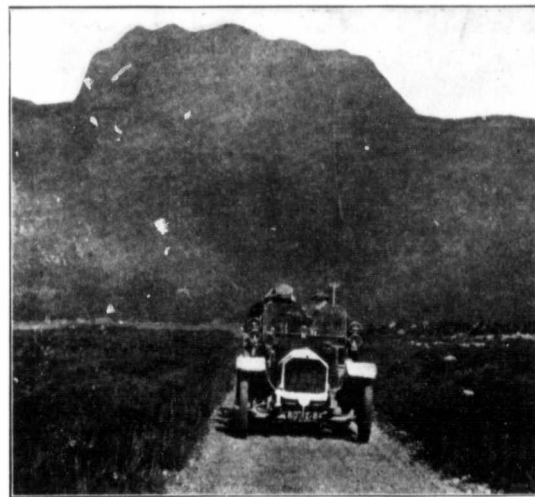
"On the Shores of Loch Lomond.

30 to 35 cents. Whatever a man or woman can do, this ubiquitous little engine seems able to do, and finish at the end of the day fit and well, and, incidentally, leave the lady of the house feeling fit and well and not tired out with turning the crank of the churn and separator.

It can also, in its spare time, be used for running a dynamo

water jacket. It is also becoming common practice to jacket the valves so that the cooling water circulates round the exhaust valve pockets, thereby preventing them from being affected by the excessive heat.

Another feature that tends towards quiet running of the motor, is the enclosing of the valves. This is accomplished by



Near Loch Maree, Scotland. Mr. Andrew Carnegie taking an airing.

for the charging of storage batteries to provide electric light for the house and stables, thereby adding a blessing in the safeguarding from fire.

The great feature of the present trend of automobile manufacture is the number of moderate priced cars that can be bought, and all of which are capable of doing exactly as good

the fitting of removable covers against the sides of the cylinder castings over the valve springs and rods. This has the additional advantage of giving the motor a much more clean cut appearance and adds to the ease with which the power plant of the car can be kept in a clean condition and free from the accumulation of dirt and grease

which was always so noticeable on the earlier models.

Unit Power Plants.

Unit type of power plants are also noticeable on a great number of the 1912 models, the motor, clutch and transmission being all in one casting, and supported in the frame by the three point suspension method.

The coupe body has also taken its place on a number of the medium priced cars, and in fact it is possible for the owner of a moderate priced car to obtain both the touring type of body and the coupe body with the same chassis, the work of changing them being very simple, and giving a car that is serviceable in all kinds of weather.

No Radical Changes.

While there is nothing new to speak of at the exhibitions in the line of models, the automobile and its parts being now pretty well standardized, the great number and variety of improvements on established methods and devices shown by the exhibiting firms is of absorbing interest. In this regard it should be noted that the gasoline motor of the pleasure autos is basically unchanged, although now made larger, while the wheel base of car is longer. As might be supposed, self starting devices of various kinds are fitted, and, in most cases, shock absorbers also.

Among really new devices and accessories seen at the exhibitions—and, after all, they were but few—were ball bearings with a double row of balls, thus giving them a wearing capacity twice as long as the single row devices. Experts assert that this is the only bearing that will automatically compensate for deflected or crooked shafts with perfect reliability. In wind shields the latest thing appears to be one that curves upwards, thus throwing off the wind over the head of the driver, who is enabled to look over the top of the shield with nothing in front of his eyes. Of self starting devices there are, of course, quite a number.

An attractive nickel finish, in combination with bright, dainty colors, was used on many of the cars in the shows. As to the various 1912 models, of these the Thomas has a gasoline tank and an oil tank running parallel with the frame of the car, thus displaying the tank in the rear, of other days. The Also has a patent ventilating system as used in the Pullman cars. The Elmore is chain driven instead of with gears. In 1912 model the magneto has been raised and enlarged, and the roller distributor so regulated that the operator is enabled to throttle down and run smoothly. In the American Underslung, the frame is slung

under the axle instead of being raised above it. The Dreadnought Moline has the Pres-to-lite self-starter, enclosed valves and a double ignition system. There is a de luxe Premier touring car, very inviting indeed with its dainty decorations and white and moss green—the colors adopted by its manufacturers. The Columbia has a valveless engine. In the Selden a dry-plate multiple disc clutch has taken the place of a comb clutch, and a full floating rear axle, that of a semi-floating contrivance. The brakes are both expanding, and the valves enclosed. The Worm and Sector steering gear is used, there is a new control quadrant, a large cut-out valve in the muffler, and a cowl in the dashboard.

A natty little Brush Courier car, called the Liberty Brush, is on the market this season for \$350, with the same motor, transmission, etc., as the early models, and offering 28 miles per hour in the way of speed.

Many manufacturers are also building a six-cylinder car this year. The Corbin has scarcely been changed since 1911; still the cars have just a few shades of detail which only a mechanic can fully appreciate. In the new Moon there is an increase of four inches in the wheel base, bringing it up to 120, and the transmission is hung on a frame instead of to the rear axle. Of the National 40, Series V is brand new, and, with Series S, makes two series now manufactured by this concern. Series V has the new 4 7/8 inch by 6 inch motor, left-hand drive, new type axles, longer wheel base and considerably lowered centre of gravity.

In the Matheson is a new tire pump, designed by the manufacturers, with larger bearings on transmission, and a 3/4 inch elliptic spring, whose lower branch is 55 inches long. Everything has been eliminated from the running boards of the 1912 Knox, the tool box, Pres-to-lite tank and battery being concealed between the running board and the car. The extra tire, which is already blown up on a demountable rim, together with all tire tools and extra inner tubes, are carried in a tire trunk suspended from the rear of the car under the trunk rack. The controlling lever is in the centre. Of the Garford, an entirely new six-cylinder model is shown. The motor is of unique design, the cylinders being cast triple instead of in pairs as with most other types.

The Speedwell has now a new and heavier transmission with ball instead of roller bearings, and the Presto self-starter.

The Marquette is a consolidation of the Rainier and the Welch-Detroit. The principal car is a 45 horse power four speed transmission, seven passenger body.

This year the Atlas is equipped with an Atlas-Knight engine, torpedo body, and a fully equipped car, which attracted a great amount of attention.

The S. G. V. car is being made

few minor refinements have been added, however. Two new model Baker Electric broughams were shown, one for five passengers, all of whom face forward. Both are underslung, and are very slightly and desirable. There has been a radical change in the 1912 Waverley Limousine No. 5. Now all the passengers face forward, with a full view ahead. In the new Reo the horn is placed



"Far from the Madding Crowd," and the last prick of worry.

much larger and more complete this year. The Grinnell Electric has been changed from chain to shaft drive, and the general body design enlarged. The Flanders Colonial Electric is built for beauty, comfort and ease in running. It has the worm gear, which is controlled by its manufacturers. Aluminium bodies throughout were the

under the hood, making it invisible. There is also an adjustment by means of which hot or cold air is obtained as desired. A compressed air starting device, by means of which an instantaneous start is secured by merely pressing a button, is a feature of the new Chalmers.

To the Hudson cars have been added self starters, demountable



A "road" in Argentina—stuck waist deep outside Buenos Ayres.

rule with the Detroit Electro. In the new model the steps are brought about five inches from the ground, and other changes have been made, which now distinguish this car, it is claimed, as being the only one in the world of its type. No change has been made in the Studebaker, none being deemed necessary by the manufacturers. A

rims, and the usual large tires. The 1912 White gasoline touring car has six cylinders, entirely enclosed. A glass hood, with which the Stoddard-Dayton is equipped, affords the operator a splendid view in every direction. A Stromberg carbureter, beam front axle, full-circulative oiling system have been installed in the Maxwell.

Some few minor details in refinement have been added to the Packard, notably a change in the manner in which the clutch and clutch shaft are suspended. In the case of the Pope-Hartford the frame is of wood-reinforced pressed steel. The Stearns has a motor of the "Silent Knight" pattern. The new and artistic features of the Oakland make it a very comfortable car. Straight and symmetrical are the lines of the Lozier; a neat and slightly model. Over 500 inches of breaking surface and the total abolition of a crank are among the features of the new Cadillac. This year the Buick has dropped the disc clutch, retaining only the cone clutch in cars of that name. The tapering hood of the Franklin is unique. A compressed air-starting device is a feature of the Winton Six. The Locomobile is one of the stand-bys of the gasoline car. In the new Peerless car the step is hollowed out to receive two tires, thus doing away with the auxiliary tire holder.

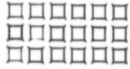
The Mitchell includes a priming pump, operated from the dashboard. By this means the engine cylinders can be primed in cold weather. New and novel color schemes characterize the Stevens Duryea; four speeds ahead distinguish the new Mercer. To the Simplex a self starter, with a dual ignition, has been added. The Valveless Amplex is described as "the acme of the two-cycle engine." In the Interstate cars the unusually straight lines differ so materially from those of the average auto body that they attract the eye at once.

J. I. Case Company.

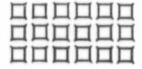
A new company of the above name has been recently incorporated. The principal aim of the new corporation is to further the effectiveness of the sales department of the J. I. Case Plow Works.

At many distributing points the last named firm is handling merchandise lines as well as goods of their own make. The name of J. I. Case Company covers generally all goods which are so handled at such points.

Articles of incorporation call for a capitalization of \$100,000. The incorporators are Jerome I. Case, Roy I. Case and Henry M. Wallis, Jr. All three men are grandsons of J. I. Case, the founder of the J. I. Case Plow Works. Mr. Wallis, Jr., is the son of the well known president of this company.



The Skip in the Roaring Game



"Fitting the Tee."

Curling. Curling. Curling.

When bold King Frost comes back again,

His snaw-white flag unfurling
And over the cheerless wintry plain
The lyart leaves are tirling;
O, wha wad creep and crulge aroun
The fire lug, groaning, gurling?
When we can heeze oor hearts aboon
Wi' curling,—curling,—curling.

The sky is bricht, the air is keen,
Oor limbs wi' cauld are dirling;
Then to the loch—ilk trusty frien—
And set the stanes a-birling;
And shout hurrah for oor auld game,
Health-giving, frien'ships thirling;
New fangled sports are no to name
Wi' curling,—curling,—curling.

But let us have a mindfu' care—
While we are happy curling—
O' dreary hames, and girnelt's bare,
'Mid frost and snaw-drifts whirling;
We'll play for flamen, coals and meal,
And keep the stream a-pirling
O' kindly thochts for puir folk's weal—
When curling,—curling,—curling.
(*Meal-bins.)

"I tell ye, man, that a chiel that is na clean sportsman is fit company for naither man nor baiste!"

That is a perfectly orthodox sentiment, whether you measure it by the negations of a son of Belial or the uncompromising dogma of a true Presbyterian. The supreme test of a sportsman is his attitude on the principle of fair play. The Pagan philosophers preached the essential doctrines of clean sport, and the Great Founder of the Christian faith was also the immaculate sportsman, inasmuch as he incarnated the living principle of fair play—righteous-



"A Thun'erin' Cast."

ness (i.e.) playing the straight game.

The greatest sport men have ever indulged in is the "Roarin' game"—the game that is altogether prehistoric, and yet the most down-to-date diversion common to the age we live in.

If the "Roarin' game" is the greatest of them all, the greatest man in the "Roarin' game" is the skip. What an almighty fellow the skip is to be sure! Is there a game or a contest in peace or war, in which any man so justly (or so unwarrantably) thrusts himself forward as a candidate for the hero worshipping suffrage of his fellows as the curling skip?

In other games or field sports you may watch the proceedings for hours before you are able to distinguish any ostensible leader or captain, but you cannot be ten minutes on the lip of the rink till an overmastering instinct draws your whole powers of observation on the opposing skips.

See that massive son of Anak, with a face like a Nor-West-



"A Hair o' Pith."

moon, a voice like a "strong bull of Bashan," and a capacity for snuff and something else when off duty that has never yet been fathomed? He is Sandy Cormack, skip of the historic "Glentacket" rink, and his opponent is the Reverend Isaac Peabody, of the no less renowned "Thistle." Greater contrast in human flesh surely never existed than what is represented by these two heroes. If Sandy is a fit embodiment of Caledonian brawn, the Reverend Isaac has him beaten in brain—but in solid avoirdupoise the "Wee Free" minister, with the perpetual "drap-at-the-nose" is to his adversary as a mosquito to an elephant.

And yet these two stalwarts are greater by far in the esteem of that "cloud of witnesses" by the rink side than anything that history records. Caesar or Alexander, Bruce of Bannockburn, Cromwell, Bonnie Prince Charlie, or even the greatest of the Argyles, never cut such a figure in the public eye as do these vociferating chieftains in the regard of their respective rinks.

Their place is paramount. They take the centre of the stage, plan and carry out every move in the campaign, issue their decrees, and in large measure accept the responsibility for victory or defeat. Their sway is—or should be—absolute. There is no room among the other players for initiative; it is their sole endeavor to obey to the best of their ability, and it is for this reason that personality counts for so much in curling.

It is the great purpose of the skip to get out of his men the best that is in them. He must not only know their play, and be well acquainted with the running of their stones. He must know their temperament, and be well acquainted with their behaviour in the stress of action. He must be ready with the honeyed word of encouragement that will keep his lead from losing heart, or the word of rebuke that will keep his back-hand from growing careless. He must be able to maintain a calm demeanour when all is well, and a cheerful outlook when things are falling to pieces; and he must be able withal in a tight place to inspire his player with that little touch of extra confidence that will lift him above his normal form.

From his commanding post at the tee-head the skip surveys the battle-field: his two sweepers on either side, and his player on the crampit awaiting instructions before he delivers his stone. As his directions must carry, through the din of a vigorous bonspiel, a distance of forty yards, he must shout lustily (which in itself gives him an air of imperious command), and as there is often much to explain in the situation, the occasion lends itself to eloquence. Thus has come about that extraordinarily rich vocabulary of curling words and phrases which imparts to the game much of its distinctive flavour. It is wonderfully rich in simile and metaphor, full of imagination, embellished by the play both of humor and of pathos. The spectator of a big bonspiel, in fact, without any knowledge whatever of the points of the game, will generally find quite enough to interest and amuse him in the department of the players.

It is almost a tradition that the skip be both eloquent and cheerful—though there are notable exceptions to the rule. It is almost a tradition that he should abstain from any word of blame, that he should maintain an attitude of belief that all is for the best. There is nothing more striking about the game—in its native land, at any rate—than this generous attitude

of appreciation with which your skip regards your efforts. So far does it go that he will often look upon your successful shot as a special favour conferred upon himself personally.

"Thank you for that one," he will say, and in moments of fine achievement he is not content with mere approbation. He will



"A Canny Swing."

specially call upon you to come up "and have a look at it"; he will shake you cordially by the hand; he will even (in a crisis) fall upon your neck. It is a fine thing to see him desert his post in the house—when you have shipped your opponent's winner with the last stone of the head—and stride down the ice with outstretched hand to meet you. "You for a curler!" he will say, or "Man, I kennt a' the time that you could dae it!"

But it is a still finer thing to see his magnanimity in the hour of failure. You have been told to lay a guard, and have come roaring up the rink, carrying out his winner and leaving the other side two shots, and you approach in fear and trembling to hear his verdict. He stands scratching a rueful head as he surveys the wreck.

"Eh man, that was a peety," he will say. "The ice is getting awfu' keen. But never mind. It was no your blame." Or you have been asked to draw to an open tee at the close of a head, and



"A' the Curl."

have miserably hogged your stone.

He will assure you that it must have caught a straw or something, or it would certainly have reached the tee, for it was "awfu' weel set doon." At all times the voluble skip displays an immense geniality. When asked the score, he will never admit to the spectator that he is more than a "wee bit down the noo"; or, if he is leading by a huge majority, he will say that it is a grand game, and he is holding his own so far.

He calls upon his sweepers in clarion tones, egging them on to great feats of strength and agility to bring up a failing stone, working upon them with every art of persuasion, flattery, command or entreaty. To each player about to deliver his stone he will give a careful digest of the situation, full of descriptive touches and pithy observations. But so great is the strain upon his voice, when the ice holds day after day, that he is often at the last reduced to silence and exasperation by the state of his throat.

One such skip I remember well, whose voice never lasted him for more than three days—in spite of frequent applications of an eucalyptus lozenge—and who was invariably found croaking and whispering miserably on the fourth. There is no question but that this catastrophe had a serious effect upon his men, and for myself, I was always ungenerous enough to rejoice when I met him (in the course of play for the club medal) during the second, silent period. For then he was reduced to signs, to him a contemptible substitute.

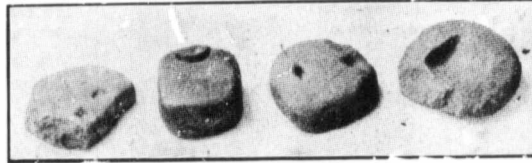
There is also the skip of the anxious, "canny" type. He may be known by his puckered brow, his air of immense concentration upon the matter in hand. You feel at once that he is so wholly wrapped up in the fortunes of the game as to be completely oblivious of the world outside. If the sun were to fall from the sky he would hardly observe the phenomenon so long as there was light enough to complete his end. He is continually watching, studying, weighing, and considering the position of the stones about his feet, as if trying to wring from them the hidden secret of the development of the head. He gives his directions with appalling earnestness, and as each running stone comes up the rink he suffers a fresh agony of suspense lest he sweep it too far or not far enough. He never feels himself secure till the last stone of the game is played. But I have always hoped and believed that when all is over and his side has won, the consequent triumph and satisfaction are sufficient to repay him for the ordeal of the game itself.

There is also his counterpart in the seemingly careless skip, who conceals his burning anxiety be-

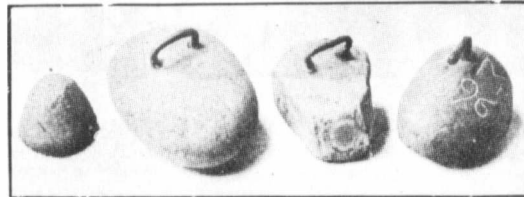
neath a casual and nonchalant manner, and makes a special point of gossiping pleasantly with his opponent. You will find that you will have to call his attention from time to time to the game, when his player is awaiting instructions, and he is eating an apple or watch-

ing another rink. And this is strange, for not the minutest point escapes him. But it is seldom that he can maintain his attitude to the bitter end. With startling suddenness it may desert him in a crisis, when something almost like a sob escapes him.

that he is apt to be led away into too great confidence, and expect his player to understand points in the situation that he has no means of knowing. But he is generally a man of iron nerve, depending much upon the power of his own last stone.



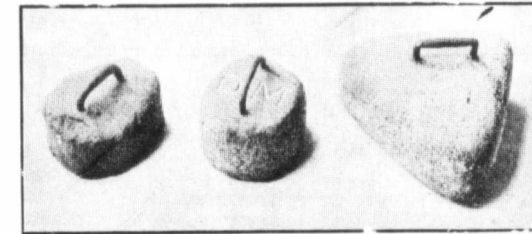
Loofies or Kutting Stanes.



Second or Boulder Type of Curling Stone.

A sturdy and dogged fighter is the phlegmatic skip. He stands with a hand in his pocket and a pipe in his mouth, his expression fixed and reflective, and it would seem that victory or defeat come alike to him. He is chary of words, and his directions are ex-

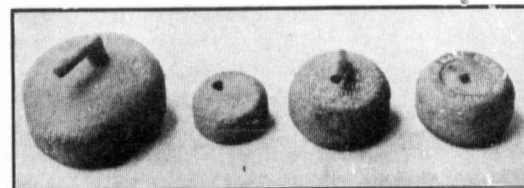
ceedingly terse and to the point. He will carefully survey the position, weigh two or more alternatives, come to his conclusion and bang down his broom on the ice. "Play that, Robbie, wi' the wee finger!" (you must pronounce the



Third Type.—Stones Carefully Shaped and Hammer Pressed, but not Circular.

ceedingly terse and to the point. He will carefully survey the position, weigh two or more alternatives, come to his conclusion and bang down his broom on the ice. "Play that, Robbie, wi' the wee finger!" (you must pronounce the

force of individuality.



Fourth Type—Circular Stones.

A Modern Application for an Old Maxim.

In the way of "advice to young men" probably the most moth-eaten of all the platitudes is that honesty is the best policy. Of course everybody admits that this is true, abstractly; even a thief will tell you that it doesn't pay, but he remains a thief all the same. Some way or other, the maxim fails to thoroughly convince young men of its practical truth, for in these days questionable methods seem to succeed as well as honest ones.

Forty years ago a boyish attorney was struggling for recognition in the little town of Akron, Ohio. He had worked his way through college, and been admitted to the bar. His first case was against the Pennsylvania Railroad on behalf of a farmer whose cow had been killed by a locomotive. He won the case and recovered \$75, the value set upon the cow by the farmer. After he had won the case, his client came to him in high glee, and congratulated him on fooling a corporation, as the cow was only \$40. The young lawyer, instead of complimenting his client on their combined sagacity, at once demanded the return of \$35, and promised him a prosecution for perjury if he did not comply. The sum was at once forthcoming, and the attorney forwarded it to the Pennsylvania officials.

A week later a letter came into his office bearing the card of the President's office of the Pennsylvania Railroad. Inside was a check for \$100, with the request that the attorney would consider himself retained to guard their interests in Summit County. It was not long before the young man was in charge of the legal affairs of the company west of Pittsburg. Why? Because they knew he was honest. See the point?

The Beginning of Things.

Sealing wax in the present form was first noted in London in the middle of the sixteenth century. A sort of earth was used by the ancient Egyptians in sealing papers and documents. The Egyptians placed such earth on the horns of cattle and upon it was stamped the seal of the priest. Thus were identified the cattle to be used in the sacrifices.

The Lombardians were the first to use effectual quarantine methods against the plague and infectious diseases, and mention of a quarantine is made in Lombardy and Milan in 1374, 1383 and 1399. Prior to that time Christian communities resigned to the visitation of the plague, regarding it as a divine punishment.



8-Furrow Cockshutt and Combined Pulverizer Boston Alberta Co.

IT IS INTERESTING and impressive to hear the opinion of farmers who have bought and are using the Cockshutt Engine Gang, for they entertain no misgivings, no doubts and no uncertainties. And if you will read their opinions candidly expressed in their letters, we believe that the weight of their experience will impel YOU to buy the fittest of all plows.

THE COCKSHUTT ENGINE GANG

Write for the Catalogue, it contains testimonials from numbers of prominent farmers — stronger than mere claims — powerful testimonials—which will bring you the desired evidence that the Cockshutt Engine Gang is . . .



12 Bottom Cockshutt Plow, 1911 Motor Trials.

THE BEST PLOW IN THE WORLD

The **FRAMES** are built up of heavy angle bars of extra strength, held together by heavy corner and cross braces. The rear angle on the 10 and 12 furrow plows has an additional reinforcing bar which extends almost its entire length and prevents absolutely the danger of a broken frame. The angles and bars are rigidly—(hot-riveted)—together. A frame thus built will stand the most severe strains that can be put upon it.

The **STEEL FRAME WHEELS** of special construction are large in diameter, and have very wide tires giving good bearing surfaces when working soft ground, and allowing them to follow the track made by the engine. The wheels are not directly under the frame but are placed outside and not only lessen the jar or jolting over

rough ground, but allow of much greater clearance, doing away with all trouble of mud clogging under the platform. The rear wheels are placed well back, and thus help carry the weight of the plows. This placement of the frame wheels is an exclusive feature of the Cockshutt Engine Gang, and one worthy of careful consideration. The front wheels are castor and allow the plows to be turned very short. All wheels are equipped with removable bushings and arbors, the hubs are extra large, dust-proof, and furnished with compression grease cups, insuring extra long wearing qualities.

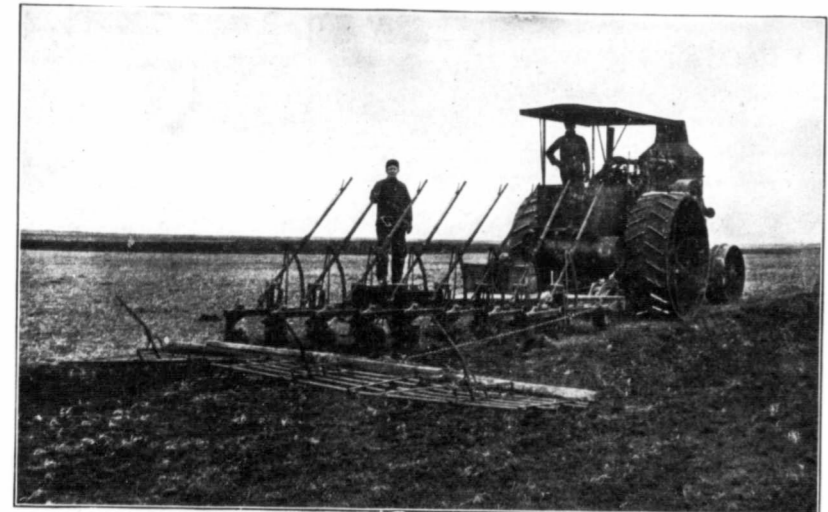
The Cockshutt Straight Beam construction (two to each plow) set straight with the line of draft, has beyond doubt proved the proper designs for Engine Gang plowing.

The left beam extends straight from the standard to the frame connecting hinge, the right beam is turned to one side and meets the hinge at a point as far as possible from the left beam connection. The extra strong wide jaw thus formed prevents the plow winging down, and holds the standard always in exactly the proper position.

The plow is easily operated by **ONE** man. The independent bottoms bolted firmly between the two beams have each their own gauge wheel properly placed, and each their own independent operating lever. The gauge wheels are set directly in front of the share points and thus protect them from stones and other obstructions. For finishing up land, or where the power is not sufficient to pull all the plows, they can be easily raised one

at the time. This is a great advantage over the gag with **TWO** plows to **ONE** lever.

The Cockshutt Steam Plow Shares will be found **HEAVIER** than those of other makes. It has been proved that these special shares are very necessary for the heavy work often met with. Breaker shares and standards are built strong enough to withstand the strain resultant in striking heavy stones hidden in the ground. On striking these buried stones the plows being pivoted to the frame, simply rise up and glance over, doing no damage. The stubble standards form an arch with the straight beams giving high clearance, so that stubble and trash pass easily through.



8-Furrow Cockshutt. W. F. Whitmack, High River.

Knowing from experiments that a light construction would not stand the strains of Engine plowing, we build into these plows nothing but the strongest and best materials. **WE COULD build them CHEAPER but WE WON'T. WE WOULD build them BETTER but we CAN'T.**

The Cockshutt Engine Gang comes out victorious in every practical test; whether your land is hilly, stony or level, whether you break sod or stubble you will find that the **COCKSHUTT** is the most practical Plow made.

It pays a big return in bettered harvests with the great advantage of plowing done at lowered cost per acre.

ing, we build into these plows best materials. **WE COULD WON'T. WE WOULD build**

comes out victorious in every is hilly, stony or level, whether find that the **COCKSHUTT** is

harvests with the great advantage of plowing done at lowered cost per acre.

Cockshutt Plow Company Limited

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Winnipeg Calgary Regina Saskatoon
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Red Deer Lethbridge Edmonton Brandon Portage la Prairie



Five-Furrow Cockshutt. Brandon Experimental Farm.

FEB.



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TREASURER

1912



"Everything begins and ends with the soil."

A MILLION FOR MANITOBA

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A MILLION FOR MANITOBA. Manitoba has room for many millions, but our headline has specific reference to the steps which are being taken throughout the Province to raise the resident population to the million mark. A wave of missionary spirit has started across the prairie, gathering momentum all the time, and in common with our patriotic neighbors we would also like to be on the top of it. The details of this great immigration revival are in the hands of all the municipalities, and the idea is being energetically "worked up" at many points where neighbors are badly needed and would be cordially welcomed. The recent afflux to the original boundary line of the Province has thrown open a wide tract of valuable land for homesteading or that may be acquired by easy purchase. It is to be fervently hoped that every effort will be concentrated on the one objective of getting men and women who will take their share in the cultivation of the land. No inducement or missionary enterprise is needed to bring artisans and shop-keepers to swell the population of the cities, but there's a great work to be done in securing the right type of

people to handle the agricultural possibilities of these millions of unoccupied acres.

REAL ASSURANCE VERSUS THE "CONFIDENCE TRICK."

We have personal knowledge of many capable men, with and without families, who are seeking just what we have to offer them, but who are held back by want of a confidence for which they cannot be blamed. The immigration department has done some fine things in the past, but with all its care and safe-guards it has not gone far enough, or something to take up the case where the immigration authorities have left the immigrant is sorely needed. There are many thousands of industrious and provident fellows in the British Isles to-day who would give much to feel absolutely safe in pulling up their stakes to accept what Manitoba has to offer them in a better return for their capital and labor than conditions at home can ever lead them to hope for. A man with a wife and a few young olive branches has to think seriously and know just where he is at before he will burn his bridges behind him in moving from old Scotland to build a home under conditions of which he practically knows nothing. Assurances of a kind have been given, but he has heard quite as much of the disappointment of neighbors who have made the attempt. They have been misled or they have presumed too far on proffered assistance.

WHAT CAN HE BANK ON? A concrete case is that of an agricultural laborer known to the writer who has an industrious wife and four children. He has lived all his days on the farm, working for one of the most intelligent and successful "mixed farmers" in Aberdeenshire. His savings are no more than sufficient to bring himself and his little crowd to Canada and leave him when he lands say at Winnipeg with about \$500 or \$600. To

whom can that man look, not merely for "advice," but for real assurance as to the maintenance of his family while he is waiting for the first fruits of his work on the virgin soil? He wants to fairly and squarely earn every dollar, he will accept no "charity," not even a loan, but it is evident that if he is to prove a satisfactory settler, he must be protected while he is turning over the land and doing what we are all seeking to get at by "advertising" and urging men of this type to come and take a hand in. The man with easy capital is a comparatively rare bird. He can take care of himself, but if we are to get the right sort in sufficient quantity to make a great province, we are satisfied that we must concentrate our recruiting on the type of farm labor referred to above. From all past experience, from some of the most brilliant records of old time farmers (in Southern Manitoba particularly) this is the class of man whose acquaintance we want to cultivate — whom we ought to encourage at any cost that does not rob him of one particle of his independence.

THE MEN WE WANT are those thousands of fine fellows who are sweating out their lives on old country farms for a beggarly pittance compared with that the same intelligent industry would produce in Manitoba. They have drunk the spirit of self-help with their mother's milk. They are not seeking help but merely the opportunity to help themselves with an assurance that they are not to be victimised by land-jobbers as soon as they set foot in the country. We hope that whatever the "Million for Manitoba" crusade has in its eye, the matter of "The Men We Want" and the manner of dealing with him will have a first position in the first part of its programme. In any case, we are glad to note that energetic steps which had been inaugurated to this end by the Provincial Minister of Agriculture sometime before the "Million" Club announced itself. Manitoba's Minister of Agriculture knows experimentally what these observations suggest. He is a practical farmer who has pushed his farming operations to a point of success that might well excite the emulation of any man; not only so, but he has done his own part in a quiet way to help with his experience other men who have come out to work and who by the same means have plowed their way to competence and comfort.

ABLE AND WILLING TO PAY. We know of men who are able and willing to pay a fair price for raw or improved land within easy distance of the railway, but they have been loaded with so much of the performances of the land sharks and kerbstone real estate men that they will not risk their hard-won earnings unless they have some reasonable assurance that they will meet with nothing worse than the ordinary natural obstacles to success that every man looks for. To any such we say that if they will get in direct touch with the Minister of Agriculture, he will take all the trouble that is necessary to satisfy them.

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."

The Great Originals

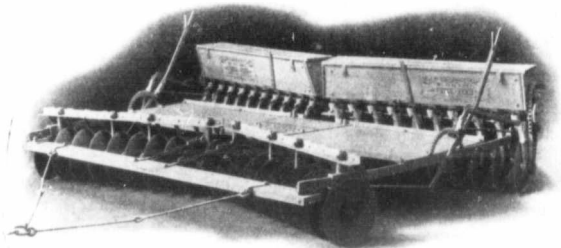
For

Engine Power in Field Work

New Emerson Engine Disc Harrow with Seed Attachment

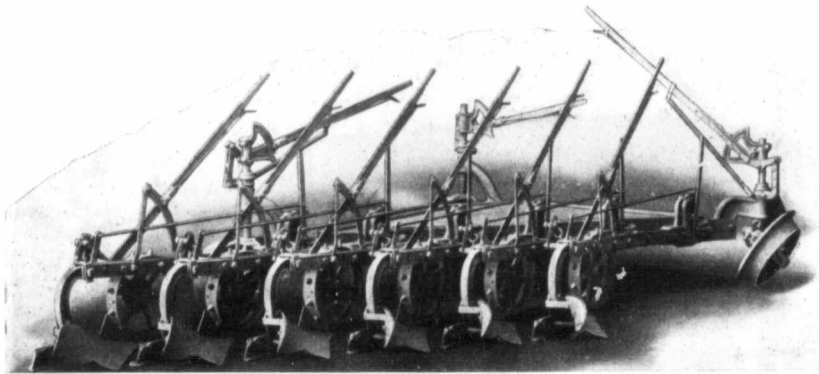
THIS HARROW is the most perfect soil pulverizer that has yet been designed for this purpose. Built in 2 sections with a large weight pan between. The front section is set so the discs throw out while the rear section discs throw in, thus pulverizing thoroughly, completely cutting the entire surface of the field and preparing your seed-bed with only one passing of the engine over the field. With all the discs set straight it makes a first-class sub-surface packer.

THE FORCE FEED SEEDER on rear harrow plants every seed grain uniformly at required depth. It handles seed as small as alfalfa and not a kernel is left on the surface or so near to it that rain or wind storm may afterwards expose it.



The Emerson Engine Gang

The latest and the greatest Machines yet produced for perfect cultivation are the Emerson Engine Gang Independent Beam Plow with Automatic Power Lift, and the Emerson Engine Disc Harrow with Seeder Attachment. For extensive or intensive work, these implements provide an absolutely perfect seed-bed with perfectly uniform seeding at the proper germinating depth.



Where the Emerson Plow Differs

It makes a continuous furrow from center of the field without a stop to turn corners, thus plowing a considerable distance while the ordinary plow is turning. There is no hauling across plowed land.

It is an Engine Plow carried on wheels with long distance axles, made in sections with patent flexible connections to conform to uneven surfaces. Turns either way, right or left, plowing all the time.

The Emerson Independent Beam Plow with Automatic Power Lift can be easily operated by a boy. Automatic lift operated by trip raises or lowers plow instantly as desired. Furrow wheel insures even width of furrows without attention. With flexible hitch the engine may vary the distance from last furrow while width at first furrow remains uniform. Gauge wheel on each bottom gauges depth. Pivoted beams allow each bottom to pass over or swing round obstructions. Suction is regulated by levers for shallow or deep plowing. Made in 3 sizes: 6, 8 and 10-14 inch bottoms for old land or prairie breaker. Change from one size to another as desired.

Either or both moldboards and discs for same frame at little additional cost. 16-inch bottoms are used regularly but 12 or 14 inch can be furnished if desired. 24 inch discs are used regularly but they may be had in 26 inch size.

Mr. Farmer: The "luck" or the fate of your 1912 crop lies in the SEED BED. Whatever your failures in the past, here is a chance to get the very best results your seed can make. These ingenious and inexpensive implements will not only save many dollars' worth of valuable seed but you will get the very highest percentage of crop from the seed used. Further: So perfectly does this harrow treat the soil that in many cases it will be found sufficient to plow the land only once in 3 years. A 25 H tractor will pull 2 of these harrows--each 10 ft. wide with 40 16-inch disc blades.

Write for complete information, to

TUDHOPE-ANDERSON COMPANY, Limited, AGENTS FOR WESTERN CANADA
 Warehouses at Winnipeg Regina Calgary Saskatoon
 Distributing Branches: Brandon, Yorkton, Edmonton, Lethbridge, Swift Current

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.)

Trouble Due to Inexperience.

I am glad to answer your questions about the use of gas power on the farm. My engine is an International 20 horse power tractor, and my separator is an Aultman-Taylor 27 x 42.

The engine gives a lot of power for threshing, but breaking is much harder, my land being very rough. It is heavy grey soil, with two inches of sod. This land was covered with poplars and big yellow trees, but the roots still remain in the soil, and breaking is very hard.

We use two John Deere Wisconsin Brush Breakers 20 inch wide, which pass everything, doing fine work. We break from four to six acres in the hardest places, and using about 18 gallons of gasoline and one quart of water every day.

For stubble plowing we have a Cockshutt engine gang of six bottoms. We can backset with five bottoms.

We are very well satisfied with our outfit and find it very simple to manage. At first we had some trouble with our auto-parker or ignitor, but this was only because we had absolutely no experience with the gasoline engine.

I am enclosing you a photo of the engine doing deep breaking. I regret that I did not have a better one.

Yours very truly,
Baron de la Rue du Can.
Ste. Rose du Lac, Man.

Cost of Operating Varies.

In the spring of 1910 being up against the power question having either to increase our horse force or adopt some other power, we decided to purchase a Hart-Parr 22 horse power oil cooled kerosene engine.

With this machine we double disced and harrowed 250 acres in five days, using four eight-foot discs and a six section drag harrow. In breaking we use a seven bottom Cockshutt plow, plowing from four to five inches, which we find a nice working load for our engine.

The cost of operating naturally varies under different conditions, and we find our plowing cost us \$1.65 an acre. This being an exceptionally dry season here, I am confident that these figures

could be reduced under average conditions.

In plowing we use about 45 gallons cheap kerosene and from two to four gallons gasoline and 25 gallons of water per ten hour day. Kerosene costs 16½ cents and gasoline 25 cents per gallon.

We employ an engineer and plowman, and a man and team to draw oil and water as required.

We used our engine threshing this fall, driving a Nichols and Shepard 36 by 56 separator, and had lots of power.

I consider threshing considerably easier on an engine than plowing, as even supposing the engine load is as heavy, there is practically no wear on the traction.

Yours truly,
McConachie and Beckler.
Green Briar, Sask.

down and incidentally causing a lot of expense and loss of valuable time just when we wanted to go ahead. However, we got this set to rights after a while, and our battery troubles ended there.

We ran the outfit ourselves, two men being with the rig continually and use one team of horses in connection with the engine, although the horses are not by any means working steadily.

We paid 28 cents per gallon for gasoline, and hauled it twenty miles, and find this engine uses for an average day's work 20 gallons. We think our engine very economical on fuel. Some days we used a barrel of water and others a barrel and a half.

We consider that plowing is easier on our engine than threshing, and think the engine better

Care Reduces Repairs.

My experience in traction plowing has been limited to one year, but in that time I have been able to see the advantages of an engine over horses in handling large tracts of land.

My outfit consists of a 22 tractive horse power Hart-Parr gas engine and an eight 14-inch John Deere gang plow, requiring for its operation two men, an engineer and plowman. The saving in men, I regard, as one of the big advantages in traction plowing, as farm labor, at some seasons of the year, is so scarce as to be a constant annoyance to the large farmer who depends on horses.

Of course, an engine does not do away with horses altogether, but by carefully systematizing the work I was able to get along with using a team only once or twice a week for hauling oil and water to the engine.

For fuel I used a cheap grade of kerosene, after warming up the cylinder on gasoline. The cost of kerosene was 13½ cents per gallon, including freight and hauling, and the amount used varied from 2½ gallons pulling eight plows in light soil to 3½ gallons pulling six plows in the heaviest backsetting at a depth of six inches.

The consumption of water generally ran about two gallons per acre when using kerosene for fuel, and not over half gallon per acre when using gasoline.

The cost of plowing 1200 acres, including wages, fuel, oil, board, hauling supplies, repairs to outfit and sharpening plow shares came to an average of 73 cents per acre, which, I think, is cheaper than the same acreage could have been turned in the same time with horses, having had the outfit in operation just three months.

The largest acreage turned in a single day was 29½ acres, when I pulled eight plows, starting at 5 a.m. and stopping at 8 p.m. When pulling six plows, which I did most of the time, I averaged about 20 acres a day, and when pulling eight plows about 25 acres a day, working twelve hours.

In regard to repairs, I might say that the entire expense of repairs on the engine on 1200 acres amounted to \$37.50, while



I. H. C. and the P. and O. turning a mighty straight furrow.

No Experience to Start

We beg to state that we operate a 20 horse power I.H.C. gasoline tractor and a five furrow Cockshutt engine gang. We plowed last year a little more than 500 acres (breaking) and pulled four plows, excepting in one or two pieces of light land when we used the five bottoms.

Our experience with gasoline engines when starting out amounted to nil, but after a year's work we fairly understood our engine, and can now locate trouble quickly. When we first got our engine it was wired wrong and caused us no end of trouble. The wire that comes from the binding post on engine and splices to one of the wires from the auto sparker was spliced to the wrong wire, continually running our battery

at the draw bar than in the belt. Pulling three discs and drag harrows or a planker loaded with rocks was easy for it. It surprised us the way it climbed hills around here.

The cost of breaking per acre here is \$2.10. Our experience with the gasoline engine has taught us that there is no truth in the oft-repeated statement that "anybody can run a gasoline engine, and no experience is required." There is no line of work requiring engineering skill where a man needs to be on his job more than when running a gasoline engine. We trust our experience may be of use to other beginners.

Yours truly,
Leighton Bros. & Lenson.
Lake Coteau, Sask.



Myers Bros., Bowell, Alta., Harvesting with an Aultman-Taylor Gas Tractor

How is this for a Record?

NOT ONE DISSATISFIED CUSTOMER of the POPULAR FOUR CYLINDER "AULTMAN-TAYLOR" GAS TRACTOR during the past season. The Tractor has far exceeded the expectations of our many customers. We have hundreds of letters from owners and operators of our Tractors from all parts of the country; everyone of them an enthusiastic recommendation of the Aultman-Taylor. We have many REAL POINTS of MERIT that every prospective purchaser of a gas tractor should know.

Write to day for GAS TRACTOR CATALOG

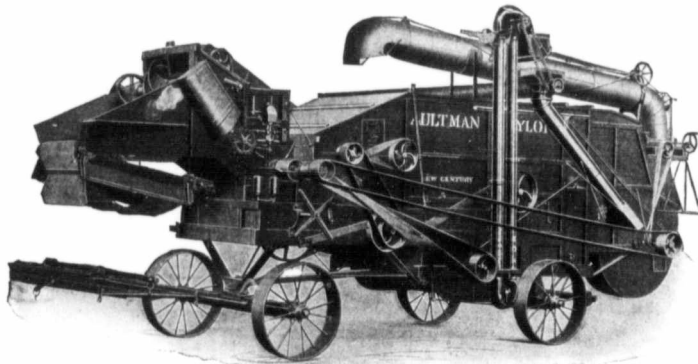
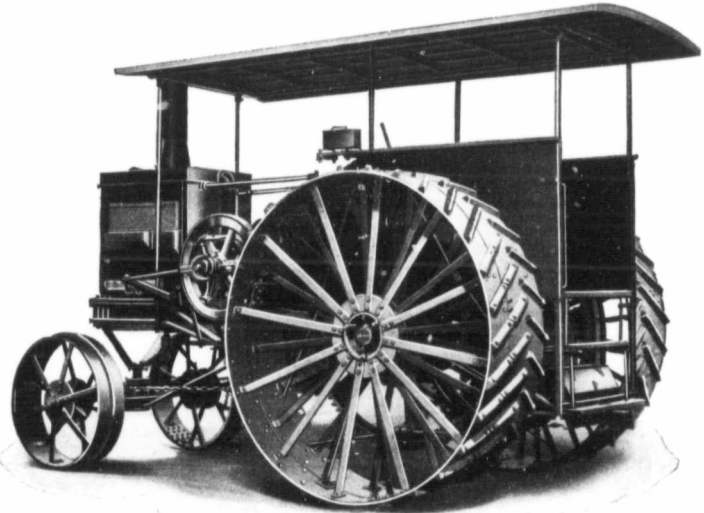
**The Aultman-Taylor has the only successful self-starting device
THIS POINT ALONE WILL SAVE YOU CONSIDERABLE ANNOYANCE AND MONEY**

From one of our many
satisfied customers

"In regard to my 30x60 Aultman-Taylor Gas Tractor, I am pleased to state it is one of the best engines I have ever handled. It ran our 36x64 Aultman-Taylor Separator with ease in the heaviest grain, and with the least vibration of any engine I have ever seen. I also used the engine in breaking sod and it did not bother the engine in the least in pulling eight and nine fourteen inch mouldboard plows. I plowed over 1100 acres of sod and threshed 60,000 bushels of grain with our outfit this past season. I think you will make no mistake if you buy an Aultman-Taylor."

Yours respectfully,

FRED J. WATERMAN,
Belgrade, Mont.



Write for Catalog of
Steam Traction and Portable Engines;
New Century Grain Separators;
Matchless Clover and Alfalfa Hullers and
Saw Mills.

The International Harvester Company
of America, Canadian Sales Agents for
"New Century" Separators.

The Aultman & Taylor Machinery Company
MANSFIELD, OHIO.

Sales Agencies: Minneapolis, Minn., Calgary, Alta., Regina, Sask., CANADA

there were no repairs on the plows other than for sharpening shares. I believe if an engine is given as good care and attention as a horse and not constantly overloaded, this item of repairs need not be so high as most farmers imagine.

I did no threshing with my engine, but have no doubt but that plowing is harder on it for the reason that there is added the wear on the gearing and constant racking strain caused by the engine moving over rough ground.

Yours truly,
Geo. D. Hetzel, Jr.
Fannystelle, Man.

Never Ran Engine Before.

In June last year I bought an International gasoline engine for the purpose of plowing. It is a 20 horse power, known as the C type. My plows are a five 14-inch bottoms P. & O. The plows do fine work, and the engine pulls them fairly well.

Last season was a poor plowing season for any kind of a plowing outfit on account of the drought.

I never had any experience with engines of any kind until I got mine in June. The expert was with me to run about three rounds on half mile length, and from that time I ran it myself alone. I don't employ any help as I don't think I lose enough time in turning around to justify an extra man.

As near as I know I used about two gallons of gasoline per acre and about 1½ gallons of water for cooling.

I think the gasoline engine is the cheapest mode of plowing that I know of. Horses are too dear at first cost. Then I think steam plowing takes too many men to operate the outfit, hauling coal and water, and in some cases good water is very scarce to get.

Yours truly,
Theo. Fredericksen.
Claresholm, Alta.

Needs a Steering Device.

We own a Hart-Parr 22 horse power and six 16-inch bottom Cockshutt breakers. We got our outfit in May, and broke 150 acres for crop and I broke 125 acres after seeding and summer-fallowed 150 acres. But I found six plows too many to break with, so I cut it down to five and went along fine. Then I pulled six backsetting this fall, and could have pulled eight if I had had them.

I backset 150 acres after threshing.

One man and myself run the outfit. I keep the man guiding the engine and I look after the engine and plows myself. I think this is a good way to run an

outfit. If anything goes wrong you are always on hand and never have to stop.

We burn kerosene, which cost us 15¾ cents per gallon. We burn about 3¾ gallons to break an acre and about one-tenth of a gallon of gas engine oil, at a cost of 45 cents per gallon, and one-tenth gallon of gear. I use Summer Black oil for this purpose, and like it fine. It costs 20 cents a gallon. I prefer coaloil to gasoline. I think it gives more power and costs less, and I am also in favor of two or four cylinders for traction work, and the closer to the ground the better.

We pull a 32 by 54 Avery separator, and can do it easy. We threshed 20,000 bushels in fourteen days. I like the engine fine for threshing as it gives

tion engine type C, and use two four furrow P. and O. engine disc plows. Our soil here is very heavy so that mouldboard plows will not scour; therefore, the disc plow is used almost entirely.

We use two men to run the outfit, one on the engine and one on the plows. While it is not absolutely necessary to have a man on the plows, I think the improved quality of the work will far more than pay his wages. We plow only for ourselves, and while we have a good many calls to go out to plow we think it pays us better to keep the tractor at work at home.

We plowed 150 acres of flax stubble in the spring; then beginning the 1st of July we summer-fallowed 150 acres. We pulled the eight bottoms, cutting ten inches each, making 80

working down or seeding the land, as we have plenty of horses for this work.

We feel very satisfied with our investment in the engine, and know we can plow much cheaper than with horses.

I am enclosing a photo of my outfit when we were summer-fallowing.

Yours truly,
C. S. Kinter.
Lang, Sask.

Gasoline to Start.

I have a 22-45 Hart-Parr engine and as a good reliable power it is a fine engine. I use a John Deer plow also. In breaking we pull six 14-inch bottoms, which the engine handles without overloading, and can average 1½ acres per hour, or 16½ acres per day. In plowing stubble I use



New Hart-Parr Branch, Regina, Sask.

good steady power. I think that breaking this heavy land is a little harder than threshing.

If I were buying another engine it would be the same kind. I think I can do a lot better next year. There is a lot to learn about traction plowing, and I am young in the business, but expect to learn. I have had no experience in drill or binder hitches.

Yours truly,
R. L. Purves & Sons.
Milestone, Sask.

No Experience in Breaking.

I am a novice at the traction plowing business, having purchased my engine late last spring and, therefore, my experience is very limited. I own a 20 horse power International gasoline trac-

ing inches or four-fifths acres for each mile travel of the engine. We were plowing seven inches deep and also pulled a harrow behind the plows. The harrow tore the freshly turned dirt to pieces in good shape and did not seem to add very much to the load of the engine.

After threshing 800 acres we plowed 100 acres. In plowing these 400 acres we used about 850 gallons of gasoline at a net cost of 24½ cents per gallon, being on an average a little over two gallons per acre. We figured that fuel, cylinder oil and gear grease cost us 60 cents per acre. We averaged from 14 to 16 acres per day.

We have had no experience with breaking with our engine, as our land is all broken up, nor have we had any experience in

eight 14-inch bottoms with a ten foot packer behind. By this means we plow and pack from 20 to 22 acres per day at a cost in fuel oil (kerosene) and lubricating oil of about \$8.20 per day.

We do not plow on gasoline as it costs more than kerosene, and has not got as much power. Of course we use gasoline to start on, in order to get the cylinders warm enough to work on kerosene, but I find in warm days that I can stop the engine for a few minutes and start on kerosene.

We use only two men in plowing, one on the engine and one on the plow. These engines are oil cooled, so we do not use over a barrel of water per day. Water has to be used in engine when



Now Comes The Real Test-- The Test of Actual Service

It is also a test of dollars, for profits are the measure of service with threshermen and traction plowmen who look upon their work as a cold-blooded business proposition, which it is.

Not one man in a hundred who has the auto fever would coax a manufacturer to take his money for a car because it had made the record of a mile in 39 seconds. He would keep his eyes open for the machine that showed itself able to be up and about on four wheels, at an ordinary gait, seven days in the week.

Most buyers of threshing machinery use the same horse sense. They get a rig that Jim Smith and Bill Jones can run and do run, not to break records but to save money on their own work and make money on the other fellow's job.

There is no trouble to make speed records with a Tiger Thresher. We can cite you to hundreds of them that go unchallenged. Our big-cylinder machines are limited only to the amount of grain that can be gotten to them. But capacity in threshing, as well as traction plowing, is more a matter of keeping at it than of scorching. In endurance test Gaar-Scott machinery always wins. It runs as long as you will let it, without any stops for adjusting and tinkering, and with the cost of up-keep so light that it cannot cut any figure in your profits.

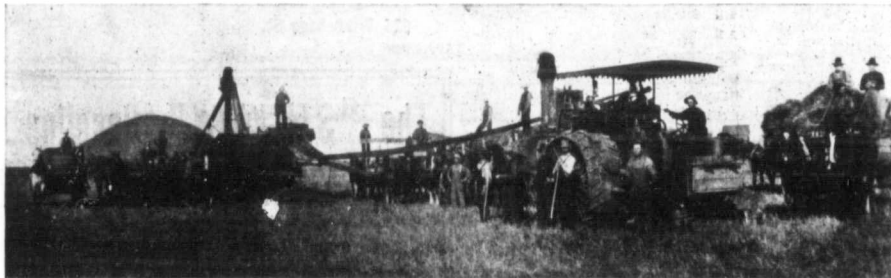
Macklin, Sask.

It may interest you to know that during the past season we broke with the 40 h.p. double-cylinder tandem-compound engine 1,650 acres in 40 days. Our largest day's work was a small fraction of an acre less than 50 acres in 13 hours. We are glad to state we are highly pleased with our engine in every respect, as it did not cost us one cent for repairs. We can also say that the separator is all you claim it to be in every respect. Had we gotten our plows in time, we could have broken 4,000 acres in the past season.

EDLER & MANSKE.

Nov. 12, 1910.

Owners of Gaar-Scott machinery are not job beggars but job getters. If you want to know why and who they are ask for Canadian Tiger Truths.



A Full "Tiger" Team, owned by Heatley Bros. & Smith, Headingly, Matitoba. Read their letter below

Headingly, Manitoba.

The 25 h.p. double-cylinder traction engine and 36 x 60 separator bought from you, has given us entire satisfaction. We threshed our own grain and for twenty-four of our neighbors, all in twenty-three and three-fourth days, totalling over 80,000 bushels of grain. Your guarantee that the old Tiger would do more and better work than any other outfit of the same size, holds good, and we are satisfied that we could have beaten our own record if the crop had been good. We never had any trouble holding steam, and the engine is a dandy. The separator can't be beat. All of our customers are well pleased, and we threshed grain of all kinds, which was thoroughly cleaned—as good as if it had been run through a reclaimer, and no grain wasted in the straw. We can recommend the old reliable Tiger Line to any one who wants the best on the market and a square company to deal with. We are sending you some photographs of our outfit. One shows a setting of stacks threshed in three hours and fifty minutes, which yielded 1,350 bushels of oats and 251 bushels of wheat.

HEATLEY BROS. & SMITH.

Sept. 27, 1910.

If you have this kind of machinery, you are ready for the season of 1912. If you have not, it is time to get busy. You cannot follow old wasteful methods and get the cream of the threshing run. The grain growers want all the grain, and the elevators want it clean and whole. Let us send you our "Get-All-The-Grain" circular and our special plowing circular.

Our six branch houses are well stocked with everything for the Canadian thresherman and traction plowman. Write any one of them, but do it quick if you want to be prepared for the real test.

M. Rumely
Co.
4021 Rose Street
Regina, Sask.



THE TRACTOR ON THE FARM

By J. N. ROGLEY

It is the general opinion of all that the farm tractor has come to stay. We have in the far West and North-West vast tracts of land, raw prairie, to keep the entire output of tractors busy for some time to come. After this has been broken, we will still have stubble ground to turn as long as the world stands. Aside from plowing, they can be used for harrowing, seeding, harvesting, and in fact all farm work in general.

We find in every state large tracts of land that can be plowed with the tractor, in fact every farm of any size can be covered with the tractor. Farmers are beginning to realize the value of them as an investment, while but few have them, we will, in the near future find on every well kept farm a tractor of some kind. Few farmers would care to invest in a tractor unless they were assured that the money spent would bring them larger returns than if spent in some way for power to be used on the farm.

In order to do this the engine must reduce the expense of operating the farm, without however, reducing the income. A well designed engine will do this on a general purpose or grain farm of three to four hundred acres. The time is not far distant when the smaller engine will make its appearance, which can be used to a profit on the smaller farm, ranging in acreage from eighty acres up. In order for the engine to be a paying investment to the farmer it must reduce the number of horses needed to carry on the farm. It must not only do the work of the horses, but it must do it better and quicker, as well as cheaper.

Of course, we can readily see where it will reduce the number of men needed to carry on the farm. It must not only do this for a year, but for many years. The running expense of the engine, including oil, fuel, repair bills, etc., must cost less than the feed, shoeing, doctor bills, and such like that would be connected with horse power. To be profitable as an investment, it must be such an engine as will do the work of the entire farm with one or more men less than are needed with the horses, considering, of course, the present conditions.

As the farmer runs the engine and becomes accustomed to it he will find many good points in it. For instance, with the present day engine the ground

can be plowed, or disked, harrowed and planted at the same time. The tractor will start across a field, and when the end has been reached a strip of ground has been plowed, harrowed and planted. One does not have to worry whether the ground will get hard before he can get it harrowed, after plowing. On the average, two men with the tractor outfit will do about the same amount of work as six men with teams, to say nothing of the difficulty in getting them sometimes in a busy season.

Aside from this we will suppose that the season has been a little backward, or wet, as the case sometimes will be. The tractor can be worked day and night without a rest by shifting the crew. After the crop has been harvested it must be threshed. Here again, the tractor furnishes the power. The grain is threshed, and it must be taken to market, and again the tractor comes in good play. Stop for a moment and think that all seasons of the year it can be used to a good advantage.

Suppose the spring is wet, we turn the stubble over, and if it is not harrowed at once it will get dry and cloddy, and after it is once in this condition, they cannot be broken up until the rains come and dissolve them. There are just two things that limit the range of work that can be done with the farm tractor: the farm and the man. A general purpose farm in some of the older sections of the country offer a wider range of usefulness to an engine than the single general purpose farms farther West. I rather think this is because there is a variety of things to be done that require power.

A farm tractor should have at least two speeds—2½ and 4 miles to the hour. The slow speed will be found useful in many tight places, as well as hauling the manure spreader. As already stated much depends on the man. If the owner is one of the wide awake fellows, not hopelessly buried in a rut, but can see some merit in the new things that are turned out day by day, and is willing to try, he will find many uses to which the farm tractor can be put. As he goes about his work, he will be continually thinking out some means of increasing the efficiency of the engine, decreasing the expense of using it, how he can do three or four things instead of one.

Do Your Spring Plowing Quickly

Delay Means Loss

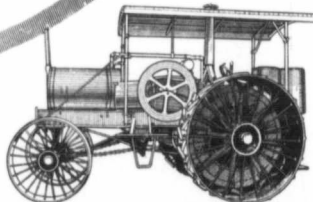
It takes "rush work and thorough working of the ground in the spring to insure good crops. Horses are too slow. A matter of several hundred of dollars' profits often hangs on the difference of a few days time in getting the seed in.



56 H.P. GAS TRACTORS

DO OVER 2 ACRES AN HOUR

It is the fastest, most powerful and easily operated tractor known. A general all-round farm power engine for plowing, threshing, hauling, road work, etc. Operates eight 14-inch plows, and will haul twenty-five tons up hill over rough rocky ground. Gives a speed of from 2½ to 4 miles an hour, and 1½ miles an hour reverse. Economical in fuel consumption, and will work right ten years or twenty years from the day you buy it. Every one is fully guaranteed. Engine is 4-cylinder, 4 cycle type; all gears protected; double clutch pulley; multiple oiler; oil or water cooled, and frost-proof. Burns Kerosene as well as Gasoline.



SEND FOR COMPLETE DESCRIPTIVE BOOKLET

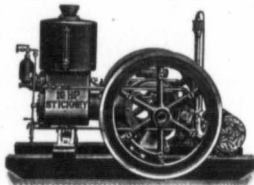
The Eagle Mfg. Co.

626 Winnebago St.

APPLETON WIS.

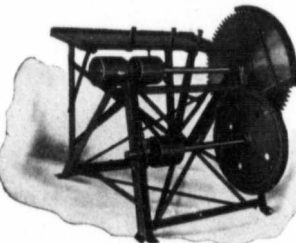
The "STICKNEY" Gasoline Engine

(STATIONARY OR PORTABLE)



If you hesitate in choosing from the various good Engines on the market, why not reach beyond them all to the **BEST**—the **STICKNEY**? It is made with the idea of furnishing the finest Engine that has ever been offered, or that it is possible to produce. It cuts costs, boosts profits, and adds efficiency all round. It may be had in just the size to fit your particular need, from 1 to 20 H.P. Write for descriptive Booklet 31.

