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THE CANADIAN THRESHERMAN & FARMER

CANADA'S FARM MACHINERY MAGAZINE

WINNIPEG

CANADA

MAY, 1913

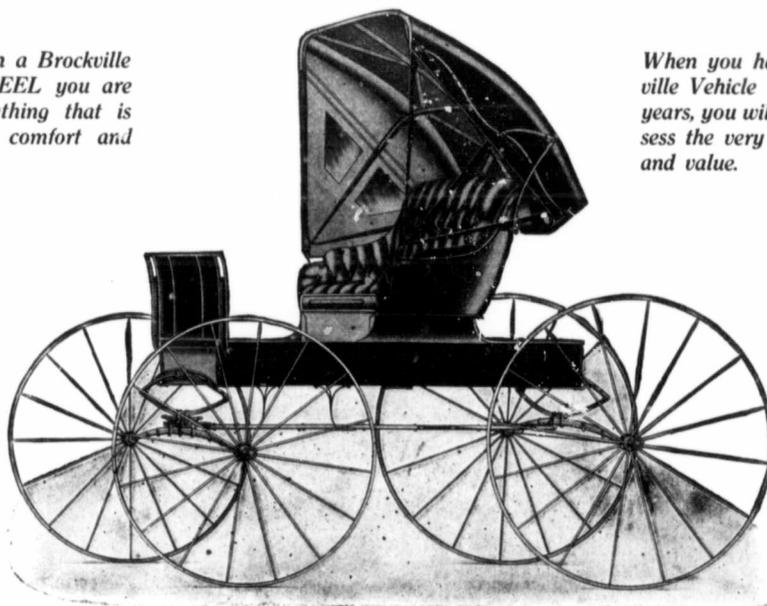


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ELEVENTH YEAR

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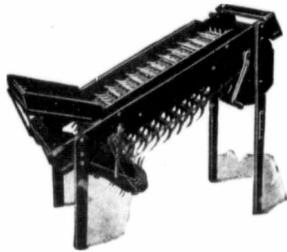
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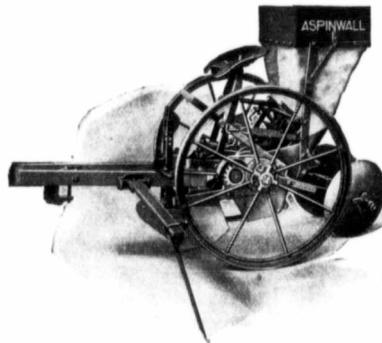


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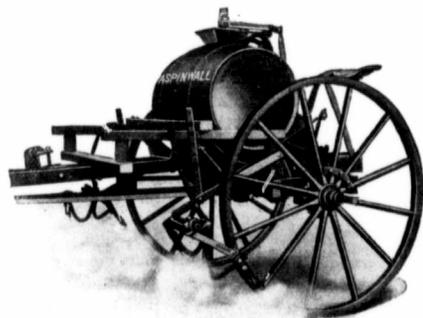
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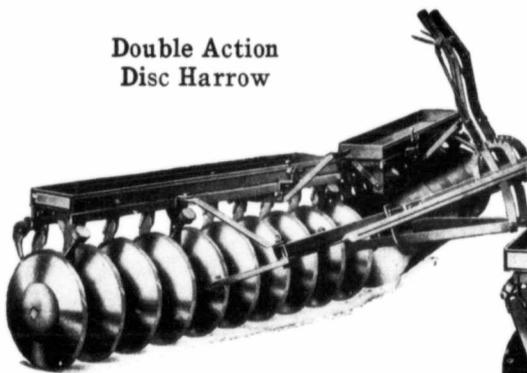
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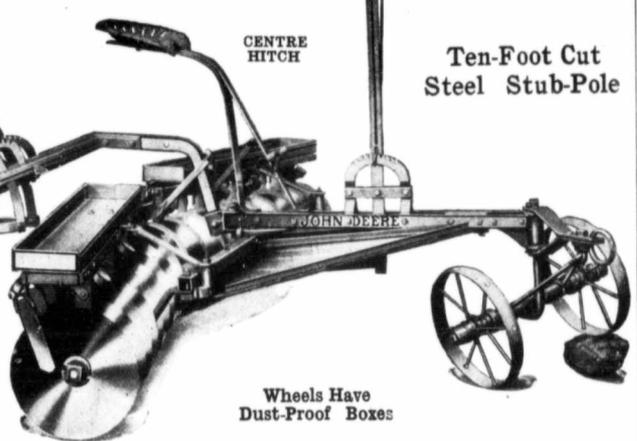
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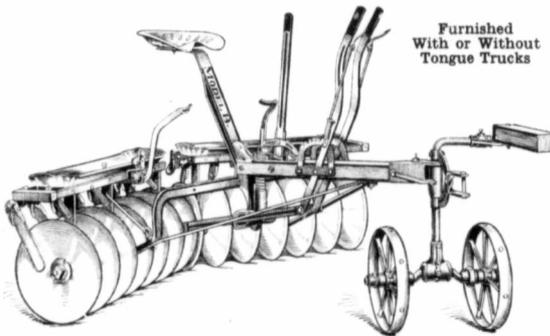
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is necessary in any implement that is operated by engine power. A breakdown not only causes delay, but may prove costly in wasting valuable time at an important season of the year. On the John Deere Double Action Engine Disc Harrows the hitches, frames and bearings are large and heavy and will stand the hardest usage. Special attention has been given to these parts which are subject to hard wear, and they have been made doubly strong.

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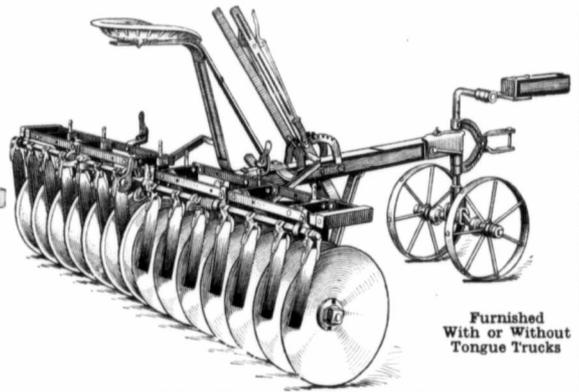


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This fine out-throw disc harrow is a perfect implement for any service, and is peculiarly adapted to work on uneven or stony ground. Its flexibility enables it to conform to any surface and to cultivate it evenly. The gangs act independently and every 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.

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WRITE TODAY



About Ourselves

THIS month our leading article deals with a subject that for Western Canada is rather new. We do not often think of the three prairie provinces as corn growing territory but if you will allow us to be a trifle prophetic we will venture to say that within the next twenty years corn will be found on the majority of our Western Canadian farms. It will never rival wheat but it will fill a place that wheat cannot and does not fill.

We can remember when any one who thought of raising corn in Central Minnesota or what was then Central Dakota was deemed more or less crazy. Today, however, corn is a very important crop in these sections.

The author of our leading article on corn growing is a gentleman who speaks from experience and his words can be taken at their full import. Be a power in this corn-growing game. You will enjoy it and there is no telling what you may develop if you keep at it. Luther Burbank did not have a spineless cactus to begin with, but by dint of careful propagation he developed one. Why not plant a few hills of corn in 1913. Nurse it carefully and this fall save only the very first ears that ripen for seed. Do the same thing in succeeding years and you'll surprise yourself how much earlier it will ripen each year. The farmer who can develop a strain of corn that will ripen in eighty days has a fortune in money awaiting him, and what is more his name will be linked forever more with the development of agriculture in Western Canada.

Next month our leading article will be on alfalfa. You farmers who think that this magazine is devoted to nothing but farm machinery just stop and reflect a moment and compare our articles with those of any other agricultural journal in Western Canada. Be honest with yourself and we believe you will admit that we compare favorably with what has previously been your favorites.

Now just one word. Don't keep these things all to yourself. Tell your neighbor about them occasionally and advise him that a whole year of these good things only cost him \$1.00. Show him the article on corn growing and see him open his eyes. He'll believe you only when he sees it in print.

Now about that change in name. We've reached the limit of our space and will have to hold it over until next time.



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Drain Pipe
- UTENSILS
Enamel
Tin Iron
- FLOORS
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Linoleum
Wood
- CUTLERY
Steel-Knives
Forks
Spoons

All Cleaned Scoured AND Polished
 Quickly and Easily with—



Old Dutch Cleanser
 Chases Dirt

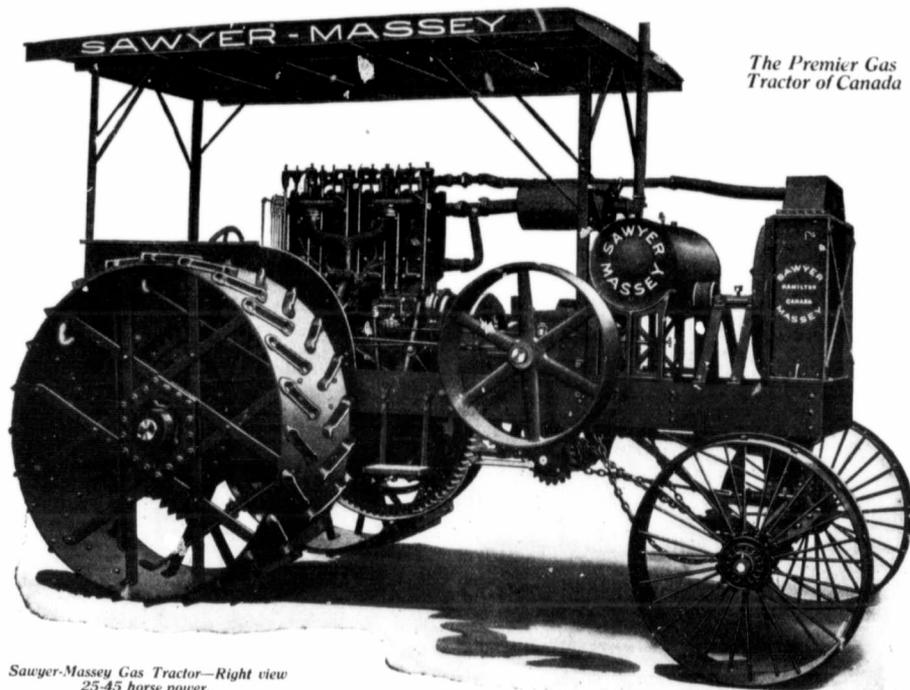
Write to Cutlery Packing Co., Toronto, for booklet "Hints to Housewives"

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Power for the
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Vol. XVIII.