CLIMAX Well Drilling and DEMPSTER Boring Machinery



The names "Climax" and "Dempster" on Well Drilling Machinery and Boring Augers define **QUALITY**—always **HAVE** and always **WILL**. Every inch of the material is **QUALITY**, and Every Mechanical Part spells **CARE** and **KNOWLEDGE**. The Best that Skill and Good Work can produce, from first to last.

They effect a surprising saving in **TIME** and **LABOR**. Big Results and Satisfactory Work without a bit of needless effort, that is where Climax Well Drills and Dempster Boring Augers excel. We have a Booklet that gives exact description. If you want it, write for Catalogue 30.

The "FLOUR CITY" Gas Tractor

Gasoline or Oil Pull

Before you buy ANY TRACTOR, be sure you know all about the "FLOUR CITY," and write for Catalogue. See the SPECIAL FLOUR CITY ADVERTISEMENT on another Page.

Pitless Scales, Windmills, Pumps

Practical Time Tests have proved their Durability and Worth, and have earned for them the Reputation of being always dependable. Write for Special Descriptive Pamphlets.

ONTARIO WIND ENGINE & PUMP CO., LTD.

TORONTO WINNIPEG CALGARY

Where Efficiency is Demanded



Four BIG FOUR "30'S" each pulling Six Eight-foot-Cut Binders on the Weitzen Farm, Zealandia, Saskatchewan.

WHY is it that on the largest, most successful and most scientifically managed farms of the United States and Canada THE BIG FOUR "30" furnishes all the power?

The Big Four "30"

does the work on the greatest farms on the American Continent because it represents the highest tractor

efficiency, and efficiency is demanded on these great farms. They cannot be operated without a sure, steady power that never falls down, that stands up to the grind of hard, gruelling work in the field hour after hour, day after day, week after week, month after month; that can be depended on to deliver the goods at all times and under all conditions. And that is why they use THE BIG FOUR "30."

Write now for the Big Four "30" Book



Gas Traction Company

First and Largest Builder in the World of Four-Cylinder Farm Tractors.

156 Princess St., Winnipeg, Man.

General Office & Factory:
Minneapolis, Minn., U.S.A.

Plowing engines differ in some respects from the ordinary threshing engine; they are built for hard service in the field, while the threshing engine is intended to work under belt and haul the separator around. The plow engine is just as successful under belt as in the field. Consequently if one intends buying a farm tractor, whether it is his first or third he should buy a plow engine instead of a single purpose threshing engine.

Most of all manufacturers at this time build a plow engine, therefore, some are better than others, considering the use they are to be put to, and in buying the field should be gone over carefully before investing. As soon as this question has been settled and the engine bought, the next step will be to get as much out of it for the least money as possible. It should be used for as many different things as possible, and just as many hours each day. Quite a little sum of money has been invested, and the owner should make a point to get this money back with a liberal rate of interest during the life of the engine.

Unless you are looking for trouble, don't criticise a woman's husband in her presence.

Why Worry?

Worry, unnecessary worry, has killed more people—or, at any rate, hastened their end—than any disease. There are, of course, states of health, mental and physical, when it is part of the illness to fear everything. But that form of worry is very different from crossing bridges before we arrive there. Life takes so many unexpected turns that it often runs on lines we never anticipated, and instead of what we expected we have to face something absolutely different. All our preconceived ideas, all our plans, all our hopes and anxieties are of no value. We are in the same position as a traveller who has bought an outfit, taken his passage, and made his arrangements to go, and who suddenly finds himself compelled to travel in the opposite direction, where all his things and preparations will be useless. If worry would bring back our losses, recall the words we had fain be unsaid, undo the deeds we regret so bitterly today, cement ruptured friendships, put the crooked straight, and, in short, enable us to relive our lives, it would be worth while; but as it won't, it is a waste of time and energy. As the old proverb says, "a pound of care won't pay an ounce of

debt," and so the only thing to do is to believe that the past is past, and, instead of grieving over its mistakes, endeavoring to profit by its lessons.

—Beach Telling.

To-day's Test.

There is no hardship ahead of us in life that may not be made easier by our doing the hard thing of today with unflinching faithfulness. And every hardship that lies ahead will be the harder to meet by any failure of ours in today's test. This day's testing and trial is sure to be severe. It probably seems unfairly so. It may be the hardest we have ever yet known. It is sure to seem dull, and unattractive, and utterly lacking in those elements of picturesqueness or heroism or adventure that seem to mark the achievements of the world's great victors. But that is what makes it hard to the point of being worth while. And here is another reason for taking up its challenge manfully: "For this commandment which I command thee this day, it is not too hard for thee, neither is it far off." How we ought to rejoice that there is something close at hand that is big enough to test us but not big enough to break us!

Dispatch.

By Josh Billings.

Dispatch iz the gift or art ov doing a thing right quick. To do a thing right and to do it quick iz an attribute ov genius.

Hurry iz often mistaken for dispatch; but there iz just az much difference az there iz between a hornet and a aunt when they are both ov them on duty. A hornet never takes any steps backwards, but a aunt alwus travels just as tho he had forgot sumthing.

Dispatch never undertakes a job without fust marking out the course to take, and then follows it, right or wrong, while hurry travels like a blind hoss, stepping hi and often, and spends most ov her time in running into things, and the balance backing out agin.

Dispatch haz dun all the grate things that hav been did in this world, while hurry haz been at work at the small ones, and haint got thru yet.

Water mills were used in the time of Julius Caesar. In Roman times slaves were condemned to the corn mills, which were propelled by treads. Afterward cattle were used. In the third and fourth centuries there were as many as three hundred cattle mills in Rome.

Is the Automobile an Implement for the Farmer?

By I. G. NITION.

Not so very long ago, in fact not more than two or three years, the above question would have been absurd, and would have undoubtedly received an absurd answer. The automobile was regarded as the "novelty of the rich," devised for the purpose of providing a means of transportation that would not permit of being popularized as was the bicycle. For a brief period this end was scored, but only for a brief one. The man of money failed to see the trend of progress. He failed to see that mechanical power was a thing toward which every business and occupation was turning. He failed to see that even the farmer was making a factory out of his farm, and that this same farmer was fast beginning to realize that machinery of any kind that would decrease the cost of crop production, no matter what the cost, would become a part of his farm equipment.

It did not take the farmer very long to realize that the automobile was a most valued labor and time saver, to say nothing about the comfort it afforded, with the result that to-day farmers are among the very largest purchasers of automobiles. Some buy for comfort alone, but by far the larger majority purchase with a full realization of the commercial value and advantages of such a machine.

I have headed this article "Is the Automobile an Implement For the Farmer." What I should have done was to have headed it "What sort of an Implement Shall The Farmer Buy?" and as a discussion I shall confine myself largely to the latter subject.

Rural Western Canada was one of the last places to take hold of the automobile with anything approaching enthusiasm. By this I do not mean that we are backward or "behind the times," but we have been so busy raising wheat at \$1.00 per that we did not stop to investigate the automobile proposition. Another apparent "stumbler" was the road question, for at certain seasons of the year Western Canada has anything but good roads. Distances between farms are in many instances great, and the cost of upkeep heavy. Until the last few years (thanks to reliability runs and endurance tests) the auto was generally regarded as a city street conveyance, and not a country road negotiator. However, since the city street fallacy has been exploded the Western Canadian farmer, who raises \$1.00 wheat, began to realize that in the

automobile was to be found something that would materially shorten the prairie miles, and that living fifteen or twenty miles from town, and owning an auto, was about the same as living four or five miles from town, and depending on horses to get there. The farmer of Western Canada came to with a start, with the result that to-day he is studying autos, talking autos, and what is more to the point he is buying autos.

We will assume that Farmer Brown has made up his mind to buy an automobile. Is there any way in which we can help him out with some good advice? Let us first ask a few questions.

What does he wish to pay for car equipment, and extras complete? What are his ideas as to power, passenger capacity, and speed? Will he use the car for pleasure only, or also for business; that is take him from the farm to town and back? Will his wife drive the car? What is he prepared to pay annually for up-keep? Does he expect to sell in a year or two, to keep the car longer? Has he had previous experience with automobiles. Does his territory include bad hills and are the roads good or otherwise? On the answers to these questions will depend the selected type of motive power, steam, or gasoline engine; the type of transmission if a gasoline car is chosen; the power, wheel-base, and body style, the tire equipment, and the extras as regards wind shield, top, etc. The question of whether to buy new or second-hand will also be determined by this information.

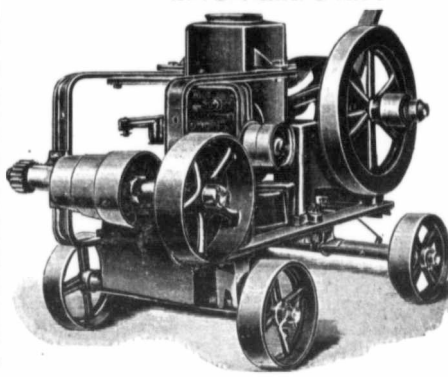
Steam cars are by far and away in the minority, therefore; suffice it to say regarding them that the choice between steam power and a gasoline engine is mainly one of personal preference. The steam engine runs quietly, and its power is very elastic. It takes a few minutes to fire up the boiler, but in most cases that is not a serious objection. The principal drawback is that to hold steam and water under a pressure of several hundred pounds necessitates more or less constant attention to pipe joints and couplings, stuffing boxes, packing, etc., of all of which the number about a steam car is rather large. The fuel, also, is in some cars under pressure, and there is the possibility of some pipe or connection springing a leak, and the escaping fuel being ignited by the fire under the boiler. On the other hand, if one lives in a country of steep hills or bad stretches of road, or where deep snow may be

FARMER'S POWERHOUSE

ON WHEELS

YOU WANT a gasoline engine that will do ALL YOU WANT.
YOU WANT a simple, reliable, durable ALL PURPOSE ENGINE.
YOU WANT an engine you can understand and make a friend of.
YOU WANT power with economy. YOU WANT convenience and safety. In short YOU WANT the famous

GILSON "60 SPEED" In 13-4 and 3 H.P.



STYLE
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ENGINES
AIR COOLED
4 1/2 to 27 h.p.
Only Engines
made that
render
100 per cent
SERVICE
Saves all your
own labour and the expense of
HIRED HELP

Has 50 less parts than any other engine. With the strength of the best steel and the solidity of granite rock. You can take it anywhere and harness it to any job inside or outside. And the Price Beats all Competition.

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OUR ENGINES PAY FOR THEMSELVES

IN FUEL SAVING and IN TIME SAVING!
They burn gas, gasoline, kerosene and distillates. They have no great cumbersome base and consequently are easily and quickly moved from one job to another about the farm. Write for information about our new Free Trial Offer of our latest improved

GASOLINE ENGINES

Note the competitors for ease in handling. Note the pulleys on both sides! Write for facts regarding our new slow speed, High Duty Engine, the engine that gets up-to-date power from every quart of fuel—one that has the record for lowest upkeep cost—that is the quickest and easiest starter—has least vibration—perfect lubrication, steadiest power, least wear and tear. Mail us your name and address on a post card, today, giving us the size of engine you need and the use you will put it to. We make 1 1/2 to 5 1/2 h. p. single cylinder engine; 6 to 25 h. p. two cylinder; 30 to 50 h. p. four cylinder. Quick action on your part is demanded to get this free offer. Don't buy or order an engine until you investigate the TEMPLE MAKE. This is our 60th Year.

1 1/2 to 5 1/2 H. P. Single Cylinder TEMPLE PUMP CO., 445 W. 15th St., CHICAGO 6 to 25 H. P. Two Cylinders

expected, one can get more for his money in the way of ability to surmount such obstacles in a steam car than in either of the other types.

As regards gasoline cars we find the larger number of the four cylinder type. A few years ago one and two cylinder cars were very common, as for example the single cylinder Cadillac and Reo cars and even to-day some very good two cylinder cars are to be found on the Canadian market while the little single cylinder Brush is performing stunts of everyday record. The average small touring car of to-day has a twenty or twenty-five h.p. engine of the four cylinder type. It gives excellent service, and can be purchased for practically the same price as the old one and two cylinder cars.

If the nurse will permit a car developing from 30 to 35 h.p. is bet-

ter for touring. Such a car will negotiate the hills and rough roads better than a smaller machine, and will ride easier on account of its longer wheel base.

The exact speeds reasonably attainable with given cars will depend on the driver and the road. On good level or moderately rolling highways, even a twenty horsepower car will average twenty miles an hour during a day's run and have power to spare.

With a thirty horse power touring car, the average gait might be twenty-five miles per hour, and with a light roadster of that power thirty mile average would be possible, though not usual. Such a roadster would easily touch fifty miles an hour for short distances—fast enough for safety.

Other things being equal it is advisable for a beginner to take a car of moderate power, certainly

not over thirty horse power and better somewhat less. A small car, on the other hand, is easily learned; and when you have learned to look after your car—large or small—you are in a position to avoid a lot of trouble and expense.

In Western Canada cars suitable for the average farmer can be purchased all the way from \$1,000 up to \$2,500. Choice is largely one of taste and length of pocket book. It is like purchasing a buggy. A part of the purchase price or the higher priced cars is for style and finish—size, strength, and power being also factors that must be considered. If the farmer had only a limited amount of money to spend it is better to get a small than a large car, for the small cars are apt to be in better condition, and will give better service for the money expended.

Assuming decent workmanship and intelligent care, what does it cost to keep a car? Unfortunately, this is a question which can only be answered by citing particular cases, since everything depends on the personal equation and on the extent to which the car is used. If a car is used in moderation—say, 2,500 miles a year—and is kept as long as it gives good service, instead of being arbitrarily sold off at the end of the first or second year, both the mileage expenses and the depreciation are kept low. Assuming a car to be purchased for a total cost of \$1,800, driven 2,500 miles per year for six years, and then sold for \$200.00, the yearly expense figures will be about as follows:—Interest on car, \$108.00; depreciation, \$300.00; tires, \$75.00; repairs, \$60.00; gasoline, \$25.00; license, \$5.00; sundries, \$25.00; total, \$598.00.

The above figures may be a trifle high, but country roads in Western Canada are on the average not the best, and are rather hard on a car. \$598.00 may seem a rather large expenditure, and is if the farmer is to regard his car solely as a pleasure vehicle, but the automobile has a commercial side to it that it is not the purpose of this article to discuss, but which nevertheless is by far the most important viewed from the farmer's standpoint. The above figures may also be cut materially by care and knowledge of this car on the part of the owner, for like a good horse, nothing counts so much with a good automobile as care and attention.

Before leaving the subject of purchase price, a word should be said about the allowance for equipment. Many cars are sold today completely equipped, or so nearly that the addition of \$50 or so covers everything except clothing, licence, and insurance. Other cars, however, especially those sold at low prices, are often imperfectly equipped, and one must add to the price of a folding top, speedometer



The GOLD MEDAL Winner

"FLOUR CITY" TRACTOR

Others may claim FIRST in this or FIRST in that, but after all is said, it is only the winner of the Gold Medal that counts for anything in the WINNIPEG CONTESTS. It is the highest prize, is sought after by all, and awarded to the one that excels in the various tests to which it is subjected.

The "FLOUR CITY" won these medals because of its correct design and construction in which is embodied the most advanced features to insure dependability, power, strength and economy. Being one of the first in the field, it could not profit by the experience of others, but has been brought up to its high state of efficiency by keeping everlastingly at it, when others were in doubt.

The performance of the "FLOUR CITY" in these contests over a period of four years, in which it carried off the gold medals, rightly classes it as the highest type of gasoline-kerosene tractors.

The "FLOUR CITY" is built in three sizes, viz., 20, 30 and 40 h. p., which gives a latitude of power suitable for any size farm; they will burn either gasoline or kerosene.

CAN BE OPERATED IN EXTREME COLD WEATHER

Herbert, Sask., Jan. 4th, 1912.

KINNARD-HAINES CO., Minneapolis, Minn.

Gentlemen:—Replying to your favor regarding the satisfaction our 30 h. p. "FLOUR CITY" engine is giving, we can say it has been doing all that was looked for in work and for cold weather we can start any day without lighting a match to warm up. People are surprised and it is finding great favor among prospective buyers.

Yours truly, BRUBACHER BROS.

If interested send for catalogue No. 18.

KINNARD-HAINES CO., 830 44th Ave. N., Minneapolis, Minn., or **ONTARIO WIND ENGINE & PUMP CO.** Toronto, Winnipeg, Calgary, Dominion Agents.



More Power

OILDAG

(Reg. Trade Mark.)

Builds a film that is lasting. It is the only oil that contains Defocculated Graphite. This graphite is not available in powder form. Oildag is put up in condensed form for mixing with 1, 4, 10 or 40 Imperial gallons of oil. You mix it with the oil you use regularly. As all Acheson-graphite sold as a lubricant is of highest purity, and Defocculated Graphite is of molecular fineness, it is plain that Oildag has no equal as a lubricant to be used in place of plain oil, that drips, drips and drips away without affording enduring benefits.

To secure the greatest efficiency from either gas or steam engines, the cylinders should be lubricated with Oildag. Oildag and Gredag are lubricants that afford cumulative benefits.

GREDAg

Gredag is the only grease containing Dis-integrated Acheson-Graphite. It will easily do twice the work of plain grease, because it forms a film that has wonderful endurance. The smoother that you can make surfaces that come in contact the less will be the need of lubrication, for friction will be reduced. We are General Agents for Gredag, made by the International Acheson Graphite Company



Ask your dealer or write for more particulars

Acheson Oildag Company

SARNIA, ONTARIO

wind shield (if desired), and various other things, before he is really through spending money. The lamps supplied with some low-priced cars are very flimsy and very inefficient, and the critical purchaser will insist on good lamps of proper size being furnished, paying the difference in price if neces-

sary. A good automobile generator or a gas tank is as important as the lamps; and, for both safety and peace of mind, a long-range horn is an important feature of the equipment. These horns are operated by electricity or by the exhaust pressure. The former type costs more; but is more satis-

factory. Another essential item of equipment is three or four spare inner tubes, and except for the smallest cars, a spare shoe. In place of the latter, a light car intended for local use may carry a blow-out patch and one or two tire sleeves.

Continued on page 36

The Use of the Gasoling Engine for Street Rolling Purposes and General Purposes

By ELI HERBERT

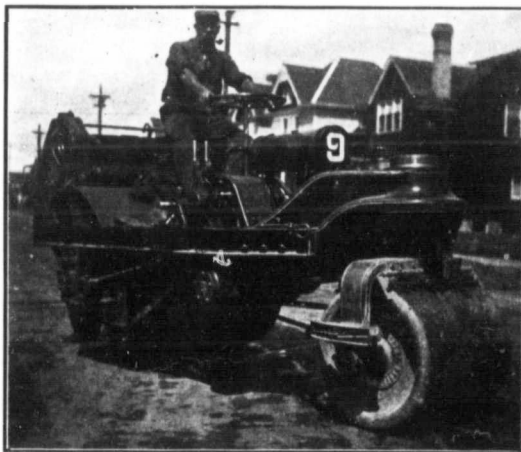
In July of this year it was my privilege to unload and start up two of Messrs. Parford and Perkins, of Peterboro, Eng., gasoline rollers for the city of Winnipeg. I was privileged, too, to operate one of the same for most of the 1911 season. As this experience appears somewhat unique in the annals of gasoline rolling on this continent I feel it a pleasure to give somewhat briefly my experiences with the roller, and also to show some of its capabilities.

These two rollers, I understand, are the first of their kind to have been put in practical use in the Dominion of Canada.

The work to which this roller has been put during the season just closed has been much and varied. She was first put into

The consumption of gasoline for the three trips was under 10 gallons; this, at 21½ cents per gallon, the price in Winnipeg, would only amount to about \$2.15 for fuel; the engine oil consumed per day was about one quart, and the cost about 25 cents. I may here mention that I am very particular to secure nothing but the best oil for lubricating, and I found McCall Bros. gas engine oil to answer admirably. The last work the roller did was to work on "surface" asphalt, and at this she proved a very all round and economical success.

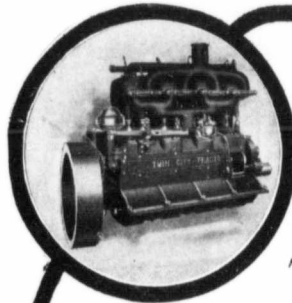
The general construction of the roller is Barford and Perkins combination of their well known water ballast roller, with a motor of the same class as



use to roll "Binder" on new streets and between car tracks, which, though a rough job, she came out satisfactorily. Next I was sent to roll "grade"—previous to the filling in of the street with concrete—this was a rough job, and the little engine answered to the call admirably. Then we next went on to turf sod, and, as for competence in this direction, I have no hesitation in saying she could not be beaten. After this it was found necessary to transport from the city yards on Ross Avenue to the asphalt plant on the east end of Water Street, a considerable quantity of stone for use in preparing "binder" for the new street laying. The little roller was brought into requisition, and although the engine was

only built to propel itself, I can testify that on five consecutive days I hauled behind this engine four wagons of about three tons capacity—or in all 12 tons. Three trips per day, or a total of 36 tons removed per day, used for heavy auto vehicles. The hind roller is made of hard cast metal, and would hold somewhere round 15cwt. of water. The weight of the roller empty is about eight tons, thus you see you have a roller easily adjusted from about 8 to 9 tons by the simple filling of the back cylinder with water ballast.

The frame is of angle steel, manufactured at those celebrated works near Dudley, England, and owned by the Earl of Dudley. The writer had the privilege of driving the noble earl's



Here is the Heart of the Twin City "40" All-Steel Gas Tractor

THE power plant of a traction engine is its most vital part. A weak motor will cause more trouble in a farm tractor than anything else. For twenty-five years we have demonstrated that we know how to make engines and transmission machinery that "make good." We are the recognized leaders in the West in this line. Many of the Twin City Corliss Engines that we made twenty-five years ago are still running and doing good work today.

In designing the motor for the Twin City "40" All-Steel Gas Tractor, we combined with our own experience the knowledge of an expert in this line of work and succeeded in producing the greatest motor ever built for tractor work, a marvel of strength, durability, simplicity, efficiency and economy of operation. We built this motor as carefully and as mechanically perfect in every detail as our large five hundred horse power gas engines.

The Trouble-Proof Motor

This Twin City "40" Motor is of the four-cylinder four-cycle type. Each cylinder is cast separately in one piece. This does away with a lot of delicate parts and unnecessary gewgaws, that only get out of order and cause a lot of trouble. In case one cylinder should be put out of commission, the work can go right on with the power furnished by the other three. Another strong feature is the door underneath the cylinders which makes it easy to get at any part that gets out of order. When anything goes wrong with this motor it is not necessary to drag the machine off the field to a repair shop to be fixed. The motor is mounted solidly on the frame-work of the tractor, holding it firmly and rigidly in place and eliminating the wear and tear on the engine, caused by the vibration.



All Steel Frame "Built Like a Bridge"

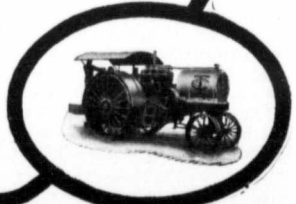
Only a corporation of expert engineers and master mechanics with our many years of experience could make a motor so perfect, so strong, so powerful and so reliable. But the motor is only one of the many strong features of the Twin City "40" All-Steel Gas Tractor, a tractor backed by a real guarantee, a tractor built to last, to hold up under heaviest strains, to do the most effective work at least cost.

Learn More About this Great Tractor

Let us tell you what the Twin City "40" All-Steel Gas Tractor can do for you, and why it is worthy of your most careful investigation if you are thinking of buying a farm tractor. If you are in doubt as to whether or not you can use a gas tractor to profit on your farm we will be glad to advise you honestly and freely. Tell us the size of your farm, the number of horses you have, and the number of men you hire. We will also tell you where there is a Twin City agent near you who can show you the Twin City "40" All-Steel Gas Tractor and give you an actual demonstration if you wish. Write us to-day for this valuable information.

General Agents for Canada
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The CATERPILLAR

Is the Tractor You have been looking for. Works in any Season and in any Soil

HOLT CATERPILLAR GAS TRACTOR,
TWO Sizes, 45 and 60 B.H.P.

Has more than 2,000 square inches Tractive Bearing Surface.

Works successfully in Mud, Sand, on Plowed Land or Sod.

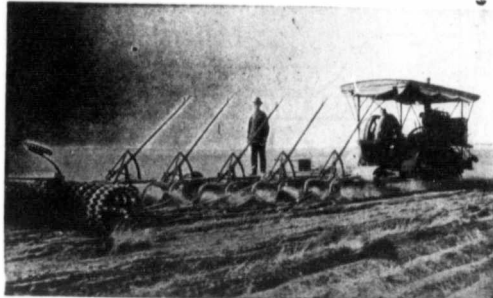
Turns in its own length, Bridges over holes and Irrigation Ditches.

It cannot Pack the Soil.

Pulls Eight to Ten 14-inch Bottoms in Breaking.

Pulls Ten to Twelve 14-inch Bottoms on old ground.

Will drive large Separator; Easily handles five or more Binders.



45 H.P. Caterpillar Breaking at Namaka, Pulling 10 Bottom Engine Gang.

MR. FARMER: During the past season how many times was your wheel traction engine hung up by the wet soil, by "pot holes," "buffalo wallows," or soft places? The Caterpillar was designed eight years ago to meet just these troubles.

Canadian Holt Co., Ltd., affiliated with The Holt Manufacturing Co. Stockton, Cal., and Holt Caterpillar Co., Peoria, Ill., was incorporated under Dominion laws December 14th, 1911.

We will Deliver Engines from Calgary and Regina.

You must order now for Spring Delivery

Canadian Holt Co., Ltd.

Builders of Caterpillar Tractors, Combined Harvesters, Fresno Scrapers

609 Eighth Avenue West, Calgary, Alberta

Canadian Holt Co., Ltd., Calgary, Alta.

Please send me free literature describing Caterpillar Gas Tractor. I am farming _____ acres

Name _____

Address _____

MAIL COUPON TO-DAY

first auto from Whitley Court to Worcester, about 15 years ago. Springs are used over the hind and fore wheels, thus minimizing the vibration and strain on the frame.

The engine is of the well known "Albion," manufactured for Parford and Perkins at their works in Glasgow, Scotland. It is rated at 16 horse power, and my experience with it is that it fully develops this rating under load. Its ignitor is of the low tension magneto, fixed and driven from the engine shaft, with, of course, make and break ignitor. I never knew an engine with magneto ignitor only to "start up" so quickly and easily, no batteries at all are used, and the whole of the wiring in connection with the ignition is less than 20 inches in length. The steering and general manipulation is extremely easy, perfect control being effected by the driver from his seat with the utmost ease. Any man with ordinary intelligence can operate this roller with very little instruction.

It has two speeds forward and two on the reverse, and I have never known her to "buck" on bottom speed, even when under more than her allotted load. I consider this roller very clean, economical and handy. The agents in Winnipeg are Messrs.

Mussens, Ltd., and I am informed that a similar roller, though smaller, weighing about 3½ tons, is on the way to Winnipeg, having been purchased by the city of Winnipeg Parks Board, and this, I have no doubt, will be a very handy machine for assisting to beautify the city and other parks.

Heat of Exhaust.—Experiments were recently made by one of the leading Swiss firms as to utilizing the waste heat of exhaust gases from internal combustion motors. In the present case the Sulzer-Diesel motor was used. Water is heated by the exhaust, and the exhaust gases are sent through a set of tubes placed

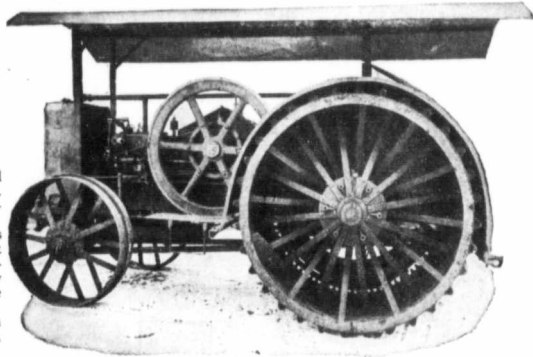
inside a water tank. Air for various purposes can be readily heated, for drying ovens or other purposes. One of the main difficulties was to make the tubes of a suitable material so that the exhaust gases would not attack it. However, it was found that certain special kinds of cast iron will serve the purpose very well.

Ideal Tractor Settles Tillage Troubles!

Gets your ground ready on time, and enables you to sow when you should. Simple to operate. One man can do it—easily.

Improved 1912 pattern ground locks on driving wheels. Steering device most perfect in existence. The IDEAL Tractor can be turned in a small space. New cooling system—automobile type—the best ever invented.

Many special features not found on other tractors. Send for catalogue, giving facts you ought to know.



GOOLD, SHAPLEY & MUIR COMPANY, LIMITED

Manufacturers of

"IDEAL" Gasoline Tractors
"IDEAL" Hopper Cooled Gasoline Engines
"MAPLE LEAF" Grain Grinders

Windmills and Pumps of every description.
Wood Sawing Outfits, etc., etc.

BRANTFORD

WINNIPEG

CALGARY

Course in Gas Engineering

Conducted by D. O. BARRETT.

This is a new series of lessons that will continue for two years. These will consist of a number of practical talks on the theory and practice of the gas, gasoline and oil engine. They will be simple, illustrated where necessary, and of such a nature that the gas engine owner may easily adapt them to his daily engine work.

LESSON XV.

After looking into the results of the motor contest, it would perhaps be interesting to know something of the construction of the various machines, the style of transmission, etc. While photographs have been printed in the different magazines showing the machines while being tested, they convey but very little specific information to anyone who was not present at the contest. The following matter does not go into detail, as the general dimensions may be obtained from the score sheet, but the line drawings will show the special designs peculiar to each contestant. The outlines of the engine, frame and wheels will be given in full lines, while dotted lines will represent the various gears. The direction of rotation of these are shown by the arrows the tractor being assumed to be travelling ahead. The dotted lines adjoining the centres of the gears show how the power is transmitted back from the engine to the drivers on the forward speed.

Taking up the International single-cylinder engine of the "Mogul" type. This style of truck and transmission was used on several of their rigs, and so is shown only for the single-cylinder. This is one of the simplest transmissions, as there is only one intermediate gear A between the engine and the drivers. Two bull gears are provided, one in each wheel, the rear axle being stationary, the drivers turning on the same. The gear E is on an extension of the engine shaft, and is in mesh with the intermediate gear A at all times. A friction clutch is attached to gear E, by which same is locked to the engine shaft. Keyed to the outer end of the shaft is a paper friction pulley B. C is an iron friction pulley, and is keyed to reverse gear D. C may be pulled up into contact with B, which revolves pinion D and reverses the direction of travel. The water supply is carried in tank W, which has a screen in the upper half for cooling the jacket water.

The transmission used on the International "Titan" is very similar to that just described. Here, however, there is only bull gear A on the right hand side. This revolves the rear axle to which the drivers are keyed. The gear B and other pinions are on the left side. The pinion C is also an extension of the

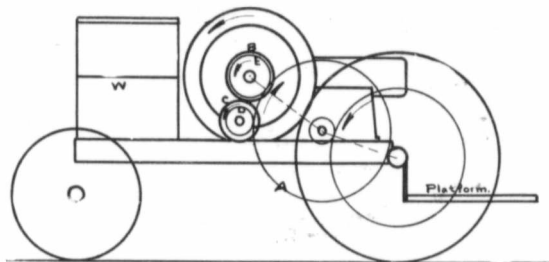


Fig. 1.—International "Mogul."

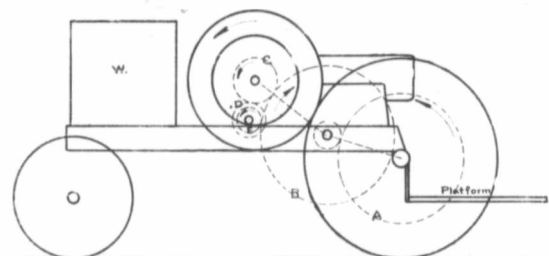


Fig. 2.—International "Titan."

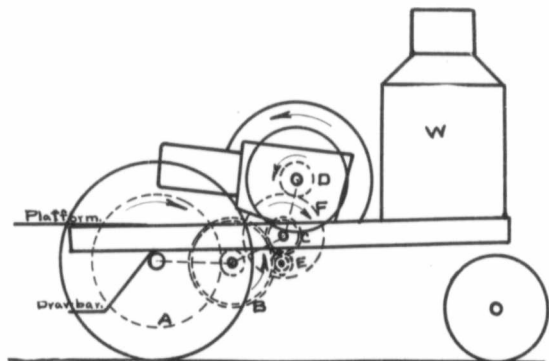


Fig. 3.—Rumely "Oil Pull."

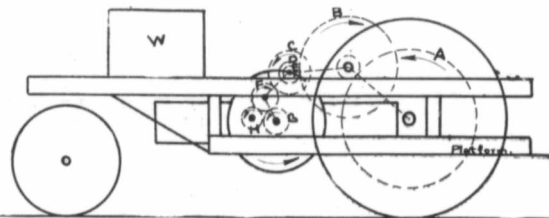


Fig. 4.—Universal.

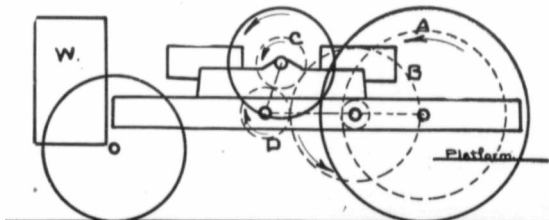


Fig. 5.—Goold, Shapley & Muir.

engine shaft, and connection is made thereto by means of a friction clutch placed at the outer end of the shaft. Pinion C is slidably mounted so that in its inner position it engages with gear B, giving the forward drive. By sliding to the outer position it engages gear D, which is fastened to pinion E, this being always in mesh with gear B. This is equivalent to interposing another gear between C and B, thus giving the reverse movement. It will be noticed that the shaft carrying gear B passes directly through the frame. The main channels do not extend back quite this far, the rear portion being a webbed steel casting. A screen cooler tank is also provided for the water.

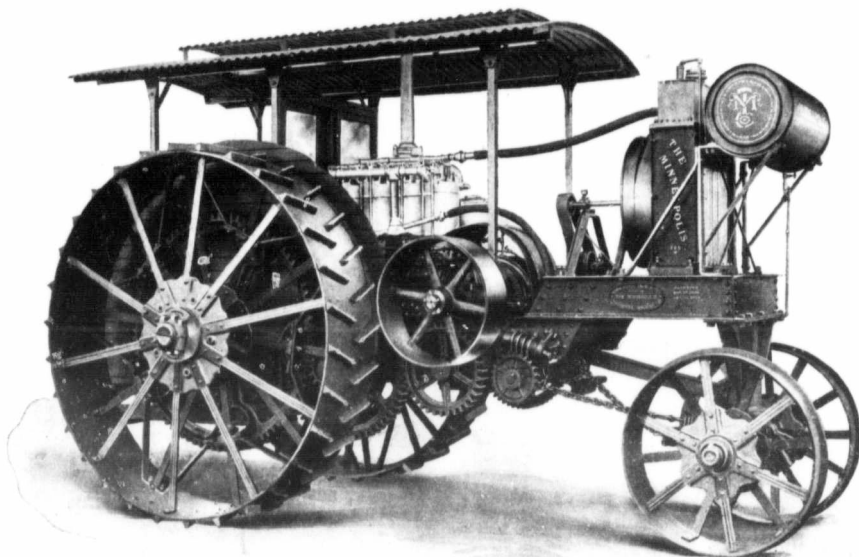
The Rumely "Oil Pull" has two intermediate shafts between the engine and drivers, consequently the engine runs under or in the opposite direction to the majority. For threshing, this necessitates an open belt instead of the crossed. The machine shown is the single-cylinder, being provided with two speed, while the double-cylinder has only one.

Both rear wheels are provided with drive gears, but the rear axle is fastened to one driver, and turns with same. Pinion D is fastened to the belt pulley, this in turn carrying the friction clutch. Meshing with D is F, and on this shaft are the two gears C, which slide either into mesh with B or with the reversing gears E. When the engine is used for belt work, C is slid into neutral or out of mesh with all the other gears allowing gears D, E, F and C to turn idly. The platform is placed on top of the frame I beams, giving the operator an excellent view ahead. The drawbar is placed below at the proper height. The exhaust from the engine is directed into the upper part of the cooler W, causing a circulation of air up through the radiator and cooling the circulating medium, which is a cheap grade of oil.

The Universal is equipped with an opposed engine. One of the special features of this machine is the fact that the engine is placed quite low to the ground, enabling all parts to be easily reached. The engine runs over, thus there need be three intermediate gears between the engine and the rear axle. The bull gears A are provided, the rear axle turning with one of

The Great Minneapolis Line

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Have no rivals in the field of agriculture today whether the test is made in power, efficiency, simplicity, durability or value.

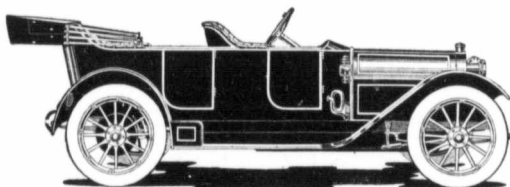
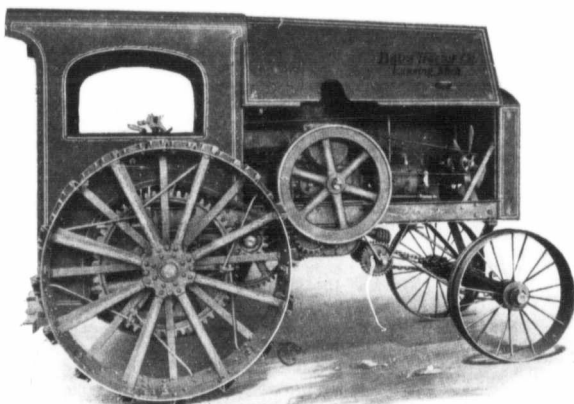
The "Minneapolis" 25 H.P.

Is the most reliable 4-cylinder tractor built. It is the top notch of value in a thoroughly dependable engine for big work and difficult work on the heavy gumbo of Western Canada. It will do all it promises — sometimes a big slice more, but never less.

Practically indestructible, it is made of steel in every detail in which cast iron can be replaced. You cannot buy a smoother working engine at any price.

THE BATES TRACTOR

An all steel general purpose farm tractor, designed by M. F. Bates, and made by the "Bates Tractor Company," of Lansing, Mich. It is the fruit of 20 years practical experience in building and operating gas and gasoline engines—the most convenient engine for the small farmer. An ideal plow tractor, there is nothing in belt work or haulage of any sort it will not handle in perfect style, and it comes in at such an easy price.



THE "MICHIGAN 40-MODEL K"

5 Passenger Touring Car

The great FARMER'S OWN AUTO. New 1912 model of this matchless machine represents what is positively the last word in automobile construction—every point the most exacting motorist could ask in comfort, style, speed, power, dependability and value. Get the specifications and compare these and the price with anything else made.

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We have a first rate money making proposition for live representatives at every point in Western Canada to handle our unique line of Tractors, Engine Gangs, Threshing Machinery, Farm Motors and Automobiles. There is nothing going in the special goods we handle that will out-rival these lines either for satisfaction to the farmer or to yourself as the sales agent. Write us at once for our complete literature and terms.

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the wheels. The machine has two speeds, the shaft carrying gears C, D and E slides forward, C remaining in mesh with F, when D may be slid along the shaft to mesh with B. To obtain the reverse, G is slid along the extension of the engine shaft out of mesh with F, and H raised up into mesh with both F and G. This double movement is ingeniously accomplished by means of a single lever. Water is used in the engine jackets, being cooled in radiator W, air being drawn through the same by a fan. The front axle is of the automobile type, each wheel turning separately.

The Gould, Shapley & Muir use an opposed engine with two intermediate gears and an internal bull gear. On the extended crankshaft are two pinions C, the inner one of which is keyed to the shaft, while the outer is provided with a friction clutch. On the first intermediate shaft are two gears D, the inner one meshing with inner pinion C, while the outer one meshes with gear B, and is of such a diameter as not to interfere with outer gear C. The two gears at D are separate from each other but may be locked together by means of a bevel friction. For reversing, the drive is from C to B. Both frictions are operated by a single lever. Steering knuckles of the automobile type are provided for the front wheels. The tank W consists of a number of corrugated iron pipes placed vertically, and just under the cab roof are a number of the same kind of pipes through which the water first circulates after leaving the engine jackets.

New Thresher Concern for Western Canada.

The season of 1912 will be the occasion of a great many new implement concerns opening up business in Western Canada. Among these we are pleased to mention the name of Messrs. Moody & Sons, Terrebonne, Quebec. This concern is an old one in the business, but up to the present time has never worked the Western Canadian trade. They manufacture a line of small separators, suitable for small size gas engine, and as the individual farmer is fast coming to realize that the individual outfit is the thing for him, this concern should enjoy a large and profitable trade.

They have opened up offices in Winnipeg at 419 Nanton Building, where any of the farmers interested will be able to find them, and all mail can be addressed to the Winnipeg office, with the assurance that it will receive prompt attention. In writing, please mention The Canadian Thresherman and Farmer.

"Big Four" at Saskatoon.

Information is at hand to the effect that the Gas Traction Co. have opened up a branch at Saskatoon for the accommodation of "Big 4" thirties, and a full and complete stock of repairs. This is made necessary by the company increasing business at that point. It will also enable owners to get repairs and supplies much cheaper than they could get them from either Minneapolis or Winnipeg, where factories of the company are located. Mr. P. M. Amidon, who has been with the Gas Traction Company for many years, will be in charge of the Saskatoon branch.

A New Investment.

On another page, over the name of Alex. McCurdy, will be found particulars of an unusually attractive proposal offered to investors by Messrs. Stewart and Walker, of Winnipeg. Their investments are in certain land developments, and if one may form an opinion from actual results—the only criterion by which any scheme can be fairly measured—the security and returns to the investor are beyond question.

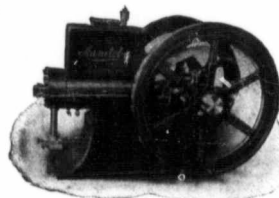
We have already made our statement to readers of The Canadian Thresherman and Farmer as to the responsibility we assume in our advertising columns. With this before us, and having taken the opportunity to make a specific investigation as to the character of this firm and the matter which is now the subject of its advertising, we have every confidence in saying that their proposal is well worth the inquiry of any of our readers seeking a safe investment.

The constituent members of the firm are known to us; they are all well known and respected citizens of Winnipeg, and men who have been uniformly successful in the special line of their own business.

We are not sent into this world to do anything into which we can not put our hearts. We have certain work to do for our bread, and that is to be done strenuously; other work to do for our delight, and that is to be done heartily; neither is to be done by halves or shifts, but with a will; and what is not worth this effort is not to be done at all.—John Ruskin.

A man who tells a young widow that she is the only woman he ever loved is eligible for membership in an Ananias club.

The *Manitoba* Gasoline Engines are Great Labor Savers on the Farm



They are always ready for work, in winter as well as summer, are not affected by cold weather as every engine is Hopper Cooled. No large separate water tank with small connecting pipes and circulating pump to freeze up or leak.

Have a perfect Cold Weather Automatic Mixer that requires no priming to start.

The Gasoline Supply tank is carried in the base below the intake valve. No possible chance of Flooding the Engine, Leakage or Waste, as with gravity feed engines.

The hopper, cylinder and base are all cast separate; in case of an accident can be repaired at very small cost. Quite different to those that have these parts cast all together; the latter method cheapens the first cost but not the last.

All small wearing parts are case hardened tool steel (never wear out). Has automatic battery and fuel cut out which insures long life to the batteries and economy in fuel consumption.

Write today for free catalog giving complete description of all sizes from 1 1/2 to 25 H.P. We also manufacture a complete line of Power and Pumping Windmills, Grain Grinders, Pumps, Saws, etc.

OUR FACTORY IS IN THE WEST

The Manitoba Windmill & Pump Co., LIMITED BRANDON, MAN., and CALGARY, ALTA.

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X CELL DRY BATTERIES

Have high Amperage and a Long Life

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PATENT NOTICE

Anyone desiring to obtain the Invention covered by Canadian Patent No. 124166, dated 1st day of March, 1910, for improvements in Cow Tail Holders, and granted to H. C. Malstrom, of Hallock, Minn., U. S. A., may do so upon application to the undersigned, who are prepared to meet all reasonable demands on the part of the public for said invention.

G. S. ROXBURGH, Resident Manager.

FETHERSTONHAUGH & CO.

Patent Barristers, Bank of Nova Scotia Building, Winnipeg.

Sparks from the Emery Wheel.

A postman is a very popular man of letters.

Don't force your opinions or visits upon people.

Some women make good friends but poor wives.

True love doesn't listen to the advice of outsiders.

An alarm clock makes a pretty good eye opener.

Tomorrow is sure to come if you have a note to meet.

A woman who weighs her words gives good measure.

A man who is worth doing at all gets done to a turn.

Conscience is something that some folks are short on.

It's human nature to want to get ahead of our neighbors.

It's usually a widow who talks about her ideal husband.

We meet gentlemen who are simply lazy men with money.

A woman can't look pleased when she isn't, and a man can't.

A man has a right to growl if his wife treats him like a dog.

Hardness of heart is responsible for some men's financial success.

Man is a born listener, and when he can't buy a parrot he gets married.

Take away some men's money and there would be precious little left.

A promoter is a man who counts his chickens before they are hatched.

Don't pay a man to be good—he will never earn his salary.

There is a lot of time wasted by folks in trying to be miserable.

It's wasting time to try to explain why you failed. Get busy and make good.

Strange, isn't it, that little girls always smile and little boys always grin?

When a preacher takes a false step people forget all about the mantle of charity.

How many of your neighbors would shed tears do you think if you moved away?

The respect your heirs may have for you depends on the amount of money you save.

Some people's morals are like their best clothes, only worn on extraordinary occasions.

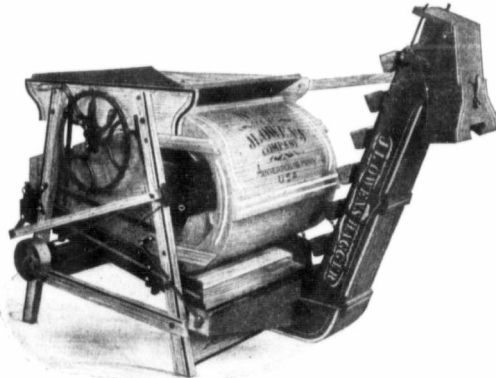
There is something radically wrong with the hearing of some musicians who play by ear.

When a man is discharged he thinks his employer is making the mistake of his life.

When a woman asks a man's advice on a proposition, she just wants him to O.K. a scheme she has already decided on.

Watch the man who boasts of his willingness to do his duty, and you will find him trying to dodge it the first chance he gets.

THE MARQUIS

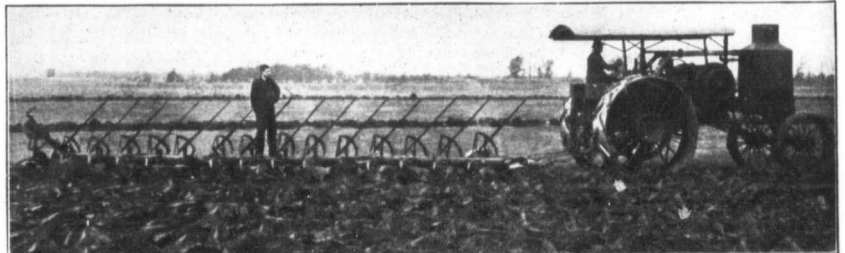


We could not think of any better name for our New Mill than "The Marquis," because it has demonstrated itself that there is no better mill ever put on the market and in a class by itself, having the most perfect cleaning qualities, the greatest capacity for its size, and in fact, it is the Ideal Farmers' Mill, being low down, large hopper, big wind blast, extra heavy and strongly built, cleans any kind of grain—oats from wheat or barley.

We Guarantee the Mill to be All We Claim Sent on trial to any Good Farmer or Agent

Capacity guaranteed, 24 in. sieve, 50 bus.; 32 in. sieve, 75 bus. wheat per hour. Supplied with full line of sieves, including barley gang Power attachment, and bagger extra. Don't buy any Mill until you try "THE MARQUIS". Stocks at Winnipeg, Regina and Saskatoon and later on at Calgary.

The Harmer Implement Co.
182 Princess Street, Winnipeg



30-60 FAIRBANKS-MORSE OIL TRACTOR PULLING TWELVE 16 INCH PLOWS

What You Want in a Tractor

Lots of power, economy of fuel, low cost of upkeep and simplicity in operation. Now, see how the

Fairbanks-Morse Oil Tractor

qualifies on these points.

POWER: Every Tractor severely tested, being made to pull full load on belt for several hours then tested for maximum draw bar pull. We prove the ability of each tractor to carry and main tain a load in excess of its rated H.P. **ECONOMY:** Our Engines have always been noted for economy. Fuel consumption is lowest, due to the exclusive patented features. **LOW COST OF UPKEEP:** Each Fairbanks-Morse Tractor is made with a view to giving long years of service. We want buyers to feel that they bought the right tractor. We want every owner a booster. Fewer small working parts than any other tractor made. **SIMPLICITY:** Fairbanks-Morse Tractors are always run by their owners. No experts needed.

SPECIAL FEATURES

Powerful brake on differential shaft for use on hills. Separate brake on belt-drive pulley stops it turning when clutch is out. Both brakes worked by foot pedals. Patented forward or reverse motion and belt pulley single lever control. Trucks, transmission and all vital parts of high-grade steel. This means a comparatively light tractor that will not pack the land. Buy the Right Tractor, at the Right Price, on the Right Terms.

Send to our nearest office for special catalogue. Our 15-30 is made for moderate sized farms. For large tracts we recommend our 30-60 Horse Power machine. Say which would interest you, when writing.

Eclipse Pumper Gives Ample Water Supply

and will run churn or cream separator at the same time. Costs about \$20 less than an 8 foot windmill. Comes to you "ready for business." Just needs to be screwed solid to heavy plank. A boy or girl can run it easily. **ABSOLUTELY FROSTPROOF** can be started even if water in jacket is frozen solid. To use engine for other purposes, simply looses four nuts. You can take it away without disturbing pump. Equipped with two pulleys, will pump and run other machines at the same time. Adaptable to any iron pump standard not over 5 inches base diameter. Note that this is not a low grade air-cooled engine. It has the advantages of water-cooling and yet is frostproof. **GUARANTEED** for a year against defect. We have hand and power pumps for shallow or deep well work.



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The CANADIAN FAIRBANKS-MORSE CO. Ltd.
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COUPON
(Mail it to nearest office)
Canadian Fairbanks-Morse Co., Ltd.

Please send Catalogue of your Oil Tractor.

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State whether 15-30 or 30-60 H.P.

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LESSON IV.

The steam engine is the oldest means of farm power. It came into existence shortly after Watt made his all important discovery, and no matter what the other types of heat engines may be developed into we must always take off our hat to steam as a factor in farm power development.

The steam engine is merely an apparatus for converting the energy of heat into work. In theory it works out as follows:—

966.6 heat units are required to convert one pound of water at 212 deg. F. into steam 212 deg. under a pressure of one atmosphere; and these heat units are equivalent to 752,305 foot-pounds of work.

The fuel value of one-pound of coal is 14,000 heat units which, expressed in footpounds, is 14,000 by 778.3 equals 10,896,200 foot-pounds. The steam engine aims to utilize the power of coal or other fuel by transferring its enormous potential energy into that of confined steam, and if it were only possible to utilize 80 or 90 per cent. of this power the steam engine would be a very inexpensive motor.

It is unfortunately true of the steam engine as a source of power that in practical experience it is only able to render available from 2.5 to 20 per cent. of the full heat value of the fuel burned in the fire box, and it is still more unfortunate that there seems to be little

The AGRICULTURAL ENGINEER

Every farmer is an engineer so to speak. He works in the biggest factory in the world and his products are world products. His usefulness to himself and to others depends largely upon the efficiency and intelligence with which he handles the tools of his handiwork. In this series of lessons which will extend over a considerable period, we propose to deal with farm machinery in detail as it applies to crop production. We trust to make this department interesting and instructive. Questions will be cheerfully received and answered.

hope that its efficiency can ever be made to much exceed 31.5 per cent. The reason this is so is because it has not been found practicable to use steam at very high temperatures, nor to cool it much below that of the ordinary air conditions. To enable a water wheel to utilize the highest per cent. of the power of a falling stream it must be arranged as to be able to take the water at the highest possible level, and the principle is the same with the steam engine. If the steam could be taken into the cylinder at a temperature of 1,000 deg. F. and released from it only after its temperature had fallen to 60 deg. F. it is clear that much more work could be performed than when the temperature is only permitted to fall between 300 deg. F. and 212 deg. F.

Where heat is converted into work the efficiency is always equal to the quantity of heat taken into the engine minus the quantity given out divided by the quantity taken in; thus if the steam entering the cylinder carries 100 heat units and it escapes from the cylinder with 90 heat units after mov-

ing the piston the efficiency of the engine has been only $100 - 90$, divided by 100, equals 10 per cent.

So, too, if steam enters a cylinder at a temperature of 300 deg. F., and escapes at 212 deg. F., the maximum efficiency would be only $(461 + 300) - (461 + 212)$, divided by $461 + 300$, equals 11.5 per cent.

In this equation 461 is the number of degrees F. which the zero of the Fahrenheit scale is above absolute zero, and in such problems as these it is necessary to express the temperature in absolute degrees. When this is done 3,000 deg. F. becomes 761 deg. F. and 212 deg. F. becomes 673 deg. F., and the above equation becomes $761 - 673$, divided by 761, equals 11.5 per cent.

From the results of this problem it is clear why it is not possible for the steam engine to utilize a very large per cent of the total energy which the steam carries with it into the cylinder. Even if the steam could be carried into the cylinder at 1,000 deg. F., and could do work on the piston until its temperature fell to 100 degrees, the maximum

efficiency would only be $(1000 + 461) - (100 + 461)$, divided by $(100 + 461)$ equals 61.6 per cent.

For our purpose we shall discuss only two parts, the steam engine, viz., the boiler and the engine proper, and as the boiler is all important we shall take up that first.

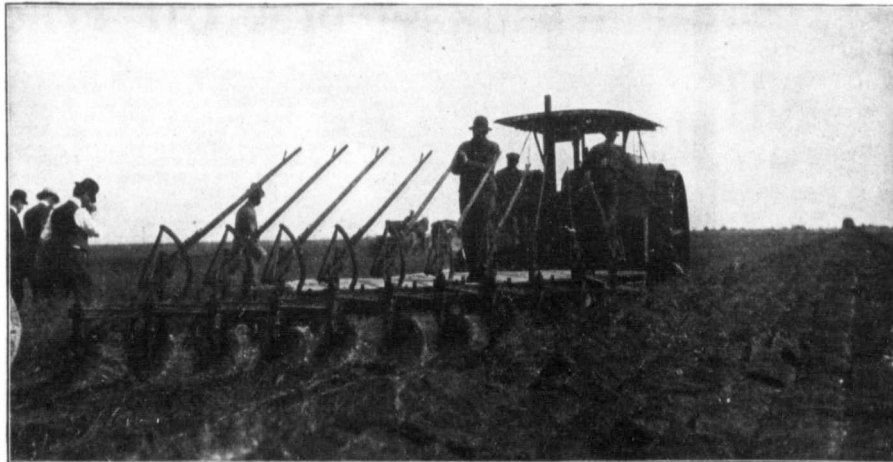
The essential parts of a steam boiler are as follows: A water reservoir, steam reservoir, furnace, and machinery, together with numerous valves, pipes, and other fittings.

The steam reservoir may be, and generally is, included as a part of the vessel containing the water. The furnace is placed within the main shell in some boilers and in others outside. The chimney serves the double purpose of carrying away the products of combustion and furnishing draft to the furnace.

All those surfaces in a boiler which are covered with water on one side and exposed to the hot gases on the other may be defined as heating surface. Superheating surface is exposed to steam on one side and hot gasses on the other.

Boilers are classified according to the service they are engaged in, as, stationary, marine, locomotive, traction engine, etc. According to construction they are classified in various ways. Boilers fall naturally into two main classes depending upon

Plowing With Horses is Too Expensive



45 H.P. TRACTOR PLOWING ON KEROSENE AT WINNIPEG

Take one item alone, feed cost vs. fuel and oil cost. What does it cost you to keep a horse? Figures gathered from a large number of farms in the Northwest show an average cost of about \$80 a year to feed farm horses. The average time of working for a horse is three hours a day, making the cost per hour for feed alone about 8c.

An I.H.C. tractor costs less than 4c an hour per horse power for gasoline

and oil, making the cost of feeding a tractor less than half that of feeding a horse. You can figure for yourself the difference in cost, as well as the difference in time between plowing with horses and with a tractor.

Talk this over with the I.H.C. local agent, or if you want a complete showing of cost comparison, write to our nearest branch house. Plowing with horses is costing you too much money. Stop the leak.

BRANDON, MAN.
CALGARY, ALTA.
EDMONTON, ALTA.

Western Canadian Branch Houses at
LETHBRIDGE, ALTA.
NORTH BATTLEFORD, SASK.
REGINA, SASK.
YORKTON, SASK.

SASKATOON, SASK.
WEYBURN, SASK.
WINNIPEG, MAN.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
INCORPORATED

THE STOVER

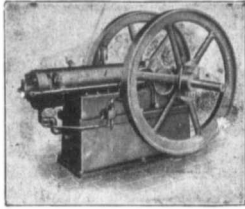
Is the Greatest Gas Engine for Western Work

It has successfully done what human genius and brute force could never have done, and what no other engine could have accomplished except at a cost of time and money that would have "swallowed the profit."

There is not a task you can give it in Western cultivation it will not perform.



Plowing with a "Stover Tractor" on the Farm of Ivan De-ek, near Deleau, Man. A Big Dutchman Gang made by the Molise Plow Company is turning the furrows.



DON'T BUY A TRACTOR TILL YOU KNOW THE "STOVER"

We have engines of every convenient type and size for every conceivable purpose, and a large stock of general engineering sundries. We can lift you over any difficulty with your power machinery.

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Canadian Stover Gasoline Engine Co., Ltd., Brandon, Man.

Visit our mammoth Warerooms, 8th and Pacific Ave.

S stands for Simplicity
T " " Tested
O " " Opportunity
V " " Value
E " " Economy
R " " Reliability

COUPON.

Canadian Stover Gasoline Engine Co., Brandon: Please send me Catalogue of your Engines and Sundries, as advertised in the "Canadian Thresherman and Farmer."

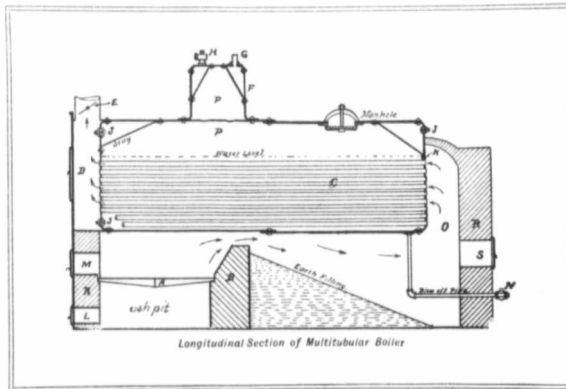
Name.....
 Post Office.....

the course taken by the hot gases; one class comprising those boilers which are provided with a furnace within their own walls known as internally fired boilers, and the other which is provided with a separate furnace and known as externally fired boilers. The former class includes locomotives, traction engines, Scotch marine boilers and many others; the latter, nearly all those stationary boilers which are enclosed in a brick setting.

Another mode of classification is based upon the arrangement of water space and heating surface in which all boilers fall again into two classes, the first being composed of shell or tubular boilers and the second of water tube boilers. In the former the hot gases come in contact with the interior tubular surfaces while water circulates about the outside. All locomotives, nearly all traction engines, and stationary and marine engines, belong to the fire tube type. In the latter conditions are reversed, water occupies the space inside of the tubes and the hot gases on the outside. Water tube boilers find a wide application in power and heating plants and in certain classes of marine service.

There are many different forms of construction of each of these four classes, which differ quite materially from each other

and are sometimes referred to as a type of boiler. For example, each of the four classes above mentioned are built in two styles, one having horizontal tubes and the other vertical. Besides these there are numberless other lesser modifications in design which it is not worth while to discuss in these lessons.



Longitudinal Section of Multitubular Boiler

MULTITUBULAR BOILERS.

Multitubular boilers are used very largely in stationary practice for nearly all kinds of service. In agriculture they find their widest application in creameries and cheese factories. The above cut represents a longitudinal section of

such a boiler set in brick setting. It consists of a main cylindrical shell fitted with tubes usually from 2½ to 4 inches in diameter. The fire is built on the grate A underneath the main part of the shell and the flame and hot gases pass back over the bridge wall B to the combustion chamber at the rear end, and

many are equipped with a dry pipe instead. The object of the dome and the dry pipe is the same, that is, to insure dry steam. When a dome is used it is usually about as large in diameter as the radius of the main shell, and its height is made equal to its diameter. The flat head of the dome is also stayed by means of diagonal stays. While a dome is of considerable advantage in insuring dry steam for the engine, boilers of the other type having a dry pipe, if well proportioned, are equally as effective.

These boilers are provided on top of the boiler back of the illustration, by means of which the boiler may be cleaned. A manhole is also provided and is placed either at the rear of the boiler, above the brick work, or, as is more frequently the case, on top of the boiler back of the dome. The manhole provides easy access to the inside of the boiler for cleaning and repairs. The handholes are made about 3½ by 5 inches, and are of elliptical shape; the manhole about 11 by 15 inches, also of elliptical shape, so that the cover opening to the inside of the boiler. It is customary to place the fusible plug in the combustion chamber just above the top row of flues and below the water level. The feed water is introduced either through the side

thence forward through the tubes to the smoke box D and out through the chimney.

The flat ends of the boiler are braced by the flues and usually by a number of diagonal stays in the space above the flues at each end. These boilers are usually provided with a dome, although quite a good

near the front, or more often, through the blow-off pipe, which is placed at the rear of the boiler, as shown in the illustration.

The usual method of supporting boilers of this kind is by means of four brackets, bolted to the sides of the boiler, two on each side; one near the front, the other near the back. The rear bracket rests on rollers and the front bracket on a plate set in the brick wall. The object of the rollers is to provide for the expansion of the boiler when heated, and thus prevent the boiler from expanding and cracking the brick wall. The rear end of the boiler is usually set one inch lower than the front end to drain the boiler and to facilitate cleaning.

The sides of the firebox are made up of the brick walls of the setting. The sides back as far as the bridge wall and the front course of brick on the bridge wall should be made of

fire brick. Fire brick usually costs from four to five times as much as common brick, so in many cases common brick is used as a matter of economy, but being exposed to the intense heat of the furnace it has to be repaired quite frequently, whereas fire brick will last for many years and is more economical in the long run.

The boiler front consists of a large sheet of cast iron to which the fire door, smoke box door and draft doors are attached. The mainshell of the boiler is carried out to the cast iron front and forms the smokebox, and an opening is cut at the top to allow the gases to escape to the chimney.

These boilers are cheap, easy to keep in repair, easy to clean, and when set properly in a good tight setting are about as economical as any boiler made.

Multitubular boilers contain a relatively large amount of heating surface, ample grate area and adequate steam space when properly designed.

The heating surface consists of the internal shell area of the tubes and half the outside area of the main shell, together with the area of the two tube sheets not occupied by the tubes.

The ratio of steam space to water space is about one to two; two-thirds of the boiler is filled with water and one-third with steam; about the same ratio holds also for traction engines.

VERTICAL BOILERS.

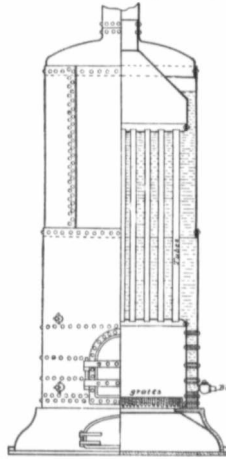
Vertical boilers are used where floor space is quite valuable and where there is plenty of overhead room. They are not generally as efficient as horizontal boilers because the hot gases pass directly out into the air before they have time to give up their heat to the heating surfaces.

The small vertical boilers used for agricultural purposes do not compare favorably in efficiency with small sized horizontal boilers, but in certain places and for certain kinds of work they are used to a limited extent.

The boiler shown in Fig. 2 is known as a submerged tube vertical boiler. It is built very much like a direct flue boiler stood on end. The main shell encloses the furnace, water space and steam space. The grates are placed at the bottom of the shell and the products of combustion pass through the tubes to the cone shaped combustion chamber at the top of the boiler, and then out through the chimney.

In this style of boiler the water level is maintained above the upper flue sheet and protects both it and the upper ends of the flues from the hot gases.

They are also made with the upper tube sheet placed above the water level. In this case the upper ends of the tubes and the upper tube sheet are apt to become burned and generally give



trouble by leaking around the tubes. The furnace walls are tied to the main shell by means of staybolts, which are screwed through both sheets and riveted over, thus forming a water leg all around the firebox. The walls of the firebox and the internal area of the tubes constitute the heating surface. That part of the smokebox above the flues, which is exposed to steam on the opposite side, is superheating surface. Handholes are placed near the bottom of the water leg and also about half way up the main shell to provide means for cleaning. The feed pipe enters near the bottom of the boiler, near which point also, a blow-off valve is located. In boilers of this class, dirt and sediment settle on the lower tube sheet where it is hard to clean, and if not kept clean trouble is apt to occur from burning both it and the ends of the flues.

WATER TUBE BOILERS.

Water tube boilers are not used very much for agricultural purposes. Only one traction engine is equipped with

a boiler of this kind. They find their widest application in large stationary plants and in marine service.

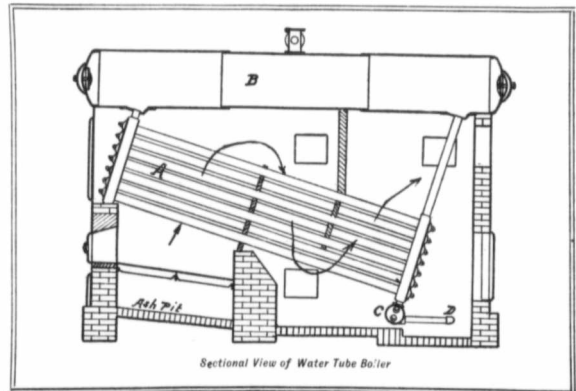
Fig. 3 represents a leading type of water tube boiler. It consists mainly of a horizontal drum B and a bank of inclined tubes A. These tubes are connected together by means of headers which communicate with the drum B by means of a large pipe at each end. The tubes are inclined at rather a steep angle and are entirely filled with water, the water level standing near the middle of the drum B.

The water in the tubes rises when heated, passing to the front end of drum B, where steam is given off. The back connection provides for continuous circulation. Water is pumped into rear end of the drum B and passes downward to the lower header. Mud and scale settles into the drum C, which is provided with handholes at each end to facilitate cleaning. The blow-off pipe is shown at D. Fire brick arches are placed across the tubes at two places, shown in the drawing, for the purpose of compelling the gases to pass across the tubes several times, following the course shown by the arrows. These boilers are set in a brick setting, and are provided with an iron front similar to the multitubular boilers.

Advantages claimed for water tube boilers are that they are quick steamers and less liable to dangerous explosions than fire tube boilers. In case an explosion does occur, usually only one or two tubes will go, in which case no great danger would be apt to occur. Of course, when such an accident does happen, the boiler has to be shut down before repairs can be made, while if a flue in a fire tube boiler breaks it can be plugged without shutting down the works.

So far as economy is concerned, water tube boilers rank quite high, but do not surpass the best types of fire tube boilers very much.

Continued on page 58b



Gophers Are Now Planning To Rob You Again - Stop Them Quick



Right now, Mr. Farmer, the gophers, squirrels, pocket gophers, field mice, prairie dogs and other pests are having a gay old time six to ten feet under ground on the grain they stole from you last season.

You can't see them. You can't hear them. You can't catch them. Right now, Mr. Farmer, the gophers, squirrels, pocket gophers, field mice, prairie dogs and other pests are having a gay old time six to ten feet under ground on the grain they stole from you last season.

but they are having the time of their life eating your grain—the grain that you should be selling now. And not only that, but they are planning to rob you again this summer. What steps are you going to take to prevent them? It's time you faced this question squarely. Gophers cost too much for you to keep them.

1c per acre kills them

If you use Mickelson's Kill-Em-Quick—the only guaranteed gopher poison. A 75c box of Kill-Em-Quick will kill every gopher on 80 acres, and that means 2,000 gophers at least. A \$1.25 box will kill 4,000 gophers. A \$1.25 box of Kill-Em-Quick will save you at least \$400 cash money in extra crops.

KILL-EM-QUICK

GOPHER POISON

has the most peculiar and attractive odor and taste that gophers ever came across. They leave grain and tender shoots for Kill-Em-Quick and a single poisoned grain kills them. They don't even have time to think about it.

WRITE ME A POSTAL

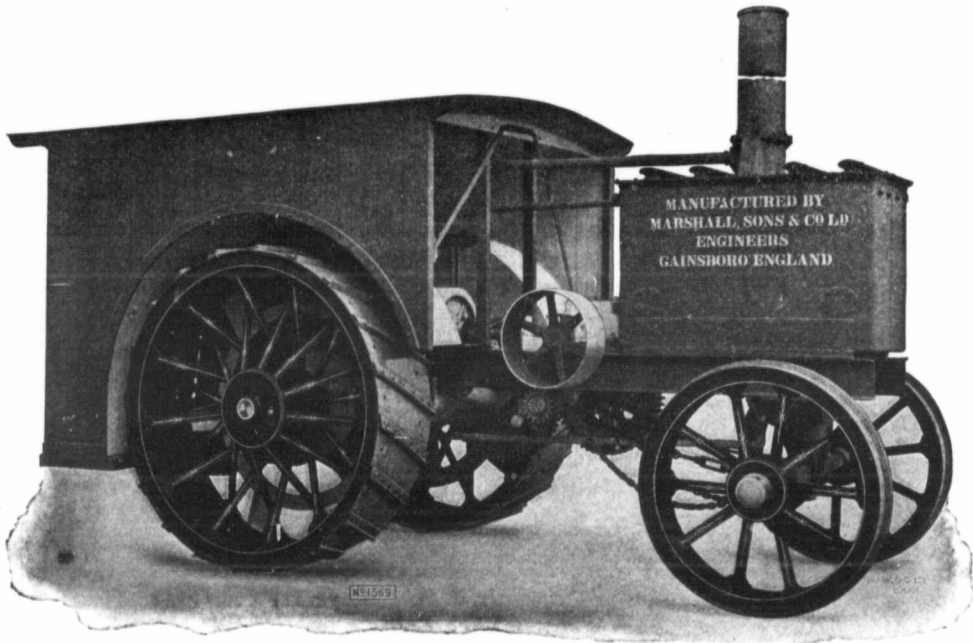
Let me tell you some remarkable facts about gophers and Mickelson's Kill-Em-Quick. I want to show you an easy way to save \$800 on every 80 acres. Gophers are constantly throwing up non-productive soil, which eventually is bound to seriously effect the productive powers of your land. I want to tell you how to prevent this. Write me a postal or a letter. In the meantime get a 75c package of Kill-Em-Quick from your druggist. If your druggist doesn't sell Kill-Em-Quick, send me his name with your order and I will ship you direct, postage prepaid.

Anton Mickelson, Pres., Mickelson Kill-Em-Quick Co. Dept. C Winnipeg, Manitoba, Canada



Not In a Combine! Let Me Do Your Work

I am
the
Dread-
nought
of
the
Prairies



I am
built
like
a
Battle-
ship.

I am the British Colonial or Marshall Tractor

I am made in two sizes, 35 and 70 Brake H.P.

I have done good work in all parts of the world.

I can do good work for you.

I can plough the mighty Prairies as steadily as the Dreadnought plows the mighty ocean.

I am big and powerful.

I am able to help you get a bigger share of the resources of these Prairie Provinces.

I have made big profits for others.

I can do the same for you--let me.

For details as to what I can do--how I am built--what I am worth--

WRITE

Sawyer-Massey Co., Ltd.

Head Office and Factories: Hamilton, Canada

BRANCHES: WINNIPEG, MANITOBA, and REGINA, SASKATCHEWAN

BROTHER THRESHERMEN, LISTEN!!!

The 1912 CASE Threshing Machinery Catalogue Is Now Ready For Mailing.

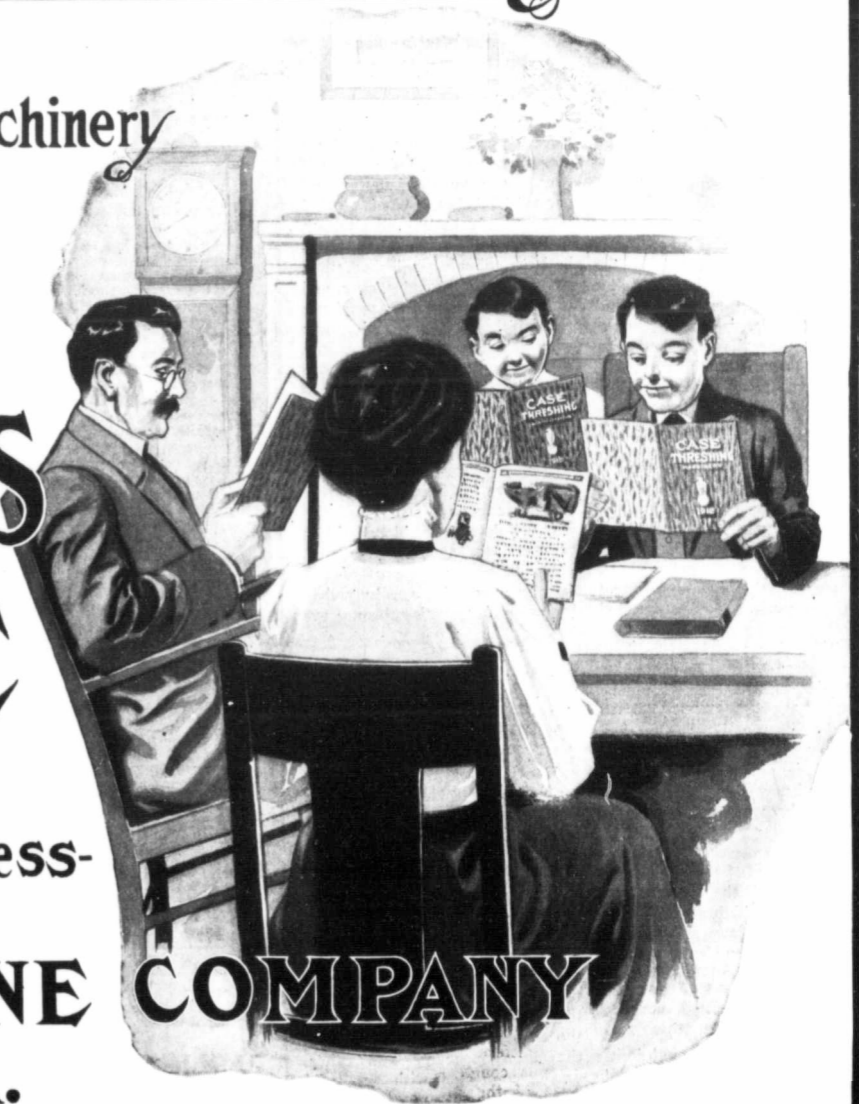
This Complete Book On Threshing Machinery Reveals

BIG OPPORTUNITIES GET ONE

We Mail It Free On Receipt Of Your Address- Write Us Now.

J.I. CASE THRESHING MACHINE COMPANY

INCORPORATED RACINE, WIS. U.S.A. CANADIAN BRANCHES, TORONTO, WINNIPEG, REGINA & CALGARY



Is the Automobile an Implement for the Farmer ?

Continued from page 23

With the next few years a great many second-hand cars will find their way on the market. A large number of these will be high priced cars, and will doubtless be offered at attractive prices. A second-hand car is like a second-hand traction engine (only more so) and the man who buys one who is unfamiliar with a car can be easily bitten. An automobile expert writing recently on this subject gives some very sound and wholesome advice, and I give it here for the benefit of those farmer readers of this magazine, who may come into contact with the second-hand proposition. He says: "In examining the car, look carefully for evidences of collision. See that the axles are not sprung, and that the springs do not sap. Usually the first part of a car to wear out is the steering gear; therefore this should be examined for looseness and wear in the reducing gear and connections. Grasp the right front wheels by opposite spokes, and shake them to detect 'play.' See whether the steering column is loose or rigid. If loose, a shop job is required to make it permanently snug. An old car with bevel gear drive will show looseness in the universal joints of the propeller shaft. The differential gears and pinions and likewise the bevel driving pinion, are liable to be worn. Jack up one end of the rear axle, set one of the change gears in mesh, and rock the rear wheel back and forth. This will show how much back-lash there is in the transmission from the gears to the rear wheel. It will disclose wear, if any, in the propeller shaft joints, in the bearings of the bevel pinion shaft, and in the gear shaft bearings next to the propeller shaft. Looseness in the bearings adjacent to the rear wheel may be detected by shaking the wheel. If the wheel bearing is plain bushed, some looseness is expected, but a ball or a roller bearing should be snug. Have the engine started, and note its sound. Any marked knock or rattle should be traced. An old engine will certainly be noisy; a new engine should run very quietly at ordinary speeds.

"The points to notice on demonstration are smoothness of operations, flexibility of the engine, the extent to which the car can be slowed down in high gear, and the acceleration at slow speed when the throttle is suddenly opened; also the speed and hill-climbing ability.

Looseness as regards the fenders, bonnet, lamp-brackets, etc., indicates an old car, although in itself it may usually be corrected with little trouble.

"If the car is purchased without overhauling, it may be best, according to circumstances, to run it

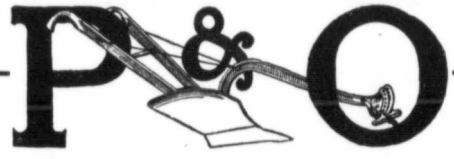
first for a time, and get acquainted with it, afterward putting it in a shop with definite instructions as to what overhauling should be done; or it may be best to have it overhauled at the outset. The former plan is best if the purchaser has some knowledge of automobiles, and the car is in fairly good shape. The latter is preferable if the owner has not much time to spend getting acquainted with the machine, or if it is in bad shape. If the car has been purchased on the advice of an expert the latter can see to the overhauling. Under this plan the owner, as a novice, is relieved of the minor annoyances which would otherwise fall to his lot, and begins his experience with the car in nearly the condition of a new machine."

We now come back to the original question "Should Farmers Buy Automobiles?" This is a question that must be answered by every farmer for himself. The automobile is in a sense a luxury, and does not permit of being purchased with money wrung from a mortgaged farm. This is, however, not luxury of the "champagne" kind, but it is of a kind that will add health and strength to its owner's store. If the farm be large enough it will more than pay for itself through its use, and if the farmer has a spare bank account then it is no one's business what he does with his money. Buy a car by all means, if you can afford it. Build it a good substantial garage, for automobiles don't make profitable chicken roosts. Give it the care of any animal-loving, self-respecting, farmer would give his horses, and you'll add ten years on to your life: your wife will develop the bloom of her younger days, and the boys and girls will become a part of the farm in a way that no city call is loud enough to entice them away.

The Automobile: Its Care and Operation.

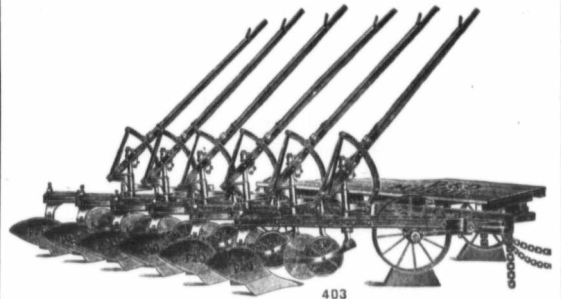
With the opening of spring those farmers who have placed orders for cars will be looking forward to the time when they will put them into service on the multifarious duties of the farm which have hitherto been performed by the horse.

In many cases the purchaser of a car will have to depend on his inborn knowledge of the mechanical features of a gas power engine, and unless care is taken to familiarize oneself thoroughly with the working of the engine and the operation of the different levers and other details connected with the control of the machine, they may find themselves in trouble, which could be easily avoided if they will take the book of instructions



Mogul Engine Plows

The Strongest Engine Plow Made



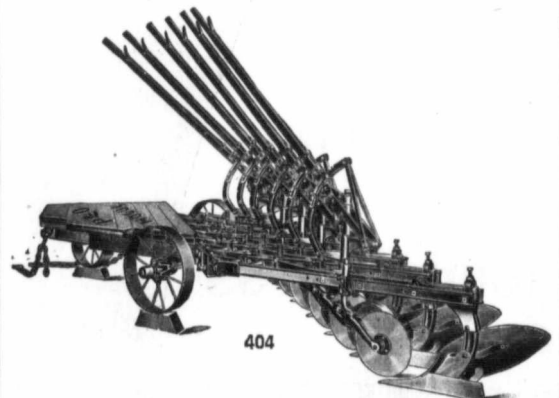
P. & O. Six-Furrow Mogul Engine Gang Plow.

We have just issued a handsome de luxe edition of a pamphlet entitled "The Mogul." Many of our friends have told us that it is the most elaborate piece of printing yet devoted to the subject of traction engine plows. We will be pleased to mail a copy to your address if you will kindly mention the name of this paper.

The Mogul is made with five, six, eight, ten and twelve bottoms. The bottoms are individually controlled, and the levers are "bunched" towards the center of the platform. The only plow made in this manner, which saves considerable walking back and forth on the platform.

The Mogul is to-day the leading Engine Gang, a position attained by reason of the fact that its leading features are protected by patents, thus making these features also exclusive.

Its strength has been repeatedly demonstrated in severe field tests, and it will stand a hard pull without straining long after some other makes would be twisted, strained or broken. We really did not know what a strong plow was until we began to get the returns from the field tests, where the Mogul has lead every time.

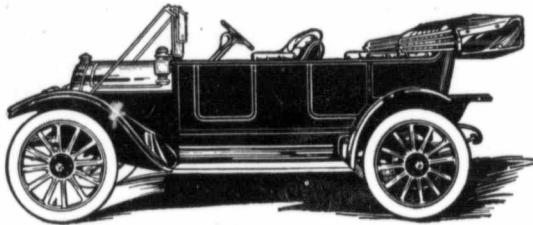


P. & O. Six-Furrow Mogul Engine Gang Plow.

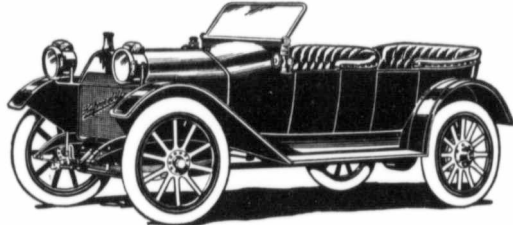
PARLIN & ORENDORFF CO., Canton, Ill.

International Harvester Company of America

Sales Agents for Canada



REO SPECIAL



HUPMOBILE "32"

THE REO SPECIAL

Reo Special Equipment, mohair top, sextette glass front, gas lamps, presto-lite tank, three oil lamps, robe and foot rails, demountable rims, 34 by 4 tires, black enamel and nickel trimmings, \$1575.00 F.O.B. Winnipeg.

The Reo Special is a beauty not surpassed by any car at any price. The lines of the body sweep back in graceful curve, while the top of the tonneau doors, fore doors and hood are on a straight line. We invite comparison with any car selling at same price or one thousand dollars more. You will find the REO equal in quality, material, workmanship and general finish to the best.

HUPMOBILE "32"

Hupmobile "32," long stroke motor, 3½ in. bore by 5¼ in. stroke, sliding gear, transmission three speeds (forward and reverse), full floating rear axle, roomy five-passenger body, with glass front, two gas lamps, generator, three oil lamps \$1075.00 F.O.B. Winnipeg.

The Hupmobile "32" dominates its class as the "Runabout" did before it. The same man—E.A. Nelson, Chief Engineer of the Hupp Motor Car Company from its inception—designed both cars.

Bonspiel Visitors! Make your headquarters with us: have your mail sent in our care.

See our new Models

JOSEPH MAW & COMPANY LIMITED

112-118 King Street

Winnipeg, Man.

in their hand and content themselves at the first attempt with getting a working insight into the use of the car, and the methods of starting, stopping, etc.

When this has been accomplished they will start out in the use of the car with a feeling of confidence in their power to use it properly and to get the best possible results from its use.

It is advisable above all things to get rid of the idea that they know more about the adjustment of the mechanical parts of the machine than the makers do, as many a car has got a bad name at the start simply because some of the adjustments have been tampered with before the owner had a practical knowledge of why the adjustment was made.

Remember also that a car costing in the neighborhood of \$1000 was not built for racing purposes, and any attempt to force it above its capacity will only result in injury to the mechanism that may lead to a big bill of expense.

A car that is used in a sane and reasonable manner will always give satisfaction if it is given the proper attention in the matter of lubrication, and periodical examinations made to see that all the bolts and nuts are

secure. The loss of a nut may cause no harm for quite a time, but there is always the chance that it may let something go at a critical moment and cause damage out of all proportion to what it should do.

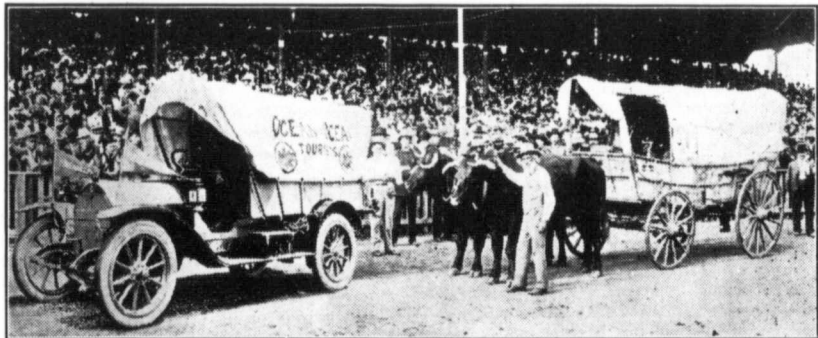
If a knock is noticeable in the engine at starting it will mean that the spark is too far ad-

vanced and it must be retarded and the throttle opened a little until the car has gathered headway, when it may be gradually advanced and the throttle retarded so that the car is running under the most economical conditions, as far as the consumption of gasoline is concerned.

Be sure and give attention to the steering gear, as this is a point on which the lives of those occupying the car may depend. Lubrication is an essential feature here, and it should be done at regular intervals, and not left to chance.

Remember that other people have as much right to use the road as the owner of an auto-

mobile, and there will be no outcry against the automobile being used on the highway. A little courtesy in this direction will lead to a feeling of goodwill towards the automobilist that it is the duty of every car owner to foster to the best of his ability. Tires should receive equal attention with the rest of the car, and any small pieces of stone or other matter that may have become imbedded in them should be removed and the cut filled in with some of the compound that is sold by all dealers for this purpose. This will have the effect of keeping the tires in first class shape, and will prolong their life far above that



Extremes meet. Ancient Prairie Schooner meets modern Automobile 'type' during progress of premier Coast to Coast run.

secured by a careless driver who lets these little things go without attention.

That the farmers of Western Canada have begun to realize that the automobile is not only a pleasure vehicle but a machine that can be advantageously used in their everyday work, is shown by the large number of sales that

secured by a careless driver who lets these little things go without attention.

That the farmers of Western Canada have begun to realize that the automobile is not only a pleasure vehicle but a machine that can be advantageously used in their everyday work, is shown by the large number of sales that



are recorded as having been made to the farmers.

The greater number of them are buying cars ranging in price from \$1,000 to \$1,500 of the five seated touring type. Wisdom is shown in keeping to a reasonable figure in the purchase of a car, as it will in most cases be used not only for the purpose of carrying the farmer and his family on their trips, but also in the general work of carrying the lighter kinds of produce to the nearest market town and bringing back the supplies needed by the housewife, etc.

The largest demand for this class of machine appears to come from the province of Saskatchewan, where the number of cars sold this year are already in excess of any previous season. One far reaching effect that will follow the placing of these cars in service will be the universal demand for the construction of roads suitable for automobile traffic of every description, as after getting used to the car and realizing the advantages to be gained from its use, the larger farmers will go a step farther and use power wagons for the transport of their wheat from the farm to the railroads. It will also lead to a co-operative scheme for the owning of light traction engines between a community of farmers who will combine together to reduce the heavy cost incurred under the present slow method of reaching their market. Carload shipments can be made up by this means, which will again lessen the cost of freight and enable them to make better terms with the commission merchant, who will find it easier to deal with a big shipment than to handle a number of small individual shipments. The returns will be made to one central point, and the farmers interested will divide the returns according to the size of their shipment. All this will not be accomplished in a day, but the time is coming when this will undoubtedly be an accomplished fact, as the tendency every day is to combine for the protection of their mutual interests. There is no reason why this should not be done, as the farmer has as much right to adopt this system as the big manufacturing concerns, who have long since realized that the cost of production can be materially reduced by co-operation.

All of these improvements will follow the use of the car and the traction engine, and the manufacturer should be ready to foster an enterprise of this nature by every means in his power, as it will mean the expansion of his market and the provision of steady business in the future.

Never Give Up.

When weary one night from the toil of the day.

My heart with its burden cast down;

Alone and unaided on life's barren way,

And all the world wearing a frown;

I heard the quaint tones, beating measured and slow,

Of the clock from the shelf on the wall;

And, as the staid pendulum swung to and fro,

In rhythm these words seemed to fall:

"Never give up, Never give up.

Time will be given you.

Never give up."

And then, through the deepening silence, it seemed

A presence pervaded the gloom;

Although far away she lay sleeping, I dreamed

My mother stood there in the room,

About her sweet face, as it turned to my own,

Seemed resting a halo of light, Like far-away music, I fancied her tone

Fell soft on the ear of the night;

"Never give up, Never give up.

Loved ones are waiting you

Never give up."

Out into the night, to the quiet and calm,

I went to the starlight and dew;

For night, to the heart that is sore has a balm,

A beauty that always is new. I saw the great earth as it swung to the dawn,

Stretching out to the east, to the west;

And out of the deep heart of nature seemed drawn

A voice with an accent of rest; "Never give up, Never give up.

The world is wide for you.

Never give up."

The past is gone with its sorrows and faults,

Then leave it and build you anew.

The past it is dead, locked in memory's vaults;

And living hopes beckon to you.

For the brave is the pathway of life. Can you climb?

Then turn from the years that are dead,

With your eyes on the promise that's shining sublime

In the years that are lying ahead.

"Never give up, Never give up.

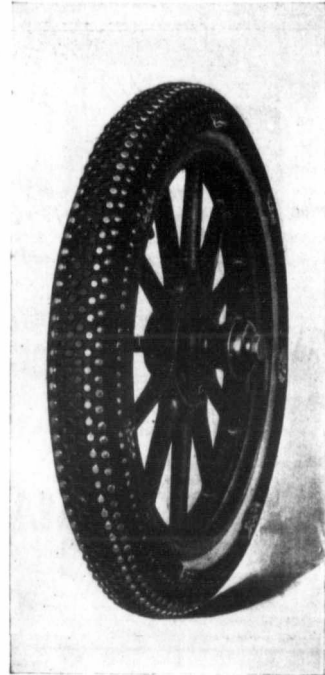
The great misty future says,

Never give up."

—J. A. Edgerton.

AUTOMOBILE OWNERS, you can have FREEDOM FROM TIRE TROUBLES for 1912, by equipping your car with

WOODWORTH TREADS



Woodworth Treads are tire protectors made of waterproofed chrome leather, studded with steel rivets. They are held on the tire by coil spring rings on each side, which keep them always tight, preventing any looseness to cause chafing and heating, such as takes place with other methods of fastening.

Woodworth Treads are guaranteed not only to give good wear, but not to injure the tire in any way. We agree to replace with a new one of the same make any tire injured by Woodworth Treads.

Woodworth Treads are practically puncture proof; they are an excellent non-skid on muddy, wet and slushy streets; they prolong the life of the tire enough to pay for themselves more than twice over.

They fit all makes of tire. Anyone can put them on without taking the tires off the rims.

NOTE THE LOW COST.

30 x 3	\$10.60 each	34 x 4	\$21.50 each
30 x 3½	\$13.50 each	36 x 4	\$22.70 each
32 x 3½	\$14.50 each	36 x 4½	\$24.00 each
32 x 4	\$19.90 each		

Other sizes in proportion.

Sold by John Millen & Son, Ltd., and the Russell Motor Car Co. at all their branches, and by first class dealers everywhere.

Send for 1912 booklet and souvenir key-ring, which we will mail you free if you mention this paper when writing.

LEATHER TIRE GOODS CO.
Niagara Falls, Ont.

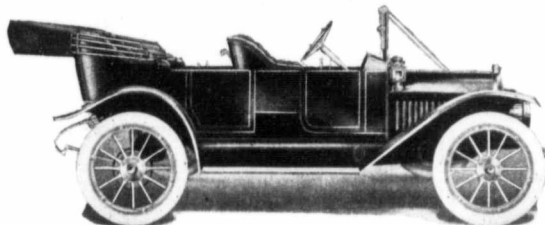
THE CAR YOU WANT

IS THE

McLAUGHLIN-BUICK MODEL 29

FIVE-PASSENGER TOURING CAR

The Car for
Strength
Security, Speed
and
Durability



The Car for
Comfort
Elegance, Value
and
Service

SPECIFICATIONS

BODY—Original advanced design, five-passenger, exceedingly comfortable and roomy in both seats.
FRAME—Pressed steel, special construction, three and one-half inch drop.
SPRINGS—Semi-elliptic front, three-quarter elliptic rear, with scroll ends.
FRONT AXLE—Drop-forged "I" beam, with drop-forged yokes, tie rod ends and steering spindles; front wheels fitted with extra large cup and cone ball bearings.
REAR AXLE—Semi-floating type; special alloy steel axle shafts, running on special high duty roller bearings.
WHEELS—Wood, artillery type, with "bolted on" type demountable rims. Extra large hub flanges.
TIRES—35 x 4 inches.
WHEEL BASE—108 inches.
TREAD—56 inches.

MOTOR—Unit power plant, four cylinders, four cycle, valve-in-head type. Cylinders semi-steel analysis, cast in pairs; 4-inch bore, 4-inch stroke. Three-bearing crankshaft with bronzed-backed, lapped-lined bearings. Exceptionally large bearing surfaces. Thirty Horse Power.

COOLING—Water, circulated by gear-driven centrifugal pump. Brass inlet and outlet water manifold. Radiator, vertical tube and plate type with large water capacity. Fan running on anti-friction bearings, belt driven from crankshaft pulley; centre distance of fan pulleys easily adjusted to take up stretch in belt.

IGNITION—Jump spark. Current supplied by Remy magneto and reserve set of dry cells.

CARBURETOR—Automatic, float feed.

LUBRICATION—Automatic splash system. Oil uniformly distributed. Supply maintained by positive-

driven, slow-speed plunger pump with sight feed on dash.

FINISH—Option of Blue and Black throughout, or combination Battleship Grey and Black throughout. Upholstered in genuine hand-buffed leather over curled hair and deep coiled springs. Dash and body finishing strips, walnut finish. Running boards and floor boards oil treated, and covered with heavy aluminum matting with heavy nickel-plated brass binding.

STANDARD EQUIPMENT—Foot accelerator, muffler cut-out, oil side and tail lamps, gas headlights, Prest-O-Lite tank, concealed horn, jack, tire pump, tire repair kit, complete set of tools, tool box on running board, one extra demountable rim, full length foot rest in rear, robe rail. All bright parts are nickel plated. Lamps, combination Black and Nickel.

NOTE—Nickel finish regular equipment.

McLAUGHLIN-BUICK CARRIAGE CO. LTD.

WINNIPEG

**New Implement Concern for
Winnipeg.**

The readers of The Canadian Thresherman and Farmer will, in 1912, have the opportunity of patronizing a new implement concern in the thresher line. This concern will be known as the Geo. E. Duis Company, and will handle the products of the Minneapolis Threshing Machine Company, known as the Minneapolis Gas Tractor and the Minneapolis Threshing Machine.

In addition to this they will handle, in Western Canada, Michigan Automobiles and also the Bates Farm Tractor, which is a small internal combustion machine.

Mr. George E. Duis is an old hand at the implement business. For many years he has been engaged in this particular line at Grand Forks, N.D. He was in 1899 associated with Gaar-Scott and Company, as general sales manager, and since 1897 has been conducting the jobbing business in a large way at the above place. He was at one time mayor of Grand Forks, N.D., and has always been more or less active in North Dakota politics.

The Winnipeg business will be under the management of

Mr. J. J. Flinn, who is also an old timer in the thresher business. He first began his work with the Champion Harvester Company at St. Claude, Minnesota. From this firm he went to the Diamond Iron Works of Minneapolis, and in 1892 accept-

ed the position for the Maple Bay Wind Stacker Company of Crookston, Minnesota. His first position with this concern was as traveller, but he was later appointed the position of secretary-treasurer, which position he held until his appointment of

the manager here of the Geo. E. Duis Company. Both Mr. Duis and Mr. Flinn are men of the type that our readers would enjoy meeting, and, at the same time, enjoy doing business with.

We cordially welcome this

ought to be on a business basis. It is unfair to expect another to devote his time, skill and energy to doing something which is of value to you without your being willing to give something besides "thank you" in return for it.

A well-known lawyer said: "When I was a boy of 13 on a country newspaper, the local butcher came in to have a contract drawn up between himself and a farmer from whom he had bought some cattle. No one else being about, he asked me to help him. I gave up my noon hour and helped him write out a good contract. When he asked me how much it was worth he expected me to say, 'Oh, that's all right,' but I told him it was worth twenty-five cents. When my employer returned he insisted that I did wrong to make a charge for a little accommodation like that. But I held that I had rendered the man service and was entitled to some pay for it. I have followed the same policy with success ever since. My old employer, after twenty years, is still living in that little town doing things for nothing just to be accommodating, and is afraid to ask a respectable price for anything he does because the work is easy and pleasant to him. He works hard and probably wonders why he never gets ahead. It has been his mistaken financial policy that has kept him working for nothing all his life."



Geo. E. Duis.



J. J. Flinn.

ed the position for the Maple Bay Wind Stacker Company of Crookston, Minnesota. His first position with this concern was as traveller, but he was later appointed the position of secretary-treasurer, which position he held until his appointment of

new concern, and wish them every possible success in the Western Canadian field.

On a Business Basis.

Business transactions, unless friendly relations are involved,

The Individual Threshing Outfit

Opinions of Three Western Farmers

No. 1—By J. R.

Seeing you are asking for experiences, I will just try to give my experience as to how I find things here in the threshing business. As I have been at it for fifteen years (ten years here and five in England), I would say it is more profitable in England than here. I have also run for others as well as owned an outfit myself. The first thing to think about is your outfit, if you have the capital to put into it, as threshing is like any other business, money makes money. And the man that gives between four and five thousand dollars for an outfit on time and thinks that it will pay for itself in three or four years by threshing alone, will get sadly left. I say to the man who has not an outfit of horses and wagons and a good mechanical experience and a lot of ready cash to back him up, he had better let it alone. If you will just look your district over, and see how many homesteads are owned by the machine company, you will agree it is not as profitable as the machine agent says it is. Sometimes an hour of thought will save years of worry. As I said in the beginning, threshing is more profitable in England than here. You may doubt this, but here is the reason. The English thresher buys his outfit for cash for about half what we pay here, but he gets the same price for threshing as we do here. He then only has to pay three men, where we have here from ten to twelve, and a lot of big interest. Until the country gets down to the cash system, the man that does pay, pays for the man that does not. With this long credit system, a lot are drawn into threshing business that have not the capital or the experience to run it, and thereby lose their homesteads; so that those who are thinking of going into the threshing business, look before you leap. See to it that you can meet your payments, otherwise than from threshing. If you are behind with your payments, and working hard and not making any headway, find out where the trouble lies. These few rules may be good to follow. Go over your outfit from stem to stern in the summer and fix every little thing that wants fixing. Put in all bolts and nuts where they are needed. Keep all frame bolts tight; see that everything is in first class repair. Get any new castings that may be broken; put new laces in belts, lace them good and give them a good rub with neat-

foot oil, also give the woodwork a coat of boiled oil. I use half boiled oil and half varnish; and see what an improvement it will make. Now do not leave this matter until a few days before you intend to start; if you wait until then it will only be half done, which will mean many stops, making many losses, as every time the machine stops you are losing money, as your wages are still going on. But keep a motto of "Keep a going," and you will find it will also work out better with your men. Try to have proper hours, and do not work after dark to make up for lost time, as one hour in the morning is worth three after dark. Always be ready to start on time in the morning, if you have to spend half the night to do so. Never let your men wait on the outfit, and you will not lose control of your men, for if you lose control of them you had better shut down than let the men run the outfit. Do not be overbearing with your men, but expect every man to do a day's work, and let him know it. He will then do it; if he will not, you had better be a man short than keep a shirk, as he will soon spoil the others. Always keep track of your accounts, and see how you are standing; do not take it for granted you are making money, when you are going in the hole every day, but remedy the reason and "Keep a going."

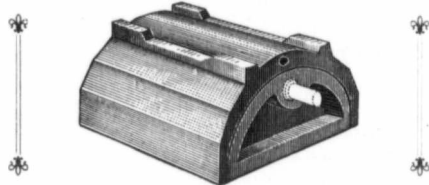
No. 2—By Rex.

I most certainly consider the individual threshing outfit a profitable investment, and also that the medium outfit that will handle the crops of two or three farmers. In shares together with the outfit is, on the whole, and in the majority of cases, a better proposition than having to depend on the travelling thresher whenever it can be avoided. Certainly there is a difficulty to procure extra hands for a small outfit for a comparatively short period. But the farmer must work out his plans to provide for this contingency. There are small outfits that can be run satisfactorily with four and even three men, with a windstacker, and a high bagger. There is only the hauling of the sheaves to be considered (the driving power, of course, being a gas or oil engine). Therefore the force is reckoned upon according to the size and capacity of the machine. This question must be settled by the farmer himself when purchasing an outfit, as to how quickly he wants to do the

WHEN YOU GET WISE TO THE SITUATION

YOU'LL KNOW it doesn't pay to run an engine with a common D slide valve, and waste from 18 to 30% of your power, waste your coal, water and oil, and wear out your valve gear, besides carry a higher pressure on your boiler than you should.

YOU'LL KNOW all about valves if you send for our 8th annual catalog. It tells you WHY and in



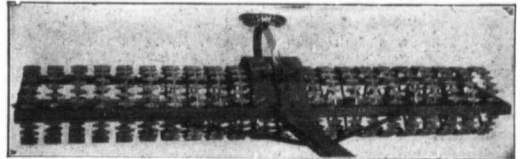
good plain English. Write us to-day for the book. No room here to tell the whole story, the book does that, but get this one big fact fixed in your mind: we guarantee that the Gould Balance Valve will give you from 18 to 30% more power, or save you from 15 to 25% of fuel and water.

If we don't do it you'll get your money back.

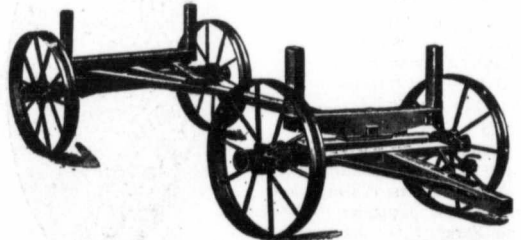
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From Factory to Farmer



Heavy 22-wheel, 15-foot long, All-Steel Frame Packer. The Farmers' Company and the FARMERS' PACKER. Don't pay 25 per cent. more for a packer simply for friendship. We sell direct to you and save you 25 per cent., which spells profit for you. Get our prices before buying any place.



Farmers' Handy Truck Gear at Factory Prices.

The Trucks are made specially for us for our Farmer Customers, and we are so sure of their satisfying, we will ship on approval if you will send us a small deposit of \$2.80 as an evidence of good faith. Steel Wheels, 28 and 30 inch, 3 1/2 inch skein, hard maple axles. Capacity 4,000 pounds. Get our prices.

Lumber and Fence Posts in Carload Lots at Wholesale Prices Direct from Mills.

Farmers Supply Co. (Machine Dept.) Winnipeg

"FOR EVERY FARMER" A THRESHING MACHINE

THE MATTHEW MOODY & SONS COMPANY of Terrebonne, Que. announce that they are ready for business in Western Canada and have a Western Manager with offices at 409-11 Nanton Bldg., Winnipeg. Size of Threshing Machine 30 in. x 18 in. cylinder with 42 in. rear, suited for the individual farmer. It takes an 8 H.P. gasoline engine to run it.

DEALERS WANTED. WRITE.

THE MATTHEW MOODY & SONS CO.,

409-11 Nanton Building, Winnipeg, Man.

threshing. Whether he can afford to go slow with less labor or whether the time occupied in the slower work would out-balance the cost of more extra hands—i.e., more cash to be paid out. It must be noted that for extra labor he has to pay a higher rate than he has for his men engaged the year round. The greatest point to be considered in owning his own machine, such as mentioned above, is that he can thresh when he likes, weather permitting, and that he can rub along with two men besides himself and is not at all stuck if he cannot get the extra hand or two. This season 1911, has shown most forcibly that the farmer who could set his own outfit among his stooks and thresh whenever weather allowed of it, is a very long way ahead of the men who had to wait their turn for the travelling outfit, and a whole lot of them are waiting yet. The difference in the price of frosted wheat and feed that was paid early in the season for the first month's threshing against the price that is paid today, and for the past month, is very considerable, and would have paid for a lot of extra labor at a high figure, and still left a balance in the farmer's pocket. The fields of stooks, which thresh out

tough and wet, often unmarketable in its present state, is another item that the man with his own outfit has avoided. We do not look for this exceptional year of trouble to appear again in a hurry; but we do not know, and we cannot by any means assure ourselves that a repetition will not follow up in 191. Those whose stooks were caught in the early winter's grip have lost considerably, and that in many cases where the amount of loss would go a considerable way towards the payment on a small outfit, or a share in a medium one had that loss not been sustained. We also know that in some districts the price paid for threshing was by the day, and that it made a considerable hole in the farmer's wheat bin. This would also have gone a long way on a payment for an individual machine.

I am not meaning any mud slinging at the travelling thresherman. He is out to earn what he can, and usually do the best he can, both for himself and the farmer, and often enough he goes in the hole. But I maintain that the farmer who cannot see his way clear to be threshed out early in the fall before November comes in, is taking great chances and altogether too much risk, and that he should take

steps to place himself in a more independent position.

We can take a pen and paper and figure out the threshing expenses of the small outfit, and also of the large one which is hired, and very often the large outfit will score out on a basis of time and labor. But the figuring must not stop just there. We are taking for example a district in which the farmers always depend on the travelling machine (and these are legion). John Brown threshed on October 18, 1910; threshed, or rather the machines came onto the farm September 28th, 1911, but was delayed a week owing to wet and a breakdown. This year John Brown's stooks are still in shock, and he does not expect the machine for a week yet. If John Brown could have threshed out this year, 1911, during the short period of good weather that was available, he could have made at least 65 to 70 cents per bushel out of his crop as he was near the elevators and his wheat, though badly frozen, was dry. Now it is covered with snow and ice, and will undoubtedly be on the tough side. He is doubtful whether he can get it to the elevator now. Cars for shipping? Well, he thinks he might get a car by the time the H. B. route is being

opened. These are some of the items we must figure on when we consider "the investment in a small threshing outfit."

Summing matters up as briefly as possible, it means the advantages of threshing early. The early market usually the best; always so for frosted wheat of low grade; the better chances of cars; the board bill; longer days and better weather; less fuel; the chances of losing a grade and even two grades by leaving to bleach in the stook are avoided. The advantages of realizing early on the grain, so that farm debts may be met promptly, and the subscription to The Canadian Thresherman is forwarded before the rush. To wind up, though, this is not a small item; in fact, I think it is about the most important—the avoidance of the risk of pollution of a clean farm or a comparatively clean farm, from some of the worst of noxious weeds, more often than not carried by the travelling machine and its attendant racks. The law provides for the cleaning of such before every move, and doubtless a great deal of weed trouble could be avoided by its proper application. Nevertheless, it is not the thresherman's fault that he has to turn in and thresh dirty grain, and

Continued on page 42d

TRACTION PLOWING

AS TOLD BY THE MEN WHO DO IT

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

The Man at the Throttle Counts.

If my experience in traction plowing will be of any benefit to anyone I will only be too glad to give it to you.

My experience in traction cultivation has not been very extensive, but what I have had has served to teach me that knowledge gained by experience is far the best kind with regard to that line of work.

Our outfit consists of a 25 horse power J. I. Case 1910 model steam engine and an 8-furrow 14-inch Cockshutt engine gang. We employ four men: a tankman, coalman, engineer and a fireman, who also looks after the plows at the ends, which I might say is all the attention they need in this locality for backsetting or stubble plowing.

We use about four twelve-barrel tanks of water per day, and one team with two tanks. We have about ten miles to haul the coal, which employs another team almost steady. We burn on an average about 2,000 pounds per day of the best steam coal we can buy.

I would judge that plowing can be done here at an average cost of \$1.50 per acre, taking everything into consideration, and would say that it is harder on an engine than threshing, though a great deal depends on the skill of the man at the throttle.

Yours truly,

J. W. Freeborn,
Normanton, Sask.

Don't Carry too Much Water.

We have a Rumely engine with which we pull eight 14-inch Cockshutt plows, which do the work well and also pull a packer behind the plow. Our engine is a 30 horse power, double simple, which works fine.

We plowed 2,000 acres and threshed 80,000 bushels of grain. We got the engine late in the first season, and this year it was too dry to plow, so we could only plow half of the season.

We used about two tons of Lethbridge coal, which is soft coal, at a cost of \$4.50 per ton in the car load lots. It fires fine in our engine. We can plow 20 acres per day, using about 70 barrels of water per day.

There are five of us when plowing: one man to run the

engine, one to fire, one to steer, one to tend the plows and one to haul the coal and do the cooking and one to haul water. We used two teams around the rig to haul coal and water.

I consider plowing is harder on the engine than threshing. It cost us 50 cents for coal and oil and about \$20.00 a day for labor, which would be \$1.50 an acre. It is somewhat hard breaking for the sod is tough.

When we first got the rig I was green at it. I had never done any plowing before with an engine, and had quite a little trouble. I used to carry too much water. Then I carried as low water as possible, about an inch in the glass. If much more is carried, it is likely to foam.

We didn't do any discing with our engine, so didn't figure out what the best hitch would be.

Yours truly,

Mike M. Miller,
Warner, Alta.

Cost \$1.50 per Acre.

My engine is a 25 horse power Case and the plow is also a Case, ten furrow. I have both stubble and breaker bottoms, and broke about 80 acres with it, averaging about 15 acres a day. I was short of water, and lost time on that account.

I plowed 100 acres of summer-fallow with it, and about 300 acres of fall plowing.

When breaking I hauled eight plows and ten in fall plowing. I find that it takes about eight barrels of water an hour for plowing and about four barrels for threshing. We burned Galt coal for breaking, but found that it clinkers considerably. For summer-fallowing and fall plowing we used the Hocking Valley coal. We averaged from 20 to 25 acres a day fall plowing, burning a little better than a ton of coal a day.

Two men ran the outfit, and one man and team drew the water, while another man and team drew the coal. We haul about 2½ to 3 tons of coal to a load. One team can draw enough in one day to last a week. The furthest we have had to haul it is a mile.

As to cost, it would come to about as follows: Water team and man, \$5.00; engineer at \$5.00; fireman, \$2.50; coal at \$8.50 a ton; hauling coal \$3.10 per day;

wear and tear on engine, \$1.50 an acre for plowing.

It can be seen that it is harder on an engine to plow than thresh. It takes double the water. Of course, firing with coal is easier than using straw on the flues and boiler, as the heat is steadier and less apt to damage from cold air.

I believe that where there is good water close at hand, steam is the way to plow, as it is faster and does a better job than can, or, at least, is done by the average man and team. But I believe the outfit should be run night as well as day. Never stop unless for repairs.

I have never tried anything but plowing as yet, but may next year. I have a contractor's tender on the engine now, and will say that if anyone is figuring on going into the business they need all the attachments, as it doesn't pay to be without them.

Yours truly,

D. Campbell,
Boissevain, Man.

Never Used Drills or Harrows Behind His Engine.

My engine is a 36 horse power Simple American-Abell and my plow is the Cockshutt eight bottom 14-inch.

I employed five men besides myself and I had two teams. I used coal most of the time, using two tons a day, and about eight tanks of water per day.

I do consider plowing a great deal harder on my engine than threshing.

I plowed 320 acres in eleven days, getting \$3.50 per acre, and my expenses were \$412.25.

I have never had any experience with drills and harrows.

Yours very truly,

James Doyle,
Melrose, Man.

Uses 1½ Tons of Coal per Day.

I have a 2 horse power Cross compound American-Abell engine and my plow is a Cockshutt with ten bottoms. I run a double shift, and employ eight men and a cook, besides three teams of horses, one water team and two coal teams. One coal team is enough for a distance of ten miles.

I use 1½ tons of coal per day; that is steam coal and water about 120 pounds a day. My estimated cost per acre is \$1.50.

I haul a land packer behind the plows, and charge \$3.75 per acre. I am sending a photo of my outfit at work. My hours are from three in the morning until dark. The biggest day's plowing that I did last year was 41 acres in one day.

Hoping this will be of some benefit, I remain,

Yours truly,

Alex. Creelman,
Gull Lake, Sask.

Steam Plowing the Real Thing.

Last season I purchased a 75 horse power brake test J. I. Case steam engine and a Cockshutt engine gang, with eight 14-inch bottoms, but owing to the delay in getting this outfit I did not get started to work before June 15. We had very little rain out here last summer and the ground was very hard for breaking. At first I pulled eight plows, but as the ground got dryer I took out one plow and I handled seven 14-inch bottoms easy, whenever I had good water, but there was a lot of bad water out here last year.

I used the Clover Bar steam coal at a cost of \$4.25 per ton. I used on the engine daily 3,500 pounds and about 45 barrels of water, and my average daily for the first three weeks of the run was 17 acres. I employed four men besides myself, and two teams of horses. The cost per acre was \$1.45.

I think steam plowing is the real thing. Most all of my work last season was done in heavy solid prairie. I had very little trouble with my engine. The plows did excellent work; everybody was admiring them.

I did not have any previous experience in steam plowing, although I had been running steam engines for eight years. I found out that traction plowing is harder on the engine than threshing. There is more jerking and tearing to it, and it is a lot more difficult to tend an engine when it is working on traction.

Yours truly,

P. E. Sagmone,
Chauvin, Alta.

Costs 75 cents per Acre.

I bought my plowing and threshing outfit last spring, but it being a very dry season, I only plowed about 860 acres. I never



MAYTAG^{CO} LTD



WELL! WHAT DO YOU THINK OF YOUR OLD FEEDER NOW?

What we do NOT know about the Threshing Proposition would make a larger book than has ever been printed. There are a few things that we guessed at last Fall in our advertisements that came true. We told you that the threshing would be tough--that you should have a new RUTH Feeder in order to do satisfactory work and make money. More than a thousand threshers took our advice and made new records and are now happy.

To the threshers who tried to make their old feeder see them through 1911 we want to say a few words. If you intend to get a new feeder this year you will of course want to buy the very best that is made. There is but ONE BEST, and that is the RUTH. The RUTH is the BEST SELF-FEEDER that is made to-day and we can prove it to any fair-minded man's entire satisfaction. Here is the Warranty that goes with the RUTH. Read it carefully:

THE RUTH WARRANTY

"The RUTH Feeder is Warranted to Feed any make or size of Separator to its full capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stack burned, wet or dry, PILED ON THE CARRIER IN ANY WAY YOU PLEASE, without slugging the separator cylinder or loosening a spike, and to do a faster, cleaner and better job of feeding and to WEAR LONGER AND COST LESS FOR REPAIRS than any Feeder manufactured by any other Company in the World."

Now that you have decided to buy, the next question which naturally arises is, which

RUTH FEEDER

Do you prefer? One is just as good as another, and any one of them will PUT AN END TO YOUR FEEDER TROUBLES FOREVER

RUTH WITH THE CRANK SHAFT MOTION, RUTH WITH THE ROTARY MOTION
RUTH WITH 14 FOOT EXTENSION CARRIERS, RUTH WITH SWINGING ELEVATORS

Any Threshing Machine Company doing business in Canada can supply you with a RUTH Feeder, and we FURNISH THE ATTACHMENTS TO PUT THEM ON SO THAT THEY FIT PERFECTLY. When we say ANY Thresher Company, we had in mind more especially any of the following, as they have all bought the RUTH of us, and we are not only willing but anxious to fill all orders they may favor us with during the coming season.

Sawyer & Massey Co.
International Harvester Co.
Waterloo Manufacturing Co.

American Abell E. & T. Co.
Haug Bros. & Neillermoe Co.
Garr, Scott & Co.
Burrige Cooper Co.

Buffalo Pitts Co.
Canadian Port Huron Co.
The Rumely Co.
Robert Bell E. & T. Co.

Geo. White Sons & Co.
Nichols & Shepard Co.
Reeves & Co.
J. I. Case Threshing Mach. Co.

John Goodison Thresher Co.
Aultman & Taylor
Minneapolis Thr. Co.

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PLEASE MENTION THIS PUBLICATION



MAYTAG



COMPANY, LIMITED

WINNIPEG, MANITOBA

had any experience with an outfit before.

My engine is a Reeves 25 horse power and plow is an eight bottom Cockshutt, and I pull with a packer behind.

I don't employ but very little help, as my oldest son is engineer and my second is fireman. I have my own team, and it all depends upon the distance that we have to haul the water as to how many teams I employ.

I used about 2½ tons of soft coal per day. This coal is mined at Taber. And we use from eight to nine tanks of water a day.

I think that plowing is some harder on an engine than threshing.

It costs us about 75 cents an acre to plow.

Yours very truly,

J. L. Cardwell.

Taber, Alta.

All Quit Horse Plowing.

My engine is a 36 horse power Rumely engine and my plow a Cockshutt with twelve bottoms.

I employ from eight to ten men, including cook, nightman, and blacksmith. The number of horses depends upon location of coal and water. When these are handy I can run with four horses, but if water is not handy, and I have to go in a bad place to get it, it takes two four-horse tanks or teams to get it. Therefore, sometimes it takes twelve horses.