WINNIPEG, CANADA, MAY, 1913.

No. 5.

KING CORN IN MANITOBA

By E. A. BLOW

HAD anyone predicted fifteen years ago that the Northern limit of corn culture would ultimately be found in Manitoba, he would have been regarded as a crazy visionary, and would have been laughed to scorn. But nevertheless the unexpected has happened. King Corn is here and has come to stay. Slowly but surely he pursued his Northward march from Iowa through Minnesota to North Dakota, and finally became firmly established in the last-named state, where he is fast becoming one of the principal products of the prairie farms in the Red River Valley.

Unaware of what was being done in Dakota by the corn enthusiasts, three or four Winnipeg gentlemen who had accidentally found a merchantable corn that gave promise of adapting itself to the climatic conditions of these latitudes were carrying on experiments. By following the method of seed selection each season and cultivating carefully, this corn in three years became completely acclimatized and matured perfectly. When they felt assured that the corn would thrive in an average growing season of Manitoba, they made known the fact through the press, and one of the Winnipeg newspapers undertook to distribute native grown seed among the farmers of the three prairie provinces.

That the Western farmer is interested in corn culture and is disposed to make it one of the features of his agricultural enterprises was proven beyond doubt by the large number of applications that were received for this seed, and by the eagerness the

applicants expressed to have a standard corn that would ripen in this country.

It was three years ago that the distribution began, and the reports received in the interval have been, on the whole, highly satisfactory, those from certain localities being particularly gratifying.

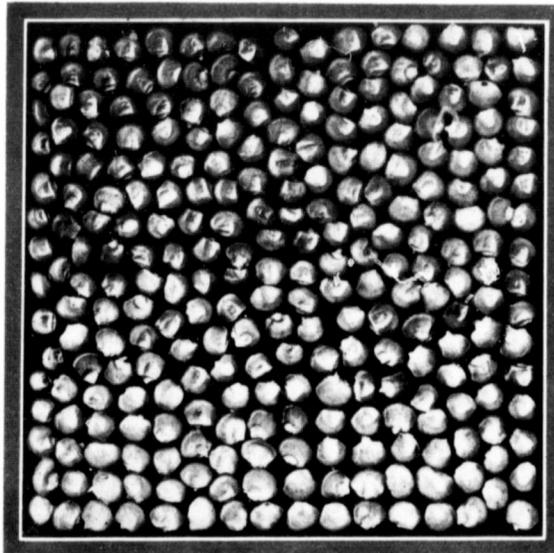
the corn maturing, and owing to this condition it is thought that it will not be possible to ripen corn in the central and northern sections of those provinces, at least until a corn has been produced that will withstand conditions that are to be met with there. However, a fine stand of

according to an official report received from Superintendent McKay.

In Manitoba, and especially in the Stonewall, Portage la Prairie and Dauphin districts, this corn does well, and many farmers and town-people now grow patches of it every year from their own seed, and are as certain of it ripening as they are of any other cereal grown in this country. No attempt has yet been made to grow it on an extensive scale, but doubtless, as the farmers come to realize its value, they will go in for acres of it, where they now only plant rods.

The parent seed of the corn which has been established here originally came from Quebec where summer climatic conditions are similar to those of Manitoba, with the exception that perhaps the nights are somewhat warmer during the ripening period. Large quantities of this corn are grown in the lower province for stock feeding and for the general market. It is a yellow flint, eight-rowed variety, and the kernels are of fair size. It is in every respect superior to the flint corns grown in Dakota. An expert at the Grand Forks corn show stated that it was equal to that grown in some parts of Kansas and Nebraska.

As wheat has been king in Manitoba ever since the settlement of the country, and everybody's mind is concentrated on it as both the foundation and superstructure of the wealth and prosperity of the West, it will doubtless take considerable time to attract more than passing attention to corn, which will probably only



Specimen Corn Seed Ripened in Manitoba

The experiments in Saskatchewan and Alberta resulted indifferently. In a few localities the corn ripened one season, but the other two seasons were wet and cold, and frost caught it before it was fully matured. The cooler nights in the higher altitudes of these two provinces militated against

straw has been secured every year, and this in itself is important, for the straw makes an unexcelled fodder for milking cows and other cattle during the winter. At the Indian Head Experimental Farm it gave the heaviest yield of all varieties grown for ensilage purposes, ac-

secure the place it deserves when our farmers are compelled to farm intensively, and when live stock will be an indispensable adjunct to grain growing.

On account of settlement, farmers cannot any longer go about the prairies and secure a supply of hay as they formerly did; consequently they find it necessary to make other provision, and corn is the substitute to which some are turning. Quite large fields of ensilage corn are grown in some of the older settled sections. Growers who have not yet erected silos, feed the straw dry in its natural state, or chop it and mix it with grain, etc. This necessity will no doubt lead to a steadily increasing interest in corn culture, and will create a desire for a corn that will produce ripened corn as well as raw. In Ontario farmers are being urged to extend their corn growing operations. Likewise in Dakota every encouragement is being given in the same direction. The agricultural colleges are taking a lively interest in the matter, and are assisting with experiments, and in every other way possible. In Dakota they are breaking away from the old traditions about wheat growing, as we must do here sooner or later, and the sooner the better.

The importance of growing corn in Manitoba cannot be over-estimated. In the first place, as a means of cleaning up dirty land or restoring run-down land, nothing could be better. Corn land requires to be well manured, and during the early stages of the growing crop constant cultivation is essential in order to keep the soil loose and free from weeds. By this process land is enriched, cleaned and made ready for wheat or other succeeding crop without the loss of the use of the land for a season, as is the case when summer-fallowing is resorted to. Supposing corn were grown that did not ripen, the farmer has improved his land and secured a supply of fodder for his stock that the animals will relish and thrive upon better than anything else.

On those farms where dairying is still in vogue, cows fed on corn rations will give a larger and richer supply of milk, which means an additional income that is well worth considering. With present day field appliances, a corn crop is not hard to handle from planting to garnering; in fact, it is pleasant and interesting work.

In Manitoba the corn, which is the principal subject of this article, has been found to do best on the lighter and warmer soils such as are to be found in the localities mentioned and along the rivers. On the heavy soil it does not do well unless it has been well cultivated and heavily

manured. The finest samples yet produced have come from Lake Dauphin, where a considerable quantity was grown by the late William Lyons on a piece of land that had at one time formed the shore of the lake, and is composed of a mixture of sand and clay silt, decomposed vegetable matter, etc., such as is usually washed up by the lake waters, and therefore exceedingly rich in plant foods.

The natural height to which the corn grows is about four feet, but at Lake Dauphin it attained a height of seven feet and produced

from the making of the seed bed until stalks are too high to work among with hoe or cultivator. Given this, the result is worth while.

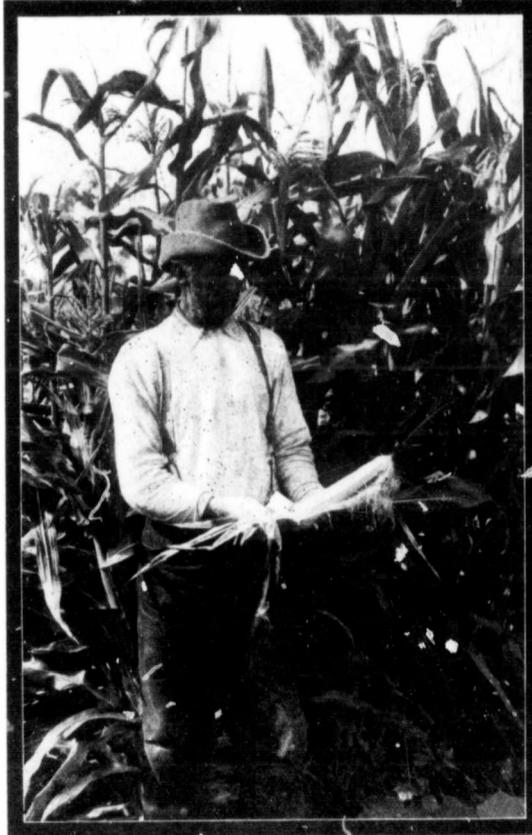
Now that we have a corn here that will ripen, and while it is sufficiently prolific and of good enough quality to produce a profitable crop, no doubt a Manitoba Burbank, desirous of achieving fame by doing something for the benefit of his fellow-men, will some day be found devoting himself to the commendable effort of creating a better and earlier variety. Corn is very easily

This native corn is not deserving of the contempt in which it is professedly held by many people. It will mature anywhere in the West east of the Foothills, and would be valuable on farms where there are hogs or poultry to be fattened; and, though it ripens quickly, it is not bad as a table corn, and can be grown in succession. Some people prefer it even to the sweet corn. At any rate, as a means of producing early varieties for this Western country, the coming native Burbank will find it a ready aid to his hand.

It will surprise the readers of *The Thresherman* to learn that the early varieties of the sweet corn, such as the Cory and Early Minnesota, have frequently matured sufficiently in the gardens of Winnipeg and the neighborhood to be fit for seed. The writer was informed by the head of one pioneer family that he had only purchased seed twice in ten years, and that he knew others who used home-grown seed more frequently than that imported by the seedsmen. This is another proof of the fact that the limit of corn culture is extending northward. The first settlers who went into the Ohio valley were told that they could not grow wheat there. After that fallacy had been exploded, it was held that corn could not be grown there or anywhere to the west or north.

Doubtless in those days wheat crops failed and corn crops failed, but by studying local conditions and learning by experience how to cultivate the land and when to sow and when to reap, both wheat and corn adapted themselves to the soil and climate, not only in the valley of the Ohio, but in the vast regions to the west and north. Less than thirty-five years ago it was thought that such things as tomatoes, cucumbers, melons and kindred tender vegetables could not be grown here, excepting under glass. If a person in those days succeeded in producing one of these vegetables in a native form after employing every artificial device known to garden science, the wonderful fact was published in the papers, the vegetable was exhibited in the window of the principal store, and crowds gathered to see it and to marvel.

Today, as a result of study and observation by people interested, they can be and are grown as easily as any common garden truck of hardier nature, providing proper methods are followed. It will be the same with corn. Once the farmers become earnestly interested King Corn will take his place in Western Canada alongside his doughty rival, wheat. When he does, there will be better cultivated farms, and present day lamentations over the difference and neglect of the dairy



A Fair Sample for Western Canada.

cobs as long as thirteen inches with kernels of beautiful color and great hardness. This experience demonstrates that the constituents of that particular soil are what corn requires. Corn produced at Portage la Prairie and Stonewall has also invariably been of fine quality. It has been ascertained that where the best results have been obtained the growers take a real and serious interest in their experiments. They have their ground in right shape. They plant the seed right, and they cultivate the growing crop properly at the proper time. This is the only way to grow corn. Shiftless methods will not do. Corn is a susceptible and sensitive plant and requires attention

crossed. If different varieties are planted together, cobs will be found on the variety that ripens with kernels of each of the other kinds.

The writer has seen cobs with as many as five different sorts on them, including both flint and sweet corn. By growing corn in this way and selecting the best kernels new and earlier varieties may be obtained, though in planting such seeds, they should be kept separate from other corn, so that the result will be definitely learned. This yellow flint corn of Quebec origin is a good sort to experiment with in Manitoba. In the higher altitudes the Indian or Squaw corn would be a suitable medium for this purpose.

and stock raising end of the farm will have ceased.

But the fact is King Corn has arrived, and is here to stay. The eight-rowed yellow flint corn that is now getting a foothold here has been named the Patterson corn in honor of the late Robert Patterson, who introduced it to Manitoba. Mr. Patterson had been an eye witness, as it were, of the first attempts to grow corn in Iowa, and also in Minnesota, and it was the knowledge he gained in those states that induced him to cast about for an early ripening corn, suitable for Manitoba.

The corn from which our illustrations were taken was grown by R. M. Traill, of Winnipeg, who has had splendid success with it during the past six years. It was planted on the 18th day of May, and was gathered ripe on the 18th day of August.

The Nutrimint in Corn

By J. H. Shepperd, Agriculturist
North Dakota Agricultural College.

THE most important single item in producing value per acre, in a corn crop is to have corn that will ripen. To most of us it is a surprising fact, found by numerous trials, that 63 per cent of the digestible matter in a ripe corn plant is contained in the ear; 37 per cent in stalks, blades and husks. The ear is formed entirely after the tasseling stage of the corn plant is reached. The volume or bulk of the corn is not much increased between the time of tasseling and when fully ripe. The weight of the corn plant is much greater in the earlier stages of the ear formation than it is when the corn is approaching maturity and after it is mature.

The corn plant seems to have spent its energies in building a framework or skeleton and in forming the cell walls during its growth up to the time the ear is started, or to the silking stage. After that, very little growth in length of blades or height of stalk takes place, and the structure that has been built up is utilized for manufacturing the material which goes to make up the ear.

Chemical analysis show that the corn plant spends the greater portion of its efforts in manufacturing and storing starch during the time that the ears are forming. In a comparatively short time it adds a ton of starch to an acre of its plants. This starch largely displaces water so that it affects the weight very little.

The following is the amount of dry matter per acre found by analysis made by Prof. E. F.

Ladd, of the North Dakota Experiment Station:

June 30, corn in tassel contained per acre 8 tons.

August 9, corn in silk stage contained per acre 1.5 tons.

August 21, corn in milk stage contained per acre 2.3 tons.

September 7, corn in glazing stage contained per acre 3.6 tons.

September 23, corn in ripe stage contained per acre 4.0 tons.

The results, covering only 55 days, show a very high rate of increase in dry matter in the corn plants per acre. It happens to be in a very convenient form to

ter has actually increased in digestibility.

W. H. Jordan, of the New York State Station, gave as the results of ten or more trials the following amounts of digestible matter in corn:

Corn cut before glazing stage showed as fodder 65.7 per cent.

Corn cut before glazing stage showed as ensilage 67.4 per cent.

Corn cut after glazing stage showed as fodder 70.7 per cent.

Corn cut after glazing stage showed as ensilage 73.6 per cent.

It will thus be seen that corn cut when riper than the glazing

Where the Corn Crop Goes

While Western Canada is yet in the "day of small things" with regard to corn growing, there can be no manner of doubt that the era of big figures in corn cultivation to the north of the States boundary line is fast approaching. That this great cereal will be grown in the Northwest and recognized as one of its staple crops is just as sure as its wheat yield.

In this connection, and having in view what Messrs. Blow and Shepperd have said in the foregoing articles, it is interesting to note certain figures which have lately been published of the bulk and destination of the corn crop of the United States.

This crop is by far the most valuable grown in North America, and about 75 per cent of the world's yearly production is raised in the United States alone. The average in the last few years (not including the bumper crop of 1912) was about 2,700,000,000 bushels. Of this, about 26 per cent or 702,000,000 bushels were marketed, 8 per cent remaining in the near-by towns, 11 per cent going to distant towns or for export, and 7 per cent going to distant farms. Of the quantity exported, less than 2,000,000 bushels were in the form of meal.

With regard to its disposal for feed purposes, the estimated percentages are as follows:

Horses and Mules	728 millions
Swine	724 millions
Cattle (other than milk)	254 millions
Milk cows	231 millions
Poultry	97 millions
Human Beings	92 millions
Sheep	60 millions
Seed	23 millions
Other, or doubtful	103 millions

This covers the total of 2,312,000,000, and if in 1910 Saskatchewan Province, with no greater acreage used for cultivation than its mere road allowance, raised wheat equal to one-eighth of the entire wheat product of the United States for that year, what may not Western Canada arrive at in growing corn?



Old King Cole was a merry old soul;

A merry old soul was he!

He called for his pipe, and he called for his bowl,

And he called for his fiddlers three.

But only two of the fiddlers came;

The third they said, was barred From earning his living thenceforth, because

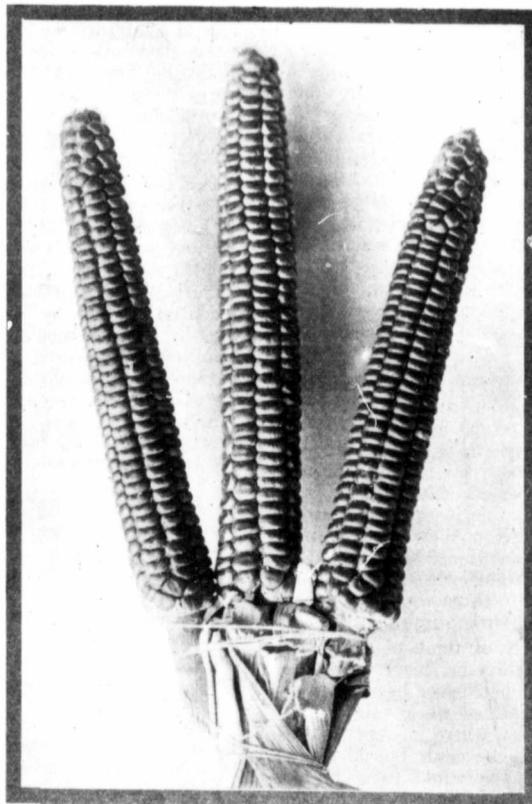
He carried no union card.

Nor came the pipe with its fragrant weed,

Nor the bowl with its golden brew;

For all such things had been driven from court

By the W.C.T.U.



Specimen Cobs Ripened in Manitoba

change slightly to round numbers, remember.

Starting with eight-tenths ton of dry matter per acre in the tasseling stage, it has, in the silk stage (10 days later), almost exactly twice the amount; twelve days after that almost three times the amount; 18 days later, or in the glazing stage, more than four times the amount; and 55 days later exactly five times the weight of dry matter per acre.