I use from 1 to 1½ tons of coal per day and from 10 to 12 tanks of water per day plowing, and when threshing four. I am satisfied that my engine could run three large separators as easily as it could run twelve plows.

It is said around here that we have the toughest sod to plow in the North-West. I pulled twelve 14-inch plows all season. That would have taken 72 horses to have done the work. In fact all parties that were running plows with horses quit and I kept on plowing.

We had no rain all summer. The estimated cost per acre is about \$2.00.

We have never as yet used our engine for preparing land or for drilling.

Yours respectfully,

J. S. Swinney.

Cowley, Alta.

Averaged 25 Acres per Day on Summer Fallow.

We have not done any breaking the past year. We have a 25 horse power J. I. Case Simple engine and an Emerson eight bottom 16-inch furrow, which makes a good stubble outfit. We believe, however, that the engine would be better if we had

a 30 horse power. The plows are Independent, so a few stones do not bother us.

We have a Contractor tank on engine, which carries eight barrels of water and a ton of coal.

We summer fallowed 200 acres and fall plowed 20 acres on a mile stretch. We employ to run the outfit one engineer, one fireman who looks after the plows, tankman and team, and coalman and team.

It takes three tons of Lignite coal per day, and we use five barrels of water to the mile when running steady. Of course there are times when one has to stop for repairs.

We pay our engineer \$4.00, fireman \$2.00, each man with teams \$3.00; three tons of coal at \$1.50 per ton, \$4.50; oil, \$1.00 per day; shares, \$1.00 per day; board for men, \$2.00; horse feed, \$1.25.

While we were summer fallowing we averaged 25 acres a day, but in the fall plowing the days were shorter, and we could only do 20 acres a day.

One advantage the steam has over horses is, if it is dry you can get the work done anyway.

Hoping this will be of some use to you, I remain,

Yours truly,

Earl McKersie.

Roche Percee, Sask.

The turkey is an American bird. Luculus and the Epicureans did not know about him. He was found in his wild state after Columbus' time. About a hundred years after the discovery of America broiled young turkeys became great delicacies on the Frenchman's table.

OGILVIE'S ROYAL HOUSEHOLD FLOUR

Is the pure, unadulterated product of the finest wheat grown in the British Empire. Every stage of its manufacture is scientifically watched from the very wheat field to your kitchen. It is well known for its superior qualities in every part of the globe. It is the choice of good housekeepers everywhere, as well as the choice of the Royal Household of Great Britain.



You can make all your cooking BETTER COOKING

Besides making the finest bread, rolls and cakes, all the old-time favourite dishes as well as many new ones are made more delicious with Ogilvie's Royal Household Flour. Send for our special receipt book.

Ogilvie's Flour Mills CO. WINNIPEG

EUREKA HARNESS OIL

KEEPS YOUR HARNESS SOFT AS A GLOVE TOUGH AS A WIRE BLACK AS A COAL SOLD BY DEALERS EVERYWHERE THE IMPERIAL OIL Co., Limited



Power for the Farm

Easily produced by the **New Farm Cushman**—the high-powered, light-weight, fuel-saving engine for general farm work. Advanced 4-cycle type, 4 H.P. rating, but will actually develop over 5 horse power; Automatic throttle governor, with high-grade Schebler carburetor, measures out just enough gasoline to do the work required, whether it be a 1 H. P. or a 5 H. P. load. Uses less than **ONE PINT OF GASOLINE PER HOUR Run Per Horse Power.**

Easy to change speed, do it instantly. Weight less than 200 lbs. Mounted on an iron truck, easily pulled from one job to another. Possesses valuable features no other engine has.

Farm Cushman The Original Binder Engine

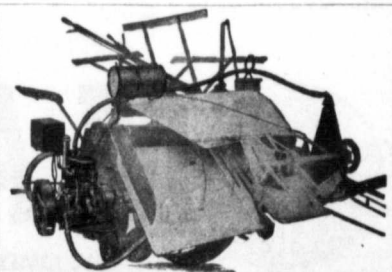
The only successful engine to operate on a Binder saving 2 to 3 horses.

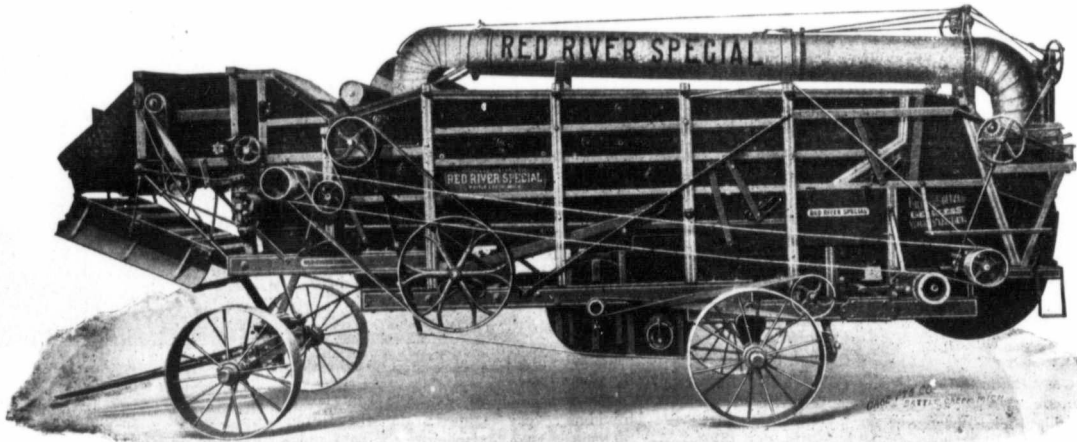
Guaranteed for 10 years on your farm. Any one can run it.

Send for further particulars.

The Harmer Implement Co.

182A PRINCESS ST., WINNIPEG





SAVE YOUR THRESH BILL

How?

By having a Red River Special do your threshing.

Why will that save it?

By saving enough more of your grain and time to pay it.

How does it save more grain?

Because it is the only thresher which beats the grain out of the straw just as you would do by hand with a pitchfork. It is the only thresher which does. All others rely upon the grain dropping out.

How does it save the farmer's time?

Because it runs steadily all the time without break downs, and further, because it will thresh when weather conditions are so bad that other machines cannot run.

Why will it thresh when the weather will not permit other machines to do so?

Because it beats the grain out of the straw.

What does the Man Behind the Gun do?

It catches the intermingled straw, chaff and grain as it is thrown by the Big Cylinder, the grain goes through the separating grate to the check-plate and grain-pan and the straw goes over upon the shakers.

How much of the grain is separated by the Man Behind the Gun?

Ninety per cent.

How do you know that?

Because we have repeatedly tested it out.

Don't some of the grain go over the Man Behind the Gun?

Mighty little.

What becomes of that?

The separating shakers beat it out.

Don't the shakers in other machines do the same thing?

No.

Why?

Because they throw the straw to the rear and expect the grain to drop out, while the shakers in the Red River Special throw the straw up and as it falls they beat it, just like you would do it by hand with a pitchfork.

What is the difference?

The grain will not all drop out, but it can all be beaten out and the Red River Special is the only machine that does it

Why is the Red River Special less apt to break down?

Because it is the best built thresher in the world. It has a hard wood frame throughout. It has larger shafting and longer bearings. It has the Man Behind the Gun which just stands still and don't wear at all. It has the largest and strongest cylinder teeth. It is double belted and heavily belted throughout, and is built so stout that no operator breaks it through usage. It cannot break or wear out anywhere except by accident.

Then what should I do to save my thresh bill?

Tell your thresherman to come with a Red River Special when he wants your job.

But suppose I make a business of threshing and have no crop of my own?

Then buy a Red River Special and get into the business right. You will earn enough more money so that you will soon be able to have a good farm and lots of crops, like thousands of other Nichols & Shepard customers.

Write the factory or our nearest branch house.

NICHOLS & SHEPARD COMPANY, Battle Creek, Mich.

Sole Builders of the RED RIVER SPECIAL Line of Red River Special Threshers, Nichols-Shepard Traction Engines, Oil-Gas Tractors, Universal Feeders, Stackers, Weighers and Supplies.

REGINA, Saskatchewan

CALGARY, Alberta

THE INDIVIDUAL THRESHING OUTFIT.

Continued from page 41

it is almost an impossibility to absolutely clean out a machine, no matter how well the owner of the outfit has followed the letter of the law, though he certainly can remove the greater part of the danger. A man with a clean farm who uses the travelling outfit needs to be very careful, or he will easily lose the price of two threshing outfits in short yields and extra labor should he happen to get a dose. However, the travelling threshing machine is a necessity, and probably will always continue to be so.

But I say that the farmer who can own his own outfit or share in one will, I think, be better off in the long run.

Rex.

No. 3—By F. C. Sanderson.

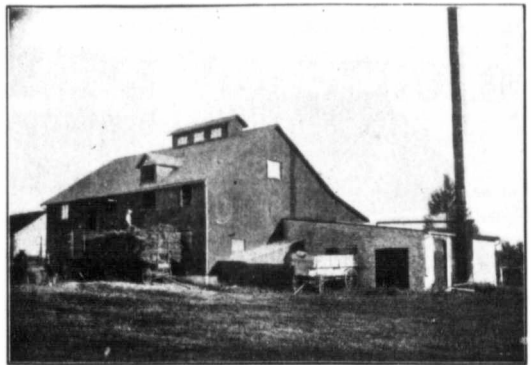
Whether it is cheaper for the farmer to own and operate his own small threshing outfit or to get his grain threshed by the custom thresher, with the big outfit, is a question that has been agitating a great many of the farmers' minds throughout this great western land of ours for a number of years past.

It is a well known fact that the "individual outfit," as it is generally called, is getting more popular every year, and I think this is justifiable both financially and for conscience sake. This I will endeavor to show according to our experience.

Before taking up this question I want to say a few words in way of comparison between the steam and the gasoline engine for power. In comparing these two powers, one has to consider at least three points: The initial outlay, the cost of operation, and the handiness of the two powers. First, as regards the first cost. This is where steam has an advantage; that is, when we compare two engines of the same rated horse power, for we know that most steam engines will develop about three times their rating, while the gasoline develops very little more than their rating. As both are sold for about the same price for the same rating, you bet much more power from the same outlay in the steam than in the gasoline, but the initial cost of an investment is not all. Second: cost of operation. Here is where the gasoline has steam beat, especially with the individual outfit, because the gasoline outfit can, and generally is run with three men and one team less than the steam rig can be run with. This means a saving of \$11.00 per day, but out of this saving the gasoline

is bought, which reduces this profit from \$7.00 down to \$4.00, according to the size of the engine and the price of gasoline. The handiness of the two powers. This is another point in which steam has to take second place, for anyone who has used both powers knows that you don't need to go out to the gas engine two hours before the rest of the gang to fire up, nor roast in a firebox a good part of the night expanding and beading flues, nor put in a few hours some nights washing out a dirty boiler, while you should be enjoying the comforts of a well earned bed.

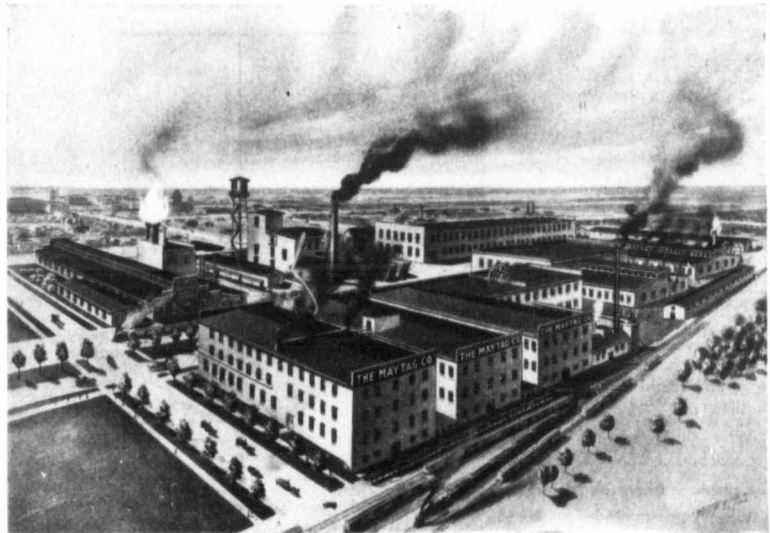
Let us now consider the advantages to be gained by owning your own outfit. Most of the people who have individual outfits get the greater percentage of their wheat threshed before it is damaged by the rain.



A Tank Station where the Oil Engine Farmer gets his supplies.

Take for example this fall the very same grain that graded two cents before the rain and for which the farmer got 85 cents per bushel, just went four cents

Continued on page 58b



The above illustration represents the plant and offices of The Maytag Company, Limited, the largest builders of self feeders for threshing machines in the world. The history of the Maytag Company is really the history of the self-feeder business they having been the first to manufacture this labor saving implement, and since that time following it up through the Parsons, the Rich, the Hawkeye, the Ruth and the Whitewing, it makes a story that if space permitted it would be well worth writing.

Wherever threshing machinery is used to-day there you will find self feeders made by the Maytag Company. Thousands of these machines go out of their factory every year to all parts of the world, and for the past eight or ten years Canada has been a large user of their self feeders.

The plant itself covers several acres of ground, and every part of

it is devoted to the manufacture of self feeders, corn shredders, and Pastime washing machines. During the past three years, under the able management of Mr. E. E. Lyday, the business of the Maytag Company in Western Canada has grown by leaps and bounds. Practically every threshing machine company doing business in the West to-day is a large user of the self feeders, manufactured and sold by the Maytag Company.

A few years ago this concern occupied small offices on Princess Street, Winnipeg. Outgrowing these they moved into a large building on Henry Avenue. At the time the move was made it was supposed that this building would be sufficiently large to meet their warehouse and office needs for practically all time to come, but so rapidly has their business grown that it is now found necessary to erect larger quarters,

which will be done during the summer of 1912.

At the present time they are the Self Feeder House of Western Canada, devoting almost their entire time and attention to this one particular business. The result of this oneness of purpose is that they are able to render the best possible service both as regards new machines, and what is more important as regards repairs. When a self feeder breaks down during the busy season it is necessary that repairs be had almost immediately. This particular part of their business is so systematized and arranged that the best possible service is rendered.

Our readers really need no introduction to this concern but we trust that they would doubtless be interested in seeing just where the feeders, which they have used in the past were made, and for this reason we are pleased to publish the above cut.

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Rumely Steam Plowing Engines are Masterful Machines

Turning the great prairies of the Northwest into fertile fields was found years ago to be much too great a task for faint-hearted men, light animals and crude engines.

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Rumely Steam Plowing Engines are double-g geared and rear mounted, so that the engine pushes itself straight ahead from the rear. All gearing is made of steel and semi-steel shafting and crankshaft made of material superior in quality to that required by U. S. Naval Specifications, and fully guaranteed against breakage.

We have a book—"From Track to Stack"—that goes into details—gives you the very information you want on steam plowing engines. It is free for the asking. A postal will do. Address

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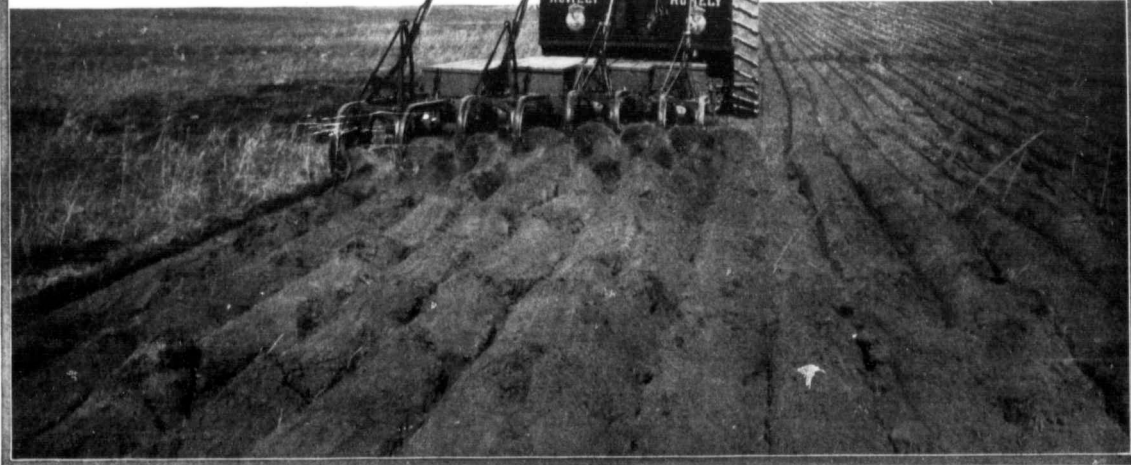
WARRANTY—We guarantee against breakage, for a period of one year following date of purchase, all gearing and shafting, including CRANKSHAFT, on our plowing engines.

We guarantee to replace, free of charge, at the factory for the United States, at Regina for Canada, any gearing or shafting, including the CRANKSHAFT, broken during usual use of the engine, on receipt of broken parts during period named.

M. RUMELY CO., La Porte, Ind.



KNOWN 'ROUND THE WORLD



Conducted by
Professor
P. S. Rose

Practical Talks to Threshermen

Talk No.
LIV.

LESSON LIV.

In this lesson we will describe some of the feeders now on the market, not with the idea of presenting anything new, but with the thought in mind of bringing together a description of the various feeders that the student may obtain thereby a fair idea of the subject and be

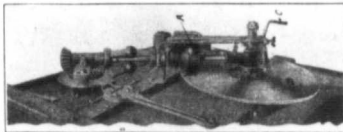


Figure 100

better enabled to draw comparisons.

The first feeder which we will describe is the well known Parson's feeder. This machine was first placed on the market in 1892, and was one of the first to gain recognition generally among threshermen. During the first years of its existence it met with the usual opposition accorded to all new inventions, and not the least of these was the hostility of men who operated threshing machinery. They not only did not use good judgment in feeding the machine, but on the contrary did whatever they could to crowd it beyond its capacity. This was comparatively easy, because of the fact that it was not at first equipped with a governor acting on the feeding riddle as in modern machines. Men who during the season had always depended upon feeding and band cutting for their season's work derided the new device and used their influence against it. In this respect, only in a lesser degree, it went through the same period of hostility from labor that the reaper and other farm machines encountered. It is only natural that men who see their jobs taken away from them by machinery should evince hostility to the machine and endeavor to prevent its introduction. Fortunately for the world, such efforts have always in the end proved fruitless.

It was thus in the case of the self feeder. While it had to meet and overcome opposition in the beginning, this was effectually done in the course of a very few years. Another difficulty that was even harder to overcome was that of perfecting the details to meet every condition of grain. To do this, it was imperative to build a machine that would be adjustable in all its

parts to accommodate the different kinds and conditions of grain and sizes and bundles found in various parts of the country. These conditions made it necessary to equip the feeder with a governor and with a variable speed device, both of which will presently be described. Minor changes and improvements have been made from year to year, but all of the distinguishing features such as variable speed device, governor, etc., were incorporated by the end of the year 1895.

It may be as well to mention the fact here that the Parson's feeder was not the first one to meet with success in the field, as a number had been invented and placed on the market prior to this one, but its advent marks the beginning of the universal use of these useful machines.

As it exists today the Parson's feeder is very well under-

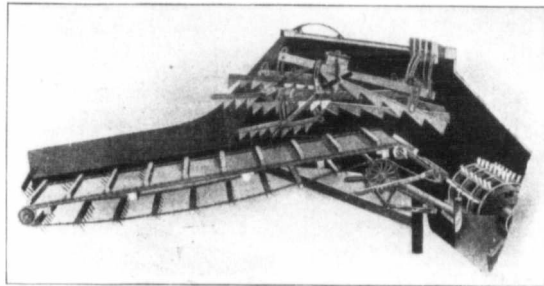


Figure 101

stood by the rank and file of threshermen, nevertheless we will take up and discuss its various features. Like all other feeders it is equipped with a revolving riddle which carries the bundles to the cylinder. This endless rake or riddle consists of two sprocket chains to which are attached hard maple slats armed with teeth that project backward to facilitate their drawing out of the bundles easily when the latter are delivered at the cylinder of the separator. These teeth serve the further purpose of holding the lower part of the bundles when they pass under the knives of the band cutter. In order to better adapt the feeder to different conditions of grain the speed of the riddle may be varied at the will of the operator, that is, it may be made to feed fast or slow as desired, but at all times it runs slower than the knives and separating device

of the machine. This is done with the purpose of retarding the lower part of the bundles and causing the straw to be fed from the top of the bundle.

The means by which this variable speed is obtained is clearly shown in the accompanying illustration, figure 100. A small rubber faced wheel, marked A, engages, by means of frictional contact, with a large flat disc B. When the small wheel is at the outer edge of this disc, the latter is driven slowly, but when it is drawn nearer the center by means of the speed changing lever C, the disc is driven faster. This disc is keyed to a short shaft which is geared to the riddle and thus causes it to revolve faster or slower as the case may be. The small driver receives its motion from the bevel gears and cross shaft shown at the top of the picture and they in turn are driven from the cylinder shaft by means of a belt on the opposite side of

The variable feeding device is useful whenever a very difficult piece of threshing has to be done; for example, in the case of wet or matted bundles, the riddle can be made to travel slowly while the knives and separating devices loosen the straw and tear it apart so that it will not slug the cylinder.

The bands are cut by means of a set of serrated knives like those used in the cutting bar of a moving machine and driven from a multiple crank shaft. The rear end of the knife bars has an oscillating motion on account of the way they are hung from the top of the frame work by hangers, while the front end receives a rotary motion from the crank shaft. Immediately back of the knife sections there is a set of fish backs which aid materially in tearing the straw apart and especially in feeding the top straws to the cylinder first. In the Parson's feeder the normal rate of speed for the knives and fish backs is two hundred and sixty revolutions per minute. The internal arrangement of the feeder showing riddle, band cutter knives and fish backs is shown clearly in figure 101.

In the machine which has just been described, it will be observed that the cylinder of the separator must first change its speed before the feeder governor can act and either stop or start the riddle. It has been recognized that this is not exactly the correct principle, although in practice it has worked very well. A better scheme is to make the feeder itself sensitive to an overload in order that it may deliver a continuous and uniform quantity of straw to the cylinder, thus preventing any change of speed at that point due to slugging.

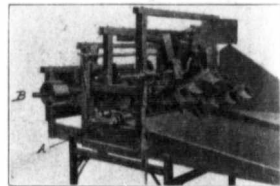
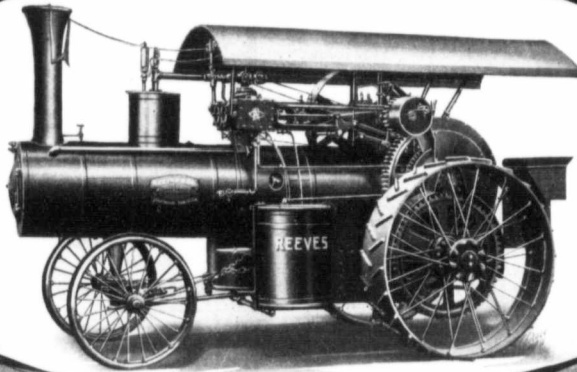


Figure 102

A number of machines have been devised on this principle. The Ruth feeder made by the same company that manufactures the Parson's is equipped with a governor which is actuated by the retarder cylinder.

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.

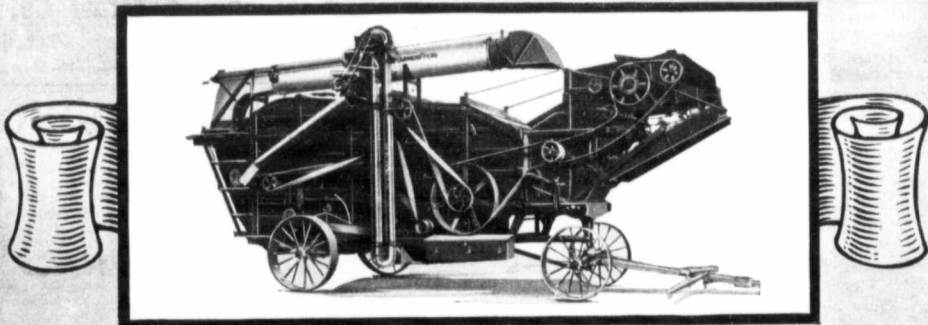
Dear Sirs:—Have you on hand lower pan for 40x60 separator No. 1052 bought in 1900? If you have, let me know and send price. This is the first repairs I have had to buy in eleven falls. I run this separator six falls in Illinois and five falls in Dakota, and it is still in first-class shape excepting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

Respectfully,

Myron McKeague, Fullerton, North Dakota.

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

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.



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REEVES

The Thresherman's Question Drawer

Answers to Correspondents

Q. B. B. I have an engine which leaks water at the corners (back) of the firebox. Can you give me a recipe for a cement which applied on the outside would stop it, or tell where I can buy it? It is impossible to chalk without taking all the gears and drivers off. Can get a cement that is advertised in Power, but don't think it is just what is needed, hence this letter to you.

A. We know of nothing which can be applied to the outside of a boiler to stop a leak except the calking tool. When you clean out the boiler put a few potatoes inside near the leak. They will cook up and get into the leak, and may stop it. Horse manure is said to be very good for this purpose. In time the leaks may corrode and lime up, and will save you the trouble of taking your engine apart.

Q. H. M. Does the lead vary or is it constant when notched up or hooked out on the Woolff valve gear?

A. When a Woolff valve gear is correctly set the lead should be the same at all points of the cut off. If it is not, the eccentric is out of place or the reversing shaft is not in its right place. When the engine is on dead centre the upper end of the eccentric yoke should be central with the reversing shaft. When it is in this position the valve will not move while valve gear is reversed and the engine is on dead centre. If the valve does not move, the eccentric yoke should be watched while reverse lever is moved and notice taken where it should be moved to bring the end of the yoke central with reversing shaft, which will accomplish a constant lead at all points of the cut off.

Q. C. M. W. I have an engine called 16 horse power with 8 by 10 cylinder and 45 inch flywheel or belt wheel; another party has one called 12 horse power, with 8 by 8 cylinder and 6 inch flywheel. Now how much difference is there in the two engines with the same amount of boiler pressure and properly speeded to a seven inch cylinder puller to run cylinder 1,200 revolutions per minute? In my opinion the 8 by 8 will develop nearly or quite as much power as the 8 by 10 cylinder.

A. The 8 by 10 engine with flywheel 45 inches in diameter would run 186 2-3 revolutions per minute. The 8 by 8 engine with flywheel 36 inches in diameter

would run 233 1-3 revolutions per minute. his speed on both engines will run the separate 1,200 revolutions per minute with a seven inch pulley on the cylinder shaft. With the proper boiler capacity in each case and with the same boiler pressure and mean effective these two engines will develop the same horse power.

Q. A. M. B. I have an injector with three-fourths inch connection. It will force water into the boiler very well with 70 to 80 pounds of steam, but 100 to 120 pounds of steam it will not force the water into the boiler at all—runs out at the overflow.

A. There is only a limited range to the pressure at which an injector will work. If it works at a very low pressure it will not work at a very high pressure, and if it works at, say, 120 pounds it will not work at the low pressure, say, 20 to 30 pounds. The jets may be cut out due to working sandy water. If this is the case, send to the manufacturer of the injector for new jets and state at what pressure you want it to work and they will send you the proper size jets. Before you do this see that everything is clean about the injector and that the delivery pipe to the boiler is free. The fact that the injector takes the water and delivers it at the overflow, would indicate that the suction pipe is tight.

Q. J. L. When one is pulling his load up a hill and is pulling the engine hard, and the steam goes to escaping from the pop valve, it is an injury to the flues to drop the dampers tight so the steam will not escape?

A. It does not harm the flues to check the draught by shutting draught door, but it may injure them by opening the fire door, and letting cold air rush through the flues as is done in some cases.

Q. S. T. If feeding too much cylinder 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 by 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 by 11 engine ten hours.

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CATALOG FREE FOR THE ASKING

DESMOND-STEPHAN M'F'G. COMPANY, Urbana, Ohio

Crane & Ordway Co., Winnipeg, Sales Agents for Canada

Patronize those who patronize this Magazine

Q. E. H. Could a handy man make a coal slack burner, using a fan to blow the dust into furnace, and burning it in suspension? Could straw be burned this way?

A. When coal dust is burned as fuel it is blown into the fire-box by compressed air. A fan is not able to generate enough pressure for the purpose. If straw could be pulverized, may be it could be used in the same way.

Q. H. K. What causes the governor to admit so much steam at times that the engine nearly runs away and then shuts down so it almost stops and starts off again? Packing is in good shape and I find nothing the matter with governor. This is on a link motion engine.

A. Sometimes the packing is all right, but the stem is worn so that it has shoulders. In this case the shoulders will wedge in to the packing, and thus make the stem strike, and cause the governor to "race." It sometimes happens that the valve will stick in the seat. A loose seat or a bent stem will also cause this trouble. A tight or dry joint will also cause racing. It sometimes happens that an imperfect belt will cause trouble of this kind.

Q. J. B. What is the mean effective pressure to the boiler pressure? Say we have 100 pounds boiler pressure, what would the mean effective pressure be?

A. In an automatic cut-off engine the initial pressure would be near to the boiler pressure. By initial pressure we mean the pressure in the cylinder at the beginning of the stroke. At the initial pressure that 100 pounds boiler pressure would naturally make the mean effective pressure would be about 50 pounds at a cut-off of one-fourth of the stroke, and about 77 pounds at one-half cut-off. In throttling engines such as traction engines with a boiler pressure of 100 pounds, the initial pressure would probably be an average of 85 pounds, which would give a mean effective pressure of about 44 pounds at a cut-off of one-fourth of the stroke and 68 pounds at one-half cut-off.

Q. K. J. H. Can you tell me how to set a valve correctly on an Advance engine (Marsh reverse). I want to rabbit the reverse boxes, and I will have to set it over. Tell me in a plain way.

A. Get the engine on the centre, placing the crank toward the cylinder, then place the reverse lever in the center notch, then turn the reverse gear on the crank shaft until the crank pin

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The Why and How of this Wonderful Culvert

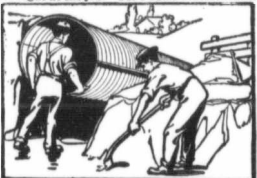
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- VANCOUVER 108 Alexander St.
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- WINNIPEG 76 Lombard St.
- REGINA
- VICTORIA 434 Kingston St.
- LONDON 86 King St.
- TORONTO 111-113 Bay St.
- HALIFAX 16 Prince St.

of the reverse gear shaft is on its center nearest the crank shaft, or away from the cylinder. The position you estimate by eye. Then tighten the screws in the reverse gear on the crank shaft slightly and temporarily. Then, as a preliminary in the operation, set the screws that are in the top and bottom of the stop plate, so that they will project inward, about one half inch from the lugs on the stop plate, though it is not important that they should be set exact, as this is not the correct and final position for them. Then move the reverse lever down, until the reverse box strikes the screw in the bottom of the stop plate, and fasten the reverse lever in that position. Now, with the engine still on the center nearest the cylinder, set the valve, on the valve stem with the edge of the valve even with the edge of the port in the valve seat, or so that the valve just covers the port, then tighten

the screws slightly that hold the valve to the valve stem. Then, with the engine still on the same centre, move the reverse lever in the opposite direction until the reverse box strikes the screw in the top of the stop plate, and fasten the lever in that position. If the edge of the valve does not return to the edge of the port, or if it laps, by the edge of the port, make a mark on the valve seat even with the edge of the valve. Now make another mark half way, between the edge of the port and the first mark, then loosen the screws in the reverse gear, on the crank shaft, and turn the gear until the edge of the valve stops at the center mark, just made. Now tighten securely the screws in the reverse gear on the crank shaft. After this operation, the gear is supposed to be properly located. The next step in the operation is to loosen the valve on the steam and set it so there will be about

one-thirty-second of an inch opening between the edge of the valve and the port; this is what we term the lead and the valve should now be securely fastened on the stem while in that position, the engine still being on the center nearest the cylinder. The next step in the operation is to place the crank pin of the engine on the opposite centre, or away from the cylinder. The reverse lever being in the top notch, the engine should be turned over in centering it. It should be turned in this manner in order to take up the lost motion in the reverse gear. The engine is thus centered to determine the lead in the opposite end of the cylinder. With the reverse lever still in the top notch, if the lead is found to be more than one-thirty-second of an inch, turn the set screw into the lug, at the top of the stop plate until the proper lead is secured.

MEN WHO MAKE No. 1 HARD

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

At it Since he was 12 Years Old.

The first experience I had in threshing was as a fireman when I was a boy 12 years old. I worked for 50 cents per day in Manitoba. When I was 19 years of age we moved to Saskatchewan, and started farming there. During the threshing season I worked for \$1.50 per day at Rosthern. The next year I worked as separator man, receiving \$2.50 per day. Our boss used to pay us for a full day even if we only worked half a day. The machine was a Sawyer-Massey, and we threshed as high as 1,500 bushels of wheat per day. We charged 5 cents per bushel for wheat and 4 cents for oats. The separator worked fine.

At the age of 20 I worked on a Waterous outfit, running the separator, and receiving \$6.25. That was the best money I made and I threshed oats, 400 bushels in 15 minutes.

When I was 21 I bought an outfit made by George White and Sons, which cost me \$3,800, and I found it to work fine. The first day I started the machine I threshed 860 bushels in six hours. The second year I threshed 204 bushels of wheat and 2570 bushels of oats in ten hours, making a total of 2774 bushels in ten hours. I think this was a good run.

In 1910 the crops in our locality were bad. One day I threshed 105 acres, and I only had 508½ bushels of wheat, which I threshed at 5 cents per bushel, making \$25.40. I paid the water man \$5.00 per day and fireman \$2.50, four pitchers \$2.25 each, making \$8.00, and separator man \$4.00 per day, and I ran the engine myself. An engineer at \$6.00 per day makes a total of \$25.50. Then, there is no oil counted in the above.

In 1909 I did some plowing for myself with my engine, and found it to work fine. But the ground was much too wet and the wheels would slip. The water around here is very poor, and I had some trouble with the tubes leaking.

Yours truly,
A. A. Dyck.
Aberdeen, Sask.

Ontario in the Game.

I began the threshing business when I was 16 years of age. The first season I spent in the barn, and I have followed it up for eight years, or nine seasons rather. I have threshed grain from 100 to 125 days and then

threshed clover all winter. Since the first season I have always been on the engine. I started out on a 10 horse power, the next was 17 h.p. traction Sawyer-Massey with a Peerless separator and Monitor clover dresser.

I ran this outfit for five seasons, then went to Saskatchewan for one season, where I ran a J. I. Case engine and an Aultman and Taylor mill, a very nice outfit.

I have never had any serious trouble with my outfits, excepting once, five years ago, while crossing a bridge with the engine and tank; the bridge gave way and I fell fifteen feet and was severely scalded. Yet, for all that, I like the business and intend to follow it up. I expect to come West in the fall, as I am in the market for a new outfit.

Regarding clover threshing. It is a very dirty job in this country. The largest number of bushels we ever threshed was 50 bushels and made three sets, and moved three miles in a ten hour day. For this we charge 50 cents per bushel.

We have threshed grain as high as 1400 bushels in a ten hour day, charging 2½ cents per bushel for oats and barley, and 3 cents for rye, wheat, peas and all hard grain. Some thresh for 2½ cents per bushel all round, but there is not money enough according to the amount that a man has to put in an outfit.

Yours sincerely,
E. F. Sharpe.
Maple View, Ont.

Letellier Man Heard From.

I first bought a J. I. Case portable outfit 15 horse power engine, along with a 28 by 50 separator, self feeder and wind stacker.

I used this outfit two years, doing good work, and then exchanged the engine for a traction, same make and size, which I have been using for four years, both for threshing and plowing.

I find my engine first class, and it is strong enough to handle the separator, and last summer I broke 50 acres of sod, pulling four plows, doing splendid work. I also did some backsetting, and pulled six plows in stubble land.

My separator can take in and thresh all that two pitchers can throw in, and I can thresh clean from the straw, and the grain comes from the machine free from chaff.

I have threshed from one thousand up to twelve hundred bush-



Three Identifying Marks

One Green Edge
and
the Trade Mark
Shown Above
with the Brand

THE GANDY THRESHER BELT

Every genuine GANDY THRESHER BELT has these three identifying marks to protect you against the many inferior imitations.

The Gandy Thresher Belt

is made by the oldest and largest manufacturers of stitched cotton duck belting in the world. The Standard Cotton Duck Belt for 36 years. Costs only two-thirds as much as rubber. Does the work equally as well.

Remember

There is only one GANDY THRESHER BELT, made by the Gandy Belting Company of Baltimore, Md.

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Conform with The New Canadian Boiler Regulations, and are approved for use in Western Canadian Provinces, including British Columbia, Alberta and Saskatchewan

The Line approved includes Globe, Angle, Cross 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 LUNKENHEIMER 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.

WRITE FOR CATALOG

THE LUNKENHEIMER COMPANY

Largest Manufacturers of High-Grade Engineering Specialties in the World,

General Offices and Works, CINCINNATI, OHIO, U.S.A.

NEW YORK: 64-68 FULTON STREET.

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BOSTON: 138 HIGH STREET.

LONDON, S.E.: 35 GREAT DOVER STREET.

els of barley and oats a day, and as my outfit is small, the expenses are not heavy, as four pitchers in the field and six teams are sufficient to keep the machine running steady. I have sometimes put five teams in the field, and where the straw was short, the machine could take all that was put on the feeder.

My father was a thresher in the East, also his father, and it is certainly a treat to have them tell of the difference in the make of the machines of those days and the modern well equipped machine of today.

Wishing your paper every success, I remain,

Yours truly,
Grant Sheppard.
Letellier, Man.

At It Six Years.

I have been threshing six years and find that a person has always got something to learn. I believe that to make money you have to run either end yourself, as a hired man will hardly look after a machine as well as the man who has to pay for it.

Our average run is about fifteen to eighteen hundred in wheat, but oats about 4000 bushels per day. We pay \$2.25 to pitchers and \$3.75 for stook teams and \$4.00 for a tank team, and use five pitchers and eight stook teams, besides a straw team.

We run the outfit ourselves. One of my boys takes charge of the engine and I run the separator, so that saves a lot of extra wages.

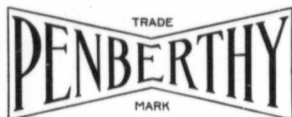
We have a 25 horse power Case engine and a 36-60 Goodson separator. Our engine uses from four to five tanks of water per day from six in the morning till eight at night.

A year or so ago we had a lot of trouble on soft ground, and the best way we could get out of a hole was to get a good oak log about one foot thick and ten feet long. We would chain it to one of the road wheels. Afterwards we got an extension on our wheels, and that made it a lot easier. One thing a person wants to have and that is lots of power. Never run without lots of good oil, and see that it is used, because oil is cheaper than iron.

Yours truly,
J. J. Elliott.
Kelwood, Man.

Gets a Good Fair Price.

Last fall my brother and I bought a 20 horse power International gasoline traction engine and a 27 by 42 Aultman and Taylor separator. We had no experience with a gasoline engine, but the water was so scarce that we thought it would be better than steam.



"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.

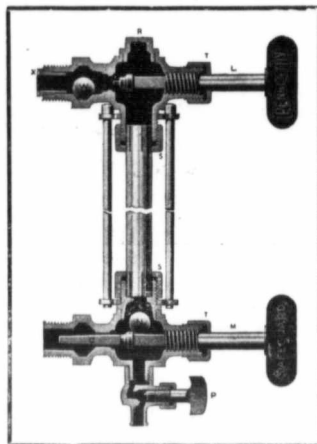
It operates on any pressure from two pounds up, is tested to 300 pounds, is very simple and strong, and is self-cleaning by the action of the blow-off vibrating the balls.

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

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

Safeguard Automatic Water Gage

Mechanically Correct

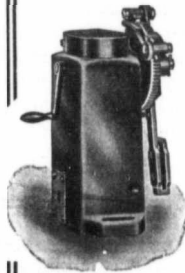


This Automatic Water Gage is made with Special $\frac{1}{2}$ inch drip connection for the conditions of Western Canada and has been accepted by the Government of Alberta under Register No. 441, and in Saskatchewan under Register No. 2170.

PRICES

$\frac{1}{2}$ inch and $\frac{3}{4}$ inch sizes \$3.00 net. $\frac{1}{2}$ inch size \$3.50 net.

A MADISON-KIPP Pays for Itself IN LESS THAN TWO MONTHS



One of our customers recently wrote us that he had saved oil enough with a MADISON-KIPP OIL PUMP to pay for it in 48 days. Oil costs money. What you want is a pump that will use as little as possible and yet keep your cylinders lubricated.

THE MADISON-KIPP IS A POSITIVE FEED PUMP

It always works. It makes no difference whether the temperature is 30 degrees below or 100 degrees above, and it "Saves Your Oil Bill." Over 50,000 in use, and as many thousands of satisfied users.

Write for prices on a pump for gas tractors with all fittings, attachments, etc., necessary to readily and easily attach to the engine in the field.

THE MAYTAG CO., LIMITED

Sole Agents for Canada WINNIPEG, Man.

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

We got along fairly well, using six stook teams and two field pitchers, charging 7 cents per bushel for wheat and 5 cents for oats, stook threshing, and 2 cents less for each in stack.

We ran 27 days, threshing 22,000 bushels in all, which wasn't too bad for a poor crop like we had here.

We didn't experience much trouble. One morning, after a snow storm, the batteries got wet and were exhausted, and, of course, the engine wouldn't start. I always fill the water jacket with warm water before starting in the morning, which saves a lot of hand turning on the fly wheel.

I intend to break considerable with the engine, and I would like to hear from someone, advising me about how many plows my engine would pull.

Yours truly,
Jeremie Aubin.
St. Brieux, Sask.

A Good First Year.

Last fall was my first experience in threshing. I bought a second hand 34 horse power Cross Compound North-West engine and a new 40 inch cylinder Rumely separator.

I had a cook-shack and sleep, and furnished all the help,

and boarded the men. The price of threshing in this country is 5 cents for oats, 9 cents for wheat, and 18 cents for flax.

I started the 9th of September, finished the last day of October, getting in 38 working days, threshing 27,000 bushels of wheat, 15,000 bushels of flax and 48,000 of oats.

The most I threshed in one day was 5,600 bushels of oats, and the most wheat 3,100 bushels, and flax 1,425 bushels.

Some days I made good money and some few days when I was

threshing late frosted flax I didn't quite make expenses. I cleared something over \$50.00 per day.

I am thinking of getting a plowing engine.

Yours respectfully,
H. B. Theobald.
Drinkwater, Sask.

Buckwheat began to be cultivated in England in 1597. It had been brought into Europe from Asia one hundred years before.

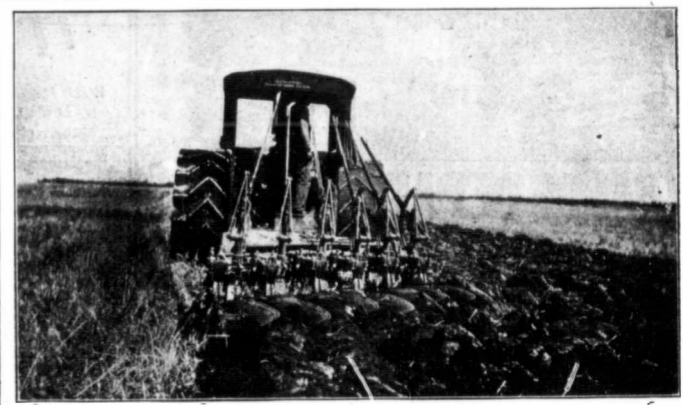


Admiring the "Universal."

History Repeats Itself

Once upon a time, so history records, there was a man who believed that the furrow should be turned and not simply rooted over as was done with the old wooden mold board. He was scoffed at and jeered to derision, and when it was seen that he was sincere in his purpose the government was petitioned that he might be prohibited from putting his plow upon the market, for it was thought that he would ruin the land. He worked under the greatest difficulties but his determination gave to the world the greatest invention of mankind—the modern plow.

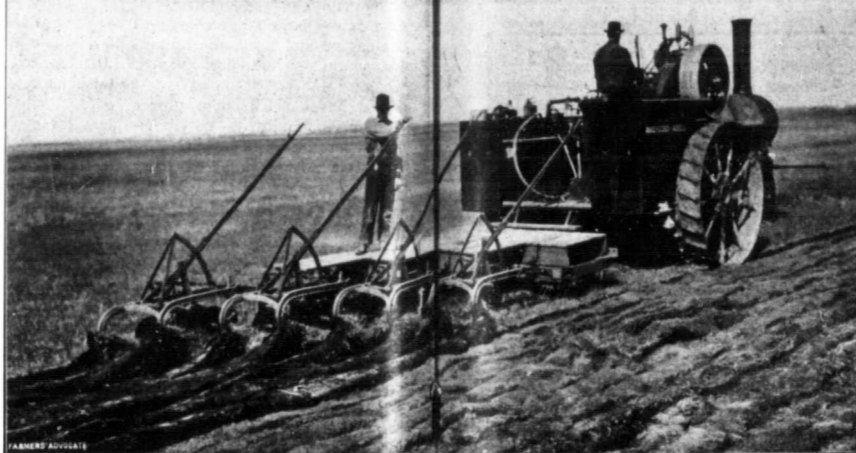
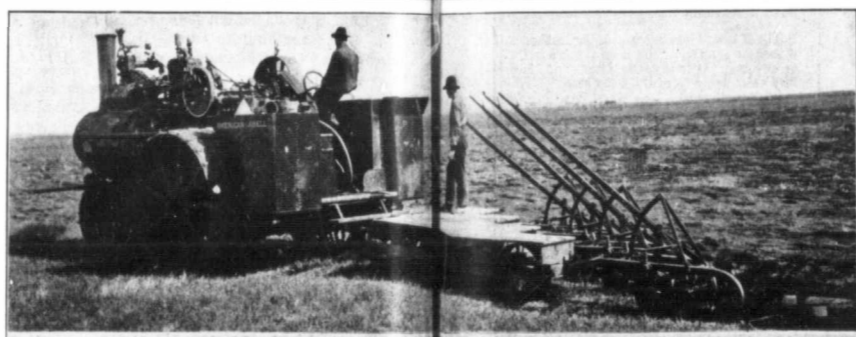
When traction engines were first used upon the land for cultivation purposes they were admitted to be good in theory, but in practice it was thought they would injure the soil to such an extent as to seriously impair its fertility. It took considerable practical demonstration and bumper yields to convince the farming public that there was something for which they had been looking and waiting and that within a very short time the horse and the ox would become a thing of the past. In other words "History repeated itself."



The "Universal" is a "one man" outfit.

\$1.00 Wheat

History, however, was helped out by the fact that the world's bread eating population was increasing faster than its wheat production and the cries of the multitudes for more bread brought an increased demand for that stuff of which bread was made — Wheat. The price of this staple product kept steadily on the increase but the supply could not meet the demand. The natural result was that more land must be turned over, but the ever present question was how. Horse flesh was being taxed to the limit of endurance and production. Then came the giant power of steam to the rescue, "invisible hot as fire, the work of days was but a single hour to this servant that would not tire." Did it work? Just ask the thousands of farmers who have tried it and who have increased their yield ten, twenty, yes, a hundred fold. But the end had not been reached. The gas tractor came into existence with the result that we hear the farmers everywhere discussing "Horseless Farming," and they know what they are talking about, for they have tried it.



American-Abell 28 H.P. Simple Special Steam Plowing Engine at work.

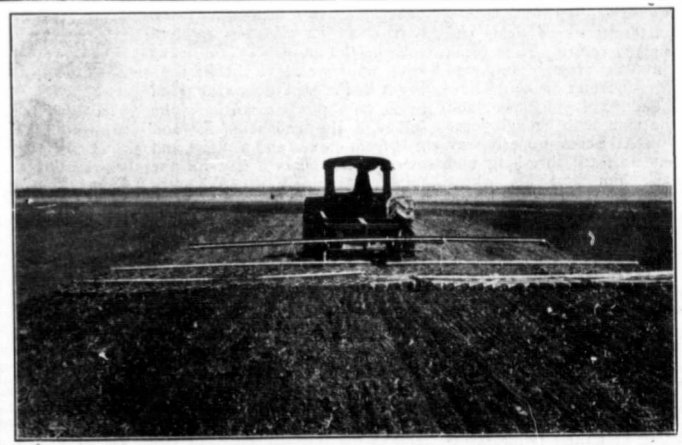
The Power Farmer

Power Farming demands suitable machinery. It can be done and is being done every day but the tools must be right and adapted to the purpose. Upon these pages you will find five illustrations of machines at work. Those in the four corners represent the AMERICAN-ABELL UNIVERSAL FARM MOTOR at work performing the work of soil tillage, and from the business-like way in which the work is being done, we believe that you will agree with us that there is a great deal in it. Scores of these machines are at work in Western Canada at present and the amount of \$1.00 Wheat that they are producing is amazing. Every owner is a "Power Farmer," and he is proud of it.

The center scene is that of an AMERICAN-ABELL REAR MOUNTED 28 h.p. Steam Plowing Engine. It is built for big work and it is doing it throughout the West. It is built for plowing, and the way that it turns over the sod-locked prairie should make the hungry multitudes cry for joy.



They all like the "Universal." Try One.



Double Harrowing 100 acres per day on the Kenilmeaky Farm.

THE AMERICAN-ABELL LINE

of POWER FARMING MACHINERY consists of AMERICAN-ABELL REAR-MOUNTED PLOWING and THRESHING ENGINES, AMERICAN-ABELL-UNIVERSAL FARM MOTORS, and AMERICAN-ABELL SEPARATORS.

Visit our Branch Houses at Toronto, Winnipeg, Brandon, Regina, Saskatoon and Calgary. Write today for Illustrated Catalogs.

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M. RUMELY COMPANY

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BREAKING AND BACK-SETTING.

By A. F. D.

Being a reader of The Canadian Thresherman and Farmer, and one who takes a great interest in the letters from my farmer friends, I find one can learn a lot of things which help smooth out the way through many a difficulty. As regards to summer fallowing, there are a good many different ways of doing this to the best advantage. Some plow once about six inches deep, others plow once and four inches deep, others believe in twice plowing, first time eight, second time deeper. I have worked in all kinds of land, and what would suit the light sandy soil would not do for our heavier dry land. A farmer has to use his judgment in this matter, and be guided accordingly. We have a section and a quarter here of heavy clay land, of which 750 acres are broken and cropped. When we bought this land we planned it out to break 250 acres each year, which we have done, breaking the last 250 two years ago, and if only some of my former friends would plan out their work more systematically during the winter months, taking into consideration the amount of horseflesh and feed for same and not go on breaking away when the feed is gone and it is past the proper breaking season, and then not be able to work the land up as it should be and in many cases as we so often see, not even touched till the following spring, we should have far cleaner farms and better crops. It is not the large acreage that is badly done, but the smaller one well done, which yields and gives us the return. How often when in town after seeding you hear Mr. Farmer asking how much land have you sown, and hear the man with enough force to put in 200 acres properly, say 300, but wait till threshing and then ask him how his wheat turned out, and, with a long face, he will either tell you that he must have either had in less than he thought or it was a bad season. If every farmer would only farm as much as his outfit can do well, he would find that his farm would be cleaner and more productive to the acre. What is the good of your horses dragging a seeder over a lot of land half prepared and expecting a good crop, and when it comes to cutting using half their twine tying up bundles of weeds and expecting to get grain out of them.

There are a great deal too many farmers nowadays taking what they call chances, and if it is a good year they come out all right, but what of a poor one? That's where the good farming comes in. I will tell you how we run our farm, which may benefit some of your readers.

In the first place, we believe in breaking and back-setting, as we have found that it is easier on your horses and you are able to get your land right from the start in the best condition. We break with two 12-inch gangs with six horses on each, and drive tandem. We found that the plows run better with no side draft, and easier on our horses than six abreast, and we could plow a furrow which you could see straight up from one end to the other. And how often do we see the crooked furrow in our travels, and if you speak about it you get, "Oh, it all comes out in the harrowing." We break as light as possible without missing, and to do so we put on a new share every day, always remembering a sharp share means a horse lighter. As soon as breaking was done, last June, we went all over the land with a packer and packed it down well and then turned in and backset to about four and a half inches deep, which we finished before harvest, and after harvest we disked it twice and harrowed it down well, and I can tell you it was in perfect shape for a crop. We have now divided our farm up into thirds, doing 250 acres of summer fallow each year, which allows us to crop 500 acres. We plow once about five inches deep and harrow as we plow, as we find this is the only way in heavy land, as if we leave the harrowing till the afternoon the land bakes on top. We can plow the full mile, the land being flat and free from stones and sloughs, and average ten acres a day for the two gangs, doing the 250 acres in four and a half weeks, allowing for stoppages for wet days. After plowing, the cultivators and harrows are kept going till harvest, which makes a nice clean fallow. We sow this to wheat and burn off our 250 acres of fallow from last year and pull right on and seed to oats, finishing up with two strokes of the harrow crossways, which means a nice job. We always get our oats in early this way, and the land being summer fallowed the year before, is in good shape for oats. By working this way it

IT IS NOT A TOY

THE MAGNET CREAM SEPARATOR
With its **DOUBLE SUPPORTED BOWL** and **SQUARE GEAR DRIVE** is right ON THE JOB and STAYS THERE.

In Creameries and Factories square geared machines are used. When you see a worm pinch gear cream separator you know it is not the kind the factory people buy.

A TOY Separator with its worm pinch gear drive is only an aggravation when you try to skim quantities of milk in the Dairy. What is required is a machine made strong and rigid, with square gear drive to do twice a day skimming with little work and no stopping for repairs. The Square Gear "Magnet" is built that way and has proven its strength by over 13 years' use.



Waste Money on a pinch gear machine if you like, but eventually you will buy a square gear "MAGNET." But why not buy the MAGNET now? It will save you this waste, because it is good for your time and your children after you.

The "Magnet" bowl is supported at both ends, (Magnet Patent) prevents wobbling and gives perfect skimming.

You get strength, durability and perfect construction in the square gear "MAGNET"

Ask your mechanic friend, he will tell you the "MAGNET" is standardized and is built mechanically true.

The Magnet's whole construction makes it solid as a rock. Stand it on the ground or any floor; it will skim clean and is fifty years away from the scrap heap.

MAGNET requires less than five minutes to clean all its parts.

Do not take our word, but make us prove all we say to your satisfaction in your own dairy. You to be the Judge. A postal card to us will insure a free demonstration.

The Petrie Mfg. Co., Ltd.

Head Office and Factory: HAMILTON, ONT.

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50 Red Jacket PUMPS

REPLACE 50 ORDINARY PUMPS

A large Canadian corporation found Red Jacket "So-Easy-To-Fix" Pumps so much better than ordinary pumps—careful tests and long experience proved to them that Red Jackets are so much better than pumps of ordinary construction—that 50 of the latter were taken out and 50 Red Jackets replace them. This Canadian company is large enough and prominent enough to make it certain that a pump good enough for them is surely good enough for you. Pictures of pumps may look much alike. The claims of manufacturers may be very much similar. But the real test of a pump, is its actual operation, day after day, month after month, year in and year out. These actual, strenuous working conditions convincingly show the superiority of

Red Jacket

SO-EASY-TO-FIX PUMPS

It is easy to install a Red Jacket. All the labor and trouble required with most pump installations are eliminated. It is easy to operate a Red Jacket. That's a big feature all Red Jacket pump users appreciate. Red Jacket Construction actually reduces the work of pumping about one-half—a good thing for the engine, the windmill or for you.

And if anything should go wrong, the Red Jacket Pump is "so-easy-to-fix." No long lengths of heavy pipe to pull up. No derricks, pulleys and tackles. No waiting for a pump expert with a wagon-load of tools. A monkey-wrench, your two hands and about 15 minutes time is all you need.

Conscientious dealers who know pumps recommend Red Jackets and sell them. Dealers everywhere should ask us or our nearest jobber for literature, prices and discounts.

CANADIAN DISTRIBUTORS:

Ross Bros. Ltd., Edmonton CANADIAN FAIRBANKS Co., Winnipeg
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Let us tell you WHY Red Jackets do what we claim for them. We'd like to help you solve your water supply problems, too. Our expert engineering service is free.

Red Jacket Manufacturing Co.

DAVENPORT, IOWA



SO EASY TO FIX

does away with both fall and spring plowing, and your land is always ready in the spring. We house all our machinery: if a drill, plow or a binder is finished with it is cleaned and put away in its proper place, and when we want it again we know where to get it, and not like a lot of farms you see; one implement here and another there, which means a lot of lost time when you have to go to the other end of the farm to get it. We find that housing our machinery and putting it away saves us both money and annoyance. We thoroughly overhaul all our machinery in the early spring so that it does not matter what implement is wanted it is ready to hitch onto. On wet days we clean and repair all our harness, and what looks nicer than a good team with clean harness on. We feed 1½ gallons of oats at a meal with an oat sheaf each horse three times a day, and when we come in to supper we throw in a sheaf between a team to nibble at until we fix up at eight p.m. And here is a thing worth doing always, feed regular hours, as your horse is looking for his meals the same as you are. We feed at five a.m. and start work on the land at quarter to seven. Dinner at 12; pull out again at 1.30, and in to supper at 7. We keep going all the time, and find that we can put in a good day's work without hurting man or beast. We find a good way with the men is in the spring to give them their own horses, which they keep right through the season, and they vie with one another in having the smartest turn out.

Hoping this letter will help some one, and wishing you every success with your paper,

Faithfully yours,
A. F. D.

Seeding Without Plowing.

With reference to query No. 13, "Seeding without plowing," or "Stubble sowing," I have had the best of success with this method year after year, in fact, I have repeatedly figured out a balance of profit from the stubble crop versus the summer fallow. It must be borne in mind that the stubble that is to be sown must have been a fallow previously with just one crop taken off. Also that it is clean and free from weeds or weed seeds in a comparative sense, and that the fallowing of the land in the first place must have been thorough, or it is no use seeding it in this manner. I have disked these stubbles in the fall and have disked in the spring before the drill and also after the drill. These stubbles have been practically clean, and from either method I have good results without any appreciable differences from the mode of disking. Usually it is left till spring and the stubble burnt, and then disked before the drill. This is my favorite method. It makes a clean field without any trash and

stubbles to bother either drill or drags. But although it is much nicer and easier to work, I have a doubtful feeling that it may not be the wisest course to always burn off the stubble, which means the loss of so much fibre and eventually depletion. However, I aim to more than counteract this by applying all available manure to my fields.

To compare a stubble crop of wheat with that of a fallow crop, I will take the last two seasons, 1910 and 1911. The former very dry and the latter being much wetter. 1910 stubble, after a crop on fallow of oats, going 90 bushels per acre, yielded 32 bushels per acre No. 1 Northern, 1910 fallow yielded 37 bushels per acre No. 1 Northern, but not so good a quality. Twine for stubble two pounds per acre; twine for fallow 4½ lbs. per acre. Loads of sheaves off stubble 1¼ per acre; loads off fallow 2 2-3 per acre. Difference of yield will be seen to be five bushels at seventy-eight cents—\$3.90 favor of fallow. But the expenses of cutting and twine, hauling and threshing, was just over double. In 1911 fallow gave 33 bushels, mostly No. 4 North— a little No. 3. Stubble gave 29 bushels per acre, and twine and extra work was just about similar to 1910.

The 1910 crop was six days earlier on stubble, and the 1911 crop nine days in favor of stubble. To sum matters up: For the same amount of work and expense the stubble throws just about 200 bushels to 105 on the fallow. Oats have given me 60 bushels on stubble against 80 fallow and upwards, and, of course, a great deal more straw to handle. At the same time the fallow straw is much greener and better fodder than stubble oat straw, and pays for the extra labor in good feed, and I prefer a fallow or spring plowed crop of oats for these reasons. With barley I prefer to sow on fallow or spring plowed land in preference to stubble, as it requires a deeper and looser seed bed, which is not always so good on the fallow stubble. Yet I have had very good crops of barley from the fallow stubble, 40 bushels of barley this last season, but fallow gave me 52 bushels and 60 bushels.

I conclude from your query that you want, Mr. Editor, to ask a man the straight question: What will you do if you have a stubble to sow and what would you prefer to sow on this stubble, and, of course, you mean it to be understood that the stubble in question is clean and good. Well I will take wheat for first choice for my clean stubble, and leave the plow strictly alone, for it will whip plowing nine times out of ten, for our springs are usually dry, and your wheat will gain from a week to ten days in maturing on the stubble land.

Plow the breaking stubble if it was not done last fall. Start the weeds and plow the distant fields of your fallow stubble, for the

DE LAVAL Cream and Butter Triumph as Usual at National Dairy Show

Cream and butter produced through the use of DE LAVAL CREAM SEPARATORS made the usual clean sweep of all Highest Awards at the great 1911 National Dairy Show (including the annual convention of the National Buttermakers' Association) held in Chicago October 26th—November 4th, just as has always been the case since the organization of the National Association in 1892.

WHOLE MILK CREAMERY BUTTER

The sweepstakes or highest award in this class was won by A. J. Anderson, Otisco, Minn., with a score of 97.50, who says: "I have been using De Laval separators for ten years and would not think of using any other."

FARM SEPARATOR BUTTER

The sweepstakes in the gathered cream factory-made butter class was won by R. O. Brye, of the Readstown Creamery Co., Readstown, Wis., with a score of 97.33, this prize winning butter being made from the cream of farm patrons using De Laval separators exclusively.

Mr. Brye says: "I was raised on a dairy farm, where my father used a De Laval separator, and my own separator experience covers a period of twenty years. I have found the De Laval machines everything that is claimed for them."

HIGHEST PRIZE CREAM EXHIBIT

The highest award for cream was made to Nichols Bros., Bloomfield, Ky., with a score of 98.80, who say: "If we didn't use the best separator we could not have made this record. Our experience has proved the De Laval the only separator that 'delivered the goods!'"

DE LAVAL PRODUCTS ALWAYS SUPERIOR

Would-be competitors are naturally forced to make many claims for their separators. But the superiority of De Laval cream and butter, as evidenced by the winning of all highest prize awards the world over for twenty years, is something so overwhelming as to be indisputable and unanswerable even by the most reckless would-be competitor.


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Dr. Clark's Hoof Ointment.	Dr. Clark's Purging Horse Ball.
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WHO GIVES THE BEST SERVICE ?

TRY

HANSEN GRAIN COMPANY

Grain Exchange, Winnipeg

THEN JUDGE

Write for Our Weekly Market Letters

coarse grains. But give me the clean stubble ground for wheat as a second crop; I'll bank a crop off it, even if it is extra dry. Keep a mulch on it with the harrows till the grain is a good six inches high, especially if there has been any breaking. Break up this crust—keep it broken until the grain is high enough and thick enough to cover the ground as a shade, and you will have good results.

Rex.

Believes in a Large Machine.

We had ranched it for some sixteen years in this part of the country. Then it became settled up, and hay got very scarce and ranching did not seem to be a very good paying business, but there was any amount of hard work in it, and it was also very lonesome.

So in the summer of 1908 we decided to try threshing, but were astride the fence as to whether we should buy a gasoline or steam engine. Finally we decided in favour of the latter. Then we gave the Sawyer and Massey Company an order for an outfit, which consisted of a 28 x 50 Great West separator, complete with Ruth feeder, wind stacker, high bagger, and a 20 h.p. traction engine. We thought that a small separator of this size would be plenty large enough for this part of the country, as the jobs are small, running all the way from 400 to 2,000 bushels per quarter section.

A few days before shipment was due the company notified us that they could not furnish the separator with a Ruth feeder, but would ship a Woods feeder with it, stating if it did not prove satisfactory they would put on a Ruth feeder when they could secure one. So the outfit arrived in due course.

We hired a first rate engineer, and got everything in readiness. My father was to be separator man and myself to be fireman with the intention of becoming an engineer (which I did). We ran for a day before starting out to thresh, which I believe is a very good thing to do, for it gets the boxings well oiled and belts stretched.

Then we started out to thresh, but were a little early, and sort of run around picking up jobs. We were paying \$1.75 per day for pitchers. There were lots of men looking for work.

We had threshed one week when returning to the job on Monday morning, the farmer told us we had put 400 bushels of wheat in one straw pile. This farmer had about 70 acres to thresh. Of course he wanted damages for it, but we could not arrive at any settlement, so decided to thresh the straw pile over again, which we did, and got two bushels of poor wheat and straw joints, so that was settled. Things went on very good after that. But it is impossible to satisfy everyone, as I have since learned.

We had run about three weeks when the engine began to pound,

and it seemed to be impossible to locate the trouble. Finally, we found that the piston in the low pressure cylinder had come loose on the piston rod, as this piston is not cast on the rod. The company replaced it with a new one free of charge. We finished up the fall without any breakdowns, threshing about 45,000 bushels all told.

When we started out in the fall of 1909 the company had the Ruth feeder on the separator, which gave first class satisfaction. We hired the engineer whom we had the fall before, threshing all our grain first, which I think is a good plan for a man to do. Then we started out to thresh, and things went on nicely until one day one of the boxings on the main shaft on the engine began to heat. The engineer was on top of the boiler when one of the set screws in the eccentric caught hold of his overalls, and stripped them off. This threw him on his back on the throttle stem, bending it. I was firing and saw him fall on his back, so jumped to the reverse lever, and brought the engine to a dead stop. He was not very seriously injured, which was a wonder.

After this one stack caught fire, just as the waterman was getting near the engine. There were eight stacks all in a row, but as luck would have it we were threshing the four on the windward side of the set. The two stacks that we were at were just about finished, so we dropped the belt and got the water tank in between the burning stack and the one next to it. Then I drew the separator out with the cable from behind. At the same time the men were busy getting all the loose bundles cleared away, also getting the other stacks soaked with water. So we were able to confine the fire to the one stack, which I think was very fortunate.

We finished up that fall without any more mishaps, threshing about 48,000 bushels all told, but we made up our minds we would never thresh wheat for 4 cents per bushel again.

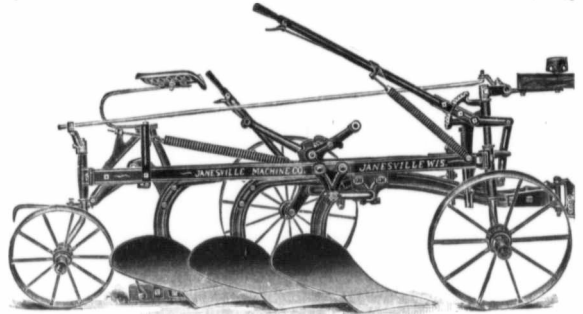
In the winter of 1910 I got my papers as engineer. So last fall I ran the engine myself which was much easier than firing. This time we charged 5 cents per bushel for wheat, which made it pay a little better.

We had run one week, when going back to the machine on Sunday afternoon to make ready for Monday we learned that someone had been around and broken things up. They had broken the chaffer and so much of the straw rack, and had taken nearly all the grease cups off the separator. On the engine they had broken the steam gauge water glass, and stole the crank pin grease cup. We got the broken parts off, and I went to town with them, and got the blacksmith to put inch hoop iron in the chaffer, which did very well. Then I got the steam gauge and grease cups at the hardware store, and we were all ready to start up

The One Plow

FOR THE

TOUGH WORK OF Western Canada



If you would save yourself all the worry, expense of breakages and loss of time from plowing the heavy soils of the great North-West with an ordinary plow, you must replace it at once with a Janesville Northwestern Gang. An ordinary implement will never stand the strain of these rich heavy gumbo lands. We have studied for many years the character and conditions of soil culture peculiar to Western Canada, and in speaking as we do of the Janesville, we are simply stating the fact that we have positively succeeded in making a plow that is perfectly adapted to those conditions. The

JANESVILLE NORTHWESTERN GANG

while it represents the very top notch in plow values, is without a rival for the strenuous work it is required to perform without a hitch all through the season. It is provided with extra heavy beams, extending beyond the frame in front, with a long cross clevis attachment. This clevis gives you choice of 4 horses abreast, or 4, 5 or 6 horse tandem hitch.

The Janesville foot-trip horse-lift is a big feature found in no other plow. Simply trip the "lift" with your foot while riding or throw the land wheel lever while walking, and the horses will pull the plow bottom into the ground at the start and out of the furrow at the end. The point of the plow bottom always goes in and comes out first just like the walking plow because the movement is just like your arms. In entering the ground the heel of the plow bottom is held up so the point must go down first. In leaving the ground, the heel of the bottom is held down, so the point must come out of the ground first. This Janesville feature eliminates the objections to the foot-lift as compared with the hand-lift. Our self-leveling device is unequalled on any other plow made. You have absolute control of the Janesville Plow bottoms at all points.

We cannot set forth in this brief space the many other features which mark off the Janesville Northwestern Gang from any plowing outfit made. Write for free literature, giving full details of this and the complete Janesville line of plows, disc harrows and cultivators before you buy any implements of the kind.

MANUFACTURED BY

The Janesville Machine Co.

The American Seeding Machine Co.

KING and JAMES STREETS, WINNIPEG
CANADIAN SALES AGENTS

next morning, but have never found out who did the damage.

This fall the crops turned out very good, wheat about 25 to 35 bushels, oats 42 to 65 per acre, and we threshed until the 29th of December. When cold weather came on the flues began to leak, and I had to expand them nearly every night, sometimes at noon also, which is a very hot job. Then they got past fixing, so we had to put new ones in. This we did ourselves. It was a very hard job to get the old ones out, as I did not have a flue cutter to cut them out, so had to do it with a cold chisel. I had no trouble, however, putting the new ones in, which proved to be a good job.

This was the first time I had ever tried to put in new flues, so was a little dubious about trying it, but to be a thresher one must be able to do everything.

When we were ready to start again snow was about 12 inches deep. The separator had to be drawn by ox-teams, which generally took about five teams. The engine also had to have the mud cleats on to get through the snow. By the time we quit the water sloughs were very bad. You could clean the boiler out at night, and before the next night it would be impossible to keep the water gauge open on account of alkali clogging it.

This fall we threshed 60,000 bushels all told. In this part of the country there is a great amount of wheat grown, so that holds the number of bushels from running up.

Threshing I think is a far better occupation than cattle ranching. If you take care of your machine it will last for a great many years. Once it is paid for it will clear you eight hundred or a thousand dollars every fall, and it would take a good many cattle to equal this.

But I believe that threshing is a poor business for a man who does not know the first thing about it. It is almost sure that such a man will ruin his rig unless he can get some first class man to take charge of it. And such a man cannot always be had.

To make a success of threshing you must not trust someone else to keep your machine in running order. You should be able to take charge of both ends yourself if necessary. But one end is plenty for one man to run. Also he must always have the best men that he can get, which is a big help to keep things in order.

I think when a man goes into the threshing business he should get about the largest machine made. Then, if he understands it he will have a chance to make things pay; that if he does not thresh for the fun of it so as to try and run his brother threshermen out of business. Such a man is almost sure to fail. I believe we should keep the price up.

Yours truly,
Robert Lawrie, Jr.,
Lawrie, Sask.

BIG NEWS Here For All Farmers and Dairymen



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GET the Biggest News in the Cow World for 25 years by sending us your name. Get this Book whether you buy or not. We leave the facts to you—with 100 points and dozens of big photographic illustrations—proofs by United States Government Tests—State Experimental Tests—Testimony of hundreds of satisfied users of the AUTOMATIC that it is the most wonderfully working and DEPENDABLE Separator and Engine of the Age.

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That's what farmers and dairymen have been waiting for—now done in one machine, the AUTOMATIC—which reaches in 15 seconds the full steady speed. Runs for hours without watching or attention. Skims closest, regardless of temperature of milk as proven by tests told about in our book. One size for any size dairy. Capacity enough to skim faster than 10 men can milk, and the most dependable, economical and money-making separator whether you have 3 cows or 300. To get all the facts, besides what we tell you here—or find out how to trade in your old machine—

Just Write for the Book You'll be astonished at our low price—delivered on your place and demonstrated by test that the AUTOMATIC is the most dependable machine to do your skimming twice a day, 365 days in the year without fail or disappointments. Read two or three testimonials here from owners of AUTOMATICS—to see how they feel about their machines:

On a Big Ranch San Francisco, Cal., July 5, 1911. Gentlemen—We beg to advise that the AUTOMATIC Cream Separator, sold by you, is without doubt the coming separator, in that it can be used to advantage in any size dairy. Our experience is that it will separate milk from 20 cows as readily as from 10 cows—leaving scarcely a trace of butter fat in the skimmed milk. We recommend it most highly to anyone in the business of separating butter fat from milk on account of the simplicity, adaptability and economy. Yours very truly, TIBBALS RANCH COMPANY. (One of the largest ranching corporations in the Sacramento Valley.)

In a Creamery Gentlemen—I made a test of the AUTOMATIC Cream Separator today at one creamery which no doubt will interest you. I run through about 1,000 pounds of mixed milk at a temperature of 55 degrees, and the cream tested 47.5, while the skim milk test on the entire run was only .035. We consider this a remarkable test, considering the low temperature of the milk. Yours truly, (Signed) BURWOOD CREAMERY CO., by Albert W. King, Mgr.

On a Small Farm Gentlemen—I have given your AUTOMATIC Cream Separator a thorough trial and find it is all it is claimed to be. It is a very close-skimmer, easily cleaned. The engine is so light running that a child can start it. Costs less than a day to separate the milk from 5 F. G. GAINES, Jr. Creston, Ind., Aug. 5, 1911.

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Read the fifteen points about The Automatic mentioned here at the left but don't stop with the little we can tell you here. Get the book and all the facts whether you buy or not. The Automatic will pay you big if you will let it, after you write us and send your name for BOOK FREE.

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We have added an Automatic Electric Lighting Plant to be used in connection with our Automatic Engine. The total expense for operating this 20-light, 16-volt plant is guaranteed less than 3 cents for each hour engine is run. It can also be used for operating electric fans, washing machines, sewing machines, etc. We used a novel Automatic switch which avoids all danger in operating and insures uniform, reliable service. Get Price. Book tells all.



The NEW Way—By AUTOMATIC

Here are 15 Points on the AUTOMATIC That Nobody Can Get Around

- 1—The only Crankless and Gearless Standardized Perfect Separator in workmanship and materials.
- 2—The only Self-Contained Combination Cream Separator and Gasoline Engine.
- 3—Perfect skimmer and separates faster than 10 men can milk.
- 4—When the milking is done, the skimming is done.
- 5—Runs smoothly without watching— for six hours.
- 6—Engine power enough to do any work that man or woman power can do on farm or dairy.
- 7—One size Automatic for any size dairy.
- 8—Speed of bowl brought up in 15 seconds and will run for 6 hours without any variation.
- 9—Stands solid as a rock without vibration and absolutely odorless, with exhaust tube attached to muffler.
- 10—Only one oil cup to fill.
- 11—Absolutely the most sanitary and easiest cleaned—besides being what is known as "tool-proof"—and easiest to learn to run.
- 12—No experience necessary as it is the simplest machine ever made both in engine and separator.
- 13—No cranking to start engine, as you just give rope a pull on fly wheel-like spinning at top, power can do on farm or dairy.
- 14—Strongest guarantee of perfect work and price so low that it practically sells itself.
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Canadian Orders Shipped from Winnipeg, address all correspondence to home office Milwaukee.

Uses a Portable.
Two years ago I bought a 25 horse power Canadian Fairbanks portable engine and a Great West separator, the first year of which I was green in running a gasoline engine.

My father and I started to thresh with three men. We stook threshed our own grain with four teams and no pitchers, and averaged from 2000 to 2500 bus. per day. And when stack threshing we averaged 3000 bus. per day.

All winter I crushed grain for my neighbors for miles around. This year we threshed with five teams, and did not get through nearly as much grain per day as last year. The water was hard to get this year, and that was our greatest and only trouble.

Our separator is a 29-50, and runs like a top. I have no photo of my outfit.

Yours truly,
C. C. Brereton,
Strathclair, Man.

Watches were made at the beginning of the 16th century.

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Will reduce Inflammation, swollen joints, Bruises, Soft Bunches, Cure Boils, Piles, Evil, Quicker, Easier or any Unhealthy sore quickly! Absorbine to use does not blister under bandage or remove the hair, and you can work the horse, 25 per bottle. ABSORBINE, J.R. Liniment for making, Reduces Painful Swollen Joints, Gout, Wren, Strains, Bruises, stops Pain and Inflammation. For Full particulars, send 10¢ for our free literature. Will tell you more if you write. Manufactured only by W. E. Young, P.O. 112, Lyman's Bldg., Montreal, Can. Also furnished by Martin Box & Wynne Co., Winnipeg; The National Drug and Chemical Co., Winnipeg & Calgary; and Henderson Bros. Co., Ltd., Vancouver.

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The Darlington's, of Darling, Pa., got rich making famous "dollar per pound" butter and selling it to the most fastidious people, the people with a taste for the best butter and with the money to buy the best.



No Disks. Double Skimming Force. The Darlington's Use Only Sharple's Tubulars.

If it's not a SHARPLES, it's not a Tubular—and you are not getting all the profits. Tubulars pay you "value" in the form of profits no other separator can get—profits you cannot afford to lose. That's why 100,000 dairymen, in Iowa alone, use Tubulars.

Rich people, willing to waste money, may not use Tubulars, but those making fortunes at dairying do.

Write us now for Catalog 430 Learn how Dairy Tubulars make more money for you because they contain no disks and have double skimming force.

THE SHARPLES SEPARATOR CO.
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Many Agencies of Service now Available for the Farmer.

On his arrival in the old country Earl Grey, late Governor-General of Canada, spoke in a most praiseworthy manner of Canada, and of the Canadian farmer in particular. He did not hesitate to say that the farmer of the United Kingdom could adopt with immense advantage much of the Canadian system of educating the farmer.

He stated further that by the application of the best methods of scientific farming in Ontario they could double their crops without adding an acre to their farm.

There is no doubt great changes are taking place in the methods of agriculture, and it is safe to say that within the next five or ten years still greater changes will take place, more so perhaps than during the previous years.

The successful farmer of to-day must not only understand the requirements for growth, the habits of field crops, and the proper ration for live stock for best returns, but he must also know the demands of the market as to form, size, color, flavor, and the degree of ripeness of his product.

Then as mixed farming is becoming a necessity even in these new prairie provinces, and as mixed farming requires an intimate knowledge of many rather intricate lines of production, in addition to an understanding of the crop and soil the farmer of to-day is reaching out to get a better education and drawing on the sources of information as he never did before.

Too much has been said about "soil robbing." This is a tiresome phrase, anyhow. In the exploitive and pioneer period of agricultural development to "skin off the cream" as it was called, was practically inevitable. It was necessary in order to live. This, however does not justify the continuance of pioneer methods, and many farmers are coming to realize that, and are struggling with problems in scientific farming with varying degrees of success.

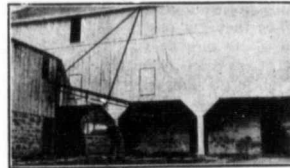
The old days of simply sowing the seed and reaping the harvest are past. The scientific farmer of to-day knows why certain kinds of cultivation effects the availability of the plant food, and how plants obtain their food from the soil. He understands rotations, and knows the how and the why of the agriculture, natural and chemical processes that occur on his farm, he knows how food nourishes his stock, and why one food gives more nourishment than another. This knowledge, coupled with common sense and a willingness to work will spell success for him in large letters, and make that success sure, substantial, and permanent.

But if a farmer is not able as a result of his own experience in conducting his farm, or if experience is too costly owing to the errors that will take place, and which cannot be rectified within at least twelve months, how then, it will be asked, is the farmer going

GET RID OF YOUR BARN DRUDGERY

A BT Litter Carrier will lift the entire burden of your barn work from the expense account. With a BT in your barn, what was once the most distasteful bit of slavery in the day's work becomes a mere pastime, and the effect is a big and immediate reduction in the cost of the hired help.

Carries the manure from the gutters to the shed or pile in a fraction of the time it takes under the old style. No matter how many cows you may keep, or what it costs you with the pitchfork and wheelbarrow system to clean the barn, the BT will save you half the expense.



First step in financial success is to cut all unnecessary trimmings from your expenses. In the business of farming the BT Litter Carrier with the whole BT equipment is planned to increase the profits by reducing the stable expenses.

THE BT LITTER CARRIER

is so simple in its construction that there is nothing on it to get out of order. WE GUARANTEE our Carrier absolutely FOR FIVE YEARS. With no other carrier is such a guarantee given. In fact, most of the firms change their carrier every year, and they will have to keep on changing, for they simply cannot get around the patented points on the BT Carrier.

More BT Litter Carriers were sold in Canada last year than all other makes combined. Here are some of the reasons why.

The BT Carrier has double purchase in lifting. It elevates easily.

There are no worm gears to wear out. The Carrier is windlassed by a crank wheel. There is no noise or rattle as with a chain lift.

The bucket is made of 18-gauge galvanized steel—four gauges heavier than others. The track is two inches in depth—the next deepest is only 1 1/2 inches. It will carry a much heavier load than any other, and is much easier to erect.

It costs no more than others.

There are many other reasons which you should know. Get our catalogue and learn them—it is free.

It will pay you to write us now. Fill out the coupon and mail it to-day. You will be surprised how cheaply you can put in a BT Litter Carrier.

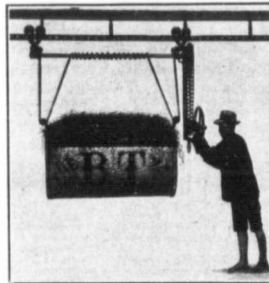
Minneapolis Steel and Machinery Company opening up at Regina.

At any point of time since the country was opened up has the expansion of Western Canada "beggared description," but among all the industrial marvels it has created, probably nothing has rushed into the gap at such a pace and in such a volume as the different lines of farm power machinery.

Every day recalls some forward movement of one manufacturing concern or another. We are advised that the manufacturers of the Twin City "Forty" Tractor are opening a branch house at Regina under the name of the Minneapolis Steel and Machinery Company of Canada, Limited.

The Twin City "Forty" is to be seen at work on quite a large number of farms in the West, and, while for some time the company has been represented by many local agencies, it has been found imperative to centralize its Canadian business at Regina, where, as well as at other points to be decided upon, a full line of repair parts will be carried.

The new Canadian incorporation will be in charge of Mr. W. J. Barnard, as Canadian manager at Regina. Mr. Barnard is well known in the implement business of the North-West, having been connected for 20 years with the Minneapolis office the "Advance Thresher Company."



BEATTY BROS.,
 FERGUS 31 ONTARIO

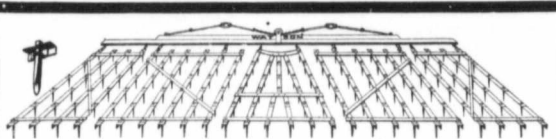
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Our New Steel Boss Harrow does the kind of harrowing that pays.

Tooth bars all angle steel, cross braces of channel steel, each tooth separately fixed in place by steel wedge. Teeth are dagger shape, with edges straight in line of draft. Equipped with pulley hitch eveners. Light draft, easy on horses. Width 24 feet. If your dealer cannot supply WATSON'S, write us direct.



Patronize those who patronize this Magazine

to possess himself of the needed knowledge of scientific methods.

It is true the agricultural colleges render the service, but it is also a well known fact that less than 2 per cent. of the farmers are able to avail themselves of the help of the agricultural colleges, and of this number a great many of them do not return to the farm, but become professors, newspaper men, farm machine agents, or demonstrators at fairs. But even if all the farmers could come the colleges as they exist to-day could not accommodate them. That, however, is an impossibility.

It is not so much a matter of money as a matter of convenience that keeps many farmers and farmers' sons from attending. The absence of the boy often involves the engaging of hired help, while there are still some parents who hesitate to subject their sons to the allurements of a great city. Then again there are young farmers just starting work on their homesteads or new farms who cannot get away, and in Western Canada we have another class composed of men who have come from less profitable occupations of one kind or another to take up farming with the hope of carving out of the golden opportunities of the West a competency for themselves and their families.

Is it fair that these men should be deprived of the help they so much need because circumstances do not permit them to fit in with the prescribed curriculum of the colleges of agriculture? The solution of the whole matter points to the need of a great correspondence school, for this method of teaching is doing more than any other method in existence to-day in spreading knowledge. Thousands of young men are to-day enjoying benefits they never dreamed of years ago, as a result of taking a good correspondence course. The great outstanding advantage of a correspondence school is that it enables a student to study at home and earn while studying. He is at liberty to study when and where opportunity affords. The big residential colleges in Canada and the States in an attempt to increase their usefulness are falling back on the correspondence plan. Oral teaching is being dropped, and the written method is recognized by the leading educationalists as the only method. The farmer is in a better position to benefit by and through a correspondence course than anyone else. He is the least likely of anyone to be able to get away from his work, but he does have time to study and learn, and the correspondence course when it comes to the farmer comes to one who is able to make the best possible use of it.

The outcome of this tendency towards better methods of farming has resulted in the establishment of the Correspondence School of Scientific Farming of Western Canada, Ltd., which reaches thousands where a residential school

A Western School with
Western Instructors
or Western
Farmers



Means Larger Yields, Greater Profits

You can increase your yield, two, five—and in some cases—ten bushels per acre by following our methods. Others have. So can you.

Whether you are in the steam-plow class or simply using a yoke of oxen we can show you how you can make more money. Our methods have the endorsement of the leading agricultural authorities and the approval of hundreds of farmers who have already experienced their value.

Our service is based upon the boiled-down results of thousands of experiments in Western methods of cultivation, of crop rotation, of handling and caring for live stock and every other phase of money-making on the farm. There are no generalities, only the real meat.

The men who have prepared the instruction are the biggest, squarest and most reliable agriculturists in Western Canada, the "pick of the North American Continent," one farmer said. How would you like to spend the balance of the winter evenings with these men and discuss with them right in your home the problems confronting you?

Professor S. A. Bedford, Manitoba Agricultural College.
Professor Thos. Shaw, Minnesota Experimental Station.
Professor H. L. Bolley, Dean, North Dakota Agricultural College.
Norman M. Ross, Chief of Forestry Division, Indian Head, Sask.
James Murray, Wheatlands, Ltd., Suffield, Alta.
E. E. Drennan, Pioneer Stock Farm, Camora, Sask.
W. H. Fairfield, Lethbridge Experimental Farm.
Professor C. H. Lee, Manitoba Agricultural College.
Professor W. E. Day, Quilch Agricultural College.
Arch. Mitchell, Weed Expert, Coaldale, Alta.
Professor E. C. Elford, Macdonald Agricultural College.
Professor E. M. Dolve, North Dakota Agricultural College.
Professor C. I. Gunness, North Dakota Agricultural College.
E. F. Coke, B. S. A., Supt. Educational Department.]

Two sections of our service which alone may be worth many times the cost of the course, are those dealing with "Farm Machines" and "Gasoline Engineering". The knowledge gained from these two lessons will often enable you to cut down delays and save you many trips to town. Yet this is just one of many departments each section being prepared by an expert.

You can complete the greater portion of the course before seeding, and be able to put into practice, under the guidance of the best instructors in the world, much of what you have learned and thereby obtain returns many times greater than the cost of the course. Cut out the attached coupon, or send for our booklet, "Better Farming" containing full particulars.

Send your book, "Better Farming," postage prepaid, free of charge, to

**Correspondence School
of Scientific Farming
of Western Canada Limited**
5 Edward Block, (over) Winn peg

reaches hundreds. The staff of instructors includes some of the strongest living agriculturists on the North American Continent, and number among them such men as Prof. S. A. Bedford, Prof. Thos. Shaw, Dean Bolley, Prof. C. H. Lee, Prof. W. H. Day, Arch. Mitchell, Norman M. Ross, James Murray, R. E. Drennan, Prof. F. C. Elford, W. H. Fairfield, Prof. C. I. Gunness, Prof. R. M. Dolve, and E. F. Coke, B.S.A.

Nothing but the plain practical work is taken up in this course, which in part includes some twenty five lessons. Any farmer who spends his winter evenings in the study of the better method under the guidance of this group of men through the medium of the Correspondence School of Scientific Farming cannot help but obtain fastening benefit.

Hundreds of farmers have already enrolled, and are enrolling daily. There is not a student who has sent his enrollment in who has regretted having taken the course, and the school is prepared to back up the quality of its work by guaranteeing a refund of the tuition fees if upon completion of the course the farmer is not satisfied that his investment was one of the best that he could possibly make.

If you have not already enrolled it will pay you to immediately investigate, or send your enrollment to the head office, 5, Edward Block, Portage Ave. (opposite the T. Eaton, Co.), Winnipeg.

Sermonettes.

Money is a good servant, but a dangerous master.

A stitch in time also saves using safety pins.

As we grow older we learn to talk less and say more.

The sacrifice you are glad to make is seldom a sacrifice.

Those who have pluck can laugh at their want of luck.

He who would eat the fruit must water the growing seed.

Be sparing of promises, but prodigal in accomplishment.

Jealousy is a game that you can play at—but neither win.

Castles in the air are all right until we try to move into them.

Things always go better with those who take them as they come.

If we did not deceive ourselves nobody would be able to deceive us.

A year's brain work may be ruined by two minutes' tongue work.

Go slow, and you won't have to sit down and rest when you get there.

Nowadays most of a brave man's adventures take place in his pocket book.

It gives us a terrific jolt every time we hear our friends praise our enemies.

Take an interest in other people if you wish them to take an interest in you.

You can lead with the thread of love when all the cable of logic would fail.

It is just as well to have a short acquaintance with a fellow who is always short.

The truest humor is that which enables you to appreciate a joke against yourself.

Do not envy those whose lives are nothing but pleasure. Honey in excess becomes gall.

Fear can sting like a scorpion and torment like a scourge.

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

FEBRUARY
1912

FARMER GOOD INTENTION

HENRY: Since I wrote you I think I can say that I have been "having the time of my life." You are not to infer from this that I have been skylarking, but the fact is one gets so "enthused" with the ordinary routine here that our recreation merely takes the form of a change of employment. The lectures and demonstrations are so put and served up in such an interesting way they take hold and grip and give you an appetite for digging out information for yourself. I learned more about "Humus" here in ten minutes last week than I did from a month's grinding at home with that junk encyclopedia father brought out with him from the Old Country the year before I was born. By the way, we're going to have a great Farmers' Institute Convention here starting on Monday, 12th of this month. It would really pay Dad to come to it.

Week
Ending
Feb. 3rd

FATHER: Gol darn this farming business anyway. I believe there's as much to be made by finding things at the fair as there is in this wilderness of a place. And yet Bob Simmers on the next half section of the very same land seems to make a go of it. He's got his automobile and was blowing that he paid cash for it as soon as he got his grain cheque in Winnipeg last week. Of course he had his seed in a week before ours and then that fine rain gave him a dandy start on the very day we got out the seeder and had to get it in again. I wish I had taken his tip and hired his gas engine to break that bit of land next the bluff. We'd have had it all in trim in good time for seeding and that roan mare wouldn't have been in her grave now. O well, we've all got to pay for our experience; only I seem to keep paying out all the time for mine.

FATHER: I think, old lady, I'll take the boy's tip and put in the week at that "Farmers' Convention." I see from the "Thresherman" they're going to have some dandy speakers at it. It will please the boy and I am bound to pick up some information that we're not likely to strike anywhere else. Besides, I want to see that Sheaf Loader and the new Grain Pickler they are making such a song about in the papers—they have both got their headquarters in Winnipeg. Then I'm going to have a shot at that "Marquis" wheat this year if I can find a decent parcel of seed somewhere. I'm convinced that if we had taken old man Sounders' tip and seeded that 35 acre field to "Marquis" last spring we wouldn't have had a bushel of frozen wheat to sell. Ten days off the ripening season is a mighty help in our short summer. Anyway, here goes for a fair trial.

Week
Ending
Feb. 10th

MOTHER: I wish father you or Charlie had done something to that hen house. It makes me cry every time I go in to feed the creatures. The place is as open to the weather as if it never had a roof on it and the poor things are dying off every day. I don't know what we would have done for something fresh to eat if Mrs. Watkins hadn't sent me that dozen eggs last Sunday. It is heart breaking. Looks as if we were really starving and although she handed them in so nicely, I'm sure she knows that we were really in need of them. I saw Miss Jenkins at the post office yesterday and she asked me to come to their Home Economics meeting, but upon my word I would feel ashamed sitting among those women with my clothes in the state they are in.

MOTHER: That's all very fine, Peter, but where do I come in? If you have read the paper when you were't half asleep you'd see that the women folks are also having their say at the College Convention; and seeing we've got everything ready to start as soon as the frost is out of the ground—I'm going with you. Oh, you needn't smile. I'm coming to hang on to your coat tail. You can "tak' the high road and I'll tak' the low road," and we'll meet at the end of the day. I think that Household Science department at the College is doing a splendid work—look what it has done for the Armstrong girls! I want to attend every meeting of our Home Economics Society and I want to take something worth while with me next time and I'd be sure to pick up some good pointers at the College lectures. I doubt if any of the other members will be able to go but you can take it that if you go, I go.

Week
Ending
Feb. 17th

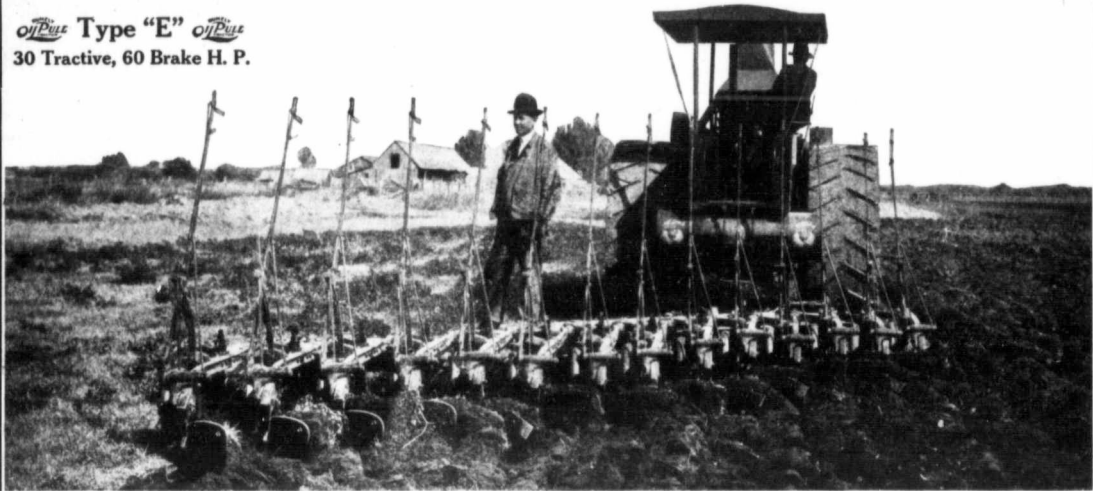
CHARLES: I have an idea father that if you allowed me to run the farm for a couple of seasons I'd jolly soon put things in shape. I tell you I'm getting sick of things. We're in a regular hole I can see and if you will not allow me some rope in helping to get out of it, I'm off to try my hand elsewhere. I never have a dollar to rub against another and its galling to meet the boys in the town and see what they are able to do. There's Harry Smith and Bob Stewart back from a month's shooting. They bought their rifles and camp outfit with their own money and here I can't raise the price of a decent sweater. Old man Wilkes wants a fellow to run his gas engine and if I take him on there's twenty dollars a week steady money anyway.

JOHN: That's a great idea of your's, Mother, and while you and Dad are enjoying yourselves in Winnipeg or at the College, I'll have a whale of a time all on my own. I don't think there's a hand's turn on the farm that I'm responsible for that is in arrears, so I'll take a run round among the neighbors. By the way, when you're doing a bit of shopping I wish you could get me another copy of "Power and the Plow" at the Thresherman office. I sent mine to Jim Haigh and he wants to keep it and sent me a dollar and a half. That's the price of the book and if it was twice that figure I wouldn't be without it. I was fair st uck with the gas tractor till I got it but after reading the first articles I saw at once where the hitch was and I have the lay of it now as clear in my head as A.B.C.

Week
Ending
Feb. 24th

SMITH (the implement dealer) extract from letter: "I have not had a word to say to you about money since some weeks before Christmas and you have not darkened my door since I spoke to you at that time. I want to put my case to you in so simple a way that no one but a lunatic could fail to understand it. It is like this: I have no money but what I make out of my business. I buy the greater part of my goods on credit and I've got to sell the bulk of them on time. The people I buy from trust me to pay them on the date I promised when I took over the goods. If I don't, what do you expect them to do with me? They can't do their business without money and they have a right to look to me for some of it but if I had another two men on my books like you I'd be in jail to-day.

Oil Pull Type "E"
30 Tractive, 60 Brake H. P.



IN SIZES TO MEET YOUR POWER NEEDS



AT PRICES TO SUIT YOUR POCKETBOOK

Whether you farm 160 acres or operate a many thousand acre ranch, THERE IS AN **Oil Pull** TRACTOR FOR YOU, in the size you want, at the price you should pay.

The **Oil Pull** throws a new light on traction power for the farmer. It breaks down the last argument of the man who thinks he can't afford one—who thinks he can't run one—who thinks he hasn't enough work for one—or who sticks to the old, expensive, drudgery horse system for any reason whatever.

The **Oil Pull** is your best protection against crop failure—because you can plow deeper without loss of time or added expense. Because you can plow fast, 12 to 25 acres per day, according to the size **Oil Pull** used. You can plow,

drill and harrow all at the same time, if desired. You can cultivate quickly—drill quickly—HARVEST QUICKLY. And for your belt work, you will find the **Oil Pull** a power plant without an equal.

It burns cheap kerosene at all loads, under all conditions. It is simply designed—strongly constructed. A boy can run it. A comparatively inexpensive, reliable power plant for all traction and belt power needed on your farm the year round.

The complete specifications, pictured descriptions and full information on the different sizes of **Oil Pull** Tractor are ready for you. Ask for "Toiling and Tilling the Soil," our **Oil Pull** Catalog. A postal will do.

Address:

M. RUMELY COMPANY

MACHINERY FOR

PLOWING, THRESHING, HULLING, HAULING, SHREDDING, HUSKING, SHELLING, SAWING, PUMPING, ETC.
1921 ROSE STREET REGINA, SASK.

BRANDON, MAN.

WINNIPEG, MAN.

BRANCHES:

SASKATOON, SASK.

CALGARY, ALTA.

Oil Pull Type "F"
15 Tractive, 30 Brake H. P.



Did you Invest in Saskatoon Ten Years ago and clean up a Fortune?
 Right now you have the same opportunity in
EDSON
 which is the distributing point for thousands of square miles of new territory. EDSON is already the wholesale center for the Peace River district into which settlers are pouring. It is a
Divisional Point
 on the main line of two transcontinental railroads and has tributary to it, coal, iron, lumber and magnificent farm land. The population has grown in one year from nothing to about twelve hundred. We offer lots in the town for a short time longer at **\$50.00 each.** Full particulars
 Write Dept. C. T.
The Edson Point Company
 608 McIntyre Block, Winnipeg.

FURS
 Trappers, Hunters and Dealers in any kind of Raw Furs cannot afford to dispose of their collections without first obtaining our quotations furnished upon request. Remittance forwarded same day goods received, express and mail charges, on all shipment paid by us. Canada's Largest Fur Operator. Your correspondence solicited
JOHN HALLAM,
 Toronto, - - Ont.

BIG MONEY in the OFF SEASON
 One Man can run it.
 Earn \$2000.00 a year extra money, besides your regular farm work, with the
Improved Powers Boring and Drilling Machine. Bore a well 100 ft. deep in 10 hours. One man can run it; steam operator and easily moves over any road. Bore everything except hard rock, and it drills that. No tower or stacking; rotates its own drill. Easy terms; write for Catalogue.
Lisle Mfg. Co.
 Box 223 Clarinda, Iowa.

THE INDIVIDUAL THRESHING OUTFIT.
 Continued from page 424
 means a loss of about 30 cents a bushel on your crop.
 In making the comparison in this letter, we will take a farmer that has 5,000 bushels in wheat, or that equivalent in oats or barley. The loss on this amount, of 30 cents on the bushel, is \$1,500, which is half the price of a small outfit in itself.
 What is the cost of threshing with the individual outfit? Allowing \$4.50 for man and team, \$2.50 for a man, the expenses will be: 5 men and team, \$22.50, and three men, \$7.50, and \$10 for gasoline and man to run the outfit, making a total of \$40 a day. This gang will thresh 1,000 bushels a day, which figures out to four cents a bushel, or \$200 for the 5,000 bushels. The gang may be changed to suit the size of the outfit.
 Now let us see what it costs to stack a bushel of wheat. Four men and two teams should stack 300 bushels of wheat in

a day, but their wages amount to \$14, therefore, it costs almost five cents to stack a bushel of wheat.
 The custom thresher charges six cents a bushel, which amounts to \$300 for the thresher, so, therefore, it really costs you about eleven cents when you stack your grain, and the custom outfit does the work.
 Summing up the two sides we have the man with the individual outfit got his crop threshed before the rain at an outlay of \$200; while if the other fellow stacked, it cost him about \$550. If his stacks were poorly built and did not get them threshed till late, he would lose about 20 cents per bushel. If he did not stack his wheat, most likely got the rain and so he also loses from \$1,000 to \$1,500 from deterioration and lateness of season. So you see that the individual outfit man is from \$350 to \$1,800 ahead.
 Another advantage with the small rig is that when there comes a broken spell of weather you do not have a large gang to board.
 I will admit, and am glad to say, that every year is not like the past one, but I did think that, taking everything into consideration, that the individual outfit is a profitable investment. But let me warn you. It is not every man that can keep the wheels going round and make a success at running a threshing outfit, therefore, make very sure of your ability before you venture, for the same business has put more farmers under than any other one cause.
 Wishing the Canadian Thresherman and Farmer and the threshing fraternity at large all the success that is due them, I remain,
 Yours truly,
 F. C. Sanderson.
 Souris, Man.
Labor Saving in the Home.
 (The following letter has been sent us which we are glad to publish at the request of the lady writer, and hope with her that the subject may prove as fertile in correspondence as that of the experience of our Thresherman Ed.):—
 "Dear Editor,—In looking over your paper every month, I see lots of letters from farmers and threshermen about labor-saving machines, but I do not see any from the wives of these men re labor-saving machines for the house. I see advertisements about them, one of which led me to buy a Maytag power washing machine and wringer attached to run with a gasoline engine. I find it the most satisfactory machine I ever had to lighten the work of the home—everything about it is so handy and so easy to start and stop or to reverse the wringer.
 "Hoping to see some letters from our sisters on the same subject, and wishing your paper every success,
 "I am, yours truly,
 "Mrs. J. W. CORDEN."
 Miami.

AGRICULTURAL ENGINEER.
 Continued from page 32
TYPES OF TRACTION ENGINE BOILERS.
 There are only two principal types of traction engine boilers in common use at the present time, viz., the direct flue boiler and the return flue, with the direct flue distinctly in the lead so far as number is concerned. With only one or two exceptions all traction engine boilers are of the horizontal style and nearly all belong to the fire tube type. Vertical boilers for traction engine work, except in the case of well drilling machinery, have been practically discontinued within the past few years.

THE DIRECT FLUE BOILER.
 The direct flue boiler is used more widely for traction engine purposes than any other type of boiler. It is used exclusively for locomotives and also for stationary work wherever it is desirable to have a self-contained boiler around which a fire brick setting may be dispensed with.
 Fig. 4 represents a common form of traction engine boiler of this type, fitted for burning straw. It can be changed to a wood or coal burner very rapidly by putting a door in place of the straw chute O, and by removing the fire brick arch P. Boilers which are made to burn straw, wood or coal are called universal boilers, of which the one shown in the illustration is an example.

The boiler consists of a cylindrical shell A, riveted to a rectangular portion containing the furnace. The furnace box is also rectangular, and is fastened to the outside portion by means of staybolts four or five inches apart. The space between the furnace box and the outer casing, which is about 2½ inches wide, is called the water leg. The fire is built on the grate E, and the hot gasses pass up over the fire brick arch and through the tubes C, to the smoke box J, and thence out through the chimney. The water level is maintained about three inches above the highest point of the crown sheet H.
 This boiler belongs to the internally fired class and when properly designed and made is fairly economical in the use of fuel. Recent tests of locomotive boilers in St. Louis showed efficiencies very slightly inferior to the best forms of stationary boilers. Traction engine boilers are perhaps a little more wasteful of fuel than the best locomotive boilers.

THIRTY YEARS OF SATISFACTORY SERVICE
 has conclusively proven the superiority of Rockwood Paper Pulleys over all others for belt drives.



To Meet the Demand
 for a more efficient and durable cylinder drive pulley we now offer our specially designed
Rockwood Paper Cylinder Pulleys



Last Season 4000
 of them were in use in different parts of the country.

To Test Them Out
 Their great success leads us to believe it will be but a few years until they are universally adopted by manufacturers for this work.



If you had trouble with your old leather covered pulley during the past season—now is
the time to order
 If you are going to buy a new machine insist on getting
A ROCKWOOD PULLEY
The ROCKWOOD M'F'G. Co.
 Indianapolis, Indiana
 1928 English Ave.

Does it Pay to Own a Traction Engine

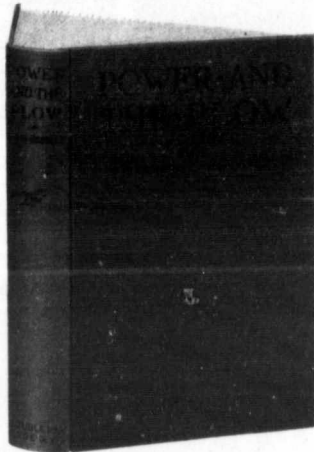
SOMETIMES IT DOES AND SOMETIMES IT DOESN'T

It depends to a very great extent upon the skill and knowledge of the owner and operator. The Traction engine represents a big investment and its successful operation requires that the owner have a full and complete understanding of his machine and what it will do.

GET A COPY OF

“Power and the Plow”

“Power and the Plow” covers all the sources of farm power, the types of traction, the horse, fuels, etc. It tells you how to operate your tractor so as to make it pay. It is just the book you have been looking for. It brings you the latest in power farming—in fact it is an exhaustive treatise on the subject. If you own a traction engine you need this book. If you intend to own one, get it and become posted.



“POWER AND THE PLOW,” cloth, 318 p.p., \$1.50 postpaid.

THE CANADIAN THRESHERMAN AND FARMER, \$1.00 PER YEAR. BOTH \$1.50, postpaid.

E. H. Heath Co., Ltd.

Enclosed find \$1.50 for which please send me the Canadian Thresherman and Farmer for one year and one copy of “Power and the Plow,” postpaid.

Name.....

Town..... Prov.....

P.O. Box.....

E. H. Heath Co., Ltd., Winnipeg, Can.

New Cream Separator for Western Canada

Of special interest to the large number of farmers in Western Canada, who set a high value on their milk products is the fact that the manufacturers of the Standard Cream Separator have just established a branch in Winnipeg under the control and management of Mr. E. Ellwood.

From his long identification with some of the most important and successful undertakings in the United States, and more recently in Toronto and Winnipeg, Mr. Ellwood is peculiarly fitted to assume the conduct of any farm machinery concern. During the past four years in Winnipeg he has managed the Empire Separator Company's Canadian business, and previous to that, for a like period, the Canadian head-quarters of the Sharples Separator Co. in Toronto.

Mr. Ellwood's earlier history presents an interesting experience in the iron industry. Starting as an invoice clerk in the office of a Beaver Falls Iron Company he was subsequently given the management of its New York business, which position he held for several years. Later he joined the forces of the Chicago Horse Shoe Co. as general superintendent, and was one of the organizers and directors of the Continental Iron Co.,

which company owned several large iron and steel mills in the state of Ohio and Pennsylvania.



E. Ellwood, Manager Western Business of the Renfrew Machinery Co.

This company was incorporated just about the time so many individual companies of the kind were being merged into Trusts, and as the situation encouraged the idea of selling out on the most favorable terms, Mr. Ellwood and his colleagues took the top of the tide and bargained for their interests.

The “Standard” Cream Separator is made by the Renfrew Machinery Company Ltd. of Renfrew, Ontario. Originally the conception of

a clever Swedish dairy mechanic, the outstanding features of this machine so impressed those Canadians to whom it was first shown by its inventor, he found no difficulty in having it established as a full-blooded Canadian industry.

First of all, to take the matter seriously in hand was Mr. Thos. A. Low, M.P., whose remarkable career of success is so well known



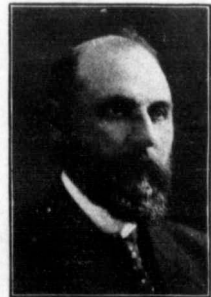
Thos. A. Low, ex-M.P., President Renfrew Machinery Co.

throughout the Dominion, and has recently been brought into the limelight by the surrendering of his seat in the House of Commons in favor of the Hon. Geo. P. Graham. Mr. Low is president of the company which, has been formed to manufacture the “Standard” Separator, and associated with him is Mr. M. J. O'Brien, familiarly

recognized as the “Silver King,” from his ownership in the rich “O'Brien” silver mine in Cobalt, Ontario.

There is a big and rapidly extending field all through the West for dairy specials and if the “Standard” is once fairly tried in the West as it has been in the East, its popularity and success commercially is already assured.

That it has every possible chance at the hands of its Western manager is well known to the wide circle of Mr. Ellwood's business friends, who will be glad to know that he has the sole agency for the sale of the famous “Gilson



M. J. O'Brien, the Silver King, Vice-President Renfrew Machinery Co.

Gasoline Engine in Western Canada as well as a complete line of wood saws.

The John Deere Plow Co's. New Implement Display



IMPLEMENT DISPLAY ON LOWER FLOOR

No visitor to Winnipeg if he has the slightest interest in the subject of soil cultivation will ever leave the city until he has visited the show rooms of the John Deere Plow Company on Princess St.

Outwardly the imposing building is an impressive landmark even in a city in which "sky-scrapers" are becoming as common as the street cars, but the real import and significance of the John Deere organization is to be found

within the four great walls raising six stories high, which provide for some 72,000 square feet of floor space.

Some time ago it was our pleasure to give readers of the Canadian Thresherman and Farmer some details and ex-

terior illustrations of the John Deere Company's warehouse. Since then they have been added to both in size and number at every outpost in the West that has any claim to the status of a distributing point.



GENERAL OFFICES

With this notice we publish reproductions of several photos of the head offices and show-rooms at Winnipeg, but any pictorial rendering that can be made will give but a remote idea of the

imposing effect—educational above all things—of the splendid assembly of some of the finest cultivation machinery and tools that have yet been produced for the "conquest of the land."

It is no figure of speech to say that

the John Deere show-rooms is a far more satisfactory exposition of agricultural implements that one can meet with at the usual industrial exhibition or fair. In the latter case, one has not the leisure to concentrate his mind

upon the special, and it may be to him vital, points of the particular subject he is inspecting. Here everything is arranged in a perfectly systematic way, without crowding, and so that every detail of any particular machine may be



BUGGY FLOOR

seen in a good light.

The plows and seeding machinery of the historic house are known the world over, but there is scarcely a detail of farm economy that may not be found within these walls. The buggy display

represented on this page includes some of the finest types of horse vehicles made to-day for city or farm, and the brand new line of harvesting machinery is one of peculiar interest to every Western resident in these days, both of

intensive and extensive farming.

As the years advance, "time is becoming money" in a more real and serious sense than it ever was, and the great aim in Western life is to make the very best of the time in the short

growing and ripening period of the prairie provinces. The purpose of these great agricultural machines is to "harvest the time" and to raise crops in quality and quantity that primitive methods could never accomplish.

Built in Canada to Do Canadian Plowing

Every Tractor owner owes it to himself to investigate this Canadian built Oliver Tractor Gang Plow.

The Oliver gang plow is the crowning accomplishment of fifty years of plow making. Most farmers know from years of actual experience that the name "Oliver" on a plow stands for the best there is. Those who do not know Oliver plows from experience or reputation are earnestly requested to make the closest detailed examination of the many new and practical features of the Oliver gang plow.

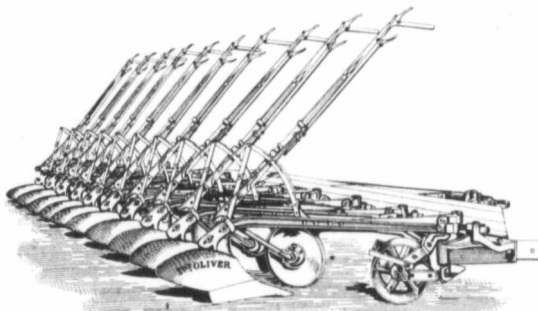
Note these features: Flexibly jointed, built-up frames which can be connected to make any size plow—each section easily conforms to lay of land. Conveniently located individual lever and gauge wheel—gauge wheel placed so that the share maintains even depth. Gauge wheel mounted on rocking axle, making plows easy to raise out of ground, giving in effect a power lift. Perfectly smooth platform—nothing in the way to hamper quick, free action in operating.

The Oliver Tractor Gang Plow

has a strong 18-inch, roller coulter, so attached that when it meets an obstruction it lifts entire plow base, preventing breakage. Coulters fitted with cushion springs. Trucks swivelled to allow for short turn—have extra wide face for carrying weight easily over soft ground—are placed scientifically to roll land level.

Levers to operate whether plows are in or out of ground—have double latch, making it convenient to operate them with either or both hands, in any position. Easy regulation of plowing depth. Beam adjustment to change spacing between bases as found necessary. Oliver Tractor Gang Plows can be equipped with your choice of our different styles of bottoms to meet your particular condition.

Oliver Plows are sold exclusively in Canada by the International Harvester Company of America. See the I H C local agent, or write at once to nearest branch house for full particulars on both horse and tractor-drawn plows.



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

WESTERN CANADA BRANCH HOUSES
 Lethbridge, Alta.
 North Battleford, Sask.
 Regina, Sask.
 Saskatoon, Sask.

Weyburn, Sask.
 Winnipeg, Man.
 Yorkton, Sask.

INTERNATIONAL HARVESTER COMPANY OF AMERICA
 (Incorporated)

New Winnipeg Quarter for Canadian Fairbanks-Morse Co.

A handsome new structure at the corner of Princess and Henry Streets is now practically completed, and will shortly be occupied by the Canadian Fairbanks-Morse Company, Limited. Recognizing the importance of the West as a business-producing territory, the company have for some time past been making preparations for the building of a warehouse in Winnipeg which will enable them to meet the needs of their business adequately and with greater facility.

The building is constructed upon the Khan system of reinforced concrete, and is faced with red Mennomenee bricks, trimmed with British terra cotta. Each floor has an area of twelve thousand square feet, and with this space at their command, the company will be able to show their various lines to the utmost advantage, and have ample space for stock.

The ground floor is to be the main show room.

The first floor is to be devoted to the general sales and private offices, and will also have a generous display space.

The second floor is to be fitted entirely with bins containing smaller articles, such as valves, pipe fittings, engineers' supplies &c., &c.

On the third floor will be found the various transmission pulleys, all carefully graded as to size, and placed on racks for the purpose.

The ground floor has been tested to carry a weight of 800 pounds to the square inch, the other two floors 500 lbs. to the square inch.

In the basement will be carried stock of gas engines, pumps, and other heavy machinery.

In addition to their new general sales, offices, and warehouse on Princess Street, the company have purchased three acres in Winni-

peg's industrial centre, where they will erect a modern warehouse for storing large oil tractors, portable engines, hand push, motor, and velocipede railway cars, general heavy railway supplies and iron pipe of all descriptions.



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RECENT CANADIAN PATENTS

Especially arranged and compiled by G. S. Roxburgh, of Featherstonhaugh & Co., Patent Barristers, Winnipeg.

(See opposite page for Diagrams.)

No. 134,623—F. W. Wigmore, Basswood, Man.—The invention relates to an improved door stop designed to prevent a door from slamming against an adjoining structure, and arranged to hold the door open when desired. It comprises a head, consisting of curved spring jaws, having their outer ends relatively spaced, a substantially circular spring member secured at its ends to the outer ends of the jaws, and an attaching element forming a part of the head.

No. 134,640—J. W. Baird, Carbon, Alta.—The invention relates to a harrow, and the object of the invention is to provide a rolling harrow with rollers inclined to the direction in which the harrow is drawn, the rollers being supplied with teeth. It consists in a substantially rectangular frame, fitted with pairs of brackets, which receive rollers disposed at an angle in the direction in which the machine is drawn. The rollers are fitted with staggered teeth which harrow the ground.

No. 134,700—J. Miner, Berry Point, Alta.—The invention relates to a rail joint, and the object is to supply a device which will form a tight joint between the ends of two companion rails. Three ties are employed, one adjoining the end of each rail, and a central one directly beneath the abutted ends of the rails. A base plate extends over and between the ties, and is formed with a flat upper face, and has tapering extremities to provide three bearing surfaces at its lower face, the intermediate bearing surface being substantially parallel to the upper face of the base plate, and being supported upon the middle cross tie, and the other bearing surfaces being oppositely inclined and resting upon the remaining cross ties. The base plate carries flanges which abut the sides of the rail sections, and spikes are used to secure the base plate to the ties.

No. 134,883—R. Pede, Rush Lake, Sask.—The invention relates to a disc harrow, and the object is to supply a gang of adjustable harrows carried by a frame and designed to be drawn by a traction engine. It comprises a main frame fitted with a platform, and a number of harrow sections secured to the frame and comprising each forward and rear pairs of adjustable harrows, which can be set at an angle to the direction in which the implement is drawn. Suitable means are employed for retaining a constant pressure on the harrows,

No. 134,707—J. G. Parkin, Islay, Alta.—The invention relates to a nose protector for animals, to prevent flies from bothering the animal. It comprises a stout wire frame adapted to pass over the nose, to the side of the jaw and underneath the jaw, the frame carrying a close mesh screen which encloses the nose and the under portion of the jaw. Means are employed for releasably securing the protector to a bridle or halter.

No. 135,034—A. Pietsch, Watrous, Sask. This invention relates to a game register, and it comprises a rotatable shaft, a numeral disc secured to the shaft, a lever for operating the disc, a cord reel suitably journaled, a cord winding on the reel and connected to the lever and connections from the operating lever for arresting the further rotation of the cord wheel on the movement of the lever.

No. 135,108—J. H. Baker, Winnipeg, Man.—This invention has for its object to provide an improved chimney pot, and it comprises a chimney pot having an enlarged base in the form of a truncated pyramid, the body portion being continuous with the base and changing in form gradually from a square to a circular cross section, the top being of cylindrical form. A flange forming a water table appears at the top.

No. 135,123—R. J. Lipton, Saskatoon, Sask.—This invention relates to a guide for reins to prevent the same from getting around the end of the wagon pole, and it comprises an upright rod attached to the pole, and having a hooked upper end which receives the reins where they cross in passing back to the vehicle. The article is made so that it can be swung down when not in use, and also so that the reins can be readily placed in the hook.