Naturally, one would expect the plant to become less digestible during this process of ripening and hardening of the leaves and stalk, and certainly the fibrous material in the stalk and leaves must become less digestible, but the total dry mat-

ter stage shows a higher percentage of pounds per hundred of digestible matter whether used as corn fodder or as ensilage than it did when cut before the glazing stage.

These facts certainly indicate that it is a mistake to grow corn, even for ensilage, that will not reach the glazing stage of growth before danger of killing frosts occur in the fall. The facts speak so loudly for themselves that they need no particular comment.



It is a man's kindly acts that are remembered of him in the years after his life.

Flattery is principally used on women and tombstones.



Everything Begins and Ends with the Soil

The CANADIAN THRESHERMAN & FARMER CANADA'S LEADING AGRICULTURAL MAGAZINE

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MAY, 1913

THE BOY AND THE CORN

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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."

IN ANY COMMUNITY, the most ineffective if not the most obnoxious individual is the man who will sit back in his chair and give away to reminiscences. Reminiscences are fine things in season, but they are worse than a weariness to the flesh when they are out of season. When they are fragments of a past that calls aloud for decent burial, the man who indulges in them should be relegated to some spot where nothing is looked for in the way of development. A man of this class who is permitted to be at large among progressive people does more damage to society than twice his weight in free-handed wickedness.

YET WE HAVE HIM EVERYWHERE. There is a growing disposition, however, to treat him as a joke—to regard him as something that cannot be got rid of, because the law forbids certain forms of extermination. But the moral weight of this man is fortunately

beginning to shrivel up, and in the New West we hope one day to find that he will finally evaporate—dried up by the sheer indifference and neglect of his audience—like the man who could no longer find some one to listen to his spell-binders and died (so the autopsy proved) from suppressed fiction.

TO BE MORE PARTICULAR, we think of a type of man who had the luck some twenty-five or thirty years ago to acquire a section of fat land that had never been plowed, say in Southern Manitoba. He started wheat-raising and went at it solidly till (as in every case where one will be "a whole man to one thing at a time") he made his pile, sold his depleted land at a fancy price and "retired" to spend his days in flooding the village with reminiscences. Yet, forsooth, this is the man who is sometimes pointed to by a select coterie of locals as an "experi need farmer;" who has "made good" in farming, and whose opinion as to what ought and ought not to be done is regarded as the last word in successful agriculture.

ONE OF THE "CANT'S" in this man's long list of impossibilities is that one which says: "You can't grow corn in Manitoba; I tried it years ago and it was a farce—you can't ripen it in the short season." Now if the country had been left at the mercy of such men as this, what would even our seed wheat have come to, not to speak of corn? But for the Burbanks and Saunders's—the Seager Wheelers, and the enterprising crowd of men who are handling the thing from a purely commercial basis, where would horticulture and agriculture be in North America to-day?

WHEAT, OATS, FLAX AND BARLEY may now be left to take care of themselves so far as indigenous or acclimatized products are concerned. Alfalfa is quickly finding its place in the confidence of the people; what is wanted is some baptism of ginger upon the corn crop; and co-operative interest and effort of all sorts to the end that it cannot suffer

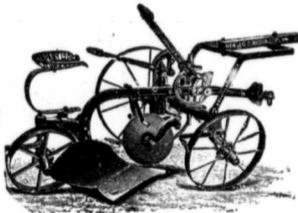
from neglect, that it shall have the same chance to establish itself as a staple product as those other cereals which have spelt fortune to so many men and have given to Western Canada a first place in the world's food markets.

MINNESOTA A FEW YEARS AGO suffered from this same fatuous scepticism as a corn growing state, but last year a sixteen-year-old boy came out with a crop of 135.14 bushels of corn to the acre, and was acclaimed champion of the Gopher State. He applied nothing unusual in his method of cultivation. The contest in which he took part (conducted by the extension division of the Agricultural College and a Minneapolis newspaper) was carefully supervised from start to finish. His winning sample was ripe and well matured and the record (one which has never been exceeded in the Northwest) was declared valid.

ON THE HEELS OF THIS RECORD came another boy with 130.8 bushels. He also worked by ordinary methods of cultivation and his cost of production including all items of expense recognized in farm accounting was only \$15.08—a little more than eleven cents a bushel. The total profit was \$76.46, a result that must surely satisfy the most greedy expectation. As an indication of progress, it may be stated that the boy who had to surrender to the 1912 champion the supreme position in corn growing won his spurs two years ago with 106 bushels on an acre. The 1912 hero (Arthur Hoese) gets a \$200.00 scholarship to the State School of Agriculture at St. Paul as his well-earned recompense for intelligent and persistent effort in shepherding his corn.

FURTHER POINT IS GIVEN TO these fine records by the fact that there were many who obtained yields of 100 bushels an acre and rather better than this. More than 50 boys and girls secured from 90 to 100 bushels per acre and not one of the 45 young folks who ranked highest found the cost of production greater than \$29.00; most of them did not spend more than \$20.00 in raising their crops. The girl champion, Florence Stenger, is of the same age as young Hoese. At Sauk Center in the northern section of the State, she raised 97.5 bushels, the highest yield in her section. Gophers and windstorms damaged her crop in its early stages, but she replanted her missing hills, cultivated six times and—"that's all there was to it."

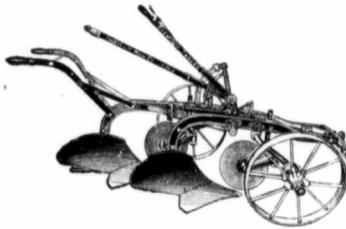
THAT WE HAVE NO RECORDS LIKE THESE in Western Canada is simply due to the fact that the same interest has not been given to the industry. Climatic disabilities are more imaginary than real. The advantages and disadvantages as between Minnesota and Manitoba are probably about equally balanced. Here is a golden opportunity for our College Extension divisions. Why not follow the lead of Minnesota and give the boys and girls the same substantial incentive? There are no enthusiasts like the young folk, and this is a case in which young blood will surely win.



J. G. C. RIDING PLOW

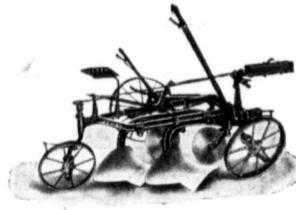
The plow that is built for the hardest kind of work on the toughest prairie soil, it also does good work in stubble. This plow is very easy to turn and handle on rough land. The seat is so located that the driver can watch the turning of the furrow, and his weight keeps the plow in the hard soil.

This plow can be furnished with 14, 16 or 18-inch stubble or breaker bottoms, rolling coulter and triplerees. It can also be furnished with rod breaker bottoms.



EMPIRE CHIEF GANG

A light, easy running, walking plow, that will do good work, it is unsurpassed for strength and simplicity. The beams are made of heavy high carbon steel, designed to meet the requirements of a light plow in heavy work. The material and design of these beams insures their remaining in perfect alignment when subjected to the severest strains. The high arch of the beams and the unusual clearance of the bottoms, prevents clogging on heavy trash land. The long levers, which are fitted with lifting springs, make it an easy matter to raise the bottoms.



NEW JEWEL GANG

The latest and best ideas in plow construction are embodied in this plow, it is adaptable to good plowing in any soil. The plow can be turned in its own length. An automatic foot lift raises and lowers the bottoms, and the driver's hands are left free to handle the lines. The bottoms lift high, so that all obstructions may be cleared, they may also be locked rigid with the frame, or allowed to float. Long, dust-proof bearings are provided on the wheels, and when hard oil is used, these require but little attention.

CHOOSE YOUR PLOW

FROM CANADA'S LEADERS

We have a great variety of styles and sizes of plows, only six of which are shown here; at least one of them is exactly suited for the work you want done.

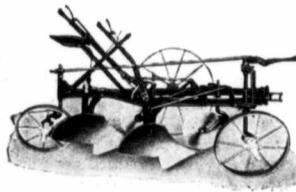
COCKSHUTT Plows are used by the best class of farmers. Those who farm to make money, and most farmers do, prefer COCKSHUTT Farm Implements every time. Because they are correctly built, in the first place, and they stay that way even after years of service. They do the best work, take less time and cost less for repairs.

**We have a Plow that will give you better service than you are now getting—
better hear about it right away. Drop us a card, or call on our nearest agent.**



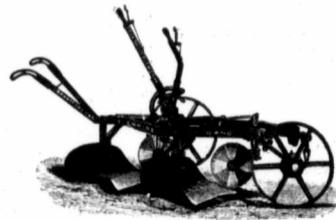
NEW JEWEL SULKY

This plow is similar in most respects to the new Jewel Gang. The plow bottom is set firmly in the ground by simply touching a foot lever, and when once set for work, it will never vary. The controlling rod, which operates automatically, connects the furrow and rear wheels. The wheels have log, dust-proof, removable bearings which require but little attention when hard oil is used. This plow is furnished with either breaker or stubble bottom, and a rolling coulter and whippetrees. It can also be furnished with rod breaker bottoms.



BEAVER GANG

The hardest light weight plow you ever saw, it combines many of the features of the Jewel Gang, such as short turning, high lift, perfect adjustments, removable dust-proof bearings, etc., but is much lighter in weight. The bottoms are easily raised and lowered by a convenient lever and spring lift. This plow is fitted with unbreakable steel and malleable standards, and the soft centre shares are the heaviest ever used on a plow.