No. 135,124—L. Dragon, Duvernay, Alta.—The object of this invention is to supply a steadier for a wagon tongue, and it consists of a rack placed on the sway bar of a wagon, and pinions secured to the reach and operating on the rack. Two cylinders are also attached to the reach.

No. 135,141—G. R. Kendall, Vancouver, B.C.—The invention relates to an improved vacuum cleaner for house purposes, in which the vacuum is made and retained by running water. A water injector is connected with suitable water pressure, there being means within the injector to break up the water particles and create a vacuum. A hose passes from the injector to a dust tank, and a further section hose passes from the tank, and is supplied with a dust collector.

No. 135,165—R. J. Reck, Gilbert Plains, Man.—This invention has for its object to provide a machine for filling sleughs,

and it comprises a main beam carried by suitable wheels and presenting at the front a pivoted cross plate, used to scrape up the material for filling the sleugh. Means are supplied whereby the plate can be set at any angle, and the machine is arranged to be drawn by draft animals located at each side of the beam.

No. 135,217—W. Darling, Winnipeg, Man.—The invention relates to a cover for automobile tires to prevent the same from being punctured. The ordinary tire is built up by coats of fabric and rubber having imbedded therein layers of overlapping metal studs. A nail or such like cannot pierce the tube as it will engage with one or other of the studs, and be deflected.

No. 135,265—A. Johnston, Vancouver, B.C.—The invention relates to a fluid cooler, and it comprises an outer hollow cylindrical casing, in which is placed an inner cylindrical casing, having spiral grooves passing around it from end to end, the edges of the groove fitting the inside of the outer casing. A pipe is led to the top, and from the bottom of the outer casing, and suitable means are employed for releasably securing the inner casing within the outer.

No. 135,290—O. H. Pierce, Oxbow, Sask.—The invention relates to an improved shaving brush, wherein the bristles are contained within a handle when the brush is not in use, the construction being such that they can be readily withdrawn, and secured in the end of the handle when required. The handle is formed from a hollow tube, having one end interiorly threaded, and the other end exteriorly threaded, and the latter end being supplied with a removable cap. A threaded head carrying a bunch of bristles is formed to pass into the tube when the cap is removed, the threads on the head being further constructed to thread into the interiorly threaded end of the handle when the brush is used. Releasable means are supplied for closing the small end of the handle when the brush is inside.

No. 135,306—W. H. Berwick, Vancouver, B.C.—The invention relates to an improved horse shoe wherein the outer and inner edges of the shoe are oppositely angled to the approximate slope of the hoof from the seat of the shoe from the under side of the ball of the hoof, the shoe being supplied further with an under groove extending around the under side thereof.

No. 135,315—H. Bolinder, Leinay, Sask.—This invention relates to an improved plow, and the object of the invention is to supply a share, which can be readily detached from a plow, the whole being controlled by the manipulation of a lever carried on the under side of the

plow. Rivets are carried by the share, and have sliding engagement with the landside and mouldboard, whilst the end of the lever is hooked to pass into a staple in the share.

No. 131,442—A. J. Hayes, Winnipeg, Man.—The invention relates to a grain shocking machine, and the object thereof is to supply a machine which will receive the sheaves from the binder, raise and turn them and deposit them in a basket, from which they are afterwards dumped in the form of a shock. Extending arms are supplied with carriers, the arms being arranged to turn round in a spiral manner from the point where the sheaves are deposited from the binder, to a position directly above the basket, at which point they are upset and returned to the original position. The basket is controlled, so that it can be dumped when desired.

No. 131,458—J. Brill, Kisbey, Sask.—The object of the invention is to supply a folding bracket for scaffolds, and it consists in a strut made of angle iron and having part of the web removed. Two angle iron members having pierced ends are fixed to the strut towards the supported end thereof, and means are employed for securing the strut and members to an adjoining support.

No. 131,461—J. G. Clark, Vancouver, B.C.—The object of the invention is to provide a crude oil vaporizer and burner, and it comprises in combination a hollow cylinder from one end of which the burner nozzle projects, a pipe delivering gas through the cylinder to the burner nozzle, an oil vaporizer coiled within the cylinder, one end of which pipe is connected to a source of oil supply, and the other end to the gas pipe to the burner, a steam generating pipe coiled around the frame from the burner, and delivering into the hollow cylinder in which is the oil vaporizing coil, and means for admitting steam from the cylinder to mingle with the gas before delivery to the burner nozzle.

No. 131,510—A. Livingston, Winnipeg, Man.—The invention relates to a threading device for sewing machines, which can be readily attached to the needle bar, and when required can be turned down to assist the operator to thread the needle. A pivoted arm is secured to a socket, which can be placed on the needle bar. The arm carries a cone shaped member, which is arranged to direct a thread into the needle opening when the bar is swung down.

No. 131,688—R. Smith, Souris, Man.—The invention relates to a wash boiler, and it comprises a casing, having a false bottom and corner ducts opening at the bottom and extending upwardly from the false bottom, and provided with perforated faces.

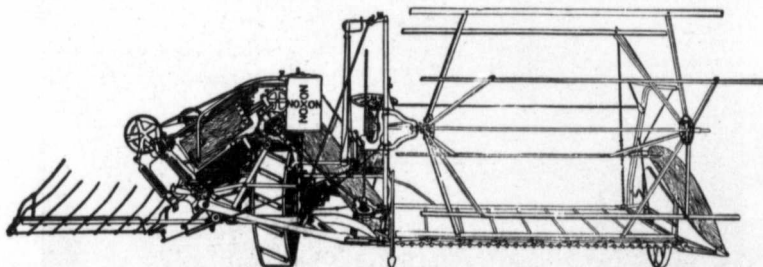
VERY LIGHT DRAUGHT

A SURE TIER

EASY TO OPERATE

SOLD BY

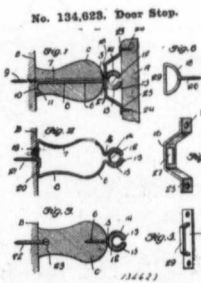
Tudhope Anderson Co.



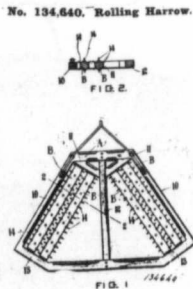
NOXON 9a BINDER

BRANCHES:
WINNIPEG
SASKATOON
REGINA
CALGARY
LETHBRIDGE

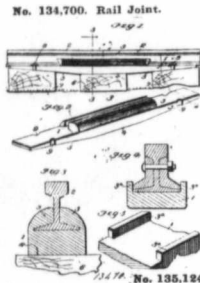
Western Canadian Patents, specially compiled and arranged by G. S. Roxburgh of Featherstonhaugh & Co., Winnipeg.



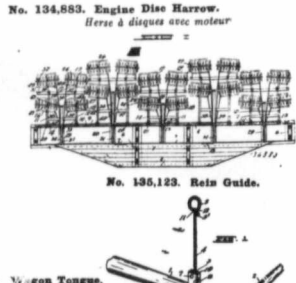
No. 134,623. Door Stop.



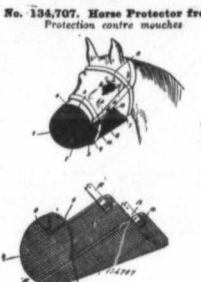
No. 134,640. Rolling Harrow.



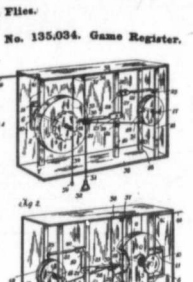
No. 134,700. Rail Joint.



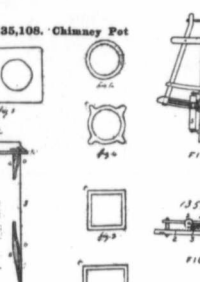
No. 134,883. Engine Disc Harrow. Herse à disques avec moteur.



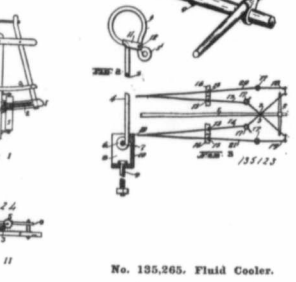
No. 134,707. Horse Protector from Flies. Protection contre mouches.



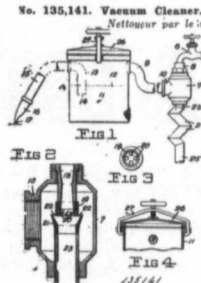
No. 135,034. Game Register.



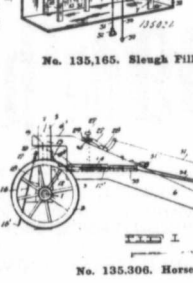
No. 135,108. Chimney Pot.



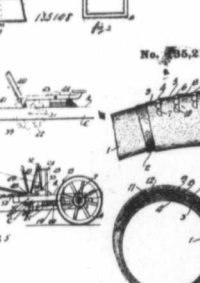
No. 135,123. Reins Guide.



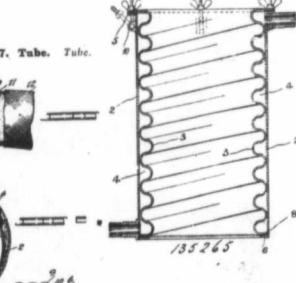
No. 135,141. Vessum Cleaner. Nettoyeur par le vide.



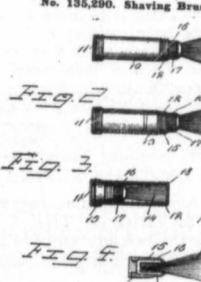
No. 135,165. Sleigh Filler.



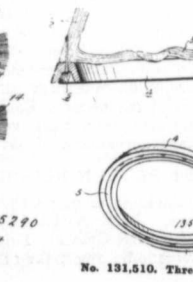
No. 135,217. Tube. Tube.



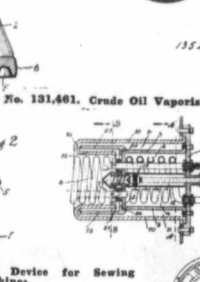
No. 135,265. Fluid Cooler.



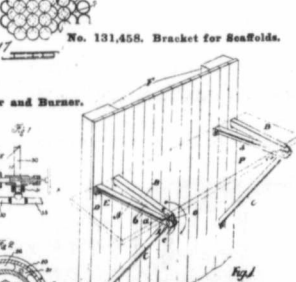
No. 135,290. Shaving Brush.



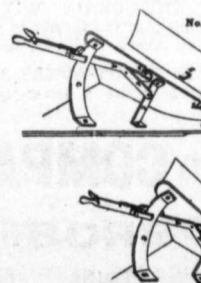
No. 135,306. Horseshoe.



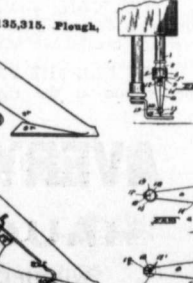
No. 131,401. Crude Oil Vaporizer and Burner.



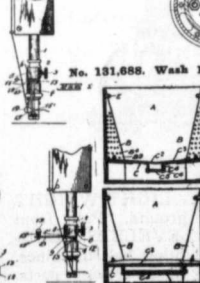
No. 131,458. Bracket for Seafoils.



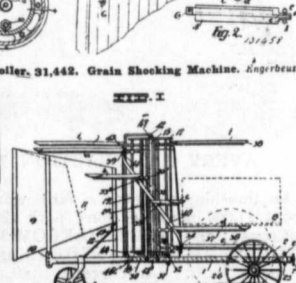
No. 135,318. Plough.



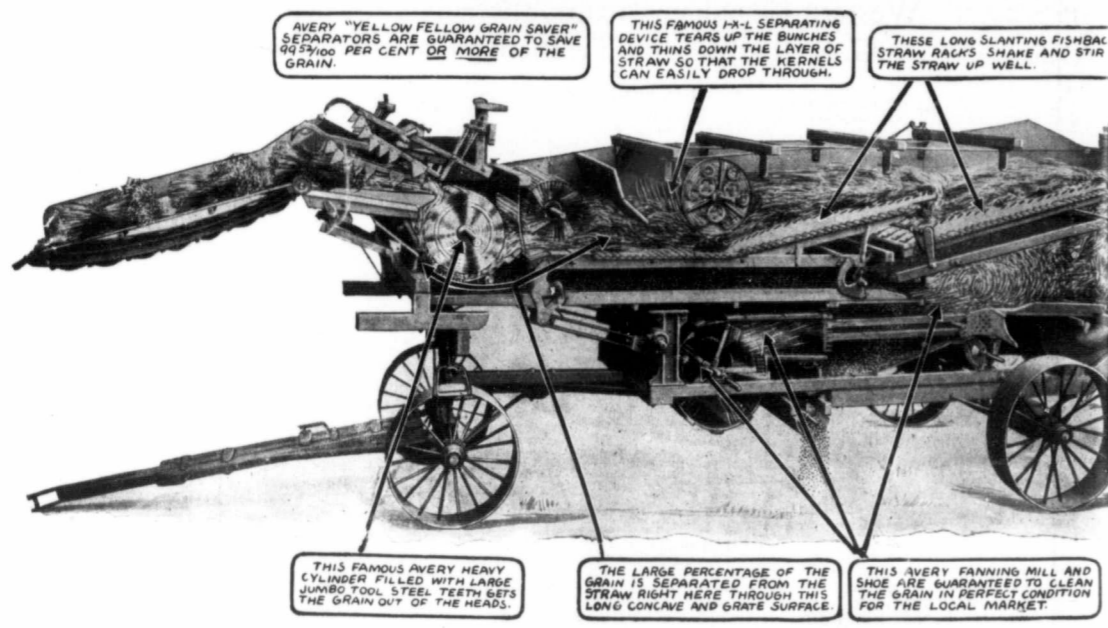
No. 131,510. Threading Device for Sewing Machines.



No. 131,688. Wash Boiler. 31,442. Grain Shocking Machine. Superbeuse.

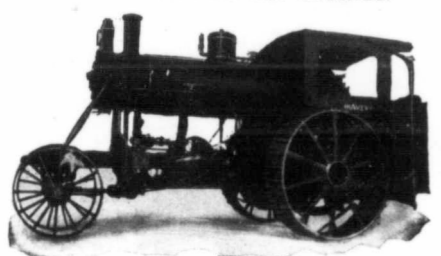


No. 135,375.



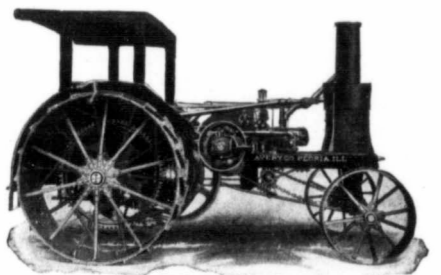
EVERY "YELLOW FELLOW GRAIN SAVER" SEPARATORS ARE GUARANTEED TO SAVE 99 9/10 PER CENT OR MORE OF THE GRAIN.
THIS FAMOUS I-X-L SEPARATING DEVICE TEARS UP THE BUNCHES AND THINS DOWN THE LAYER OF STRAW SO THAT THE KERNELS CAN EASILY DROP THROUGH.
THESE LONG SLANTING FISHBACK STRAW RACKS SHAKE AND STIR THE STRAW UP WELL.
THIS FAMOUS AVERY HEAVY CYLINDER FILLED WITH LARGE JUMBO TOOL STEEL TEETH SETS THE GRAIN OUT OF THE HEADS.
THE LARGE PERCENTAGE OF THE GRAIN IS SEPARATED FROM THE STRAW RIGHT HERE THROUGH THIS LONG CONCAVE AND GRATE SURFACE.
THIS AVERY FANNING MILL AND SHOE ARE GUARANTEED TO CLEAN THE GRAIN IN PERFECT CONDITION FOR THE LOCAL MARKET.

PULL AN AVERY SEPARATOR WITH YOUR CHOICE OF THESE STEAM OR GAS ENGINES.



AVERY UNDERMOUNTED STEAM ENGINE.

Learn what UNDERMOUNTED construction means. Why the Avery Undermounted Engine LASTS LONGER, PULLS HARDER and is EASIER TO HANDLE. Why it's the best steam engine built for threshing, plowing and all round traction and belt work. Sizes 20 and 30 horse power.



AVERY GAS TRACTION ENGINE.

Built for threshing and general farm work. LIGHT WEIGHT—only about 11,000 pounds; won't pack the ground. Pulls from four to six plows; also DISCS, HARROWS, LEVELERS, SEEDERS, BINDERS. Drives THRESHERS and other belt machines. Simplest tractor built. Least gears, shafting and working parts. Twenty Traction horse power and 35 Brake.

99 ⁹/₁₀ per Cent. Grain Saving Proved

Think of it! 99 9/10 PER CENT. GRAIN SAVING PROVED BY ACTUAL FIELD TESTS—practically perfect. That's the wonderful record made by Avery "Yellow Fellow" Separators in 27 FIELD TESTS, while operated by owners and regular crews.

FIELD TESTS PROVE WHAT A MACHINE WILL DO.

There is just one way to absolutely prove what a Separator will do in Saving the Grain, and that is to make a Field Test.

For three years we have been making Field Tests on Avery "Yellow Fellow" Separators to prove what they will do. Twenty-seven tests have been made. Each of these tests was made on a different machine in a different locality and while working in the hands of the owner. Each of the tests was witnessed by a number of farmers, who have voluntarily signed statements showing the average percentage of saving.

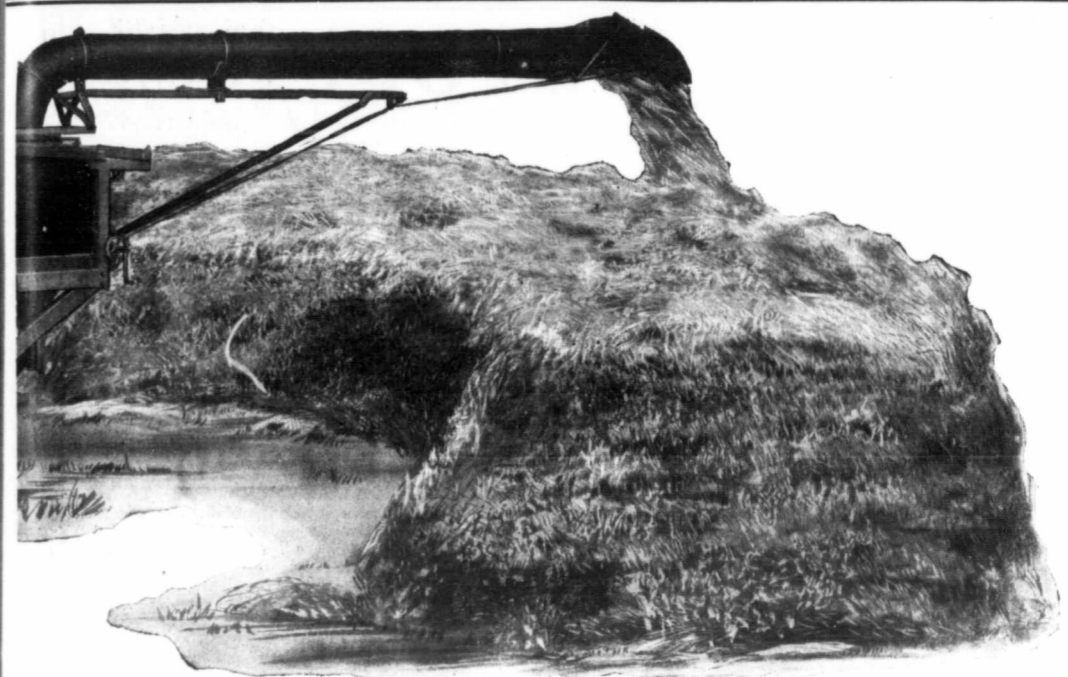
BEST PROVEN RECORD OF GRAIN SAVING EVER MADE.

These tests prove that Avery Separators are Wonderful Grain Savers. THE AVERAGE SAVING IN THE 27 TESTS WAS 99 9/10 PER CENT. This is the best proven record of grain saving ever made by any make of separator.

YOU CAN SAVE THE GRAIN WITH AN AVERY for Grain Saving is the thing that the farmer is most interested in, ever any breakdown with an Avery "Yellow Fellow." Small repair

GET ALL THE FACTS ABOUT AVERY Separators, Engines and Farm Trucks. Write at once for complete 1912 catalog. Use the coupon at the right, or write a letter or postal at once.

AVERY COMPANY, 6 75 Iowa St., Peoria, Ill.
HAUG BROS. & NE LLERMOR CO., LTD.
 WINNIPEG REGINA CALGARY WESTERN CANADIAN JOBBERS



YOU ALSO GET THE STRONGEST GUARANTEE ON GRAIN SAVING WITH AN AVERY "YELLOW FELLOW."

This is the warranty you get, printed right in the order blank—"The separating device will shake out 99 52/100 per cent., or more of the loose grain that is in the straw, the grain to be dry and in fit condition to thresh. When desired, we will submit the machine to test."

This is the strongest grain saving warranty ever given. It is absolutely plain and straightforward. It means exactly what it says, and there are no impossible conditions connected with it in any way, shape or form. We guarantee a saving of 99 52/100 per cent., OR MORE—and the "or more" means anywhere up to 99 99/100 per cent. for this record has been made by Yellow Fellows in field tests.

THESE TESTS AND THIS STRONG GUARANTEE CLEARLY PROVE THAT YOU GET A GRAIN SAVER WHEN YOU GET AN AVERY "YELLOW FELLOW."

"YELLOW FELLOW." That means that you can get the jobs They also do good cleaning, fast work and steady work. Hardly bills. Teeth guaranteed for life against breakage.

and Farm Trucks. Write at once for complete 1912 catalog. Use Address:



AVERY GAS FARM TRUCK.

A combination gas farm wagon and general power machine. Does hauling, field work and belt work. Travels from 2 to 12 miles an hour, depending on road and load. Does all kinds of country hauling cheaper, quicker, and easier. Pulls PLOWS, DISCS, HARROWS, SEEDERS, BINDER. Drives belt power machines. Does work of six to ten horses.

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 Winnipeg and Regina, Western Canadian Jobbers.

Gentlemen,—Please mail me free, 1912 Books with all the facts about the machines checked below:—

- "Yellow Fellow" Separator. SizeX.....
- Undermounted Steam EngineH.P.
- Gas Traction Engine
- Farm Truck

Remarks

Name Town

State R.F.D. Date

BUSINESS CONDITIONS IN CANADA DURING 1911

Addresses of the President and General Manager of the Canadian Bank of Commerce at the Shareholders' Meeting

General Manager's Address.

The General Manager then said :

In presenting you with our report for the year just closed, it is gratifying to know that our predictions regarding the probable course of our business, when last we had the honor of addressing you, have been fully confirmed, and we have great pleasure in submitting a statement which we feel will be regarded as more than usually satisfactory.

The record of the year is remarkable for the evidence it affords of a steady and continued prosperity, and notwithstanding the large increase of our resources we have been able to make a profitable use of the funds committed to our care with a reasonable assurance of safety.

The average paid-up capital during the year was \$10,591,405, and the net profits were \$2,305,409.42, the latter item showing an increase of \$467,344.38, as compared with our last report, and amounting to 21.76 per cent. on the capital employed. It is proper to remark that this satisfactory showing was the result of our operations after the usual very careful revaluation of our entire assets, ample provision having been made for bad and doubtful debts.

In our report for the year ending 30th November, 1909, it was recorded that we had recovered \$300,000 from the realization of assets in connection with which appropriations had previously been made. We direct your attention to the announcement in this year's report that \$500,000 has been similarly recovered. We believe you have always given us credit for being conservative and careful in the administration of your affairs, and the policy of making ample provision for doubtful assets might well, over a series of years, result in important recoveries. The recoveries now referred to, however, come mainly from two sources. During the entire administration of our business in the Yukon Territory carried on at the Dawson branch and begun in 1898, because of the dangers and difficulties surrounding the venture in this new field, we held in reserve the whole of the profits made at this branch, awaiting the outcome of the business in that district. Secondly, in purchasing the assets of the Bank of British Columbia in 1900, we found

a considerable quantity of real estate, in valuing which we made large appropriations as compared with the figures at which such assets stood in the books of the selling bank. There has been, as you know, a very large increase in the value of real estate in British Columbia, owing to the extraordinary development of that province, and through sales of such real estate and through the liquidation of most of the important assets in the Yukon territory, we are warranted in transferring to the ordinary profits so much of these reserves as are represented by the two amounts referred to.

We recommend the payment of dividends at the rate of ten per cent. per annum, and in this connection \$1,057,218.59 has been disbursed. Our program for the erection of suitable bank premises, particularly in the West, and the necessity for increasing our equipment of this character throughout the country, make it imperative to continue the appropriation of large sums for this purpose. We are hopeful that with the completion of the Winnipeg office extraordinary expenditures may be curtailed, but we must keep pace with the requirements of a growing business, and our commitments, while relatively moderate, are considerable in the aggregate. We have written off Bank Premises \$400,000, and have added \$866,092.61 to the account, which now stands at \$3,142,487.82, representing about 45 per cent. of the value of our properties. The resolution passed at the last annual meeting authorized the contribution of a sum not exceeding \$100 per annum per member of the Pension Fund, and we have appropriated \$55,000 for this purpose. We are pleased to report that after making these appropriations \$1,400,000 has been transferred to Rest Account, in addition to \$1,357,820 received as premium on new stock.

It is interesting to note the course of the Bank's circulation during the period under review. Our last report showed \$10,222,953 outstanding; during the succeeding months there were important fluctuations, the highest and lowest points touched in July being \$10,016,000 and \$8,289,418 respectively. The early crop movement gave an impetus to business, and our available margin of circulation was quickly absorbed. The total amount outstanding in September was \$10,

STOP! AND THINK A MINUTE

What makes the difference between a GREAT CITY and a CROSSROADS village? RESOURCES, you say, and you are right.

TRANSPORTATION, Trade Territory, Distribution, Natural Resources such as Minerals, Timber, Cheap Fuel, Cheap Power for Manufactories, Industries that give Employment to Skilled and Unskilled Labor, a Big Weekly Payroll—these are the Resources that make all the difference in the world between Good Towns and Poor Towns, between Live Towns and Dead Towns, between Cities and Villages.

The Town that has the RESOURCES is BOUND to be a GOOD Town. Nothing can Stop it.

WHERE THE MONEY IS MADE.

The money is made in the LIVE Towns, in the towns that have the resources that will make CITIES of them.

THE NEW CITY OF RESOURCES IS

TOFIELD, Alta.

TOFIELD is on the Main Line of the GRAND TRUNK PACIFIC—it is the Junctional Point of the Main Line and the Tofield-Calgary Branch, which, when completed, will be the longest and most important branch line of the System; it is planned to make it the Junctional point of the Main Line and the Battleford Branch, also. This gives it ideal Transportation facilities—puts it right in touch with the best part of the Prairie Provinces—makes it an ideal manufacturing and distributing centre.

TOFIELD has 20,000 acres of coal—five coal companies now operating—150 men employed at the mines—and has only begun to develop its vast coal deposits. The mines are expected to be employing 500 men before the end of this year.

TOFIELD has valuable Clay Deposits—Porcelain Clay, as well as clay for the manufacture of Brick, Tiling, Terra Cotta, Fire-proofing, etc. It has Cheap Fuel for the manufacture of these products, and it has the Best Market in Western Canada—Edmonton, Saskatoon, Calgary, and the scores of prosperous town in Saskatchewan and Alberta.

TOFIELD has Natural Gas—which means cheap fuel, cheap light and cheap power. It has the Cheap Fuel with which to produce Cheap Electrical Power for Factories.

TOFIELD is the Trade Centre of the celebrated Beaver Hills District—one of the richest and most prosperous mixed farming sections of the West, where grain growing is accompanied by stock raising, dairying and market gardening—and it has the best market in all Canada for everything the farmers produce—the rapidly growing cities of Central Alberta, and the fast developing lumbering, mining and manufacturing districts on the Eastern Slope of the Canadian Rockies.

TOFIELD has ALL THE RESOURCES necessary to make it a Populous, Prosperous City. Within Two Years it has grown to a population of 750 to 800 souls, and its growth has only begun, because the development of its resources has only begun.

BIG PROFITS TO BE MADE IN TOFIELD.

Property can now be bought in Tofield within a couple of blocks of Main Street—within three or four blocks of the Business Centre within a few blocks of the Station—at \$100 to \$150 a lot, on easy monthly payments. We are just platting a tract that is RIGHT IN THE HEART OF THE TOWN—the centre of it is HALF A MILE INSIDE THE TOWN LIMITS. Plans will be ready in a few days. Adjoining property has ADVANCED 100 PER CENT in value during the past year. Those who buy early are sure to make a good profit, for this property will advance in price at least \$50 a lot in sixty days. Send for full particulars at once and get choice location.

Canada West Townsite Company, Ltd.,

615-617 Somerset Block

WINNIPEG

MANITOBA.

Mail This Coupon for Full Particulars.

C.T.F.

CANADA WEST TOWNSITE CO. LTD.
615 Somerset Block, Winnipeg, Man.

GENTLEMEN: Please send me, free and post paid, illustrated circular, plans and full particulars of your property at Tofield, Alta. It is understood that this request places me under no obligation to purchase.

Name _____

Address _____

WHETHER IT IS Business or the Bonspiel

that brings you to Winnipeg in February, you are not likely to spend the whole of your recreative moments in the excitement of the "Roaring Game." By all means be our guest for a quiet half hour while you inspect that fine exhibit known the world over as the

FLYING DUTCHMAN LINE

of Agricultural Machinery and Implements. Not under any circumstances will you be importuned to buy. Have a quiet look around our fine warehouse. Make your inquiries and then make the most exhaustive inquiry into anything else of the nature of our goods on the market.

The visit will pay you if
it is only to see
our great

"GLENGARRY"

brand of Cutters and
high grade
Buggies

The "Glengarry" is the "Blizzard King." For comfort, security and value, there isn't a vehicle like it on the trail to-day.

Canadian Moline Plow Co.

Logan Avenue

Winnipeg

842,000, and but for the issue of new stock we should have had difficulty in keeping within the limits of the law, and, as it was, meeting the demands on us for currency. In October we exceeded the amount authorized under ordinary conditions, and had recourse to the provisions of the Bank Act Amendment of 1908. At the close of November we reported notes in circulation amounting to \$12,004,649, this being \$307,374 more than we were allowed to issue except under the emergency provisions. There is a real necessity for a large increase of the amount of circulation, and it does not seem unreasonable that the period for emergency issues should be extended to include both the months of September and February. In connection with this suggestion it should be noted that because of the great development of business it is altogether likely that we shall in the near future experience a currency stringency in the spring and summer months. This matter should have very serious consideration, and immediate action should be taken to guard against the possibility of such an occurrence. The augmentation of capital by the banks is, of course, the first remedy to be applied, but this is of necessity a slow process and would scarcely keep pace with requirements. We

venture to hope that during the discussion of the Bank Act, means will be found to enable any Canadian bank possessed of sufficient resources to be able always to pay out its own notes across the counter without resorting to other forms of currency.

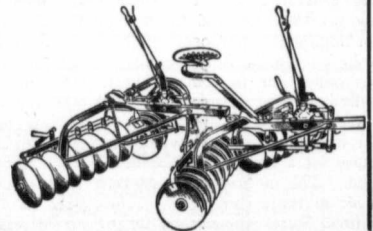
During the year our deposits were increased by \$19,131,480, showing a handsome growth, although we received under this head large amounts which are

held temporarily and will be withdrawn in the near future. Our branches in the West contributed a handsome addition to our deposit account. On the other side of the balance sheet, current loans and discounts show an increase of \$19,757,171, as compared with last year's report, and our investments in Government bonds, municipal and other securities were increased by \$2,616,826. Cash resources increased \$8,390,979.

In view of the wide franchise we enjoy, we recognize the duty and responsibility upon us to aid in the development of the country, and we have endeavored to keep abreast of its rapid growing needs. We are confident that the work of establishing branches has been undertaken with great care and a conscientious regard for every interest involved. It is gratifying to know that our labors have not been in vain.

Both Out Throw and In Throw

This illustrates the correct Harrow for Summer Fallow work. It is a double action Harrow, both out and in-throw working the ground twice with the one operation. The "Bissell" in throw Harrow in the rear worked at a sharp angle, leaves the surface of the ground pulverized like a "mulch", so it will hold the moisture. The central position of the seat is convenient from which to adjust both Harrows. Six horses will handle this double action nicely. There is no neck weight, and it works complete without a fore truck or other "make shift." Suitable for either engine or horse power. For further particulars write Dept. L.



The "Bissell" Double Action Disk

Manufactured
Exclusively by **T. E. Bissell Co. Ltd., Elora, Ont.**

JOHN DEERE PLOW CO. LTD., Winnipeg, Man., Sole Agents

The distribution of the branches at the close of the year was as follows:

Ontario	66	
Quebec	3	
Nova Scotia	13	
New Brunswick	1	
Prince Edward Island ..	5	
Manitoba	21	
Saskatchewan	52	
Alberta	40	
British Columbia	33	
North-West Territories		
and Yukon	3	
Total branches in Canada		237
England	1	
Mexico	1	
United States	4	
Total number of branches		243

The management of so large a number of branch banks brings up the question of our staff, which now numbers over two thousand, and you will readily understand that this is a difficult problem. We have not overlooked the importance of a strict supervision of our branches, and have endeavored to devise a system which will ensure a freedom of action and quick response to the demands of customers, and at the same time keep in control managers who lack experience and judgment. We sometimes fear lest we should fail in our appreciation of the claims of our large staff, particularly in these latter days of profitable employment in other occupations when promotion in banking appears slow. In our service we often ask officers to perform onerous duties under very trying circumstances, but our experience almost invariably is that they meet the emergency with commendable efficiency and loyalty.

We look into the future from the vantage ground of a successful year's business, and we have reason to hope for a continuance of prosperity so far as Canada is concerned, and as a bank we shall expect to share in the general good. The steady and persistent demand for money for legitimate purposes should keep our funds fully employed for some time to come. There will doubtless, as usual, be adverse influences at work, but at the moment there is no apparent cause for a feeling of apprehension. The noticeable improvement in trade conditions in the United States encourages us to think that our neighbors will emerge from a period of depression not unusual on the eve of a Presidential election. We shall probably see easier conditions in Great Britain after year's accounts have been settled. This is important and desirable when we consider the large amounts of

Canadian securities awaiting a favorable market.

We look forward confidently to the duties and responsibilities of the coming year, and trust you will not be disappointed with our efforts to render you good service.

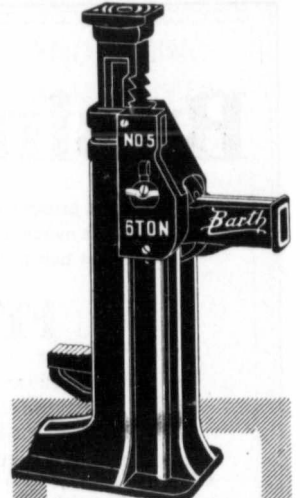
President's Address in part.

The President then spoke as follows:

The progress of the Bank during the past year has been so gratifying and the subjects to which the General Manager has been asking your attention are so important that I feel less confidence than usual in taking up your time merely to review some of those features of the prosperity of the country, with most of which you are already familiar. As you all know, the year has been a momentous one for Canada, in directions which cannot be discussed here, but on the purely business side it has demonstrated in an unusual degree the fact that the general progress of such a large area as Canada is likely to be accompanied by untoward as well as fortunate events.

The totals of our imports and exports for the fiscal year of the Dominion, ending March, 1911, are again record figures. Our imports were \$472,194,000 and our exports \$297,196,000, balance against us being the large sum of \$174,998,000, not far from the balances of any two previous years put together. The total trade was \$769,390,000, against \$693,161,000 a year ago. The significant fact, however, is that while our imports increased \$80,391,000 our exports declined \$4,162,000. This is, of course, principally due to very free imports in anticipation of the present large cereal crop; to the increase in railroad construction and public and private building; and to larger immigration, the value of such settlers' effects as are declared appearing as imports. It is also partly due to somewhat larger imports of gold bullion and silver. For the first six months, ending September, 1911, of the current fiscal year, the figures are even more striking, the imports being \$266,187,000, and the exports \$141,865,000, the balance against us for the six months being \$124,322,000, as against \$94,404,000 for the corresponding period in 1910. The imports for the half year in 1911 include, however, an increase of about \$7,500,000 in gold coin. An examination of the items of imports and exports in the trade returns will suggest many explanations for the respective increases and decreases, but the fact remains that we must enlarge the volume of products we have to export and either lessen our imports by cur-

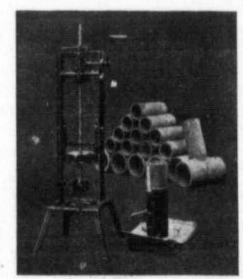
tailment of expenditure or by manufacturing at home many of the articles we buy abroad, especially from the United States. Our trade with that country, always one-sided, is growing more so. During the fiscal year ending March, 1911, we bought from them \$293,403,000 and sold to them \$119,203,000, leaving a balance in their favor to be paid in cash of \$174,200,000, over \$50,000,000 more than in any previous year. In 1901 our total trade with them was \$191,689,000, and in ten years it has grown to \$412,606,000, or an increase of 115 per cent. The part we have to pay in cash has, however, grown from \$46,942,000 to \$174,200,000, an increase of 271 per cent. Our trade with Great Britain makes the worst showing for many years. The imports have grown to \$110,390,000, while the exports have fallen to \$137,158,000, leaving a balance in our favor of only \$26,768,000, a much smaller sum than in any of the last ten years. In spite of the decrease our exports are still the largest for any year except the previous one, but the volume of imports is much greater than ever before. It is useless to repeat arguments often advanced in other years. Few nations have such an alluring future and few can afford to mortgage their future to such an extent, but our power to do so depends upon our credit, and there are those in England who are asking whether we are not borrowing too much. There is, of course, one great reason why we must go more and more largely into debt for many years to come. At present we are preparing for the settlement of about 400,000 immigrants in one year. This is an addition of five per cent. to our population, or the same as if 4,500,000 new people entered the United States in one year. To provide everything for these people, from transportation to housing, is a huge task, quite large enough to account for more than the difference between our imports and exports. Not only must the improvements necessary to create many new farming districts be made, but new towns, and great additions and improvements to older ones are required, indeed, betterments of all kinds throughout the community. More important than all, two new transcontinental railway systems must be completed and many branch lines added to our three great systems. There is, therefore, little cause for wonder that we need so much new money every year. The import returns show settlers' effects at only \$14,000,000, doubtless far below the actual value, but the main part of the settler's property consists



Now isn't it a fact that when you buy a new tool you consider quality and price. The quality of this Jack we guarantee without any ifs. The price—why a few cents a month for a few years pays for it. Most good Thresher Supply Dealers sell this Jack. If they don't write us.

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Make Your Own Tile



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WALKERVILLE, ONT.

Oxy-Acetylene Welding

Save your cracked or broken castings from the scrap heap. We weld cylinders, crank shafts, gears, levers, etc., retain original form and strength at a small cost. Metal added to worn out parts. All metals welded satisfactory.

The Manitoba Welding & Mfg Co.
62½ Princess St. Winnipeg.

of money. The estimated wealth of the new settlers for 1911, based on the lowest experience of several years, is about \$160,000,000.

The revenues and expenditures of the Federal Government show plainly the growth of the country as a whole. Apparently the ordinary revenue for the year ending 31st March, 1912, will be between \$130,000,000 and \$140,000,000, as compared with \$117,780,000, in 1911, and with \$36,000,000 in 1896, only 15 years ago. Thus far the new capital expenditure, estimated at about \$46,000,000 for the year, has been met out of revenue.

The clearing house returns of twenty cities for 1911 were \$7,336,866,000, against \$6,153,701,000 for seventeen cities in 1910, a gain of 19 per cent.; the gain between 1910 and 1911 being 18 per cent.

The building permits of the chief cities again illustrate the rate of growth in Canada.

	1910	1911
Montreal—	\$15,713,000	\$14,580,000
Toronto—	\$21,127,000	\$24,374,000
Winnipeg—	\$15,106,000	\$17,550,000
Vancouver—	\$13,150,000	\$17,652,000

Proposals for municipal expenditures are on a scale never attempted before.

Manitoba Saskatchewan and Alberta.

Practically all the early estimates of the yields of produce for 1910 in the Western Provinces were astray, the error in underestimation varying in the case of wheat from 12,000,000 to 25,000,000 bushels. The drought throughout the whole West had not affected the yield or the grade as seriously as was expected, and this was particularly the case in Manitoba, where the bulk of the high grade wheat was produced.

Opinions as to the outcome of the crop of 1911 have also been widely different, owing largely to unsatisfactory weather conditions. The season of 1911 did not open altogether favorably, although preceded by a favorable autumn, in so far as the preparation of the land and increased acreage were concerned. The area under cultivation had been increased 15 per cent. for wheat, 4 per cent. for oats, 12 per cent. for barley, and 4 per cent. for flax over the year 1910. The weather conditions were such that the grain grew rapidly and the outlook was promising well into the month of August.

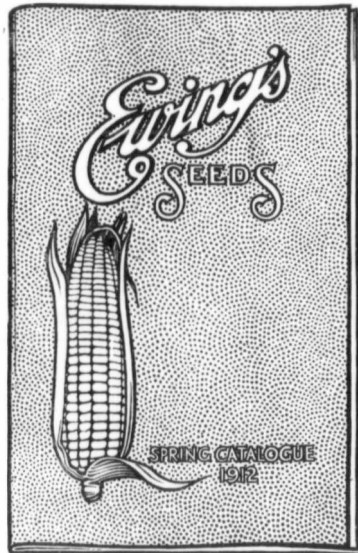
At that date estimates of a wheat yield of 200,000,000 to 225,000,000 bushels, oats 200,000,000 bushels, barley 40,000,000 bushels, and flax 10,000,000

bushels were made by competent judges, and it appeared for a short time as if these figures might be reached. Towards the end of August, however, the weather became cold and wet. The result that the ripening season was shortened, and throughout large areas in Saskatchewan and Alberta the grain was in green condition when the frost came in September. In Manitoba, however, the crop had ripened somewhat earlier than in Saskatchewan and Alberta, and the results in the older province, both as regards grade and yield, have been satisfactory. Despite the extraordinary unfavorable weather which prevailed during September, October and November over a large part of the West, it is conceded by competent authorities that the three Western Provinces have the largest and most valuable crop which they have yet produced. From recent information collected by our own staff we estimate that the final result will be approximately as follows:

Wheat ...	175,000,000 bus.
Oats	180,000,000 bus.
Barley ..	35,000,000 bus.
Flax	6,000,000 bus.

—having a money value to the farmer of upwards of \$200,000,000. Of the wheat not quite 50 per cent. will grade as milling wheat. In the case of the other cereals the percentage of high grade grain will be somewhat higher. The high prices which have existed for the lower grades, however, in consequence of the export demand for all kinds of coarse grains, have largely offset the loss consequent upon the damage by unfavorable weather.

There are some object lessons to the farmers in connection with the past season's work which might well cause him to pause and seriously consider. Most important of all is the question of a greater diversity of farming. We have frequently touched upon this question, and while something has been accomplished, there is still great room for improvement. We refer particularly to the apparent indifference of a very large percentage of our farmers to the raising of high-grade cattle, hogs, horses and sheep, and also to the lack of effort on their part to produce such profitable commodities as milk, butter, eggs, cheese, vegetables, fruit, meats, poultry and all the minor by-products which the farm is capable of producing. It is a deplorable state of affairs that Western Canada imports from the United States very large quantities of the commodities mentioned, the value of which runs into millions of dollars yearly. The main cause of these



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Reliable
Seeds—

vegetable—flower—field root—field grain—grass — clover and ensilage corn.—Also fruit trees — small fruits — roses and other shrubs—bedding plants—fertilizers — insecticides — garden tools — spraying appliances and poultry supplies. Mailed free for the asking. Address

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Taxidermist Supplies. Write for Lists.

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teaches how to become a successful Locomotive Fireman and then an Engineer in quickest time at small expense. Learn in spare time.

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unsatisfactory conditions is that the majority of farmers confine their efforts almost solely to the raising of grain, and appear to forget entirely the value of the home market for the products mentioned. It is true that the agricultural colleges in the three Provinces are doing excellent work, but the progress which is being made is comparatively slow and can only be materially accelerated by the farmers generally helping in the good work. Experience has proved that large profits, not long delayed, await the farmer who will intelligently carry out a system of intensified farming. He must pay attention to the proper rotation of crops, to the value of increasing and preserving the fertility of the soil by the use of manure and other fertilizers, and to the extermination of noxious weeds. He must also have a right conception of the amount of labor required, in addition to his own and that of his family, for carrying on properly the work of the farm.

The weather conditions in the autumn of 1911 would almost warrant us in predicting a considerably smaller acreage of wheat in 1912. Much will depend upon the weather conditions of the coming spring. Little plowing was done during October and November owing to the unusually early freezing of the soil. In view of the improved facilities for carrying on all kinds of farm work, much can still be accomplished if we have an early spring. It may not, however, in the end be a serious drawback to the country if a late spring should result in having large areas of land put into summer fallow. Such a process undoubtedly enriches the land, and experience proves that land so treated over a series of years gives the best total results. Grain, other than wheat, such as oats, barley and flax, as well as roots, can be seeded somewhat later and excellent results obtained.

While speaking on this subject it may be of interest to know that last year Canada stood fifth amongst the nations of the world engaged in the production of wheat. The figures are as follows:

	Acres.	Bushels.
United States—	52,123,000	658,567,000
Russia in Europe—	73,818,000	629,300,000
British India—	29,670,000	370,413,000
France—	15,644,000	320,142,000
Canada—	10,503,000	204,634,000
Hungary—	9,095,000	192,691,000

It will doubtless not be many

years before Canada will advance to a much higher position in the above list.

The winter of 1910-11 cannot be regarded as having been altogether satisfactory for the live stock industry. The early months of 1911 were very cold, with heavy snow storms and blizzards in the districts where the animals wintered, and it was feared that heavy losses would fall on the ranchers. The spring, however, opened favorably with plenty of moisture in the ground, the grasses grew rapidly and luxuriantly, and the cattle which had grown thin soon showed sign of improving. As a general rule the cattle came on the market in good condition and prices for all grades have been higher than during the past 15 or 20 years. Quite a large number however, will be carried over till the spring, as farmers and dealers will take advantage of the large quantity of low grade grain in the country and by feeding it during the winter will have their animals ready for the market early in the year. Hogs and sheep have commanded high prices throughout the year, but it is to be regretted that they are not raised in sufficient numbers to meet the demands of the local packing houses. It is a satisfaction to note, however, that at several points in Saskatchewan and Manitoba farmers have recently been purchasing small flocks of sheep. As a further matter of interest we may add that between the 1st January, 1911, and the 18th November, 1911, live stock were received at the stock yards in Winnipeg as follows:

Cattle	89,765 head
Hogs	73,494 head
Sheep	38,289 head

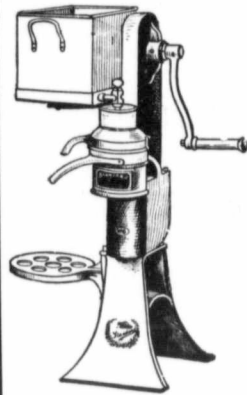
An agreement has now been concluded between the railways centering at Winnipeg for the establishment of more extensive stock yards at St. Boniface, Manitoba. Such improved facilities should encourage the rancher and farmer to develop the live stock industry to a greater extent in order that the requirements of our local packing houses may be fully supplied from our own country.

During the past five years a great change in conditions has taken place in the raising of horses. Ranges which were formerly used for the purpose have been divided into farms, and as a consequence the stock of range horses is rapidly diminishing and a good market developed for farm horses imported from the Eastern Provinces. Prices for this class of animal vary from \$500 to \$700 per team. A good demand for horses has also been created on account of the amount of work being carried on by

CLEAN SKIMMING

Is the Final Test of a Cream Separator

In actual skimming results, that is, in obtaining from the milk the last available particle of butter fat there is in it, in a contest with some of the best machines in Canada and America



The STANDARD CANADIAN-MADE Cream Separator

outclassed all competitors, and its Makers are prepared under any conditions in an open contest to back it against any Cream Separator made.

**IT SKIMS FASTER,
TURNS EASIER,
IS MORE COMPACT,
EASIER TO CLEAN**

than any Separator now running. Safest for children to handle. Gears all enclosed and absolutely dust proof. No back-ache, either in handling crank or lifting milk to top of supply can. Crank is at a comfortable height (35 inches) and supply can is only 3 feet 2 inches from floor. You must eventually get a **STANDARD**.

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ENDERTON BLOCK - - - WINNIPEG

Perfection in Tanning

is only obtained by absolute conformity to natural conditions and the skillful treatment of those conditions. This knowledge and special skill cannot be acquired from books or picked up from "any old" tanner. It is to be gained from a life's experience in handling and preserving hides and pelts.

Robes
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Buggy-Rugs
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if they are the products of "The Brandon Tannery" will give the utmost satisfaction, however long they are worn; however abused.

made from skins or hides which have been tanned by us have a flexibility and wearing quality that no other process can give.

Our prices for tanning an average size hide (about 50 lbs.), providing the best lining and double row of felt trimming is \$9.50. Smaller hides less in proportion, and we pay the freight one way.

BRANDON TANNERY

Successors to Carruthers & Co.

BRANDON

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the railways and irrigation companies.

The logging season of 1910-11 opened quite actively and a large cut was made by most of the operators. The weather was satisfactory for the greater part of the winter, although towards the end of it the snowfall was heavy and interfered a little with getting the logs out of the woods. The big operator was able in the main not only to secure the logs of the year's cut, but also to draw out the logs of the previous season, left in the woods owing to the early breaking up of the previous winter. In the spring the demand for lumber was general, satisfactory sales were made, and prices continued good until June, when keen competition developed between the manufacturers of spruce and the coast and mountain mills. A large quantity of low grade stuff was also brought in from the United States. Very favorable freight arrangements were also conceded by the railways to the coast and mountain mills. This concession, coupled with the cheap article from the United States, placed the manufacturer of spruce at a disadvantage and sales and profits alike were somewhat curtailed. Taken as a whole, however, both manufacturer and jobber, have had a satisfactory year. The present season also promises to be an active one, and a large cut of logs is predicted.

It is noticeable that the new settlers who entered the Prairie Provinces in 1911 were of a better class than in any previous year. Commenting recently upon the matter the Dominion Government officials report that from the 1st January, 1911, to the 25th November, 1911, there entered Canada as immigrants 338,986 persons. Of these 214,458 entered at ocean ports, and 124,528 came from the United States. Of those entering by ocean ports 169,429 were British, while the balance, 45,038, were from Continental Europe. Of the combined British and European (214,458) it is estimated that 50 per cent. settled west of the Great Lakes, whilst of the American settlers (124,528) it is estimated that 85 per cent. also settled in Western Canada. It is estimated that the amount of money and other assets which each settler brings into the country is as follows:

British	\$150 to \$200
Other European	\$10
American	\$1000

The fish and fur industries do not as yet represent a large volume of business to the Western Provinces. They are capable, however, of very great development, and the progress made during the past year has been satisfactory. The lakes of Mani-



"IDEAL" Fence will hold a Buffalo!

Any attempt to get the better of "IDEAL" Fence will only make him look foolish. "IDEAL" Fence was chosen by the Government out of fourteen makes, to fence in their herd of wild Buffaloes at Wainwright. Naturally, Buffaloes don't take kindly to fence of any kind, and "IDEAL" Fence was tested pretty roughly the first few weeks at Wainwright. NOW, the Buffaloes know better.

"IDEAL" Fence and its never-give look are made of all large gauge No. 9 hard steel wire, heavily galvanized. Rust proof, won't sag, won't weaken, won't get unsightly.

Get a Handsome Picture Free!

Send us the names of five men who would be interested in good fencing and we will mail you a beautiful picture in colors of the herd of Buffaloes in the Government preserve at Wainwright. This picture is an excellent production, and worthy of a place in the finest home.

Send in Five Names and get your Picture by Return Mail

IDEAL FENCE CO., Limited, WINNIPEG


toba, Saskatchewan and Alberta contain almost unlimited quantities of valuable fish, and good markets at profitable prices are found for the catches in the United States and the Western provinces. The Dominion Government have at last realized the importance of the fishing industry to the Western provinces, and a Commission has been appointed to investigate existing conditions thoroughly. A report by the Commission is now in course of preparation. The industry during the winter months affords employment to a the provinces, who are thus able large number of settlers and Indians in the northern parts of to supplement their earnings derived from farming and other pursuits. The fur catch is an important industry to such places as Edmonton and Prince Albert. Owing to the severity of winter, 1910, trapping conditions were not altogether favorable, and the catch fell somewhat below normal figures. To offset this it is satisfactory to note that prices were higher and the year's business has been profitable.

The coal industry has been in a very unsatisfactory condition for nearly a year, in consequence of the labor troubles existing in the coal districts of Western Canada. Fortunately, in September last, a basis for settlement was reached between the owners of the mines affected and the miners. A contract has been entered into for a period of 3½ years, and it is expected that no further trouble will arise during this period of time. It is devoutly to be hoped that the results expected from the agreement will be realized. Undoubtedly a great injury was done to the industry as well as to manufacturing and commercial enterprises, and the loss of wages to the men was very large. The local governments and the railways, however, realized the gravity of the situation, and have done a great deal to relieve matters.

There has been great activity in real estate during the year throughout the West as regards farm, city and town properties. In cities and towns the great danger has been in the number

of outlying sub-divisions placed on the market. The cure for this unhealthy state of affairs rests in the hands of the more reliable firms, and we cannot too strongly urge upon them the importance of applying the remedy without delay. It is not our desire to point to any particular place or district, as the reliable dealers are undoubtedly in a better position to know the situation than ourselves. It is to them, however, that the commercial community look for protection from a catastrophe which will inevitably come if present methods are allowed to continue. Undoubtedly desirable inside properties in our principal cities and towns have a good basis for existing values, but these must suffer materially unless something is done to stop the inflation of the values of outlying districts. Farm lands are firmly held at advancing prices, justified perhaps by the results of several years of good average crops. It will be a great detriment to the West, however, if our cheap lands are advanced

See the V



And Make
\$25 a Week
Trapping this Fall
VICTOR TRAPS
are sure to go and
sure to hold Every
genuine Victor Trap
is pierced with a "V"
Ask your Dealer
Insist on the "V"

3

Leading Brands

Sold everywhere throughout
Western Canada

DREWRY'S

Refined
Ale

(Registered)

Extra Stout

AND

Redwood
LagerThese well known malt
beverages are brewed from
barley malt and hops only.
Always uniform in quality and
flavor.

SALESMEN WANTED

Trained Salesmen earn from \$1,200 to \$5,000 a year and expenses. There are hundreds of such positions now open. No former experience needed to get one of them. We will teach you to be a Salesman in eight weeks by mail and assist you to secure a position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars, list of good openings, and testimonials from over a thousand men who have recently placed in good positions. Address Nearest Office Dept. 172

National Salesmen's Training Association
Chicago New York Kansas City Seattle New Orleans Toronto

so rapidly in price as to make the new settler hesitate about coming to us.

The building trade, with few exceptions, has been exceedingly active in Western cities and towns. The record figures reached in 1910 in such cities as Winnipeg, Calgary, Edmonton, Regina, Saskatoon, Moose Jaw, Medicine Hat, and Prince Albert will probably be exceeded by the final figures of 1911. We understand, too, that in the larger centres a decided effort is being made to improve the standard of the buildings erected. The industrial developments taking place in our chief business centres is an important factor in such activity, and as the population increases we shall doubtless find that such development will be much more rapid than many of us at present realize.

The extension of the three railways, the Canadian Pacific Railway, the Canadian Northern Railway, and the Grand Trunk Pacific Railway has been carried on to a greater extent than at any previous time, and the disbursement of money in this connection has materially helped the prosperity of the Western provinces. It is likely that these expenditures will continue for some years to come, in order to meet the growing requirements of the country.

New capital has come freely from Great Britain, Continental Europe, and the United States. Municipal, mortgage, and industrial securities have been eagerly sought and we think the results will prove generally satisfactory to the investor. Capital, however, is timid of investment in new countries and new enterprises, and every care should be exercised to guard the interests of bona fide investors. There are some things already of which our local governments and municipal authorities might well take notice.

The increase of population and wealth in the centres has created a desire for the best class of payments, roadways, sewers, etc. This is very commendable, but the authorities in providing such improvements are inclined to load the future to too great an extent. Debentures which are drawn for 5, 10, 15, 25 and 30 years would be more sound if drawn for 2, 5, 7, 10, and 15 years, the shorter periods of time more nearly representing the life of the improvement.

Municipal and government ownership of public utilities has a tendency to extend unduly, and there are already signs of failure in this connection in several directions. Any considerable disaster would undoubtedly result not only in new capital being withheld from us but in

NOT ONE
SMUT GERM

can escape destruction if it is dealt with by the
AUTOMATIC GRAIN PICKLER

The main features of this machine are: A tank for solution; a cone shaped hopper into which the grain to be treated is placed. From this hopper the grain falls onto a turbine placed in the lower hopper, causing a quick revolution of the turbine. The liquid passes from the tank through a pipe into the turbine where it is forced out through openings in the bottom outer edge onto the grains.

IT MEANS that the last seed is reached and treated in every corner; and it is done at the rate of 135 BUSHELS AN HOUR. It is equally successful with wheat, oats, barley, flax, etc., and we guarantee perfect results.

Price, with an Absolute Guarantee, is only \$17 for a Formaldehyde Machine.
\$20 for Acid Proof Metal Machine which will Stand Bluestone.

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Information to

The Dominion Specialty Works

820 UNION BANK

WINNIPEG, MAN.

Agents Wanted.

Freight prepaid on all shipments to any point in Canada

Standard
Gas Engine Oil

gives the best lubrication possible, alike in kerosine, gasoline and gas engines. Keeps its body at high temperatures. Equally good for external bearings.

MICA AXLE GREASE

saves power and fuel in your tractors. The best known, most liked axle grease made. Never rubs off. Never gums.

Silver Star Engine
Engine Kerosine Oil Gasoline

Granite Harvester Oil—The short cut oil; specially prepared for use on reapers, binders and threshers. Greatly reduces friction and wear. Body not affected by moisture or change of climate.

Capitol Cylinder Oil—The very best oil for steam plants on the farm. Lasts longer and gets more power from the engine, with less wear, than any cheap substitutes; costs less in the end.

Atlantic Red Engine Oil—Strongly recommended for slow and medium speed engines and machinery. Eases the bearings and lightens the load.

Our experts have made a special study of the requirements of farm machinery. Read our "Easier Farming" booklet: free, postpaid. Call or write, any agency.

The Imperial Oil Company, Limited

Patronize Those Who

Patronize This Magazine

vestments already made might be realized upon in a way which would reflect seriously upon the credit of the people and the country.

Before passing from this subject we should like to say that there is one matter at least which might well be regarded by provincial governments and rural municipalities as coming within their scope of operations. We refer to protection to the farmer from the effect of hailstorms. We allude particularly at this time to the subject, as the number of farmers who suffered in this respect last year is greater than in any previous year, and the individual loss has been heavier. As the area under cultivation increases the number who will suffer loss and the aggregate losses will increase considerably. It is well, therefore, to consider what protection can be given to minimize the loss. The government of Alberta gives some protection to farmers who pay certain schedule rates of insurance, and local companies also operate in that province as well as in the provinces of Saskatchewan and Manitoba. This protection on the existing basis is not generally made use of, and it appears to us that a regular tax authorized by the legislature would be feasible. Were all farmers obliged to pay on the basis of an approved schedule, the obligation would not be burdensome.