NEW EMPIRE GANG

This is a light, strong, two-furrow walking plow that will keep in good condition for a lifetime. It has unbreakable steel and malleable standards. The frame is made of steel and is extra strong. Heavy axles and dust-proof bearings further increase its durability; this plow is made right and will stay right always. It is equipped with our fine adjustable ratchets, compound adjustable levers, and spring lift, all of which mean easier operation and better plowing.

COCKSHUTT PLOW COMPANY LIMITED

Branches: **Winnipeg** **Calgary** **Regina** **Saskatoon**
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TRACTION PLOWING

AS TOLD BY THE MEN WHO DO IT

Mixed Farming Necessary
Replying to yours of January 29th, will say that Mr. Gray and myself purchased a 25 h.p. Case steam plow engine and Cockshutt plows in May of last year. We plowed with this outfit from May 16th to June 25th. This was all breaking sod. We put in 34 days work breaking 750 acres.

After threshing last fall we plowed 100 acres on our own places, averaging about 18 acres per day. This land we plowed about 8 inches deep which is quite a little deeper than the average steam plowing.

Our cost per acre for steam plowing can hardly be figured accurately until we have the engine worn out, as we hardly know what proportion to figure as depreciation. However, we can give you cost for operating. We usually figure on a basis of 20 acres daily average. This, I have found in five seasons plowing in Saskatchewan and Alberta to be a fair average, I have also figured that operating expenses are approximately \$2.00 per acre. However I think this is over rather than under what it really is for successful operation.

Figuring on a 20 acre average as follows:

2 tons coal, delivered \$6 per ton	\$12.00
Fireman 1 day	2.00
Tank team and man	2.00
Oil	2.00
Sharpening lathes (40 acres to set of 8, 35c each)	1.40
Engineer 1 day	5.00
Cook	1.75
Provisions	2.50
	<hr/>
	\$30.65

This gives us \$1.55 per acre actual operating expense. Then there are a great many incidental expenses besides cost of maintenance which begin to mount as the rig grows old.

For my part I think traction farming is only a makeshift. We can hardly get along without it in the West at first, on account of the scarcity of horses and help. But, I think as the land is broken up and put under cultivation, we shall have to raise stock to survive, and so will go out of the tractor habit.

Mixed farming is the only successful farming, and the steam and gas tractor tend to propagate the all grain farmer who is rarely successful for long. He takes too much out of the land without putting anything back.

Whenever this western country is all broken up and the big

farms are also "broken up" and parcelled out to small farmers, who can raise stock as well as grain, then will this become a great country for certain. Until that time we shall hear stories and stories of big hits in extensive farming.

Respectfully,
McDaniel & Gray,
Per H. C. McDaniel,
Whitla, Sask.



Engine Beneficial Rather Than Detrimental to Plowed Land

Your letter asking us for a frank statement of our opinion



Avry and Deere

of the tractor and its usefulness on the farm, was received a few days ago. We have had our tractor only one season and the uses to which we put it were not varied enough to enable us to make a very comprehensive summing up. We used it exclusively for plowing; but any deductions that our limited experience has enabled us to make we shall gladly give and hope that they may prove beneficial to others.

From the standpoint of both economy and efficiency, we consider the tractor incomparably ahead of horses. Anything we say has no reference to the steam tractor. The scarcity of water and the lack of good coal in our district, prohibit the use of the steamer.

Of course there are tractors and tractors; and when one contemplates the purchase of one, the great question is, which?

Every man's opinion of traction farming is rose-colored or

otherwise, according to the performance of his engine.

We were exceedingly fortunate in our choice of engine, and her performance was so entirely satisfactory, that we look upon traction farming with great favor. We have a Hart-Parr 30-60 oil cooled engine, burning kerosene or gasoline and having but one speed, 2.3 miles per hour. Her builders extolled her merits with becoming modesty, but we found by actual test that she was more powerful than they had led us to expect. At Bengough another engine of the same rated power, but of a different make had been

hitched to fairly large two story general store containing a \$3,000 stock. She failed to move it. Our engine was tried. She snapped quite a number of chains but after having been securely fastened she started the store, but but reared up in front. Enough of the bystanders to hold her down, jumped on in front and she pulled the store to its new site across the street. She will pull eight breaker bottoms on ground that is fairly level. As a hill climber she is a wonder. The Hart-Parr people keep a man in the field at their own expense, to assist its patrons until they have thoroughly mastered the engine.

We can plow 20 acres in a ten hour day. One can easily reckon how many horses, plows, sets of harness and men would be required to do that, and what the expense of feeding them throughout the year would be. We now round the corners and plow in a circle, never lifting the plows, and one man can handle the outfit.

If necessary the engine will work at night which horses cannot do.

On a section or half-section a lighter engine of less power would meet all requirements and be more suitable. An engine that could pull four or five plows with harrows, or drills, or other implement behind would be plenty large enough. But she ought to be geared for at least two speeds.

For discing, harrowing, cultivating, etc., a four mile speed would be about right. The only fault that we find in our engine is the low speed. An engine that will pull five stubble bottoms, with a harrow and a six foot binder at the same time, would be an ideal one for a small farm. One operation would cut the grain, plow and harrow the field immediately after. This method would save much time with no appreciable expense for fuel, and would be in keeping with the best methods advocated by our Experimental Farms for preservation of moisture, and would make a perfect fire guard.

Fuel is the question of great importance. An engine that will burn either gasoline or kerosene is better than one that burns gasoline only. Some owners of one-fuel engines were tied up last fall because they could get no gasoline. Our engine will burn either fuel, but we have found that gasoline works more satisfactorily for us than kerosene aid also that the former is more economical than the latter until it reaches three times the price (which may not be long). We bought kerosene at 22 1/4c per gallon, gasoline at 27 1/4c per gallon, paid 2c per gallon freight and hauled it 75 miles to the farm. It was shipped to us in wooden barrels and the leakage was appalling. The loss in leakage on kerosene was about 50 per cent., and of gasoline about 25 per cent. The latter is shipped in better barrels. Allowing for leakage and teaming, gasoline is cheaper at 20c than kerosene at 20c. One and a half barrels of gasoline will do as much work as two and a half barrels of kerosene, and do it quicker.

This year we shall have a metal storage tank at the farm and steel barrels for hauling. A ten barrel metal tank to fit the wagon would be better. These are absolutely indispensable to every engine owner and will save treble their cost in one season. We use

Three Speeds

A Three-Speed Kerosene or Gasoline Farm Tractor

The **BIG FOUR** "30"

Three Speeds—another new feature which further strengthens the BIG FOUR "30's" leadership in the farm tractor field. *Three speeds forward, one reverse.* Every bearing of the transmission equipped with "Hyatt" Roller Bearings, composed of nickel steel, case hardened and ground, working in nickel steel cages, on hardened steel shafts. All gears *drop forged, cut from the solid steel and hardened, and are enclosed and running in oil bath.* These are exclusive features of BIG FOUR Quality and Points of Superiority.

Saves Time, Saves Work, Saves Money

Haul and drill on "high"—increase your average speed 40 per cent. 20 to 40 more acres per day. Hit the hard spots, the hills and the gumbo on "low" and keep *all your plows in the ground!* Increases power at drawbar *over forty per cent!* Does the work of 40 horses with the light weight and handiness of the 30 h. p. Tractor.

Three Engines in One

Make 3 to 4 miles per hour on "high" speed where the work is light, and save many days' time in a season, besides taking more complete advantage of weather and ground conditions to get your crops in and your grain cut at the *right time.*

Do your ordinary work on "direct" drive or second speed. Your "low" enables you to pull heavy loads which one-speed tractors of other makes would have trouble with, also to work in soft ground where heavier tractors would be helpless.

Big Four "30" Farm Tractor

with its three-speed transmission, *dual carburetor* for KEROSENE or GASOLINE, four cylinders, mammoth 96-inch drive wheels and self-steering device is the *most efficient and most economical* farm tractor ever built! Write us for the *proof!* Let *actual users* convince you!

Uses Kerosene or Gasoline

The BIG FOUR "30" Farm Tractor is not restricted to one fuel. Its dual carburetor enables it to use either KEROSENE or GASOLINE with greatest efficiency and economy. It will pull a greater load with kerosene than any other so-called kerosene tractor of equal rating.

One BIG FOUR user writes—"I can do *twice as much* with my BIG FOUR "30" and at *one-half* the operating expense, as my neighbor does with a two-cylinder oil burner."

Holds the Record

The BIG FOUR "30" has broken and plowed more acres per engine than any other. It is the first tractor to use the efficient, steady, economical power of the *four cylinder* principle. It is the first tractor

Sold On Approval

You can try it on your own farm—in your own field! It *must* satisfy you *before* you pay out a cent! You are to be the judge.

Write for Our Catalog TODAY

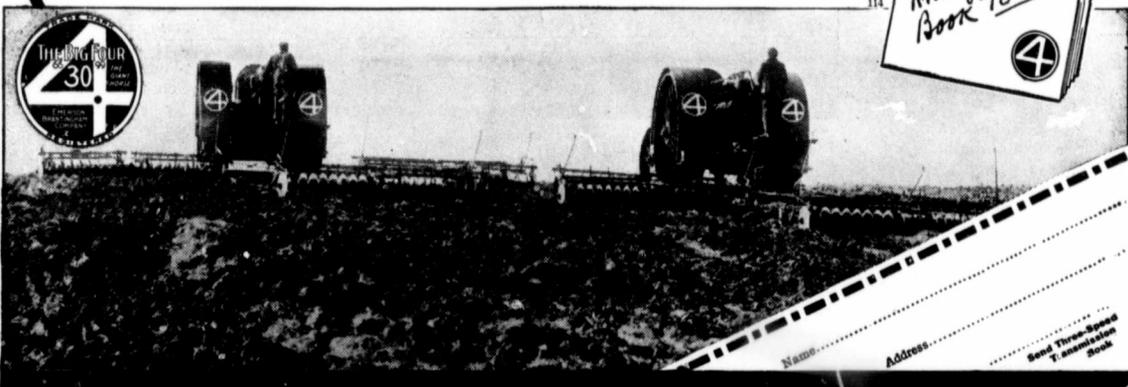
Don't wait until you get ready to order. Get the new BIG FOUR book telling all about the three speed transmission. Just drop us a postal, or mail the coupon below. Do it NOW!