In concluding our remarks regarding these provinces, it is but fair to say that although the Western crops will produce a larger amount of money than those of any previous year, yet the conditions under which they will have been gathered and marketed will interfere with an early liquidation of the indebtedness of the farmer and merchant. The wholesale dealers and manufacturers, however, practically in all lines of business, report large increases in the volume of trade over previous years, and they evidently feel satisfied with the credit thus extended to their customers.

In addition the President gave a resume of the conditions of the past year in the other provinces of Canada. A copy of the complete address may be obtained upon application to the Bank.

A telegraphic line, consisting of twenty-four wires, each representing a letter, was established by Lesage, at Geneva, in 1774; and in the same year Bishop Watson made experiments over 10,600 feet of wire near London. In Germany the invention is credited to Sommering—1809.



Can you afford to take these chances?

Read these clippings—all taken from the same paper—the result of an electrical storm.

LOSSES BY LIGHTNING.

BARNS BURNED IN DIFFERENT SECTIONS OF THE COUNTRY.

Farmers Lose Live Stock and Crops—Planing Mill at Niagara Falls and Large Stock of Lumber Destroyed—Other Fires.

(Special Despatch to The Globe.)

Lindsay, Sept. 15.—A more than ordinary electric storm, doing considerable damage, passed over this section this morning at about 1 o'clock in the rural districts. Several barns were destroyed by fire from lightning. Among others the following have been reported: The barn of Nicholas Opa, containing the season's crop, was destroyed by Mrs. Shea, total loss; the dwelling house and barns of Mr. Lamb of the township of Verum are reported destroyed, but no particulars have been received. In the p. of Lindsay the storm was

Another Barn Burned.

St. Catharines, Sept. 15.—(Special Despatch.)—Lightning struck and set fire to the barn of John Bertram on the town line between Leith and Clinton, about a mile north of Vinetay on Tuesday night. There was a hot electrical storm in that vicinity. The barn was entirely destroyed, with its contents, including two valuable horses. Most of the implements were to be outside the building. Mr. Bertram had recently cleared the barn for thrashing, which had been completed. The loss will be \$1,050 or \$2,000. The barn was a storage for crops and sheaves of horses.

Blaze at the Falls.

Another barn and the dwelling house and barns of Mr. Lamb of the township of Verum are reported destroyed, but no particulars have been received. In the p. of Lindsay the storm was

Other Fires.

Intense, owing to lightning and other causes, with the loss of \$4,000 in insurance.

"EASTLAKE" METALLIC SHINGLES

will prevent such losses—they are LIGHTNING PROOF—an absolute protection for your crops and implements. "EASTLAKE" SHINGLES are the EASIEST to lay, and cost less than a wooden roof equipped with lightning rods. A Metallic Roof saves you money—it reduces your insurance rate and remains IN PERFECT CONDITION for a lifetime.

Manufacturers



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FREE BOOKLET

Our interesting free booklet "Eastlake Metallic Shingles" gives valuable roofing information. Write for it.

1937

Lower Freight Rates on Grain

The Canadian Pacific and Canadian Northern railroads have made a heavy reduction on grain freights

To Minneapolis and Duluth

We have strong, old-established offices in both markets and can make money for our Canadian shippers on

Wheat - Barley - Flax

Write direct to our Minneapolis office to-day for full shipping instructions. Give your railroad station and state the kind and amount of grain you have to ship.

RANDALL, GEE & MITCHELL

Minneapolis

GRAIN COMMISSION

WINNIPEG

Duluth

MANITOBA

The Province that has been enlarged from about 74,000 square miles to 229,000 square miles

OVER THREE AND A HALF MILLIONS OF ACRES are now open for homesteading in Manitoba, and the Provincial Government will give every possible encouragement and help to industrious men who are seeking an ideal home by free grant or purchase. By ordinary application and industry in treating the splendid soil of this Province, no man can fail to reach the success he has been fruitlessly endeavoring to reach elsewhere. And it does not take a long time to do it. Conditions of soil and climate are the best in the three grain-growing stock-raising Provinces. Splendid profits are waiting the man who will work—and we will protect the stranger

Gold in the Crop

The total grain crop in 1911 amounted to 160,262,300 bushels worth \$63,651,925. This was really a reward of \$2,100 to every Manitoba farmer. Many of these Manitoba farmers have only a few acres each, broken. The increase in the value of their land, together with the value of the crops grown greatly increases the returns of the Manitoba farmers, while the extension of the boundary gives the Province many valuable resources available equally to the New Settler and to the old timer

Write for information to

Jas. Hartney, 77 York Street, Toronto.

Jos. Burk, 178 Logan Avenue, Winnipeg.

Immigration Agents



Abundance and Home Comfort in Manitoba

Highest Prices

Within the last few years higher prices have been obtained for Manitoba produce in grain and live stock than have ever been realized since the Province was opened up. Railway facilities are improving every day and the great transportation Companies have very large developments in progress. Manitoba has many social and business advantages in her magnificent churches, schools and colleges. Telephone system throughout the Province owned and operated by the Government.

Write for information to

J. J. GOLDEN

Deputy Minister of Agriculture and Immigration, Winnipeg, Man.:

MANITOBA

In business life, in agriculture in the professions, in fact in every sphere in which men are employed, it has become the fashion to depreciate the "chances" which present-day conditions offer to success as compared with what they were "in years gone by."

This whine is about the lamest and tamest apology for insipid laziness that any two-legged creature could offer. The opportunities are distinctly greater, and still more numerous to-day for success in every line than they ever were. They lie ready to the hand of the man who will work, and who is intently looking for them.

Manitoba has her millionaires who entered the province with scarcely a dollar's worth of unencumbered property. They found the raw material—very "raw" some of it was too—but they knew what could be made out of that black stuff that nourished the succulent herbage of the limitless prairies.

The millionaires need not interest us at the moment. Few of us expect or even have any desire to become millionaires, but we all feel that we would like to make the most of our opportunities whatever they are; to secure a

competency by the work of our own brain and brawn, and to provide while we have the ability for the evening of life when one can no longer labor as he did at life's meridian.



A Corner of Killarney Fair. Some of Her Own Efforts in Horse Breeding

Among all the "chances" that can fall to the lot of a man there is nothing after all like the possibilities of a bit of freehold land that

may be cultivated to some purpose.

It is in this very heritage that Manitoba is prolific to a degree that has scarcely been equalled on any other part of the globe.

Before the recent extension of her boundaries, this province contained many thousands of acres of the very choicest soil which have never been touched by any process of cultivation. Since the marches

to deal with over three-and-a-half millions of acres for homesteading.

With the proximity to markets and the daily developing transportation service, the inducements to settle in Manitoba are to-day something that only a few years ago one would have hardly dared to dream of. The aspect of things as they are at the present moment must occasion some remarkable reflections and comparisons in the minds of the men who came out in the early eighties.

The "strenuous life" in the environment of up to date facilities is no more akin to what existed when some of our Southern Manitoba men first took things in hand than is the social life of Central North America to-day like that of the days of the "Prairie Schooner" when the land was really in the possession of the aboriginal red man.

The scene illustrating this article is that of a corner of the horse exhibit at Killarney fair two years ago. Many of the very best of our Western farmers started in there under the most serious handicap—disabilities that no longer exist at any point of Manitoba—and are now men of solid substance, owning their two and three sections, every available acre of which is either under the plow, given up to some other productive end, or used in its beautified sense as the home of the owner and his family.

of Manitoba were set back this immense acreage has been greatly increased and the government is in a position at the present moment

MAGAZINE SECTION

WITH THOUGHTS LIKE THESE
ARE ALL OUR CARES BEGUILED.

Fatigue and Efficiency

WHEN a man finds that he is always tired he should take a few moments off to ascertain the cause. In nine cases out of ten the need is not medicine, but a better distribution of activities. Ceaseless overtime toil such as is common on farms day in and day out, with no recreation or variation, has done more to drive boys and girls away from the farm than any other influence. Farmers, old or young, require diversity of crops. Reading or social recreation should be to them what a refreshing shower is to the fields.

Then there is the tired farm woman. By wearing out our wives and mothers we reduce national efficiency. There you have it as plainly as it can be put. When you see that your wife is tired out make her rest. You will thus conserve national efficiency and you may also earn her gratitude. This whole matter of the relation of fatigue to efficiency is now receiving the attention of experts. Scientific investigators are demonstrating the fact that continual fatigue is sapping the vitality of the nation and in the end will deplete those resources upon which national efficiency depends. One authority rightly declares that the conservation of human life will constitute the greatest movement of the present century.

We recognize that long hours are sometimes necessary on any farm. The urgency of planting a crop before it is too late, the need of harvesting a crop before it is damaged by the weather; all such cases are exceptional and must be met by overtime work, but the regular routine work of the barns and fields can be done in less time with greater efficiency in most cases. There are cases where the ten-hour day is observed quite regularly and the farm work is made more effective by this regularity.—"The Country Gentleman."

RACING FOR THE THRESHERMAN & FARMER



Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



FOR THE TIRED MOTHER.

"Where children are, there is the golden age."

"Mother is the name of God in the lips and hearts of little children."
—W. M. Thackeray.

"We are fashioned and shaped by the paths that lead us to God's throne
Are worn by children's feet."
—Goethe.

Longfellow wrote of children:

"They are better than all the ballads
That ever were sung or said,
For they are the living poems
And all the rest are dead."

"It sends a breath of heaven
Round many a cradle lies,
and every little baby
Brings a blessing from the skies."

"We all talk of angels and saints; did you never think that there is not a home, however homely, that has not in it the germ of angels and saints?"
—N. A. Staples.

"Love is delicate; Love is hurt with jar and fret, and you might as well expect a violin to remain in tune if roughly used, as Love to survive if chilled or driven to itself. But what a pleasure to keep it alive by little nameless, unremembered acts of kindness and of love."
—Sir John Lubbock.

"Love is life. The unloving merely breathe."
—You can't buy a home. A man buys a house, but only a woman can make it a home. A house is a body, a home is a soul."

"When home is ruled according to God's word, angels might be asked to stay a night with us, and they would not find themselves out of their element."

A woman who creates and sustains a home, and under whose hands children grow up to be strong and pure men and women, is a creator second only to God."

"Know that when homes shall perish states shall fall,
And earth, e'en as the nether world, be hell!
The citadel of hope for earth is home
Home the best type that Earth affords
of Heaven."
—Ray Palmer

HOME ECONOMICS.

BOOKS THAT ARE HELPFUL.

(Read at a Home Economics Meeting at Valley River.)

When we consider the important part books have in conveying to us the knowledge gained through experience of others, who have made life studies of subjects which appealed particularly to them, and by which mankind in general is benefited, the subject becomes so broad and deep that it is difficult to deal with it with any thing like accuracy or conciseness. We have heard it said that it is not so much what we read as how we read, that we benefit thereby.

In our day we are fortunately blessed with an abundance of good literature, being able to obtain for very little, copies of the world's literary masterpieces; it were a great pity then if we waste our time on that which is unprofitable. The books that help us most are the books that make us think most. If we are careful to read only that which is wholesome, or that by which we gain strength and activity of mind, that which causes us to overcome our weakness, to enlarge our vocabulary and avoid monotony—the

ultimate result will be the elevating of our mind and souls. Cultivation is as necessary to the mind as food is to the body. We are in all probability just as prone to mental indigestion, by not discriminating wisely in our selection of reading material as we would be if we overloaded our stomachs with too much, or too rich or unfit food.

Mothers should use great care in the selection of literature for their children, more especially when they are young, as first impressions are usually vivid and lasting.

Children are endowed with so much imagination that fairy tales, myths and folk lore should form a part of their reading. Rhymes and jingles are usually fascinating too, and if care is taken in the selection that only the brave, the true and noble types are pictured as obtaining praise and award, these virtues will be naturally acquired by the child, and they will at the same time see the justice which punishes the deceitful or causes him to go unrewarded.

The Great Teacher, when He wished to make a truth so clear that His hearers could not fail to grasp its meaning, always told a story. Without a parable spake He not unto them. Bible stories are a great help in awakening a reverence for God and noble living. Clara Whitehill Hunt says, concerning Bible stories, "I would always read the stories from the Bible, altering scarcely a word except by omitting certain tedious parts, or those undesirable for little children."

Katherine Gunn says, "The concentrated wisdom of every age is stored up in the great books of that period. For the writer writes not of himself alone, and the books of the greatest writers reflect not only their individual thoughts and fancies, but all the manifold activities and opinions of their time. Books enlarge our sympathies. For this reason books are valuable, not so much because they are pictures of the things which have happened to other men, as because they act as a developing solution, which brings into relief the things that have happened to ourselves. Whatever things we are most interested in will to a large extent determine our selection of books. Those who are musical will enjoy the biographies of musicians. By reading the lives of good women such as Francis Ridley Havergal, Francis Willard and others, we receive invaluable help and inspiration. "Quiet Talks on Power," by Gordon, is I think very helpful in leading us to think as to whether we are making the best of our lives. In an article, "Books—What and How to Read," by Miss Mary Scott Drynan in the report of the Farmers' Institute of Ontario, she advises housekeepers to read books on "Cooking" and "Plain Words About Food," etc., by Ella Richards; and for mothers, "Studies in Child Nature," by Elizabeth Harrison, also "The Rights of Children," by Kate Douglas Wiggin. She also advises every young woman to read, "What a Young Woman Ought to Know," by Mary Wood-Allen M. D., as it gives girls a higher ideal of life and inspiration to true and noble womanhood.

But I think we owe a great deal to the humorous writer who would have us see the cheerful side of life. Laughter is better than medicine and easier to take. However, let us choose only the best. Although I believe fiction should have its place, there is much in some of the books of present day writers that is most undesirable, and we would do well not to forsake the old standards altogether for the new.

Kingsley has said, "I say we ought to reverence books, to look at them as useful and mighty things. If they are good, and true, whether about religion, politics, farming, trade and medicine, they are the message of Christ, the teacher of all truth."

I wonder if we read the Bible as much as we should. This Book of Books which has been described as a well of English, pure and undefiled, and of which Mr. Cleveland said in one of his last published letters, "I look upon it as the only source from which we may derive strength of character and a true apprehension of the wisdom, mercy and power of God." Let us not get too busy to read a portion day by day. Now in thinking over what we have read, I find this suggestion from St. Paul, " whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue, and if there be any praise, think on these things."

Mrs. Jas. McQuay.
I am sure our readers will enjoy reading this very interesting paper on Books that are Helpful. Papers read at the different societies are greatly appreciated by our readers. I trust that we may have many sent to us this year for publication. We are grateful to the Valley River Society for sending us this important paper.
P.R.H.

CARMAN.

We offer an apology to the Carman Home Economics Society for the error in last month's report. They sent in one of our best reports but the printers left out the last part of it. We publish it in full this month.

CARMAN

The Dufferin Home Economics Society was started in November, 1910, with Mrs. W. S. Murray as President, Mrs. Coultas as Vice-President, and Miss Meikle, Secretary-Treasurer.

At the January meeting, 1911, Mrs. Murray was re-elected President with Mrs. Robert Malcolmson Vice-President.

These officers have served the society faithfully and well, being at their posts through heat and cold, when home duties were pressing and always with the Society's best interests at heart.

The following are among the best papers of the year, "Best Literature for Our Homes," "Order and System in Housekeeping," "Care of Children's Teeth," by Dr. McLaughlin, "Care of Typhoid Fever Patients in the Home," by Nurse Adrain, "Bread Making" and "Ridding our Homes of the Filthy Fly." We had a discussion on "The Dower Law," in August and a lecture by Dr. Mary Ellen Davidson, of Neepawa in September on "Hygienic Management of Infants and Young Children," "Germs and Their Infections," etc.

Along the culinary line we have had demonstrations in cake baking, candy making and salads, and a talk on Paper Bag Cooking, by a member who had experimented and brought the article cooked for inspection.

At one meeting pickling, preserving, making of jellies, etc., were discussed and recipes were exchanged. We also had a practical demonstration of a Vacuum Cleaner.

We have held two social meetings with tea and cake, one in March at which the delegates to the convention gave their reports, and one in November in honor of our first anniversary.

One of the most enjoyable meetings of the year was held in July at the home of the president. The hostess served a delightful lunch and a good time was enjoyed by all present. Thirteen new members joined on this occasion. In neither numbers nor power have we reached the high water mark of our existence, but our outlook for 1912 is very encouraging.

Our town ladies are very much interested and we feel that it is not only the physical touch of elbows that is good for us, but the touch of hearts as well.

God speed the day when every woman in our fair land will heed the question "What canst thou do?" being asked by that great need, stalking at her elbow
H.C.F. Sec.

HOME ECONOMICS CONVENTION.

The Home Economics Convention will be held February 13-16 at the Manitoba Agricultural College. The convention will be held at the same time that the Agricultural Societies, the Horticultural Society and the dairymen's Convention meet. This makes it convenient for a farmer and his wife to take in the week together. From the inspiration gained by those women who attended last year, we feel sure that they will gladly attend this year again and bring with them many more women. The programme will furnish food for thought for another year and every woman who attends this convention will go home with a new ambition to make the home work more helpful and attractive and with a feeling that her work is not drudgery. Then with the memory of new friends made and new ideas gained her life will be changed from lonely monotony to happy anticipation of better times. Following is the programme:

Tuesday, February 13th.
10.30 a. m.—Meeting of Executive.
1.30 p. m.—Registration.
2.00 p. m.—Address of Welcome, Principal Black. Response, Mrs. McCharles, Manitou.
—6.30 p. m.—President's Annual address, Mrs. A. Chisholm, Morris.
Roll Call of Societies. Delegates responding with two minute reports of special work.

3.30 p. m.—"Woman's Part in Developing Our Province," Mrs. E. W. Hamilton, Editor of Woman's Department of Canadian Thresherman and Farmer, Mrs. Jessi McEwen, North Brandon; Mrs. Skinner, Mrs. V. Thomas, Winnipeg.
4.00 p. m.—Good taste in Dress and Home Furnishing," Miss M. Kennedy, M.A.S.

4.30 p. m.—"Household Science in Schools," Misses L. Black and S. Irwin, Instructors Domestic Science City Schools, Winnipeg.
5.00 p. m.—Social; Tea; General Discussion.
7.30 p. m.—GENERAL MEETING.

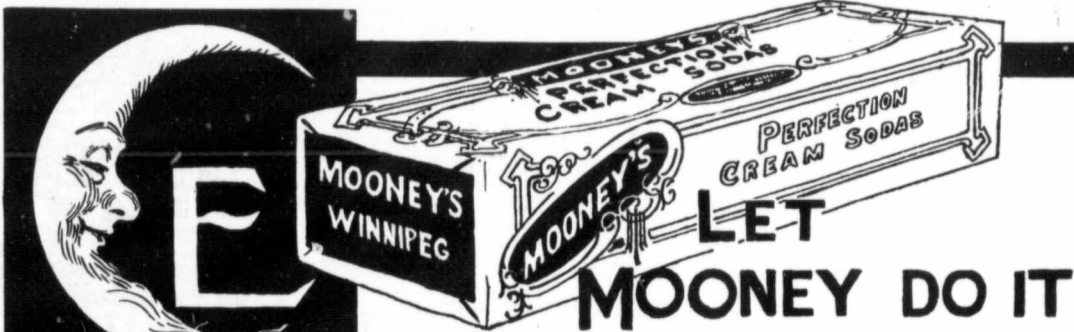
Wednesday, February 14th.
9.30 a. m.—Luncheon for a small family. (Demonstration.) Miss B. A. Duncan, M. A. C.

11.30 a. m.—Poultry. Mr. M. C. Hermer, Manager Poultry Dept., M. A. C.
1.30 p. m.—"Home Care of the Sick." Dr. Moody, Winnipeg.
2.30 p. m.—"The Well-Balanced Meal." Mrs. Lachlan MacNeill, Winnipeg.
3.00 p. m.—"Co-Operation, the Key to Success." Mrs. B. Stavert, Miss M. Mantle, Winnipeg.

3.30 p. m.—"The Future of the Farm Boy and the Farm Girl." Miss A. Ferguson Playfair, Hartney.
4.00 p. m.—Question Box. Mrs. Charlton Salisbury, M.A.C.
4.30 p. m.—Business.
5.00 p. m.—Election of Officers.

Wednesday, February 14th.
8.00 p. m.—Joint Meeting in Auditorium.

Thursday, February 15th.
9.30 W. m.—Influence of Home Economics Societies in Town and Country. Discussion: Mrs. H. W. Dayton, Viriden; Mrs. Jas. Howden, Neepawa; Mrs. G. Fraser, Hamiota



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10.50 a. m.—Modern Conveniences in Rural Homes. Prof. L. J. Smith and W. J. Gilmour, M. A. C.
11.15 a. m.—Business.

Mother's Corner

A MOTHER'S PRAYER.

O Father, heed a mother's prayer,
And keep within Thy loving care
My little ones, who day by day
Must learn to walk earth's rugged way.
Thou knowest, Lord, each little heart,
And what in life must be its part;
The humble paths of little feet
Are traced in all Thy plans complete
For this I praise Thee, and confide
My lambs to Thee, what'er betide;
In confidence I look to Thee
To shape in love the destiny
Of each confiding, helpless soul,
That it may reach some happy goal.
I rest in Thee, O God above,
And trust in Thy eternal love;
In Thy enfolding arms divine
I place these little ones of mine.
O do Thou hold them to Thy breast,
And give them peace, and give them rest;
Then, far beyond encircling skies,
Grant them the joys of paradise.
Amen.—From The Mother's Magazine.

JUST TRY THINKING.

"Never mind a change of scene—
Try a change of thinking.
What if things seem sordid, mean,
What's the use of blinking?
Life's not always storm and cloud,
Somewhere stars are shining;
Try to think your joys out loud,
Silence all repining.
By degrees, by thinking light,
Thinking glad and sweetly,

You'll escape the stress of night,
Worry gone completely.
Get the habit of looking for
Sunbeams pirouetting,
Tapping gayly at your door—
Surest cure for fretting.

John Kendrick Bangs.

Again I want to thank the women who have sent in such kind letters of encouragement. This letter from a reader fifty miles from town expresses the keenest of appreciation. I trust my readers will note the value of their letters to other women. Let me have as many as possible.

Dear Editor,—My husband takes the Canadian Thresherman and Farmer and I am a very interested reader of the Woman's Dept. We are living on our homestead fifty miles from town and sometimes it is very lonely. I have a dear little baby almost a year old. She is a lot of company for me, she is getting so interesting now. I find the Woman's Dept. very helpful and the recipes useful. I always enjoy the poetry and letters from other farmer's wives. I think the papers about infants which appear from time to time are splendid as there are so many inexperienced mothers like myself living on the prairie far from doctor or advice. We have taken the Thresherman for a couple of years now and we both think it splendid. I must close now, wishing the Woman's Dept. every success, from Another Farmer's Wife, Sask.

Another friend writes: I always read the "Woman's Department" and "Mother's Corner," and am very much interested. We lost our baby when she was three months old and I feel that my own ignorance and inexperience had something to do with it. We are a long way from a doctor." I quote this because I

want my readers to feel the responsibility of helping young mothers who live far from medical help. If mothers would write their experience for our Mother's Corner they would help other mothers who have had no experience.

Another subscriber writes: "I am a reader of your good paper, and find many things in it to cheer me up as I am a homesteader's wife out here in 'Sunny Alberta.'" My object has been to make my readers happier for having read this department every month. For this reason I usually omit the pathetic and sad, as I want this department to be like a sunbeam on a rainy day.

"If I covet one high grace,
It is this—upon my face
Just to show an inner light
To illumine other's night.

So many requests have come in for the article on Helps for Expectant Mothers, that I am having it printed in booklet form and will attend to the requests promptly as soon as the booklet is ready. I am sorry that a delay was necessary but from now on I will mail the booklet the day after receiving the request. It is sent free to any wife. P.R.H.

We are planning to have a pattern department soon, which I trust will be helpful to our readers.

EXERCISES FOR WEAK LUNGS.

People with weak lungs should stand erect in a well-ventilated room, place the hands on the hips and take long, deep, slow breaths, varying the rhythm, and at times taking short, jerky breaths for variety. The breath should be drawn through the nose.

The following exercises are valuable: Slowly raise the arms from the sides until they meet above the head, breathing deeply. Breathe out while slowly lowering.

Raise the arms in front; carry them as far back as possible then down. Breathe as before.

Slowly rise upon the toes, breathing deeply.

Extend the arms in front; carry one leg back as far as possible.

Lie on the back; raise the arms backward and over the head, while breathing deeply.

People with plenty of lung capacity can stand even bad air without suffering.

BUST and HIPS

Every woman who attempts to make a dress or shirt waist immediately discovers how difficult it is to obtain a good fit by the usual "trying-on" method, with herself for the model and a looking-glass with which to see how it fits at the back.

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do away with all discomforts and disappointments in fitting and render the work of dress-making at once easy and satisfactory. This form can be adjusted to fifty different shapes and sizes, bust raised or lowered; also made longer and shorter at the waist line and form raised or lowered to suit any desired skirt length. Very easily adjusted, cannot get out of order and will last a life-time. Write for illustrated booklet containing complete line of dress forms with prices. Hall Borchert Dress Form Co. of Canada, Ltd Dept. R., 72-78 Pearl St., Toronto, Can



It is well known that women whose lung capacity is interfered with by corsets are much more apt to faint in close, ill-ventilated rooms than men. Persons accustomed to active physical exercise have so strengthened their vital capacity that they are not only less liable to counteract disease, but better able to throw it off should they be afflicted.

FOR CHILBLAINS.

Vinegar one pint
Alcohol one pint
Muriate of Ammonia... one ounce
Apply to the affected part with small camel's hair brush.

The sore throat victim should form the habit of breathing through the nostrils and avoid mouth-breathing. The mucous membranes of the nasal passages strain off purities and warm the air before it passes through the throat into the lungs. The nose and its lining membrane should therefore be in a healthy, normal condition at all times. A spray of some antiseptic solution for the nose is a valuable thing if regularly

used. Salt, dissolved in luke-warm water, makes a good and simple douche. A teaspoonful of salt to a half pint of water is about the correct proportions.

The person who keeps the nose and throat membranes clean, avoiding chilling and dampness, at the same time keeping the eliminative functions working normally, will seldom be troubled with sore throat.

To save time in darning.—I wonder if any of the readers have my way of mending children's stockings at the knee. Take yarn to match the stocking and two knitting needles. Cast on twenty or twenty-two stitches for first row, slip one, knit one across the needle. For second row purl every stitch across. Continue in this way until the patch is long enough. Sew in place with yarn. This patch will wear well.



Where ignorance is bliss, it is safe to serve hash.

An automobile covers a multitude of social and mental deficiencies.

A valuable kind of wisdom is distilled from realization of our mistakes.

One day with a teething baby will do more to increase a man's respect for woman's ability than listening to a dozen suffragette speeches.

His Better Half — "I think it is time we got Lizzie married and settled down, Alfred. She will be twenty-eight next week, you know."

Her Lesser Half—"Oh, don't hurry, my dear. Better wait till the right sort of man comes along."

His Better Half—"But why wait?" I didn't."

A woman may give her husband a piece of her mind, if she chooses, but she should not break the peace.

An old lady, really quite well, was always complaining and "enjoying poor health," as she expressed it. Her various ailments were to her the most interesting topic in the world. One day a neighbor found her eating a hearty meal, and asked her how she was.

"Poor me," she sighed. "I feel very well, but I always feel bad when I feel well, because I know I am going to feel worse afterward."

A woman never stops to consider how very interesting her children would be if they were some other woman's.

ENTERTAINMENT.

The following game is good entertainment for an evening party. Cut out each verse, paste it on paper and pin in different places about the rooms, on curtains, pictures, and in corners. Then give each a paper and pencil and request her to write the answer which in every case is the name of a bird.

1. A flash of sky on wing.
Or but a wandering voice?"
Thy note from household clocks is heard,
And children's ears rejoice.
2. "Oh, shall I call thee bird,
Or but a wandering voice?"
Thy plaintive cry announces punishment,
And warms the luckless boy for whom 'tis sent.
3. King of the water, as the air,
He drives and finds his prey.
4. Thy plaintive cry announces punishment,
And warms the luckless boy for whom 'tis sent.
5. You introduce yourself throughout your song,
And tell the world your brief, old fashioned name.
6. "Bob White" you call,
Along the marshy coast,
Speak not so loud
Or you will be on toast."
7. Cooing 'neath barn rafters,
Pouting, sometimes, too,
Rippling like child laughter
All the winter through.
8. An English emigrant, bird of the street,
So common that some like thee not at all.
Yet in the Holy Bible we are told
The Father careth if but one should fall.
9. Red-breasted harbinger of spring
We wait in hope to hear thee sing.
10. Yellow captive of the cage,
Silver notes thou giv'st as wage.
11. A flash of white upon the sea,
And yet 'tis not a sail,
A "little brother of the air,"
Hath dared to ride the gale.
12. "Jenny" named in children's books,
Bright in spirit, dull in looks;
With Cock Robin as thy mate,
Nothing else I'll have to state.
13. In Blue Grass regions is thy splendor seen,
Thou flash of flame.
August thy name,
Red-coated pontiff of the green.
14. Black robber of the corn fields, oh, beware!
The farmer can do other things than scare.
15. We know how long ago,
You frightened Mr. Poe—
Black-coated prophet of adversity.
16. Named for the animal the dairies need,
Yet, in thy nature, quite a different breed.
17. Black-winged in crimson roses thou art dressed,
Fine feathers make fine birds, it is confessed;
And none more fine than thou,
Oh, brilliant beauty of the bough.



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18. The melody is trickling from thy beak,
And silver whistlings help thy voice to speak.
Oh, singer, famed by thousands clear the strain
Which ripples from thy pulsing throat like rain.
19. Bird of the night,
Thy round eyes are aglow
With all the learning
Which the sages know.
20. The mother hen must watch her little brood
Lest thou come down and bear them off for food,
And use them for a dinner
Oh, prowling sinner.
21. You imitate the foe which does you wrong,
And call "Meouw," instead of chanting song.
22. Your coat is like the leaden sky
Which drops the feathery snow,
And when that leaves us, by and by,
Still further north you go.
23. A symbol of the perfect love shed from above.
24. I supplicate
At Heaven's gate
And rest on wing
Where Angels sing.
25. I'm always offered cracker,
And though I like it well
I think some other viands
Would answer just as well.

Answer

1. Bluebird.
2. Cuckoo.
3. Kingfisher.
4. Whip-poor-will.
5. Phoebe.
6. Snail.
7. Pigeon.
8. Sparrow.
9. Robin.
10. Canary.
11. Sea Gull.
12. Wren.
13. Kentucky Cardinal.
14. Crow.
15. Raven.
16. Cowbird.
17. Scarlet Tanager.
18. Nightingale.
19. Owl.
20. Hawk.
21. Catbird.
22. Snowbird.
23. Dove.
24. Lark.
25. Parrot.

Here is another game:

A Musical Love Story

Once on a — a lover bold
His sweetheart's hand essayed to —,
And whisper — in her ear,
"You have the — to my heart, my dear"

The maiden's heart — loud and fast
For fear this — would not last,
This pretty maid was sore afraid
When'er her beau would —,
So — and shrewd was her papa,
He scented romance from afar.
One night her pa came with a —
So large it made the neighbors laugh.
And when he knocked her lover —,
The maiden shrieked, "Oh, you — that!
I pray you grant me one request,
Then in a convent I shall — well.
Give us a short — for some token,
And the tender — shall soon be broken
But up he sent her to her room,
And left the lover to his doom.
Then around her waist she — a —
And soon descended to her lord.
Next day they sent her pa a —:
"We're married." This was all she wrote.
Key—Time, hold, softly, key, beat, rhapsody, serenade, sharp, staff, flat, stop, rest, space, tie, tied, chord, note.—L. B. Mock.

Recipes

These recipes were sent in by request. They were served at one of the meetings:

Potato Salad.

Slice one dozen medium-sized potatoes with three onions, season with salt pepper and celery salt. Make a dressing and pour over it as follows: Boil one cup of vinegar with one tablespoonful mustard, one teaspoonful salt, pepper, sugar, four, dissolve the mustard, salt, pepper, sugar and flour in a little water, then pour it

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into the vinegar when boiling, then add two well-beaten eggs, and set off to cool, when cool add two cups of cream, garnish with sliced hard-boiled eggs.

Cabbage Salad.

One and one-half tablespoon vinegar, boil and stir in slowly one beaten egg, boil together and stir in slowly one-half cup cream; pour over chopped cabbage when cool.

Salmon Salad.

One can salmon, celery, one cup chopped nuts, mix well with following dressing: Yolks of four eggs well beaten, add two tablespoons melted butter, one-half teaspoon each of mustard, salt and pepper, one teaspoon sugar, five tablespoons hot vinegar, cook until thick and when cool add five tablespoons (or more) of cream.

Peaches. Cook a quarter of a pound of rice in three cupfuls of milk, with the grated rind of a lemon and a pinch of salt. When tender and while very moist add a tablespoonful of gelatine dissolved in two tablespoonfuls of boiling water, and three tablespoonfuls of sugar. When cooled and beginning to stiffen stir in a cupful of whipped cream. Mould in a ring. Serve with canned peaches in center.

An Inexpensive Casserole. A Common stone jar, with a lid, such as is used for keeping pickles, butters, etc., makes as good a casserole as the expensive ones we buy. I use the gallon size costing twenty-five cents. Cooked in it, the

A MAN IS AS OLD AS HE FEELS!




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toughest meat, with a few vegetables, seasoning and plenty of water, makes a nourishing meal; an old hen becomes as tender as a young chicken. It can be used for steaming brown bread by setting the mould in it, surrounding with water, then on with the lid, into the

oven, and no watching until it is done. Beans can be baked to perfection, and fruit made into fine preserves in it.

For Afternoon Tea. A loaf of cube sugar rubbed over the surface of an orange will retain the orange flavor by absorbing the oil. Sugar thus prepared

and used in tea imparts to the latter a most delicious flavor suggesting orange pekoe.

Spiced Cranberry Jelly. Pick over and wash one quart of cranberries. Put in a saucepan, add one cupful of boiling water, and let boil until cranberries are soft. Rub through a sieve, and add one-third cupful of water, two cupfuls of heated sugar, a three-inch piece of stick cinnamon, twenty-four whole cloves and six allspice-berries. Again bring to the boiling point and let simmer very gently fifteen minutes. Skim, add a few grains of salt, turn into individual molds, and chill.

Prunes. One heaping tablespoonful of powdered gelatine, two cupfuls of water, half a pound of good prunes, three tablespoonfuls of sugar, and the strained juice of one orange are required for this delicious dish. Take the stones out of the prunes after soaking them. Cut the prunes in halves, put them into a saucepan with the water and sugar, and cook very slowly until soft; then add the gelatine, first dissolving it in hot water, and the orange juice. Pour into a wet ring mould. When set serve with whipped and sweetened cream in center. Decorate with lady fingers.

Oranges. Two tablespoonfuls of powdered gelatine dissolved in one cupful of boiling water, two cupfuls of orange juice, two cupfuls of whipped cream, one cupful of sugar and yolks of three eggs. Add the cream last. Mould and garnish with sections of orange.

Apples. Wash and soak a pound and a half of dried apples; stone a quarter of a pound of dates, and cut each in thirds. Put the fruit into a saucepan with a tablespoonful of butter, half a cupful of brown sugar, and a teaspoonful of ground cinnamon. Stew slowly until tender. Turn out to cool. Butter an eight-inch round cake tin. Sift half a pound of flour into a basin, rub in four tablespoonfuls of butter, add two tablespoonfuls of sugar, a teaspoonful of baking powder, and a teaspoonful of a half of ground cinnamon; make into a stiff paste with the beaten yolk of one egg and a little milk. Divide this paste into a large piece and a small piece. Roll out the large piece and line the tin with it. Put in the mixture and smooth it evenly; roll the second piece round, wet the edges, place it neatly on the top. Bake in a moderate oven for three-quarters of an hour; then take it out and cool. Cover with a meringue.

Nut-Date Pudding. Cut 1/2 pound of English walnuts and 1/2 pound of dates into small pieces and mix with 1 cupful of dry bread-crumbs and 1/2 cupful of pulverized sugar. To this add the yolks of 3 eggs and beat until light; then fold in the stiffly beaten whites. Pour the mixture into a buttered pudding-dish and bake in moderate oven for fifteen minutes. Serve with whipped cream, or Snowflake Sauce, which is prepared as follows: Cream 1/2 pound of butter and 1 pound of pulverized sugar together. Add gradually, while beating constantly, 1 cupful of rich cream. This is necessary in order to make a mixture of proper consistency. Flavor to taste and place on ice before using.

Chicken Pie. Instead of a pastry-top, a baking-powder mixture is used. Dress, clean and cut up two fowls. Put in a

stew-pan with one onion, cover with boiling water, bring to the boiling-point and let simmer until meat is tender. When half-cooked, add one-half tablespoonful of salt and one-eighth teaspoonful of pepper. Remove chicken, strain stock, skim off fat, return to stew-pan, and let simmer until reduced to four cupfuls. Thicken stock with one-third cupful of flour, diluted with enough cold water to pour easily. When boiling-point is reached, add three tablespoonfuls of butter, bit by bit, and more salt if necessary. Place a small cup in the center of baking-dish, arrange pieces of chicken around it (removing some of the larger bones), pour over gravy, and cool. Cover with a baking-powder crust, from the center of which a circular piece has been cut. Around edge of circle place a braid of baking-powder mixture and bake in a hot oven. For serving, surround dish with a paper frill. For the crust use a bit more butter than for ordinary baking-powder biscuit.

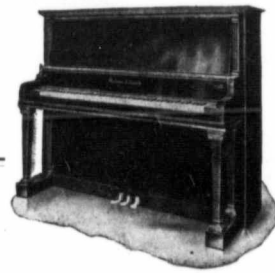
Grape Snow Pudding. Soak two tablespoonfuls of gelatine in enough water to cover it. At the end of an hour add to it a quart of heated grape juice, stir over the fire until the gelatine is dissolved, add the juice of one lemon, and sugar to taste. Take from the fire, and, as it cools, beat into it gradually the stiffened whites of four eggs. Beat until the mixture begins to stiffen, then turn into a wet mould and set in the ice-chest. When firm, turn upon a chilled platter and serve with whipped cream.

Doughnuts. One egg, 1 cupful of sugar, 1 cupful of sour milk, 1 tablespoonful of melted cottolene (or 2 tablespoonfuls of any other shortening), 1 tablespoonful of soda, 1 teaspoonful of cream of tartar, 1/2 teaspoonful, each, of salt and ground nutmeg, 1 small teaspoonful of vanilla, and flour enough to mix very soft.

Break the egg into the mixing-bowl and beat very thoroughly. Add the sugar and beat again, add the melted shortening and beat in well. Stir the soda into the sour milk, stirring until it gives out a hollow sound, then add to egg and sugar. Mix in the salt and spices, then add the flour (into which the cream of tartar has been sifted) gradually, using just as little flour as possible, as the whole secret of good doughnuts is mixing them very soft. Roll out, cut, and fry in deep hot fat, which should be just right. When a blue haze rises from the fat, drop in one of the little round cut-out "holes," and try. It should rise and commence to brown immediately. Turn the doughnuts only once and fry to a light golden brown. Drain on brown paper and put away warm.

Scrambled Eggs with Ham. Scramble some eggs in the usual manner, and just before they are ready to serve add one cupful of finely minced cold boiled ham. Have ready squares of nicely buttered toast, spread half of these with the ham mixture; lay another slice on top of each, and serve at once.

The Thanksgiving Pudding may be made two or three days in advance, and reheated for serving. Pick over and finely chop one pound of beef suet, and add one cupful of molasses and one cupful of sour milk. Mix and sift two and one-fourth cupfuls of flour with one and one-half teaspoonfuls of soda, one teaspoonful of cinnamon, one-half teaspoonful of clove and one-half teaspoonful of salt. Add to first mixture; then add one and one-fourth cupfuls of raisins (seeded and chopped) mixed with three-fourths cupful of currants dredged with one-half cupful of flour. Turn into a buttered melon-mould, adjust cover, place on a trivet in kettle, half surround with boiling water, cover, and steam four hours, adding more water as necessary, and never allowing it to reach a lower temperature than the boiling-point. If one cares to have a hard sauce in place of the Sterling Sauce which is suggested, the pudding might be served in the following fashion, which looks very attractive, while the heat of the pudding does not melt the sauce. Put the pudding on an oblong serving-dish and surround with one-third inch slices of lemon from which the seeds have been removed. Pile a portion of sauce on each slice (or better still, force through a pastry bag and tube if one is at hand) and garnish each with a candied cherry. For Sterling Sauce, beat the white of one egg until stiff, and add gradually, while beating



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F.O.B. Calgary per bushel \$3.75; over 5 bushels, per bushel \$3.60; over 10 bushels, per bushel \$3.25. Cotton bags 25 cents each, 2 bushels.

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F.O.B. Brandon per bushel \$2.80; 10 bushels or more, per bushel \$2.75
F.O.B. Calgary per bushel \$2.75; 10 bushels or more, per bushel \$2.70

A Postcard will bring our Catalog

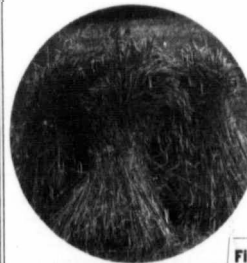
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constantly, three-fourths cupful of powdered sugar; add the yolk of one egg beaten until thick and lemon-colored, a few grains of salt, three-fourths cupful of heavy cream, beaten until stiff, and one teaspoonful of vanilla.

CANDIES.

Chocolate Chips—Place in a saucepan one cupful of brown sugar and one cupful of Orleans molasses, and one tablespoonful of butter. Boil until it spins a thread or forms a hard ball when dropped into cold water; then remove from the fire and flavor with one teaspoonful of vanilla. Pull into long thin sheets, then cut into small pieces. When cold dip into melted chocolate flavored with vanilla.

Fig Favorites.—Select the best quality of figs and steam until soft, then make an incision in each lengthwise and stuff with chopped nut meats. Close and place on a buttered pan. Boil together two cupfuls of sugar, one-half cupful of water, and one-fourth teaspoonful of cream of tartar. Boil until it will make a hard ball when dropped into cold water, flavor with a little vanilla, and then pour over the stuffed figs. When nearly cold mark off into squares. Stuffed dates can be used in place of the figs if liked.

Walnut Bonbons—Place in a saucepan one cupful of granulated sugar, one-half cupful of golden syrup and one-half cupful of water, and a pinch of cream of tartar. Boil until it makes a firm ball when tested in cold water, then add one-half teaspoonful of vanilla and one-half cupful of English walnut meats chopped fine. Pour over the beaten white of one egg, and beat up until light. When it begins to harden drop on halved English walnuts and press a half nut on the top of each bonbon.

Nut Foam Chocolates—Place in a saucepan two cupfuls of granulated sugar, one-half cupful of water and one-fourth teaspoonful of cream of tartar. Boil until it forms a hard ball when dropped into cold water. Add a teaspoonful of vanilla and pour over the stiffly beaten whites of two eggs and beat until foamy. Drop from a spoon onto a greased paper or buttered plates, that have been spread with chopped nut meats. Press chopped meats over the top, mark off into squares, then set aside to cool. When cool dip into melted chocolate fondant or melted chocolate. These will be light and foamy in the inside and delicious to the taste.

Honey Nougat—Put into a saucepan over the fire one pound of clear honey. Boil until it makes a hard ball when dropped into cold water. Have the whites of two eggs beaten stiff. Remove the honey from the fire, stir into it one cupful of almonds cut into lengthwise strips that have been heated in the oven. Pour over the whites of eggs and beat up until light and foamy. When it begins to harden drop in spoonfuls onto a greased plate or paper.

Cream Peppermints—Put into a clean, light saucepan two cupfuls of sugar and a half-cupful of water. Stir until sugar is dissolved, then withdraw from the spoon. Cook just eight minutes from the time the sirup begins to boil, then take off the fire immediately. Add eight drops of peppermint, stir hard and drop from the tip of a spoon onto waxed paper.

Lemon Meringue Pie. Beat three eggs slightly and add two-thirds cupful of sugar, the grated rind of half a lemon, one-fourth cupful of lemon-juice, and two tablespoonfuls of water. Bake in one crust in a moderate oven, cool slightly cover with meringue (forced through a pastry-bag and tube), and return to oven to bake the meringue—the time required being about eight minutes in a moderate oven. If meringues are removed from the oven before they are done, the eggs will liquify and meringue settle; if cooked too long, meringue is tough. For the meringue, beat the whites of three eggs until stiff, and add gradually, while beating constantly, four tablespoonfuls of powdered sugar. Cut, and fill in three and one-half tablespoonfuls of powdered sugar, and add one-half teaspoonful of lemon-extract.

Katie's Pie is a cheaper lemon pie than the foregoing. Mix one cupful of sugar and three tablespoonfuls of flour; then add three tablespoonfuls of lemon-juice, yolks of two eggs, slightly beaten,

one cupful of milk, one tablespoonful of melted butter, a few grains of salt, and the whites of two eggs beaten until stiff. Bake in one crust in a moderate oven. The white of egg rises to the top, making a little coating which looks very attractive.

Experience Extracts

Keeping the Family Receipts
While visiting a well-ordered home recently, the postman handed my hostess some receipted bills. Asking to be excused, she left the room, returning with a large scrap-book, of the kind that has vertical columns of gummed holes on the pages. In it she pasted the new receipts, fastening them by one edge. "I always do this as soon as a receipt is received, stopping whatever I am doing. Here I have all the receipts for the last three

years. These pages hold quantities when you file them this way, and I can turn at a moment's notice to the receipts for any month during these years."

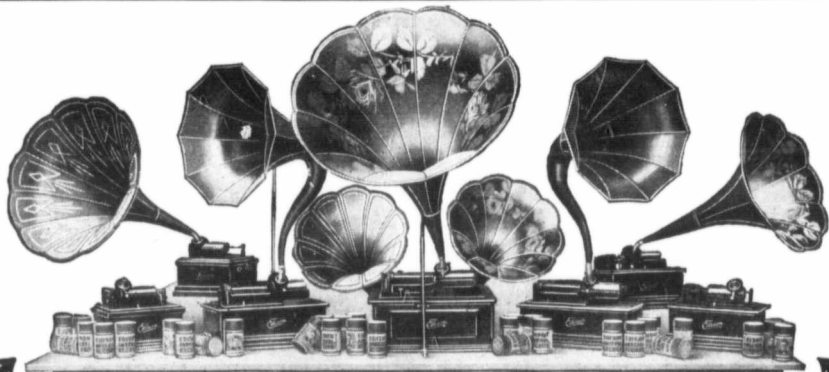
She had written along the top of each page the name of the month, and the neat columns of receipt bills showed that the system was a convenient solution of what to do with family receipts. Some of the sheets of paper were larger than others, and to make them uniform in size, she had neatly folded these, after pasting the edges.

Often you see it advertised to "test" a cake with a broom-splint. If this is broken from a broom in constant use, the practice is not one to be commended; and even if one takes a bunch of splints from a new broom there is still something to be said against their use, as broom-corn is frequently "treated" with arsenic or other injurious stuff to make it of that bright, attractive green which

people prefer to buy. Get a set of very fine knitting needles, and keep one of them in the kitchen to test cakes with, and you will have no trouble. If the needle comes out clean and dry, the cake is done; if sticky, let the cake remain in the oven five minutes longer. Many test cakes by listening to see if it "sings," when done it will stop singing.

Often a carpet has worn seams. Get a package of dye the prevailing color and go over the seams with a small brush. The improvement is remarkable. When a carpet has become dusty and faded looking, after sweeping go over it with a cloth wrung from gasoline. This wipes up the dust left on the surface and brightens it wonderfully. The gasoline also keeps moths from getting in the edges of the carpet.

China that has become stained may be cleaned by rubbing with salt, ashes or bath brick.



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My Reason: Why should I make such an ultra liberal offer? Why should I go to all this expense and trouble just so you can have these free concerts? Well, I'll tell you. I am tremendously proud of this new instrument. When you get it in your town I know everybody will say that nothing like it has ever been heard—so wonderful, so beautiful, such a king of entertainers—so I am sure that at least some one—if not you then somebody else, will want to buy one of these new style Edisons (especially as they are being offered now at the most astounding rock-bottom price—and on easy terms as low as \$2.00 a month). Perhaps you yourself will be glad to keep this outfit. But even if nobody buys I'll be glad anyway that I sent you the new Edison on the free loan—for that is my way of advertising quickly its wonderful superiority.



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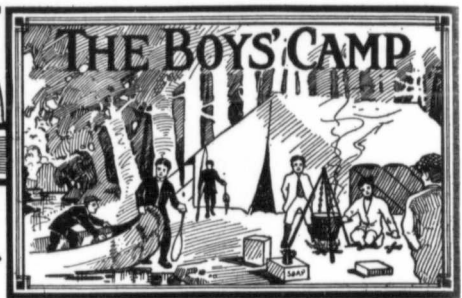
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The Girls' Cozy Corner

KEEP SWEET.

BY H. ISABEL GRAHAM

Keep sweet, my dear, when things go wrong.

And life is sad and dreary,
Just start and sing a little song
To cheer the sad and weary.
'Twill ease your own heart of its load,
And make the darkness lighter,
Through rifted clouds the sun shall shine,
And some one's smile be brighter.
Forget the past and all its frowns,
Peace and contentment borrow,
And happiness may shyly call
To visit you to-morrow.

Asker P. O., Alta.
Dear Cousin Doris:—This is the first letter I have written to The Girls' Cozy Corner.

I am nine years of age and will be ten the 14th of September. My father is out threshing now and will come to our place on Thursday or Friday. We are ready with digging and picking our potatoes. There is a girl that stops at our place. Her name is Signe Stabenfeldt. I have two pets and the name of one is Fido; I have not got a name for my hen. Brother has 6 pets, consisting of 4 doves and two kittens. This is a long letter, but I hope I find it in print. Yours truly, Marie O. Krefting.
October the 26th.
No. more.

Stoughton, Sask.
Dear Cousin Doris:—This is my second letter to the Cozy Corner, and as I do not receive a prize perhaps I will this time.

There is quite a lot of threshing to do around here yet, and the stocks are nearly covered with snow. Papa is running my uncle's threshing engine. We live eight miles from town. I have four sisters and three brothers. I am nine years old and my birthday is on March the eighteenth. Our school has stopped for the winter.

I think my letter is long enough for this time. Wishing the Club every success.
from Mabel Dodge.
Bardo, Nov. 15th, 1911.

Dear Cousin Doris:—This is the first letter I have ever written to the Girl's Cozy Corner, and hope to see my letter in print.

My brother takes the Canadian Thresherman and Farmer and we all like it fine. I like to read the letters that are written in the paper.

I am going to school every day, and I am in the third class; my studies are; reading, spelling, arithmetic, grammar, history, geography and bookkeeping. I am 12 years of age.

For pets I have a horse and a cat. I used to ride on my horse every day to school.

We have a number of sheep, and we get a lot of wool from them.

I will close now because I think my letter is getting too long. I remain, your cousin, Bertie Lerbakmo.

Astwood, Sask.
Dear Cousin Doris:—This is my first letter to the Cozy Corner. My father takes the Canadian Thresherman and I like reading the letters very much.

I have 4 brothers and 3 sisters and we live on the ranch. My brothers hunt. One of them killed two bears in one week. In winter they use trained dogs. I like to see the Indians with their trained dogs. We are all learning to talk Indian. I have a cute little brother and he is two years old. We have lots of fun up here and we all can skate but the baby and he is too small yet. I am, your cousin, Violet White.

Radville Farm,
Box 77, Strathmore, Alberta.
Dear Cousin Doris:—I have been a silent reader of the Girls' Cozy Corner and I think the letters are nice. I am an English girl and have been here three years, but I would rather have England than Alberta because there are no trees here and there are hedges in England instead of barb wire fences. I can ride horse-back and like it very much. I am also very fond of reading and have read a great many books. Some are: "In the Days of Bruce," "Corie," "Daisy in the Field," "Under Fire," "Dewdrops and Diamonds," "Meadow Brook Farm" and several more. I also collect picture post cards and I will exchange with any of the members who care to. I will now conclude. I will be glad to hear from any members and will answer them. Wishing the Club every success. I remain, Your new member, Amie Love.

Glenavon, Sask., Nov. 20, 1911.
Dear Cousin Doris:—This is my third letter to the Cozy Corner and I like it better every time I come.

Well, cousins, winter is here again in all its severity. The threshing is not much more than half done in our district. We have about 300 acres of grain covered with snow yet. I go to school every day and I like it fine. We have a very nice teacher here. His name is Mr. Laidlaw.

We are going to have a concert here at Xmas and our teacher is drilling us at present. We are going to have a tennis drill; it consists of six girls and six boys. We have a dialogue also, entitled "Mr. St. Nicholas."

I haven't seen any more recipes coming in lately. What is the matter with the girls? I am going to send a recipe for "Maple Cream Candy" this time. Take one cup of brown sugar and three table spoons cream, set this on the stove and boil for seven minutes or until it thickens, then stir in one tea spoon vanilla and beat until it is thick and creamy; pour on buttered plate and let cool.

Well, I think I will close my long, long letter now and leave room for someone else. Wishing the Club every success, I remain, your affectionate cousin,
Jean Barver.

Fairfax, Man., Nov. 10th, 1911.
Dear Cousin Doris:—This is my first letter to you to see if I can win a prize and see my letter in print. I go to school every day. I am in the sixth grade. I am twelve years old. I live on a farm one mile from town. I have two sisters and seven brothers. There are about ten going to school now. I like to read the letters.

I guess I will have to close for this time, your loving cousin, Bertha Tufts.

Dear Cousin Doris:—This is my first letter to your club. I go to school every day. Our teacher's name is Miss A. Johnson. I am in the fourth grade and have been going for 19 months. My father has taken the Canadian Thresher-

man and Farmer for nearly a year. We like it very much. We have three horses, 27 head of cattle; we milk seven of them. I have two sisters and two brothers. There are 3 of us going to school.

I guess this is all for this time. Hoping to win a prize. Your cousin, Hazel Sherwood.

Cofighcie Hillta
Dr Cousin Doris: This is my first letter to the Girls' Cozy Corner. I have just been reading the girls' letters. My father takes the Canadian Thresherman and Farmer. I go to school, I am in the Fourth reader. My studies are Arithmetic, Grammar, Canadian History, English History, Hygiene, Reading, Writing Spelling, Composition and Nature Studies. Please excuse my bad writing, yet it can't be helped for my pencil is short and my pen is broken.

I will close now hoping to see my letter in print. How are Cousin Doris and her little girl?

I still remain, your cousin,
Grace M. Martin
Thank you, Grace, we are both well and happy.
C.D.

Strome, Alberta.
Dear Cousin Doris:—I am going to write a letter to the Girls' Cozy Corner and see if I can win the prize. I hope to. I am not going to school for there isn't any school now. There hasn't been any school ever since the last of June. I wish it would start up pretty soon. I like to go to school quite well. My brother and my sister go to school with me. We have three miles to go to school. Well, my Aunt Rose is here on a visit from South Dakota ever since the 17th of July. I think she is going to stay all winter. My Grandma is going to stay here for a visit for a few weeks. She came here on Wednesday night last week. I see my friend Anna Fossen has written a letter to the Girls' Cozy Corner. I remain a member of the C. C.—

Denage Ponton.
Q.—When is love like a chicken bone?
A.—When hidden in the breast.

Q.—Why does a singing master always win?

A.—Because time flies and he beats time.

Q.—Of what trade is the sun?

A.—A tanner.

Clive, Alta.

Dear Cousin Doris:—This is my first letter to your club. My father has been taking the C. T. and F. for a few years now. I like to read the letters which the girls and boys write. I saw in the paper that Cousin Doris will give a prize book to the girl or boy who writes the best letter, so I will try to get one. I have read many books. Some which I have are: "The Pilgrim's Progress," "Queen Bee and Busy Bee," "Grimm's Fairy Tales," "Alice's Adventures in Wonderland," "Through the Looking Glass and What Alice Found There," and some other ones. I go to school and am in the fourth class. I am 10 years old and will be 11 in November. We have two cats and one dog. One cat is black and white and we call him Rover. Whenever we take a pail or something to go and pick berries he always likes to go along so he runs around and wags his tail and whenever we go to get the cows he wants to go along too. My mother has only 19 house plants now because the rest of them froze last winter when my mother and I were about 100 miles east of here to visit my sister and brother. This was last Christmas. My father and my two brothers were at home baching. They

forgot to shut the hall door at night so they froze.

My favorite game is "Stink Base." Two choose sides and then get two bases and put them opposite each other. Then somebody from one side goes up towards the other base and then the other side runs and tries to catch them and then one from the other side runs up and the one that leaves the base last can be caught. They cannot catch you if you are behind your own base. If anybody catches one on the other side he is a prisoner and has to come up to the other side and remain on the other side. If somebody from his own side comes up and touches the prisoner before somebody from the other side touches him he can go back to his own base again.

My letter is getting rather long so I will quit for this time, wishing Cousin Doris and the club every success. I hope to see my letter in print. Your new cousin,—Marie Strandberg.

The Canadian Boys' Camp

Dear Campers:

A slight error occurred in the printing of the Scout Law in the December number, for which I ask the pardon of the Scouts. I hope I may hear from some of the Scouts in regard to their work. It is the best organization for boys that has ever been formed and boys who belong to this learn to be courteous, brave and patriotic—three essentials necessary for a manly citizen. The following is the Scout Law for the Canadian Boy Scout. It is quoted from the Canadian Boy Scout by Sir Robert Baden-Powell, K. C. B., K. C. V. O.

THE CANADIAN BOY SCOUT. Scout Law.

Scouts, all the world over, have unwritten laws which bind them just as much as if they had been printed in black and white.

They come down to us from old times. The Japanese have their Bushido, or laws of the old Samurai warriors, just as we have chivalry or rules of the knights of the Middle Ages. The Indians in

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ONE TRY ON ALL KINDS OF WOOL

and then making them over.



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The Johnson-Richardson Co., Limited, Montreal, Can.

America have their laws of honor: the Zulus, the natives of India, the European nations—all have their ancient codes. The following are the rules which apply to boy scouts, and which you swear to obey when you take your oath as a scout, so it is as well that you should know all about them.

The scouts' motto is:—

Be Prepared,

which means you are always to be in a state of readiness in mind and body to do your DUTY.

Be prepared in mind by having disciplined yourself to be obedient to every order, and also by having thought out beforehand any accident or situation that might occur, so that you know the right thing to do, at the right moment, and are willing to do it.

Be prepared in body by making yourself strong and active and able to do the right thing at the right moment, and do it.

The Scout Law

1. A Scout's Honor is to be Trusted. If a scout says "On my honor it is so," that means that it is so, just as if he had taken a most solemn oath. Similarly, if a scout officer says to a scout, "I trust you on your honor to do this," the scout is bound to carry out the order to the best of his ability, and let nothing interfere with his doing so. If a scout were to break his honor by telling a lie, or by not carrying out an order exactly, when trusted on his honor to do so, he may be directed to hand over his scout badge, and never to wear it again. He may also be directed to cease to be a scout.
2. A Scout is Loyal to the King, and to his officers, and to his parents, his country, and his employers. He must stick to them through thick and thin against any one who is their enemy or who even talks badly of them.
3. A Scout's Duty is to be Useful and Help Others. And he is to do his duty before anything else, even though he gives up his own pleasure and comfort or safety to do it. When in difficulty to know which of two things to do, he must ask himself, "Which is my duty?" that is, "Which is best for other people?"—and do that one. He must be Prepared at any time to save life, or to help injured

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It is cheap—sand and gravel can be taken from your own farm. Cement, the only material you must buy, forms from one-seventh to one-tenth of the whole volume.