Emerson-Brantingham Implement Co., Rockford, Illinois

(Incorporated)
Good Farm Machinery

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Branches: Winnipeg, Man., Brandon, Man., Calgary, Alta., Edmonton, Alta., Lethbridge, Alta., Regina, Sask., Saskatoon, Sask., Swift Current, Sask., Yorktown, Sask.



Name..... Address.....
Send Three-Speed Farm Machinery Book

Polarine for cylinder oil. It comes high but it stands peerless.

We have not used our engine on plowed land but can see no reason why it should do harm, in fact we are inclined to believe it beneficial. With an engine of two speeds on a small farm, one might be able to get along with one general purpose team. Two teams ought certainly to meet any emergency.

Trusting you will survive such volubility, we are,

Yours truly,
Menno Moyer,
H. Morgan Moyer,
Kantenville, Sask.



Use Axle Grease on Gears

Yours to hand asking for experience with a traction outfit.

Last spring, we decided that our land was too hard to plow with horses, so we bought an engine and plows. Our engine is an International 45 h.p. Mogul, and for plowing it is hard to beat, but we did not have enough land under cultivation to run a full set of any one kind of implement.

In the spring, we pulled 3 discs, 2 drills and 22 feet of drag harrows. This made a good job in any kind of land that was worked down, although ordinarily I would rather have the packers behind the drills. We put in about 50 acres a day (one shift) at the cost of 36½¢ per acre, using about 70 gallons of gasoline, two gallons of lubricating oil, and three lbs. of grease.

I do not like the engine as well for cultivating as some others, on account of the amount of water it uses. (About three barrels per day when cultivating, and four barrels per day when plowing.) We did some discing and harrowing as well, at about the same cost per acre, drawing six discs, and 24 feet of harrows.

I do not think that the engine hurts the land at all. We have extensions for our wheels, and the only difference I could see was that in the wheel tracks, the grain was a shade shorter and ripened a day or two earlier, which I think goes to show that it pays to pack well, especially on this heavy land, where the grain is liable to be frozen.

In plowing, we hauled a six-furrow Cockshutt engine gang, and it does a dandy job. We plowed about 15 acres a day, and I estimated that it cost us \$1.65 actual cash to plow an acre, and counting wages and board, \$2.15. We used kerosene the last half of the season, but I could not see that there was much saving in the cost per acre on account of it not vaporizing quite as readily as gasoline, but our engine has more power.

When we were plowing, we had two men with the outfit, one running the engine, and one running the plows, and doing the cooking.

One of my brothers drew water, and kerosene, and it kept him busy about half the time. We could bring a tank of water every two or three days, and a tank of kerosene about every five days. Our kerosene costs us 19¼¢, at Herschel, and gasoline 29¼¢. We

waste paper basket without being first read, I remain,

Yours sincerely,
H. B. Sanderson,
Herschel, Sask.



Experience Necessary

As I take your valuable paper and read the ups and downs of others members of the traction



The Huskey Auto-Plow

used about three gallons of gasoline a day for starting, and from 60 to 70 gallons a day of kerosene.

We averaged about two gallons of lubricating oil per day for the season, costing us 43¢ per gallon, and ¼ lb. of mica axle grease per acre for the gearing, and the plows.

The hard oil we used was hardly worth considering as it was only about 15 lbs. for the season, our engine being equipped with force feed pump oilers on all the main bearings, and the shafting, including the rear axle.

We tried using drip oil on our master gear and pinions, but found it was not very satisfactory, so we used mica axle grease, and

plowing and farm work, I will try and give you my experience.

In the spring of 1911, I purchased a 25 h.p. I. H. Case gasoline tractor, and I started breaking sod. It was very wet to start with, and it seemed as if everything was against me. The mud holes and a green man with a gasoline engine is a slow go.

I broke about 500 acres that first year, and threshed some during the fall and winter. In plowing I use about thirty gallons of gasoline per day, and about the same in threshing. If anything I used a little more oil when threshing. I used about 1½ gallons of cylinder oil per day, and about two barrels of water.

I broke on an average of about



Fig. 1-Parr and Cockshutt

I think it is the finest lubricant for greasing that is sold. We bought one pail of gear grease, and it was not worth the powder it was taken to blow it out of the pail.

We used our engine to thresh this fall, and found it made an ideal power, although our separator was a little heavy for the engine, 36-60, but still we could keep eight teams going nicely.

Hoping this will not find the

ten acres per day, if the soil is in fit condition. The soil here is very spotted, as there is some sandy loam in this soil. I pull five plows, but we have a lot of gumbo to bump against, so that three to four plows make a good load in this. As the farmers use from five to six horses on one plow you see about what we have to pull with the engine.

The first year, I had one man

with me, and a young lad to haul us a load of oil once a week. We could get plenty of water out of the sloughs without the use of a team. I never disced or seeded with my engine, as I use horses for that work.

I think an engine is the proper thing to break heavy soil with, but I find that it costs me more money per acre than it did with horses, but the difference is well made up in the difference of depth, and the time it takes to plow and get it worked down.

This year I broke only 100 acres of sod, and threshed from the middle of October to December 1st.

I do not see but very little difference in steam or gasoline engines, for difference in the price of labor equals the difference in the price of fuel. I think the greatest trouble with the gasoline engine is caused by poor ignition, and a man trying to run the same without any experience. I find that one has to understand them the same as any other machinery to make them go. I use the P. & O. Mogul 15-inch plows, they give me very good service, and are strong and durable.

Hoping this experience will be of some benefit to you, I will close, wishing your magazine a prosperous year,

Yours respectfully,
G. B. Shultz,
Lillico, Alta.



Engine for Plowing, Horses for Seeding

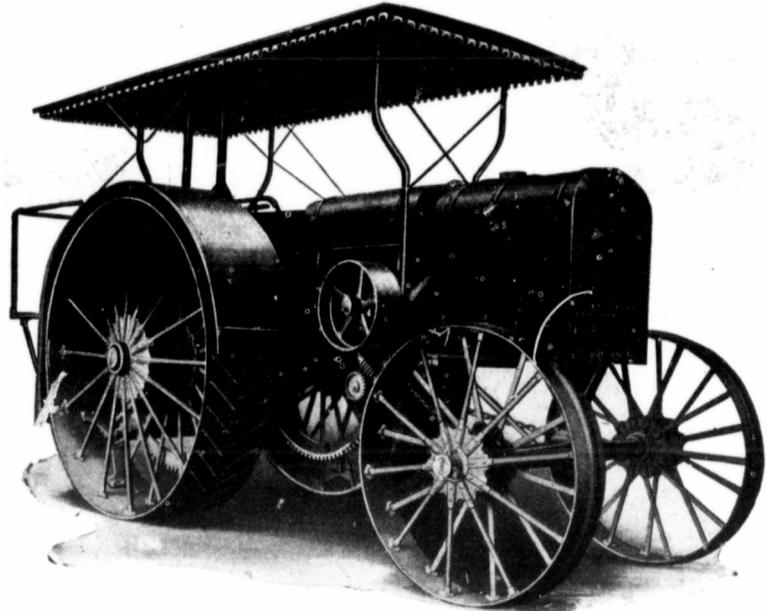
In answer to your letter with regard to traction cultivation and as to how we like our engine. I can only say that we own and operate three Hart-Parr gasoline engines, two 60 h.p. and one 40 h.p., the small one being a three wheeled engine. We use these engines for all kinds of farm work and I do not think that we could farm as large a tract of land without them.

In plowing one man handles the engine and another man the plows. We use about 40 gallons of fuel oil, two gallons of gasoline, three gallons of lubricating oil, also 30 gallons of water per ten hour day on the large engines, the smaller engine of course takes less.

We use the small engine for harrowing, discing, grinding and light work in general on the farm. One man handles the outfit. I find in averaging up the cost per acre in plowing that in figuring fuel oil, hard oil, lubricating oil, wear and tear on the engine and plows, also labor, I find that it costs us about \$1.00 per acre for breaking and 60¢ an acre for stubble.

We have never done any seed-

HUBER
Power
For
You



Huber Gas and Oil Tractor

When buying power, why not get the outfit that will prove the best all the time, and for the longest time?

Huber tractors have a record along these lines that you cannot afford to ignore. What you want is full value for your money. You get it in big measure when you invest in a Huber. If you don't try it you will never know. If you do try it, you will prove our statements true.