Do you want to know more about Concrete on the Farm? Then write your name and address in the lines above, or on a postcard, mail it to us, and you will receive by return mail a copy of

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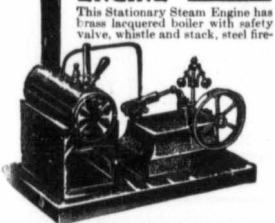
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persons. And he must try his best to do a good turn to somebody every day.

4. A Scout is a Friend to All, and a Brother to Every Other Scout, no Matter to What Social Class the Other Belongs.

Thus, if a scout meets another scout, even though a stranger to him, he must speak to him, and help him in any way that he can, either to carry out the duty he is then doing, or by giving him food, or, as far as possible, anything that he may be in want of. A scout must never be a Snob. A snob is one who looks down upon another because he is poorer, or who is poor and resents another because he is rich. A scout accepts the other man as he finds him, and makes the best of him.

"Kim," the boy scout, was called by the Indians "Little friend of the world," and that is the name every scout should earn for himself.

5. A Scout is Courteous: That is, he is polite to all—but especially to women and children, and old people and invalids, cripples, etc. And he must not take any reward for being helpful or courteous.

6. A Scout is a Friend to Animals. He should save them, as far as possible, from pain, and should not kill any animal unnecessarily, for it is one of God's creatures. Killing an animal for food is allowable.

7. A Scout Obeys Orders—of his parents, patrol leader, or scoutmaster without question.

Even if he gets an order he does not like he must do as soldiers and sailors do, he must carry it out all the same because it is his duty; and after he has done it he can come and state any reasons against it but he must carry out the order at once. That is discipline.

8. A Scout Smiles and Whistles under all circumstances. When he gets an order he should obey it cheerily and readily, not in a slow, hang-dog sort of way.

Scouts never grouse at hardships, nor whine at each other, nor swear when put out.

When you just miss a train, or some one treads on your favorite corn—not that a scout ought to have such things as corns—or under any annoying circumstances, you should force yourself to smile at once, and then whistle a tune, and you will be all right. (N. B.—Since this rule first appeared in print a great many scouts, old and young, have written to me saying how useful it has been to them.)

A scout goes about with a smile on and whistling. It cheers him and cheers other people, especially in time of danger, for he keeps it up then all the same.

The punishment for swearing or using bad language is for each offence a mug of cold water to be poured down the offender's sleeve by the other scouts. It was the punishment invented by the British scout, Captain John Smith, three hundred years ago.

9. A Scout is Thrifty, that is, he saves every cent he can, and puts it into the bank, so that he may have money to keep himself when out of work, and thus not make himself a burden to others; or that he may have money to give away to others when they need it.

BOY'S PRIZE LETTER

Sumberg, Sask., Box N

Dear Campers; This is my first letter to your Club, I like to read the boys' and girls' letters. My father takes the Canadian Thresherman and Farmer. I go to school sometimes, but I haven't went lately; I am going to school this winter. I am in the third grade and I am ten years old. Our teacher's name is Miss Rusten. I have two brothers and three sisters; one of my sisters and one of my brothers are twins and the other two of my sisters are twins.

We have seven horses and three colts, one cow and two calves, one rooster and three chickens, ten pigs, two dogs and one cat.

I hope my letter will jump over the waste paper basket and win a prize.

I will tell you about a runaway we had when I was a little fellow. My father had three horses hitched on to a binder and he stopped to put some twine in the binder box and the horses run with the binder and it just whizzed by the corner of our kitchen and then they went through a gate and out one post and ripped about sixteen yards of fence down and then they ran down a hill and tried to jump over a pig pen but they couldn't, so they stopped there. By that time the binder was so badly broken that it was no more good. Well, I think my letter is long enough so I will close for this time. Wishing your Club every success, I remain, yours truly, William G. Stacey.

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For selling Assorted PICTURE POST CARDS. In one hour you can earn this handsomely Chased Signet Ring, engraved with any initial desired Free. The design is exact duplicate of a solid 18K gold pattern.

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GOLD IN A CROP

Found gold in turkey's crop, eh? Staking placer mining claims on a Manitoba farm, are they? Well, its all very amusing and takes me back in memory to a time long ago when the report of a fabulously rich gold strike made by a squaw in the bottom of a frying pan in which she dipped water for dish washing from a creek caused me to drop the tools of a civilized occupation, sever home ties, and with all the money I could scrape together tucked snugly into one of my pockets stampede for the section in the full hope and expectation of kicking gold nuggets from trees or bushes or vines—wherever it might be found to the end that the bank account of Rothschild or Rockefeller wouldn't loom much greater than mine.

I reached the head-quarter camp of that new mining district well up in the head of the bunch after months of strenuous work, and great physical hardship. Day after day I had climbed long miles of steep mountain pass with a pack upon my back of a hundred pounds and more. Week after week I trudged unbroken snow trails with a sled rope across my shoulders tugging at a load of three and four hundred pounds. For months I spread my bed upon a few spruce boughs thrown upon the snow, and in the tent that covered it cooked slop-jacks, fried bacon, and boiled the beans on which I fed, and then after that and much more I reached the Eldorado.

When I started out on this adventure I knew absolutely nothing concerning the origin of gold or its habitat. All I knew of the metal was that it was yellow and heavy. And at that I was as well informed as ninety-nine out of every hundred men who made the rush with me, and, by the same token, as well posted on the subject as are the same per cent of men who have been attracted by the report of gold found in a turkey's crop, and are spending their time and money rushing to a Manitoba gravel bed, that they too may gobble nuggets, as is this wonderful bird said to have done.

There is nothing amusing in the knowledge that these men who, in their ignorance, are susceptible to airy report and expend physical exertion and good coin of the realm in a greed born rush for rosy wealth which will never be realized. There is, though, a lesson in experience coming to them which will open their eyes to the old, old truth that "all that glitters is not gold,"

and that the only sure road leading to an independent or greater fortune, is back on the acres from whence they fled, with their "hand to the plow" mining the wonderfully fertile and productive soil with which this Dominion is blessed, and this they will contentedly do when they see the bubble of their impossible dream burst.

With old and experienced miner men the gold in a turkey's crop report will loosen a fund of remembrances of other rushes for gold, started by equally humorous report, and it might be interesting to some if I relate an incident or two of gold strikes and resulting stampedes, that are known to me through personal experience.

A few years ago when the great rush was on for the Klondyke, and hundreds of men were moving their outfits over White Pass to the head waters of the Yukon River on their way to Dawson, at a point near the base of the coast range of mountains there was a bar of gravel bared of snow over which their sleds were dragged. One day a man travelling the trail noticed a streak of yellow flashing in the sun from one of the stones that composed this bar. Picking it up and examining it closely he believed its yellow working was gold. This opinion was confirmed by others trailing their sleds as they arrived on the spot. Immediately began a hurried staking of claims and in a few hours the country for miles upon miles around was located for mining purposes, and before the sun of that short arctic day had set scores of men on all sides wear tearing at the frozen ground with eager pick and shovel. In less than forty-eight hours the news of this rich strike—richer even than the Klondyke was the report—had reached the coast and the town of Skagway, with the ever happening result in such case of causing every man, woman, and child in that tented city, who could travel a trail to hasten out for the new found Eldorado, only fifty miles away. One of the first of the Skagway crowd to arrive on the scene of the discovery happened to be a man well up in mining lore, who, upon examination of the prospect, and the golden yellow workings thereon, threw up his hands and fell over on his back in the snow in a paroxysm of laughter. When he came too sufficiently to speak he ventured the information to the surrounding crowd that the yellow streak was nothing more or less than brass, due to the contact of the

Western Women Read This



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This dress is SIMPSON MADE, which means that experts designed it, experts made it in the Simpson work rooms, and more important still it was inspected the Simpson way, not one little defect was passed. We bought too many yards of the cloth and want to clear it out quickly, hence the great saving in price to you.

Misses' Sizes

Years	14	16	18
Length	33	35	37
Bust	32	34	36

Women's Sizes

Waist	23	24	25	26	28	29
Bust	32	34	36	38	40	40
Length	38	39	40	41	42	42

Order Number G90581

This attractive dress for women or misses, is splendidly made from richly finished lustre. The shoulders are made so as to give a dainty kimona effect. The pretty yoke of fine net lace is outlined with a new rolling rever and a square-designed black satin collar comes over the shoulders from the back and continues to the waist-line at front; the lower part of sleeves trimmed to match. Skirt made with correct and graceful lines, fastens at left side of front panel, which is finished with small black satin buttons. Colors, black, navy or green. **Sale \$6.49**
Price

THE ROBERT SIMPSON COMPANY LIMITED.
TORONTO

stone, with a brass shod sled hauled over the bar. He demonstrated the truth of this theory by rubbing a stone on the brass of a near-by sled. To a majority of those who had located and began mining the surrounding hills this was convincing proof that they had been fooled. It is to be related, however, that a few refused to escape their delusion, and continued to dig for some days longer without any gold yielding result.

Another instance of just how far the average man will go on the report of gold found sprung from

the remark of a Dawson miner coming out over the ice during that winter. Said he to those of the stampedees with whom he spoke, "Its a rich country boys, and gold is to be found in there at the moss roots." As a result of that expression many an acre of moss was uprooted the length of the Yukon river by men who were to learn that gold does not grow on or cling to moss roots.

At the end of a year, or five or ten (it takes some men longer than others), nine hundred and ninety-nine men out of every thousand

who are attracted by a gold excitement, and who lay down the tools of the calling in which they are engaged—be it farm, or business, or shop—to follow the will-o'-the-wisp, learn that mining is of all gambling the greatest. No gold camp was ever struck into which more money has not been expended than was taken out. The percentage of successful miners is about one in ten thousand. This success is counted in dollars, but at the expense of environment such as tends to develop the best in men. Isolation, such as men

who seek gold in mines must know, is the mother of degeneracy in all its worst forms. Any honest spoken man who has followed mining for a year or more will say with me to the young man or the old don't go into it. Stick where you are on the farm, in the shop, or the store, and you will be the better mentally and financially, as well as morally, for doing so.

But there is a wonderful opportunity for the men who go to the section in which this turkey strike originated if they but open their eyes to it. Surrounding

them on all sides—once there—will be opportunity for home and money making unequalled in any other section of the world. This home and wealth can be won in consideration of less expenditure of labor each year than is required to sink the average mining prospect shaft. I refer to the almost limitless acres of rich agricultural soil, across which they will wander. Land, the productiveness of which has been demonstrated, and which may be had almost for the asking; land which in innumerable cases has produced a crop in dollars greater per acre than the original cost thereof is their reward.

The only benefit to the world that gold mining stampedes has produced results from the fact that men, unsuccessful and discouraged in the pursuit, have looked the world in the face, and with the wisdom born of experience realized that through the tilling of the soil lay the surest way to a home and independence. In the rush for California, in the days of '49, here and there along the miles of trail, men, who travel to endure the hardships of travel, dropped out of the ranks. Then locating a spot in the valleys, or on the prairies built a home, and commenced to till the soil with success that soon neighbors came, towns were built, and a state formed, and the present wealth thereof is counted in sums so many times greater than the value of all the gold in existence that one marvels.

And so the discouraged miner of the Cariboo, settling down to the true life of a farm paved the way for the winning from the soil returns in grain and fruit and other agricultural products, which have brought to British Columbia a portion of wealth in comparison with which her past yield in gold is but a speck. And so, too, in the Klondyke country, close clinging to the arctic circle as it does, men who tilled and planted produced returns in vegetables and grains and grasses that counted a fortune for them. While the miners round about them picked and shovelled themselves deeper into poverty day by day.

Of course, in this day and age, just as has been in all the past, men court adventure different from that which comes to them through the ordinary happenings in the locality of their birth. Pulling up home stakes they venture into another province or alien land. If this had not been so America would not have been discovered, would to-day be inhabited only by the Indians. The adventurous spirit born in men is to be commended. It has been the avenue through which food and clothing and shelter has been provided for the ever-increasing millions of the world. It is good to see a young man striking out

into the world for himself—brave and strong in the ambition to make a home and take a place among men. For such a young man just starting out here in the North-West are opportunities for success just as great, if not greater, than have ever existed. These opportunities are in all lines of human effort—business, manufacturing, farming—what not? And with a minimum of effort insure a maximum of reward in return.

Experience and investigation have impressed me—have strongly embedded within my mind—the conclusion that no young man should be satisfied these days until he has acquired at least a few acres of unencumbered land, and built a home on them. It is a step towards self protection, that means an independence for him so long as he holds them. No matter what misfortune fate may hand him, no matter where he is located, any advice to him, founded upon an experience gained from an investigation of every section of North America, from the Gulf to the Arctic, from the Pacific to the Atlantic, is to locate those acres, and build his home somewhere in the North-West. Here there is a wealth of soil, at a price per acre uninflated and easily obtainable. Upon this land he may produce a diversity of crop which always brings a big return in dollars, because of the never sluggish big market close at hand.

Join the stampede for gold in Manitoba young man, seek it through the production of her golden grain with "your hand to the plow." Enter dairying here, and win fortune through an ever insistent and growing demand for her golden tinted, money-getting butter. Yes, and if you will, come and seek gold in her turkeys. There is gold in turkeys, and all other poultry in Manitoba, but it's in the sale of their eggs and flesh—not in their crop.

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have three cows or three hundred, as the Automatic Self-Contained Combination Cream Separator and Gasoline Engine skims faster than ten men can milk. With a capacity of over 700 pounds per hour only one size of this machine is necessary and from United States Government and state experimental tests, as well as reports on thousands already in satisfactory use, the dependability and skimming qualities of the Automatic prove it to be a remarkable machine. The home-separator principle has unquestionably been the right one for a dozen years, although the tendency of late has been to run hand separators by power where the farmer or dairyman has an engine on his place. The Automatic combines both separator and engine power in one machine and is really in a class by itself because it is the first and only machine that does this. From reports of the demand both in the best dairying districts of the United States, and from Canada, South America, Australia, and, in fact, all over the world, it appears that the farmer is no longer willing to "trade the sweat" of his brow for less than three cents an hour, what the Automatic costs to run. The full speed of the bowl is brought up in 15 seconds, and the machine will run for hours without watching or attention. The milk tank can run dry as often as necessary without churning or congealing cream in the bowl, as the Automatic patented milk feed prevents this, and the cream will discharge evenly and smoothly when more milk is poured into the tank. The only bowl ever made that can do this. The price of this machine is astonishingly low, and arrangements are offered by the manufacturers to accept old machines on trade. These points and many others even more interesting are fully covered in a large new book showing all points, with big photograph color illustration. A copy of this book will be mailed free to any reader of this paper who sends his name and address as below. Be sure to ask for Book 13, and address Morton Ducker, President, Standard Separator Company, 275 Reed Street, Milwaukee, U.S.A.

The diving bell was not mentioned before the sixteenth century. Two Greeks in that century (1538) gave an exhibition before Charles V, descending into water at considerable depth in an inverted large kettle. They took down with them burning lights. The men returned to the earth level without being wet. The light was still burning.

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Every Farmer should grow Plums. They are hardy and certain croppers.

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Try these two great papers, and enjoy the pleasure of the contest.

Western Canada Market

Largest and most prosperous territory in the world now under development. The tune of the traction engine is sounding its note over 500,000 square miles of good agricultural country.

Chas. F. Roland, Commissioner, Winnipeg Industrial Bureau.

The needs of the West, for manufactured goods, are many and varied. It is true that some cities of this section—more notably Winnipeg, perhaps—have made progress along certain lines of manufacture, but the demand is so insistent and grows so rapidly that there is no hope that the West will be able to supply



Chas. F. Roland.

mediate demand has been supplied. It for some years at least. It must be true, too, that Western Canada, filled with the millions of people that it readily will support, will always be a good customer for the manufacturer of other parts—a customer to be cultivated, encouraged, attended to.

At present, one of the chief needs of the West—naturally—is farming machinery. In the three provinces of Manitoba, Saskatchewan and Alberta there exists today an open market ready for exploitation by manufacturers and machinery agents, second to none, and one that will grow with time, instead of being—as is the case of other markets—glutted when the im-

mediate demand has been supplied.

The principal lines of machinery needed by the markets of the Canadian West, are all classes of agricultural machinery, including steam threshing, plowing and traction engines, municipal equipments, such as road scrapers, rollers, etc., railroad cars and supplies, pumping outfits for city wells, excavating and mill machinery, and, in fact, every type of machine generally used in the building up of a new country in which cities and towns are steadily rising in importance and others springing up.

In this farming machinery, there is greater demand than in any other line, and this demand will occupy a widening field as the country becomes more thickly populated. In the three provinces of Manitoba, Saskatchewan and Alberta there are 357,016,778 acres of land, of which more than half is suitable for farm purposes. Of all this vast total only 16,327,970 acres is at present under cultivation, leaving the remainder as the future market to be supplied when the country is fully opened up. Conditions on the great farms of the Canadian West are totally different from those which obtain in many countries, where most of the farming, is of a mixed nature. In the West, thousands of acres are used for the cultivation of wheat alone, and it is on these immense tracts of land that the value of up-to-date machinery is making the work of cultivation as simple as possible, is fully recognized. Traction engines, hauling eight, twelve and fourteen gang plows, are being brought into use throughout the prairie provinces, and seeding, reaping and harvesting the grain are all carried on in the same large way. Harvesting machinery is sold by the trainload, and it is by no means an uncommon sight to see a complete train of over forty cars loaded with threshing engines and separators, coming into Western Canada from Eastern Canada or across the border. United States makers of machinery are active and aggressive in their selling campaigns in Western Canada. It was boasted in an American magazine last year that one United States house sold \$1,200,000 worth of farm machinery in the Bow River Valley last season. Possibly the figures were exaggerated.

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- NORTH WEST COLLECTION**
A Grand Selection for North-West Growers
- 1/2 lb. Beans.....Dwarf Stringless Green Pod.
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 - 1 pkt. Cabbage.....Extra Early.
 - 1 oz. Carrot.....Early Scarlet.
 - 1/2 pkt. Cauliflower Snowball.
 - 1 pkt. Lettuce.....Early Crisp.
 - 1 pkt. Lettuce.....Cabbage Heading.
 - 1 pkt. Onion.....Early, Slicing.
 - 1 oz. Onion.....Large, Boiling.
 - 1 pkt. Parsley.....Curled.
 - 1 pkt. Parsnip.....Long White.
 - 1 lb. Peas.....Earliest Dwarf.
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 - 1 pkt. Radish.....Early Round Red.
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Care of Stewart & Walker
106 Bank of Nova Scotia Building, WINNIPEG

Triumph of Farm Plant Breeding

Red Fyfe Wheat (Regenerated)

Bred by Garton Brothers, the celebrated Farm Plant Breeders, England. The earliest, heavy yielding and most rust-resisting strain of Red Fyfe wheat.

No. 22 Oats

Bred by Garton Brothers by crossing together Abundance, Banner and Tartar King. The earliest, large grained, strong strawed oat in cultivation. Six days earlier than Abundance.

Garton's No. 68 Six-Rowed Barley

The earliest six rowed barley out of a test of 134 trial lots.

Marquis Wheat

Bred by Dr. Saunders, the famous Plant Breeder of Ottawa. Has proved an ideal wheat for western conditions. Our seed is raised from stock seed obtained from Indian Head Experimental Farm.

Victory Oats

Bred by Prof. Nilsson of Svalof, Sweden. A New White Oat, now introduced into the West for the first time, has given good results in Europe.

Garton's Selected Hardy Alfalfa

Proved by four years trials to be the Hardest Strain in the West.

Breeders and original introducers of No. 46 Wheat, Regenerated Abundance, Regenerated Banner Oats, Brewer Barley and Selected Strains of Grass, Clover and Root Seeds. Write for catalogue (now in press) describing fully all the above varieties of grains and seeds.

Garton Pedigree Seed Co., Ltd.

Seed Farm 2480 Acres,
CAREY, MANITOBA

259 CHAMBERS OF COMMERCE, WINNIPEG

gerated, but it is certain that a very large amount of this class of goods finds its way into the Canadian West each year. United States papers and magazines send their best writers through the country to gather material for special stories. These stories—appearing, as they do, in the best publications in the States—carry great weight with them and attract a deal of attention to Western Canada, for manufacturers and selling agents of American goods.

One hundred thousand actual farmers from the States crossed into Western Canada last year. They brought with them goods and money estimated at \$100,000,000, and they brought more than that—they brought a big trade in all sorts of farm machinery and in dozens of other lines. Naturally, perhaps, these men are disposed to buy the makes of machinery and other goods which they have tested and know. Certainly, they will buy heavily and just as certainly will be most likely to buy the goods that are easiest to come at if the quality is there. Experience proves that the people who come to Western Canada from the States speedily develop into good citizens of Can-



The laying of the Cornerstone of the Winnipeg Industrial Bureau's New Permanent Exposition Building, by His Honor, The Lieutenant Governor of Manitoba, on Dec. 30th, where the product of Winnipeg factories and labor will be exclusively shown. The insert is a photo of Lieutenant Governor D. C. Cameron, and in the front row facing reading from left to right are:—W. J. Bulman, Chairman of the Trade Expansion Committee of the Bureau; next the Governor; Major R. D. Waugh; F. W. Heubach, President of the Bureau; Ex-Mayor W. Sanford Evans; James Scott; and C. N. Bell, of the Winnipeg Board of Trade, in foreground.

ada, contented with their lot and circumstances, and believers in things Canadian.

Primarily, a trade centre only for supplying these products to Western points, Winnipeg has taken on the quality and conditions of an important industrial city in addition to its prominence as the largest wheat market in the world, and the biggest trade and financial centre of Western Canada.

J. S. Schultz, a German, obtained the first actual photographic copies (of writing) in 1727; and to Thomas Wedgewood is due the honor of first producing pictures on sensitized surfaces in 1802. In 1839 John Daguerre (with Joseph Nieuce) perfected the euguerreotype process, the first practical photography.

Cork was known to the Greeks and Romans, and was put to almost as many uses as at present, although there is no mention in Rome of linoleum, notwithstanding its Roman sound. Glass bottles with cork stoppers for wine and beer did not come into use until the middle of the fourteenth century.



Complete Story of the Wiles of a Woman

Mr. Chuttle uttered a low exclamation and his eyes widened as they rested on a small advertisement in the latest edition of the "Saltcombe Recorder." He glanced furtively over the top of that publication at the rather portly form of his rival, which occupied a goodly portion of the other end of the settle, and being satisfied that both the start and the exclamation had passed unnoticed by that worthy, he settled down to a more careful perusal of the advertisement. It ran as follows:

"KNOW THYSELF.—Madame Hebert, late of Bond Street, the famous clairvoyant, palmist, and general dealer in the occult, offers her services free of all charge, for purposes of advertisement, to readers of the 'Saltcombe Recorder.' Dreams interpreted. Your character from your fingerprints, etc., etc.—Address, Madame Hebert, 128 High Street, Saltcombe. Note.—All frivolous inquiries will promptly be destroyed."

Mr. Chuttle grunted as he made a mental note of the address, and glancing again at Mr. Topleigh, who, to all intents and purposes, was deep in an antiquated edition of the "Livestock Weekly," he placed the newspaper in his breast pocket and passed out of the bar.

There was a slight twinkle in Mr. Topleigh's eyes as, through the open door of the tap-room, he watched his one-time friend walk briskly down the village street and enter the gate of widow Nash's cottage—a twinkle that developed into a positive beam when, a few minutes later, he drained his tankard, folded his paper, and with a cheery "good-day" to the landlord, followed in Mr. Chuttle's footsteps.

At one time there were no firmer friends in the village of Duxborough than Messrs. Topleigh and Chuttle, but a barrier had sprung up between them in the shape of slim Widow Nash, who had descended on the hamlet with a coy smile and a cottage full of furniture, and had taken the heart of every single and ambitious man by storm. But one by one her admirers had been repulsed, until there remained only these two bitter rivals.

Mrs. Nash was busy ironing, and singing over her work, when the door opened and Mr. Chuttle

entered unceremoniously. He placed his hat on the floor, and dropping into a large armchair, eyed the widow curiously.

"Good gracious me, Mr. Chuttle!" cried the lady, feeling that she must say something, "whatever's come over you? You look quite scared."

Mr. Chuttle endeavored to look mysterious.

"Your dreams are about to be realized," he said at length, in a sepulchral voice, at which the widow dropped the iron with a bang.

"Oh, which one?" she gushed. "Do tell me, there's a dear man. Is it the one about the millionaire, or the one about the peer who—"

"None of 'em," replied the little man shortly.

The widow's face fell.

"I meant to convey," Mr. Chuttle went on in his loftiest tones, "that your expressed wish that your dreams should be interpreted is, owing entirely to my astootness, about to be gratified."

And in a few words he explained to her the purport of Madame Hebert's advertisement.

The idea appealed strongly to the widow, and leaving the iron to scorch its shape on a table-centre, she dashed into an adjoining compartment and returned shortly, loaded with stationery.

"We'll write at once," she said. "I'm dying to know what that dream I had about you meant, Mr. Chuttle. You know, the one where you fell in a ditch and Topleigh helped you out. I told you about it."

"You did," said Mr. Chuttle dismally. And, drawing his chair up to the ironing-board, he wrote out a vivid dream he'd had on the previous night.

The two were thus busily occupied when Mr. Topleigh entered, and was immediately prevailed upon by the widow to enter into the project.

For a fortnight no replies were forthcoming, and when one day, in passing, Mrs. Nash had expressed the opinion that their separate missives had been considered frivolous and had suffered prompt destruction, as the advertisement threatened, Mr. Chuttle had replied that he thought such a course highly probable in the case of Mr. Topleigh, but that he had an idea

Big Ben

**If you'd rise early just say when
And leave your call with me—Big Ben.**

BIG BEN has something to say to people who like to get up promptly in the morning. He guarantees to call them on the dot whenever they want and either way they want, with one prolonged steady call or with successive gentle rings. And he guarantees to do it day after day, year after year if they only have him oiled every year or so.

There are 4,000 dealers in the Dominion who have known him since he was *that high* and who'll vouch for everything he says.

Big Ben stands 7 inches tall. He rings steadily for 5 minutes or intermittently for 10. His price is \$3.00 anywhere in Canada.—If you can't find him at your dealer's, a money order sent to *Wentlow, La Salle, Illinois*, will bring him to you duty prepaid.

"BIG BEN"

Sent on receipt of price **\$3.00** Established 1875

ON SALE BY
Andrew & Co. Limited
JEWELLERS
Special Agents, 420 Main St., Winnipeg

Repeating Shotguns

\$19.50 to \$95.00

Marlin

repeating shotguns are made in 12 and 16 gauges (6 shot), solid frame and take-down, many grades and styles, with special models for trap and field shooting, etc. The most extensive line of repeating guns in the world.

Every Marlin repeating shotgun has the *Marlin* solid top, slide ejector and closed-in breech. It can't freeze up with rain, snow or sleet; rain can't run into the action and swell the shells in magazine; dirt, leaves, twigs and sand are also excluded from the action. Simple, strong mechanism; one-third less parts than any other repeater. The double extractors pull in any shell. Handles rapidly, guaranteed in shooting ability—and the automatic recoil safety lock makes it the safest breech loading gun built. Be sure you get a *Marlin*. **DO IT NOW!** Send three stamps postpaid and get our big catalog of all *Marlin* repeating rifles and shotguns by return mail.

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

Family Group Photos a Specialty

AT
STEELE & CO., LTD.
MAIN ST. AND BANNATYNE AVE. WINNIPEG

that his own document must have gone astray in the post.

That evening, however, they each received a communication from the clairvoyant, from the outside of which it was plain to see that Madame Hebert's talents did not extend to the art of calligraphy, and that her education generally had not encroached very seriously on her valuable time.

Mr. Chuttle hastened to the widow's cottage to acquaint her with the contents of his epistle, and there found Mr. Topleigh discussing the extraordinary genius of Saltcombe's Sorceress.

The interpretation the widow had received was the very one she would have wished; so was Mr. Topleigh's. But Mr. Chuttle's was in somewhat grimmer strain.

"I told her that I dreamt my pig had won first prize at Saltcombe Cattle Show this year," he said, choking back a sob, "and this is 'er reply." And straightening out the thumb-marked missive he read it aloud in a quavering voice.

"Dreams go by contraries," it ran. "Disaster is staring you in the face. If you had dremt your pig had died, it would have won first prize; but as you dremt it won first prize, it will surely die. And even if it don't it will bring bad luck. If it is not ded the morning after you reseeve this, give it to your worst enemy. It is your only charnce."

The next morning the gate of Mr. Topleigh's farm swung open, and the bowed form of Mr. Chuttle, preceded by a huge and grunting pig—which was very much alive—passed through.

Having carried out Madame Hebert's instructions to the letter, Mr. Chuttle made his way home alone, rather lighter of heart and firmly resolved to pry no further into matters occult.

Apart from the fact that the feelings of the rivals became more bitter towards each other as time went on, things were running as smoothly as could be expected in the circumstances, and Mrs. Nash seemed as undecided as ever as to which was the more favored of her suitors, when one Sunday something happened which saved her any further trouble, and the rivals any further anxiety, by settling the question then and there.

She had invited both strings of her bow to afternoon tea, and had, as usual, introduced the subject of dreams and Madame Hebert—whose advertisement, by the way, had not made a second appearance—when Mr. Chuttle, to her pleasurable surprise, had hailed the subject as one which positively made conversation, and dramatically recorded at length a dream which, he said,

had happened to him on the previous night.

"I was going down this very street," he said, in a hoarse whisper, "and passing this very cottage, when the door opened, and Mrs. Nash, lookin' 'as beautiful as ever"—here he paused and glanced sheepishly at the widow, who blushed in piebald fashion and coughed affectedly—"appeared before me astonished gaze, dressed all in bridal clothes."

The widow's blush deepened. "Oh, Mr. Chuttle!" she interrupted, playfully flicking him with the corner of a serviette, "what nonsense you do talk—doesn't he, Mr. Topleigh?" "Gin'rally," assented Mr. Topleigh, with lowering brows.

"Yes, all in bridal clothes," the narrator went on, "and 'anging on her arm was the 'usband to 'oom she had just been wed."

A short silence ensued, then: "Who—who was it?" cried the widow breathlessly.

"Oo?" roared Mr. Chuttle, banging his fist on the table to emphasise the question. "Oo should it be other than Mr. —" "Yes?" panted both his listeners.

"Topleigh!" said Mr. Chuttle. The widow gasped. So did Mr. Topleigh.

Mr. Chuttle leaned back in his chair, breathing hard.

"Now send that to Madame Hebert and see what she has to say about it," he said decisively.

And the widow, not knowing whether to faint or treat the startling disclosure as a huge joke, decided, after a few moments' consideration, to adopt the middle course and forward the dream to the clairvoyant for interpretation.

As Mr. Chuttle made his way home that night he showed many outward signs of exultation, and when at last he reached his own front garden, all freshly laid with unrolled gravel, he permitted himself a few clumsy steps of a sand dance until his dog called him to earth with a peremptory and reprimanding bark.

The fact was that Mr. Chuttle had been giving the subject of dreams a good deal of his



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CUT PLUG
SMOKING TOBACCO
FOR QUALITY AND VALUE.

time and attention since the loss of his pig, and the alleged dream which he had related with such eclat was in reality no dream at all, but a carefully thought-out fiction, which had its foundation in Madame Hebert's statement that dreams go by contraries. For, he had argued, since it was generally accepted that either he or Mr. Topleigh would eventually lead the blushing widow to the altar, and since he had dreamt that his opponent was the favored one, then, to be consistent, Madame Hebert must surely interpret the dream as indicating that he, and not his opponent, was destined to be the lucky man.

Picturing the effect that this information, coming from the clairvoyant, would have upon the credulous widow, Mr. Chuttle could almost hear his bride-to-be giving Mr. Topleigh, in her iciest tones, the straight tip that in future she would regard any attentions he thrust upon her as deliberate annoyances.

It so happened that the rivals were again partaking of tea in the widow's cottage some three weeks later, when the postman, limping up the path, handed Mrs. Nash a letter through the open window.

The handwriting was clearly that of Madame Hebert, and the widow, recognizing this fact, went hot and cold with excitement, grasped the breadknife, ripped open the envelope, and with trembling fingers drew forth the missive from within.

Her eyes opened wider and wider, and her face went paler as she read on and on; and finally, with a piercing scream, she dropped the letter, and, turning her back towards Mr. Topleigh, fainted gracefully in his outstretched arms.

"W-what is it? What ails 'er?" groaned Mr. Chuttle, who, noticing that the lady had gone out of her way to faint in Mr. Topleigh's arms, when his own had been in more convenient proximity for the purpose, had promptly concluded that Madame Hebert's interpretation of the dream had not come up to his expectations.

During the fortnight following the receipt of this grim document, Mr. Topleigh, having been finally accepted by Mrs. Nash as her future husband, lost no time in transferring the widow's furniture to his own household.

Mr. Chuttle presented the happy pair with a work-basket on the occasion of their wedding, in atonement for any distress his rash dream may have brought about, and received in reply a courteous but illiterate note of thanks written by the bridegroom himself, wherein that gentleman forgave the erring Chuttle absolutely.

To Mr. Chuttle's certain knowledge Mr. Topleigh had never written to him before, yet somehow the writing seemed to him to be painfully familiar.

The perspiration glistened on the little man's brow at the very thought of it.

But he would revenge himself, he decided, fuming. He would tell Mrs. Topleigh of her husband's duplicity, and how she had been won under false pretenses. And with such thoughts surging through his brain he had run halfway to Topleigh Farm, when the other side of the question occurred to him, and put a sudden check on his wild career.

He had been taken in himself, he realized, and to make the pig episode public would be to make himself the laughing stock of Duxborough. Moreover, the wily Mrs. Nash would probably swear that Madame Hebert's epistle had in no way influenced her decision, whether it really had or not. She would gloat noisily over the clever way in which Topleigh had acquired his—Mr. Chuttle's—prize pig, and had even had it driven into his sty for him—all free of charge.

The odds were quite against him, he determined; and wearily retracing his footsteps, the little man decided that he must accept his humiliating defeat unconditionally.

It was a dingy little shop, with a dingier window display of very worn and very unconvincing dummy blocks of tobacco. These occupied Mr. Chuttle's attention for a brief instant, and then, as he was about to enter the shop, his eye fell on a dirty postcard which was affixed to the window by a gelatine lozenge at each corner and bore the legend: "Letters may be addressed here." Why Mr. Chuttle should have glanced immediately from the dirty postcard to the number over the shop door he perhaps could not explain. But the number over the door certainly explained the presence of a familiar voice that fell upon his ears from within.

"I sha'n't want you to receive no more letters for me," it said. "I've fixed up that affair. You can have the dream book, if you like. Good day."

And the next moment the doorway of 128 High Street, Saltcombe, was filled with the burly form of Mr. Topleigh. For a moment he looked embarrassed on recognizing his vanquished rival's presence, and made as if to approach him and shake him by the hand. But there was a dangerous look in the little man's eyes which made him think better of it, and nodding his head slightly in Mr. Chuttle's direction he stepped heavily from the shop and passed quickly down the cobbled street.



The Howard Watch

THE "Big Limited" moves out on the tick of the second—does its thousand mile run and arrives on time.

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A HOWARD Watch is always worth what you pay for it.

The price of each watch is fixed at the factory and a printed ticket attached—from the 17-jewel (double roller) in a Crescent Extra or Boss Extra gold-filled case at \$40, to the 23-jewel at \$150—and the EDWARD HOWARD model at \$350.

You can buy HOWARD Watches all over Canada. Find the HOWARD jeweler in your town. Not every jeweler can sell you a HOWARD. The jeweler who can is a good man to know.

Send us your name on a postal card and we will send you—free—the little HOWARD Book, full of valuable information for the watch buyer.

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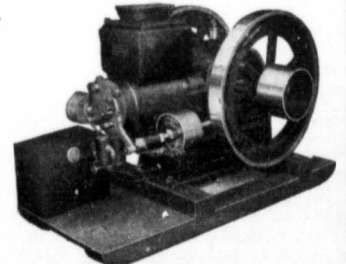
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Window Plants. Their Care and Culture.

A love of the beautiful seems to be inherent in human nature, and in every walk of life we find that beauty is attractive. But some forms of beauty are so common, so universally distributed, that they are passed by unheeded, or as the old adage expresses it, "Familiarity breeds contempt." If an example of this were needed I would point out the wayside flowers, and I might instance the dandelion as a most striking illustration. It is so common that it is regarded as a nuisance, and yet, if studied minutely it will be seen that in richness of color and beauty of formation it is equal to many of our most highly-prized floral specimens. In England many of the flowers that grow wild in Canada are only found in gardens and they deserve their place.

To foster this love of the beautiful I consider it but right and fitting that everyone should be encouraged to grow flowers. Everybody has not a garden in which to grow them, yet that need not preclude their effort to cultivate a few plants, which may be grown in pots in the window or in a box outside of it.

It is of the former that I wish to treat in this paper, but what is said of pot plants may apply in many instances to those grown in boxes.

At the commencement we must first consider what space is available for plants and the time we have to devote to their care and then make individual choice, for the selection is in a great measure a matter of fancy. But, remember, it is far better to have a few well kept plants than to have more than can properly be taken care of or you have room for.

Those who prefer the most bloom with the least care will find the geranium the most hardy of house plants. There are several varieties, some of the best being almost continuous bloomers. The choice of color ranges from white, pink, salmon and scarlet to dark red and there are also single and double varieties.

Foliage plants, such as coleus, with fuchsias, begonias, primulas, musk, cinerarias and petunias, all make splendid window plants, though some of them will not stand any frost, but, if kept free from that, are easy of cultivation and give very satisfactory results. Roses of some varieties also make nice house plants. There are many others that might be grown as pot plants, such as verbenas, stocks, asters, mignonette, etc., which are also admirable for window boxes. Then there are ferns of many kinds that are suitable for growing in pots. I have refrained from the subject of bulbs, which is too wide to include in this paper, but they make ad-



ANTON MICKELSON President

Don't Let Gophers Rob You This Year

The gophers and squirrels are now sleeping and dreaming of what great feasts they will have as soon as the first of spring seedling. As soon as the snow disappears, they will wake up from their long sleep and join together for the big feast of grain that the farmer will be spreading and which he believes will produce bounteous crops for him. The gophers did it last year and the year before and they can't figure out any reason why they won't be able to do it again. Yet the whole matter is in your hands, Mr. Farmer. Are you going to stand a loss of \$50 every 50 acres, or are you going to prevent this loss?

1c PER ACRE KILLS THEM

I want to prove it to you—I want to show you how a 75c box of Kill-Em-Quick—my gopher poison—will kill every gopher on an 80-acre farm—how a \$1.25 box will kill them all on a 100-acre farm. Is it worth while to you to at least investigate and get the facts? Let me prove to you that every gopher on your farm costs you 10¢—that there are about a thousand gophers on a 40-acre field—that in 40 acres the gophers will eat and store away hundreds of bushels of grain. Why not get a package of

MICKELSON'S KILL-EM-QUICK GOPHER POISON

from your druggist right away? Have it on hand ready. It is easy to use. The first day you see any signs of a gopher mix a little Kill-Em-Quick, carry it out in the field and put it wherever you know a gopher has been. Go back in a few minutes and if the gopher remained around there you will find him dead.

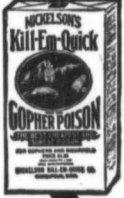
Mickelson's Kill-Em-Quick has a very peculiar odor and a very attractive taste to gophers. It draws them like a magnet and they eat it greedily. One single poisoned grain is enough to kill a gopher. It is the most economical and the quickest acting gopher poison ever placed on the market. It also kills pocket-gophers, field mice and squirrels.

I know what it has done thousands of times on thousands of farms throughout the country. That is why I can absolutely guarantee it to give positive and perfect satisfaction to you, or I, personally, will refund every cent of your money. Go to your druggist. It will even pay you to make a special trip. Get a package of Kill-Em-Quick. If he won't supply you, send me his name with your order and I'll ship direct, postage prepaid, and with my guarantee of satisfaction or money back.

WRITE ME A POSTAL OR LETTER

I have made a special study of gophers and I want to tell you some of the things I've learned about them. I want to tell you personally how you can rid your fields of them. But if you follow the simple directions given on every package you will find it an easy matter to kill every gopher on your farm. Tell me whether you have gophers, squirrels, prairie dogs, field mice, rats or pocket-gophers to contend with. I will tell you the best way to use Kill-Em-Quick. Write me now, and in the meantime go to your druggist and get a few packages of Mickelson's Kill-Em-Quick. Don't take anything else. Nothing else on the market will do the work as quickly or as cheaply. Address me personally.

ANTON MICKELSON, President, Mickelson Kill-Em-Quick Company Dept. C Winnipeg, Manitoba, Canada



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mirable pot plants and will bloom when other flowers are scarce; nor have I dared to touch on chrysanthemums, which merit a place in every home that can afford a place to grow them.

For an amateur just making a start with window plants, I should recommend him to go to a local florist and buy a few plants, and he can afterwards increase his stock by propagating a few cuttings which he will find an interesting occupation. Geraniums, fuchsias and some others are easily raised from slips started in water or placed in the soil. Begonias are better started in water, but for the others named I prefer to start them in the soil.

A good soil should be used for the pot plants. A mixture of loam, leaf mould and sharp sand is very suitable, or a good soil can be obtained by scraping away the upper surface of a cow yard and taking the soil underneath. The space for the root being limited, the soil must be carefully attended to.

The ideal conditions for house plants are practically the same as for human beings, that is a temperature of about 65 to 70 degrees by day and 50 to 55 degrees at night. It may not be always possible to maintain this warmth at night, but strive to keep as near that as you can.

The next consideration is fresh air. Keep the room well ventilated, but let the plants be free from all draughts. When a room becomes too warm and too dry the plants suffer. If they are grown in a high temperature with moisture the growth is forced, and being soft is easily injured. A strong draft will seriously chill plants in this condition and it will take months of careful attention to bring them back to a healthy condition.

The next exacting condition is watering, and here is the point on which most plants have to suffer. Too much attention cannot be paid to the drainage at the bottom of the pot, because if that is imperfect it is impossible to water properly. Too much water will make the soil sour, while with too little water the plants will wilt. The effect of either will be yellowing and dropping of the leaves. It is easier, however, to drown a plant than to kill it by drought. No hard and fast rule can be made for watering as so much will depend on the soil, the atmosphere and the plants. The common fault in watering is not doing the job thoroughly when it is done at all. Never give a little surface sprinkling as this causes the slender thread-like roots to turn up to the surface in search of moisture where they are left to suffer from the drying of the soil afterwards. The best way is to take the plants to the sink or bathtub and give the soil a good watering, allowing the

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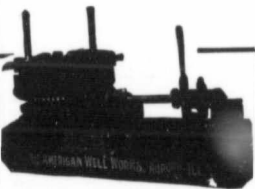
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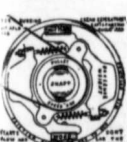
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pots to remain there until the surplus water is drained off. If this cannot be done, place a saucer under each pot, and about fifteen minutes after watering go around and turn out all the saucers. Never allow water to stand in the saucers, as it will prevent aeration through the hole in the bottom of the pot and also has a tendency to rot the roots. When plants are kept in jardineres, people often get careless, allow water to collect in the bottom, and then wonder why the plant is not doing well.

It may perhaps come as a revelation to the amateur to be told that plants breathe, and they do this through their leaves, which are full of small pores for that purpose. So it becomes necessary to bathe the leaves frequently to remove the dust which will invariably settle on them and choke up the pores. This may be done by spraying or by carefully rubbing the surface of each leaf with a damp sponge.

If the plants should need extra feeding it is much better to give in liquid form, being more readily assimilated by the plant. The best form of liquid food is made from cow or sheep manure, as there is no danger of burning the roots, if not applied too strong. More cleanly to handle are the special plant foods put up in powder or tablet form, and which can be brought from the local seedsmen.

Geraniums are remarkably free from plant diseases, or insects, which is more than can be said of some plants, and in naming a list of some plants for the amateur I purposely avoided mentioning the calceolarias, as my experience with it as a window plant has not been satisfactory on account of its liability to become infested with green fly. These plant lice, or aphides, are generally found on the underside of the leaves, where they suck the sap. Against these use tobacco water or soap suds. Some persons advise fumigation but unless done thoroughly this method is of little use, and as the plants need syringing after, it is well to wash them first and rinse in clear water after. Next to the aphides in destructiveness is the red spider, a very small red mite which can scarcely be seen by the naked eye. It also lives on the under side of the leaves, but its presence can be readily discerned by numerous small, yellow spots on the leaves. Like the aphides, the red spider lives on the plant's juices. It thrives in a hot, dry atmosphere, and its presence is a sure sign of insufficient moisture. The conditions ordinarily found in living rooms are very favorable to this pest. The remedy is obvious; syringe the plants with water, applying it on the under side of the leaves, and with

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considerable force because the spider is protected by a web.

Mealy bug is sometimes found on house plants, looking like a small tuft of white cotton. Sometimes the plants are affected with thrips, which are small slender black or brown insects, about a quarter of an inch long. Both these may be controlled by a free use of the insecticides mentioned.

If angleworms infest the soil in the pots, they may easily be removed by watering with lime water. A few applications of this at intervals of two or three days will generally drive out the worms.

A Tip For The Boys.

Don't Worry—Just Work!

While every young man should be ambitious to aspire to the leadership of his fellows, it is a fact that all cannot be at the helm, for some have to serve in the ranks. If there were none faithfully serving in the ranks, leaders would not be needed.

One fact should be forever in the minds of all young men — there is just as much honor in faithfully serving in the ranks as in the leadership. The leaders could not accomplish anything worthy of note if their subordinates did not do their allotted share of the work that has to be done faithfully, for a faithful worker gets the credit that is due him, whether he is in the ranks or in the lead.

The young man entering upon his career in the business world must keep one fact before him at all times—faithful work is not always rewarded with promotion. If he goes ahead faithfully performing all his duties, he can have a clear conscience, for he has earned the salary that he draws; in other words, he gives his employer a fair exchange in labor for what he receives in his pay envelope.

To be successful in his position, which is the stepping-stone in the ladder that leads to promotion, the young man must go ahead with his work and not worry whether it is appreciated or not. That comes with time.

He need not worry whether his employer seems to notice the hard work he is doing, for the employer does not exist that does not have his working force divided into two classes — the workers and the shirkers.

If he is doing his best for his employer, working to the best of his ability, the young man will be advanced when the period of promotion is at hand.

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Lack of it may be the one thing that holds you back from the fullest success in your life.

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ganization, but without the energy born of enthusiasm, of what avail is it?

Enthusiasm is the power that drives our mental machinery. It is the force that brings things to pass. The derivation of the word is interesting. The original idea is the presence of God in a man. So when you are enthusiastic you may consider yourself inspired.

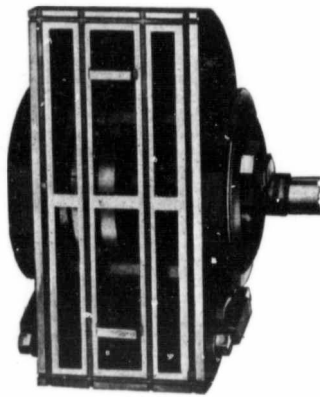
Enthusiasm is something that can be developed. Fall in love with your work and you cannot help becoming enthusiastic. This mental condition springs from knowledge and confidence. The more knowledge you have the greater becomes your confidence and your enthusiasm increases in the same proportion.

Be an optimist. Look on the bright side of things. Nothing so deadens enthusiasm as pessimism. The one is as antagonistic to the other as fire and water. There is a strong element of hope in enthusiasm that inspires one his strongest and noblest efforts. Enthusiasm quickens all the mental faculties. It stimulates the bodily activity. It is an important part of love, patriotism, industry, perseverance and a score of other fine human qualities.

But there is an extremely practical side to this subject of enthusiasm, too, for enthusiasm is contagious and therein lies its special value in the business world. A thoroughly enthusiastic man can communicate his earnestness to his fellow workers or the men under him. He gets results, and that is the supreme test of a man's efficiency nowadays.

It is doubtful if, next to truthfulness, there is any quality so much needed for the successful salesman or advertiser as enthusiasm. Arguments fall flat, tact is thrown away, if you do not broach your business proposition with all the enthusiasm you can muster. Who has not been chilled by the listless answers and hesitating manner of a poor salesman? You feel like running away from such a person, and much trade is driven away by inefficient, unenthusiastic salesmen. It is better to err on the side of too much enthusiasm than it is to have too little.

Many a man who is very successful behind the counter in meeting his customers face to face makes a dismal failure when he tries to reduce his salesmanship to paper in advertising or letter writing. There again enthusiasm is an all important factor. Indeed, if possible, it is more important than in the personal intercourse with your prospective customer. In cold type, gestures and facial expressions, tones of voice and actual demonstration of the goods are necessarily lacking. You cannot answer questions directly. You must forestall objections and



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They are now in use in nearly every Province and State Canada and the United States, and are considered by all mechanics and engineers as having the finest and most successful Steam Tight Expansion King on the market. The Baker Balanced Valve can be placed on any kind of engine using a slide valve.

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In conclusion we will simply say we are thoroughly satisfied with the Baker Balanced Piston Valve and are glad to recommend the same to any and all threshermen. Very respectfully yours, KIETZMAN BROS. & LONGACRE.

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Dunham's Special Canadian Soil Packers
 break up the lumps, pulverize the top soil, pack the subsoil, smooth off the field and leave it in just the right condition to insure bumper crops. They do the work easily, too. Send for catalogue. Then go to you local dealer and insist on seeing the Dunham Soil Packer. Dunham's have STEEL FRAMES. Other makes have wood frames. The 2 poles may be thrown together, a very desirable feature when hitching packer to the engine.


The American Seeding Machine Co.
 WINNEPEG, MAN.



The Loafer.

As I said before, God Himself cannot make a man or woman worthy of consideration except in the crucible of industry. Work is not a curse. Indolence is a beastly mother, breeding no high purpose and no sweet sentiments, nothing but the imps of selfishness. Earning one's bread by the sweat of one's brow—whether on the outside or the inside—is not a curse. God help the children of the rich, the poor can work. I have no patience with the rich loafer, I think much less of him than I do of the poor loafer, and I have no more respect for the female loafer than I have for the male loafer—a loafer is a loafer—nothing more need be said, nothing worse can be said.

The Pump That Pumps
 Double-acting, L.H. Tank and Spray PUMPS
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 of all kinds. Write for Circulars and Prices.
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and BROODERS offer you this liberal and hitherto unheard of opportunity. Try them out on your own premises. Send them back if you want to. These machines are built by the world's most experienced and expert incubator builders. They embody all that is known about successful incubators—lead you by a safe, sane and sure route into the fascinating and enormously profitable poultry-raising business. 80% hatches happen every day with these 120-egg machines. These letters prove it. Get all the facts. Study our catalog before buying elsewhere. It has been the means of saving thousands of dollars' worth of fertilized eggs. It's yours, FREE—no obligation. Send your address now.

Komon Sense Incubator Co., Dept. 43, Racine, Wis.



Lincoln, Grant and Jimmie Hagan

It is contended by some experts that the speech delivered by a negro orator in the New York mayoralty campaign that ended recently, in what is known as the San Juan Hill district, was the best of the entire campaign. The orator was supporting Jimmie Hagan, Tammany's candidate for county clerk.

He said: "I dunno nothin' 'bout dis yere white-slave 'legation they's bringin' 'gainst our man fer mayah. I dunno' nothin' 'bout it. I know sumpin' 'bout black slaves, 'cause my gran'daddy wuz a slave. I suppose I ought to be a Republican, 'cause they tells us Mr. Linkum and Mr. Grant set all us black men free, but I ain't a Republican. I's a Democrat and I'll tell you why. When a pooh culled man is sick in baid, with no coal and nuffin' 'eat in d'house, is it Mr. Linkum or Mr. Grant what sends in a l'il coal, and some meat and braid and sich? Is it Mr. Linkum or Mr. Grant? No, suh! It's Jimmie Hagan."

Strong on Recollection

The Senator was making a speech. After he had finished there was a reception at one of the hotels. A litt'e man pushed eagerly forward.

"Hello, Senator!" he shouted.

"How do you do, sir?"

"Say, Senator, you remember me? I'm Jones—Jones, of Springfield, you know. I met you down there. Remember how full we got together?"

"I do not," replied the Senator icily.

"They pushed 'ones away, but soon he was back.

"Hello, Senator!" he shouted. "Don't you remember that time down in St. Louis we went out and made a night of it? Jones, of Springfield, you know."

They shoved Jones away again, and somebody standing near the Senator asked "Who's your friend?"

"I don't know who he is, but he seems to be hell on remin' cences."

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FOR SALE—Two portable steam engines, 12 and 20 horse power...

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WANTED TO RENT—A 20 H.P. engine and 36 x 60 separator for threshing...

FOR SALE—Ready for immediate location 1 horse, 2 horses, harness...

HOW TO START YOUR GAS ENGINE in the coldest weather...

FOR SALE—A 20 H.P. engine and 36 x 60 separator...

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FOR SALE OR EXCHANGE FOR AUTOMOBILE One is H.P. John Abel Simple Traction Engine...

THRESHINGMAN wants position on Steam Threshing or Threshing Machine...

FOR SALE—30 H.P. hand engine. Only run good shape...

EXCHANGE—For good hand good second hand horse, for 14 Latta Wilson, Murray County, Minn., U.S.A.

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FOR SALE—One 1 1/2 H.P. Case, 20 H.P. Traction Engine...

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FOR SALE—One Gould Balance Valve for 22 or 25 H.P. Gas-Steel engine...

CERTIFIED BROWNER and Meehan with fifteen years experience...

FOR SALE—30 H.P. Motor Oil gas engine...

WANTED—Position as engineer, preferably on portable engine...

LOAN COMPANY commencing business wants as an agent...

EXPERIENCED Licensed Engineer and Traction Mechanic...

WANTED—First class blacksmiths on job on mill, saw, and engine...

FOR SALE—30 H.P. P. Ramsey Engine...

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WANTED—Canadian Traction engine for 100 horse power...

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WANTED—Position as Steam Engineer for fully qualified in any position...

FOR SALE—Threshing machine, also engine...

WANTED—Catalyzers of Steam and Gasoline Threshing and Powering Outfits...

FOR SALE—Mosses-Harris engine in good form near Shekleton...

FOR SALE—A 20 H.P. engine and 36 x 60 separator...

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BARGAINS 1—32 H.P. Port Huron engine, rebuilt and in first class shape...

WANTED—By holder of second class certificate as engineer...

FOR SALE One 25 h. p. compound, return fire traction engine...

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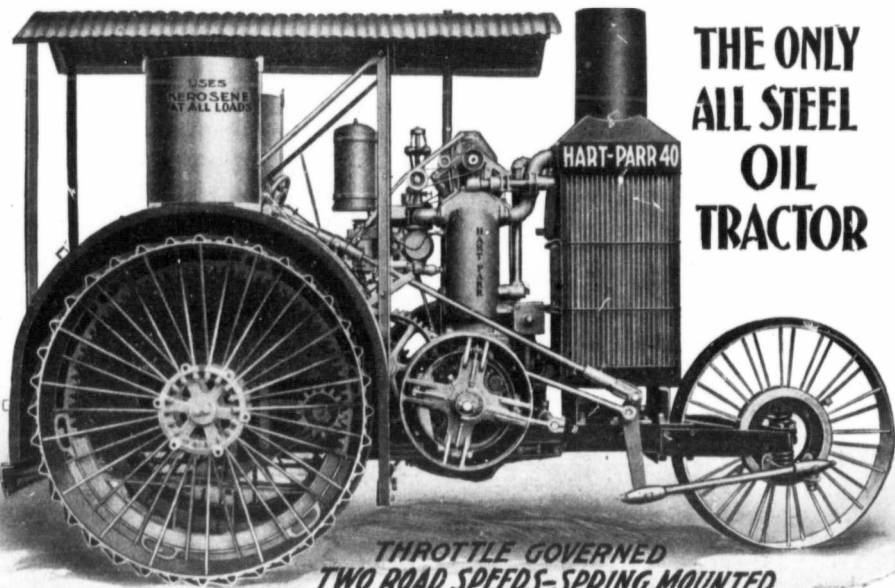
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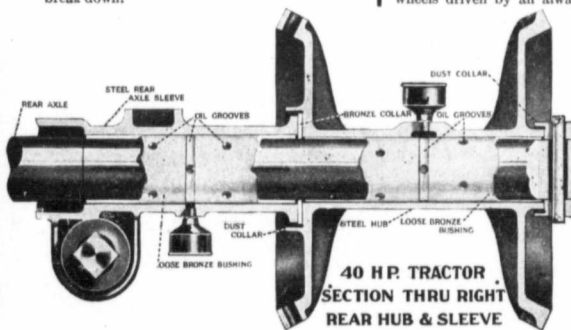
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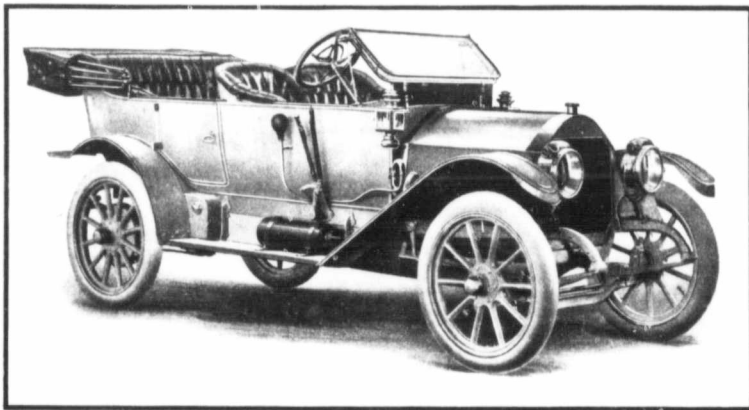
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It was right in the midst of the Threshing season. Waiting customers were getting impatient. Every minute was worth almost its weight in gold. The owner of the rig was watching the progress of the work with anxious eye. "Boys, we must finish this job today. Jim wants us down to his place tomorrow. Crowd her all you can so we can clean up here by dark and move tonight." All hands are straining every nerve. Suddenly there's a snap, a crunching, a grinding and the separator comes to a stop. A gear has broken. What's to be done? It's an all-day drive to the nearest repair house—with men sitting idle and their pay going on. But wait, the owner of the rig owns a Case Car. He jumps in, throws on the power and away he goes. In two hours he is back, the work is underway again and the Case Automobile has again proven its practical value and every-day utility on the farm.



It is not so much a question of "Can you afford a Case Automobile" as "Can you afford to be without one?"

The Case is such a practical car, such a reliable and dependable car, with such a powerful motor and such an abundance of reserve power that it is more of a necessity and convenience than a luxury. It enables you to go when you want to, and come back when you want to, to do ever so many things that you could not do without it. It makes you independent of trains. It makes distant relatives and friends next-door neighbors, it enables you to widen your sphere of activity and make money that you never could make tied down at home. If you never have considered the purchase of a Case Automobile, consider it now—in the light of its many practical uses.

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