A Few Harvest Hints

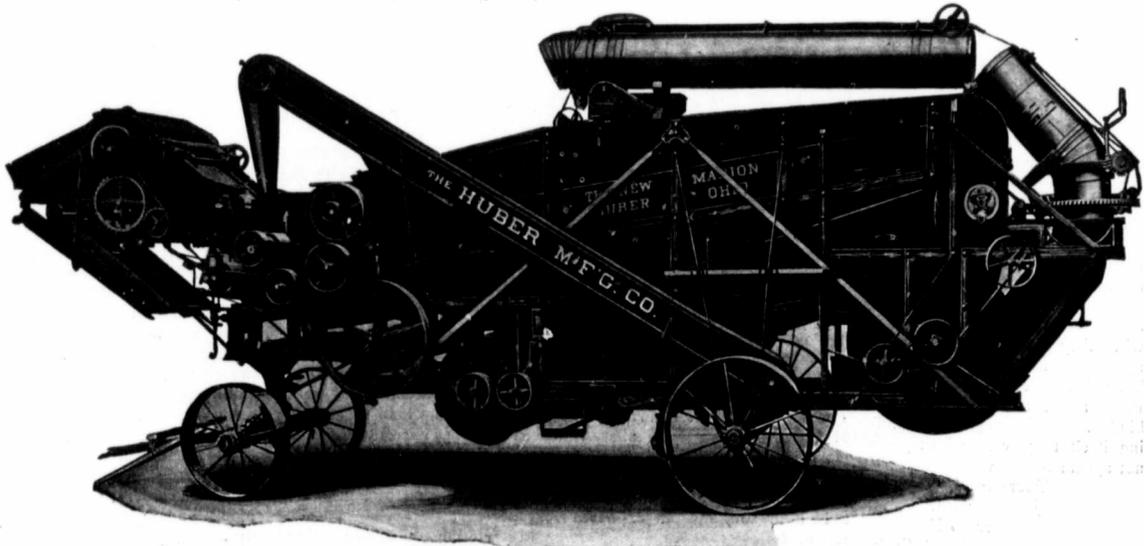
You have doubtless determined by this time whether or not you are going to operate a new threshing outfit this year. Many threshermen have settled the matter and have the machinery bought. If you should be among the number who have not, let us suggest the satisfaction it would be to you to get your order in and know that you were going to have the outfit in ample time for the first job.

Huber Threshers have so many good points that you would need to read the complete catalog to get a list of them. Get out your Huber catalog again and read about the latest improved Threshers. If you have misplaced your

copy, or if you haven't received one, then let us have your request by return mail. As a matter of business, you ought to know all about the Huber.

We confidently recommend the Huber machine. Whether your work is heavy or light, we build a machine suited to your requirements. One of these machines run with a Huber steam or gas tractor gives you a high class outfit, and a money maker for you.

If it should be that you haven't had our 1913 catalogs, ask us for copies. Your request will bring them promptly.

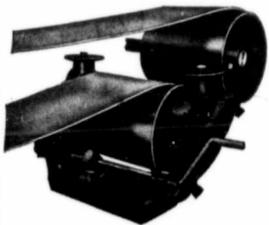


THE HUBER MANUFACTURING CO.

MARION, OHIO, U.S.A.

Canadian Branch: Corner Logan and Arlington Streets, WINNIPEG, MANITOBA

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



LOOK AT THESE

THE OLD RELIABLE DEPENDABLE CASWELL ADJUSTABLE BELT GUIDE.

Holds the belt steady in every wind that blows. As necessary as a self-feeder. Always on the job. Saves the belt. It has been saving time, labor, belts, and money for thousands of threshermen for over a decade. **LET IT SAVE YOURS.**

THE CASWELL AUTOMATIC BINDER HITCH.

Simple. Easily Attached. Cheap.

Each binder steers itself and cuts an even swath all the time on in-curves, out-curves, round corners, square corners, and points, without any attention whatever.

After two years of success everybody says "The best at any price."

CASWELL MFG. CO.
Cherokee, Iowa U.S.A.

Carpis, N. Dak., Dec. 11th, 1912. "I sold five of your binder hitches this year and the parties that bought them are well satisfied with them. In fact they give better satisfaction than the higher priced hitches."

C. K. CHRISTENSEN.

We also manufacture a full line of Power Farming Equipment including Wagons, Packers, Disc and Seeder Hitches, etc. Write us to-day for catalog and list prices. Also see your dealer. Dealer business solicited.



ing with these engines yet, as we consider the horses can handle the drills if the engines prepare the land for them. I have never kept any account of the engine while working on the discs or harrows but with the small engine we draw three sets of double discs covering 24 ft.; the same with the harrows. With this outfit we can cover 40 acres per day.

We use an Ideal Rumely separator 34 x 56 and operate it with one of the large engines. I would say just here that we made a mistake in buying a small size machine as we could run a 40-inch cylinder with the same engine.

We have large steel oil tanks also water tanks to supply the engines, and once they are placed in the field where the engine is working, do not need any attention until they need filling again. We keep one man and team doing odd jobs about the farm. This man looks after the water and anything that might be needed. We have to haul our oil 20 miles. This is an all day job for one man and four horses as our tanks hold 420 gallons.

The gas engine has the monopoly in this district as some of the farmers own and operate two outfits. I do not consider a tractor is detrimental to plowed land. I am satisfied that the gas engine is a success for farming.

I forgot to say that we haul our binders with these engines using a Hansman binder hitch.

Our main and only trouble with the gas engines is to get men to handle them. There are a large number of men who present themselves as gas engineers but when they get into the field they appear to forget all they ever knew, if they ever did know anything about a machine of any kind. An engine might be pounding itself to pieces and they do not appear to know it.

Yours truly,
James Smith,
Per E. H.
Duval, Sask.



Only \$1.25 for Repairs

I must take pleasure in telling you about our past experience in steam plowing. We have now

put in five seasons of steam plowing, but the last season was the best one. We have used different makes of engines, and plows, but last year we bought a new 32 h.p. Reeves engine, and a twelve-furrow Cockshutt engine gang, which is the best combination a man can buy for a real money maker.

Last June we had a very dry spell here, but we always drew ten plows four inches deep in the toughest of soil, breaking sod, and twelve plows in stubble, so that shows that the engine was



Hart-parr and Cockshutt

powerful, and that the plows drew light. We averaged 36 acres a day in breaking, and 40 acres in old ground, so that showed that we were not sleeping very much, while the engine was under pressure. We broke and plowed 1000 acres, and the repairs for the engine and plows was \$1.25 for a locking pin on the engine, which was my fault. Our Reeves is like a brave horse. We start in the morning, and run till dark and the next day the same thing over again, without any trouble whatever. We plowed old ground with breaker bottoms, which gave entire satisfaction. The engine used a ten barrel tank of water to every two miles of work, and about 250 pounds of Youghioughing steam coal, making it about 3,500 pounds on a 14 hour run, and our expenses ran as follows:

Two teams	\$ 5.00
Engineer	6.00
Fireman	4.00
Plowman	2.50
Coalman	2.50
Waterman	2.75
Blacksmith which also did cooking	2.75
3,500 lbs. of steam coal	14.85
Oil	3.00

Wear and tear	2.00
Board	4.00
	\$49.35

I think we shall finish up with this, for it will take up too much space in your valuable magazine.

Very truly yours,
A. Kapell & Sons,
Pilot Butte, Sask.



A Success

I received your letter in which you stated that you would like my experience with gas tractors.

days threshing for which I think a four cylinder engine is equal to steam.

I do not think that an engine is detrimental to the land, but think that it is a benefit, as the grain seems to be better in the wheel marks. Even though I have not had much experience, I would rather have an engine to farm with than try to get along without it.

I will have to close as I am a poor writer and cannot express myself as I would like to.

Respectfully yours,
L. J. Griffen.



Wet Weather a Real Set Back

I am in receipt of your inquiry. Yes, I am an owner of a steam plow outfit, etc., but as it has been very wet for the past two seasons, it has not paid me. I have only disced one hundred acres with my engine, and that was sod breaking, which took me three days to finish. My experience in steam plowing has not been a success, owing to the very wet seasons.

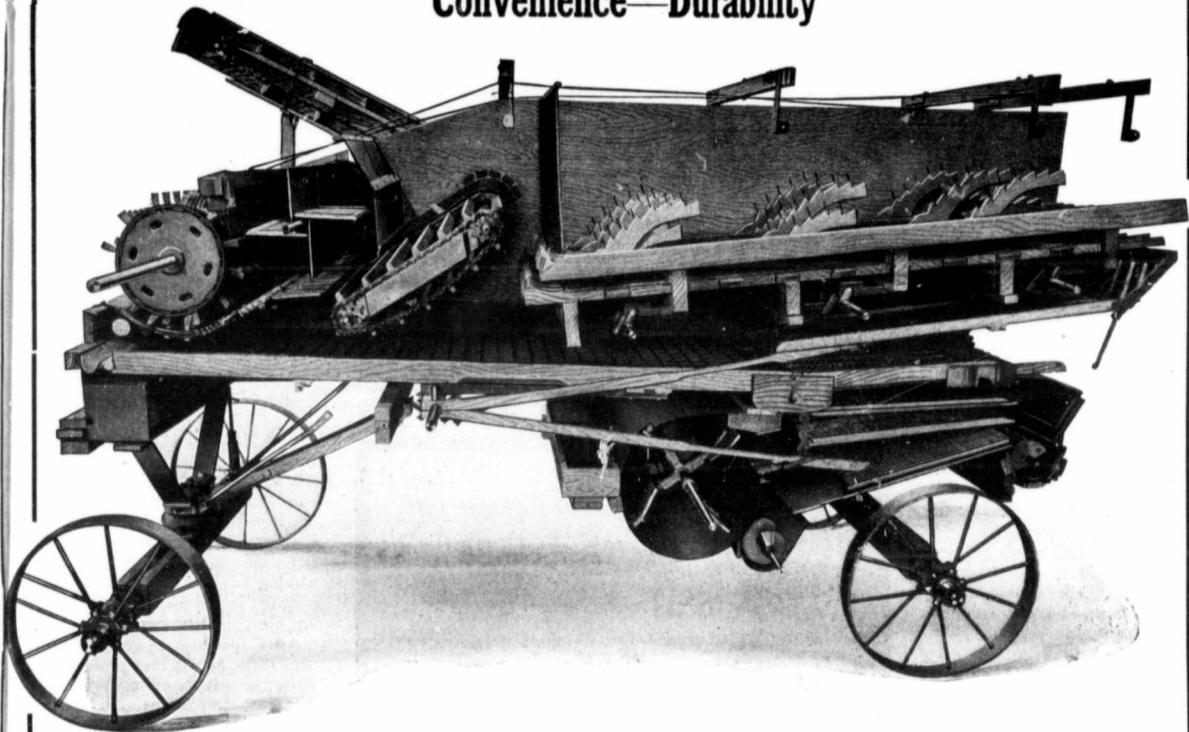
I do not think that steam is any good for discing, drilling, etc., for ground that has been in cultivation for several years, or long enough to get thoroughly worked up, as it packs the ground too hard, and there are always wet places in the field that make it impossible for this work.

I have a 32 h.p. J. I. Case engine, and I am thoroughly satisfied with it, and do not think that there is any better engine, as it always does the work if it has a footing. I have Cockshutt plows, which are also perfect in every respect, but outside of sod breaking give me the old reliable horse and horse plow. The work can be done very fast with one of those rigs if the ground is in a condition to use one, but if a man puts that amount of money in horse and horse machinery, he can do as much, and he can do it wet or dry.

I use three tons of coal per day, and have four horses to haul coal, and two horses to haul water. I have five men working in all, namely, engineer, fireman, waterman, coal hauler, and plowman, and some of these men are

The "New Century" Separator

Light Weight—Unlimited Capacity—Perfect Separation—
Convenience—Durability



Where in any other Separator can be found such a matchless system of Separation?

That open web conveyor and patented rotary type of straw rack form the greatest combination of separating devices ever used in the construction of a thresher.

Do not be misled by representations that something else is "just as good" as the "New Century," **FOR IT IS NOT BUILT.** In every part of Canada, operators, patrons of operators, agents and everybody else who have had an opportunity to see the "New Century" at work are most emphatic in their declaration that no other separator will anywhere near compare with the "New Century" for fast, clean and thorough work.

If you are in need of a strictly up-to-the-minute separator, one that will not only satisfy you in every particular, but satisfy your patrons as well, by all means investigate the "New Century" before placing your order elsewhere.

We are also builders of the famous Aultman-Taylor 30-60 gas tractor, steam traction and portable engines, "Matchless" clover and alfalfa hullers, bean threshers and saw mills. Send for catalog today—it's free.

International Harvester Company of Canada, Ltd., Canadian Sales Agents for "New Century" Separators.

The Aultman & Taylor Machinery Co.

Lock Box No. 64. MANSFIELD, OHIO.

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



"FLOUR CITY TRACTORS"



Illustrating the "Flour City" 20, 30, and 40 H. P. in field work.

The "Flour City" has the endorsement of all who have used them.

Embodying units of power, suitable for any size farm.

it is a successful tractor, backed by safe and sane business methods.

high priced men, as they have to be qualified.

Counting the time a man loses with engine, farming can be done cheaper and more satisfactorily with horses, as a man can have brood mares, and his power is increasing each year, in value as well as in power, and in a few years, you can have a new outfit, worth as much or more than when you started. However, we cannot get along without engines.

If a man is able to buy an outfit to suit his farm, let it be large or small, it is all right, as at times he can use it to great advantage, as the threshing will have to be done, as well as grinding feed, etc. This will allow him to get his work done when it should be done, and probably enable him to farm one hundred or two hundred acres more each year in good shape. This will insure him getting his threshing done when it should be done, and more plowing done in the fall, and it is an evident fact that a man has to get his plowing done in the fall if he expects to do very much farming, and this is just what has not been done in Alberta since I have been here.

I am not able to tell just what it cost me to plow, disc and seed, as the wet season has mad: it hard to tell, unless a man keeps a correct account.

E. E. Birnst,
Highland, Alta.



A Good Hitch Idea

Highland, Alta.

Your letter to hand re my experience in traction cultivation. I might say that this is my second year with the tractor on the farm, but as I gave you my first year's experience a year ago I will only give my second year's now.

I started in the spring with my 25-45 Rumely Oil Pull intending to make it take the place of horses as much as possible. I employed one man only, for a couple of weeks in seeding and only used four horses on the farm. I used the engine to pull three drills and drags to cover or 6 discs

and drags or the Y furrow engine gang with packer and found any of these loads quite easy to handle with the engine. I operated this outfit entirely alone, so could not be expected to make any record days n r could I economize on fuel. On an average day's drilling and dragging of about 60 acres, I would use about 45 gallons of kerosene and about 30 gallons of water. I never used the seeder behind the plows,



Heer and Cockshutt

but for plowing, packing, dragging, seeding and dragging again my estimate cost per acre is \$1.10. This of course is by doing the work in two operations, when the work would be done cheaper than if done in one operation. For plowing, packing and dragging I use on an average of about 2 3/4 gallons of kerosene.

I had a great deal of trouble getting a drill and drag hitch to work satisfactorily but after losing three or four days repairing and making new hitches, I succeeded in making one that was quite satisfactory. The first hitch I tried was one often recommended to me. It was a 6 x 6 timber fastened to the engine draw bar with the cables running from the ends to the front of the engine. The drills with the short tongues were on the ends and the drill with the long tongue in the centre. On the centre drill I had six sections of drags and two sections on each outside drill. This outfit was a complete failure, as it could not be turned on less than twelve or fifteen rods. With

the last hitch I made I could easily turn on five rods and go back to the last wheel track.

If the publishers wish for a cut of this hitch I could send in a sketch any time. The engine I used in seeding being too cumbersome and slow for farm use, I traded it back to the Rumely Co. for one of their 15 x 30 Oil Pulls which I used to cut my crop of 550 acres I used the 15 h.p. engine on two 8-foot binders

cutting round ends on the fields and travelling four miles per hour. This I found to be an excellent outfit as three men could easily cut 60 acres per day. The corners of the fields were cut afterwards with the horses. I used this 15-30 h.p. engine to drive my 34 x 56 Rumely separator and found that it could easily run the separator with three men feeding in any kind of grain.

As for the tractor being detrimental to plowed land I might say that I watched results very carefully and had only one field where the engine tracks could be seen at harvest time and that was on land which had been backed very deep and had not been properly packed. The grain on the wheel tracks was shorter and stood thicker but had smaller heads. The sample was not affected for better or worse neither do I think the yield to have been affected. On any other land seeded with the engine I could only see the difference for a couple of weeks after the grain was up. Trusting this informa-

tion is along the line asked for, and thanking you for the opportunity of expressing my views on this subject, I remain,

Yours truly,
Albert E. Cunningham,
Pulleville, Sask.



J. B. of the Avery Company Goes to Europe

Mr. J. B. Bartholomew, President of Avery Company, is travelling to New York, and after consultation with parties there with whom the company does an export business, and taking up other matters of importance in connection with its affairs, he will sail on the steamship Mauretania, making London, where some important engagements are awaiting him, his first stop.

After spending a week or ten days there, he will then proceed to Paris; then to Berlin, Germany, Budapest and Austria-Hungary. From there his expectation is, if the time permits, to visit Roumania, Italy, and possibly Genoa, then coming back to Paris, after which he expects to return to New York City. The time required to make this trip is in the neighborhood of six or seven weeks.

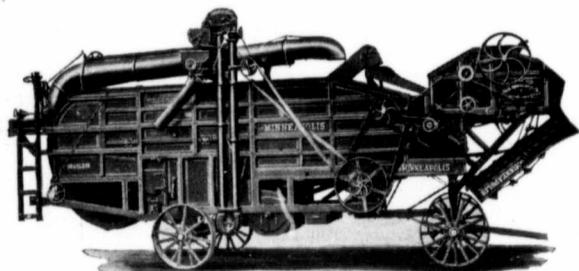
The Avery Company have established agencies in all of these countries and many others in Europe. The Avery gasoline traction engine and self-lift plow have met with such favor in these countries that it seemed imperative that the president of the Avery Company should call on these agencies in person and meet the management of these large concerns with whom they have been doing business for some years and whom he had never met in person.

Mr. Bartholomew will be accompanied during this entire trip by his wife. This is not her first trip across the water, she having accompanied Mr. Bartholomew a few years ago to the Argentine, returning by way of England.

Everyone acquainted with Mr. and Mrs. Bartholomew wish them a bon voyage and a safe return.

"The Great Minneapolis Line"

THE LINE OF EVER-INCREASING POPULARITY



STANDARD SEPARATOR

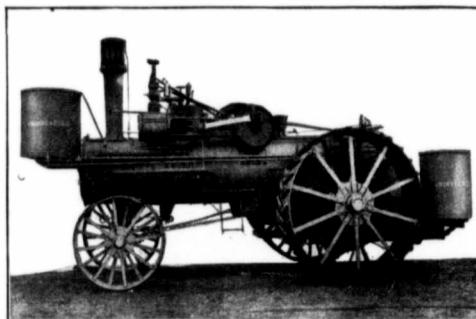
Always Ready

It Saves the Farmers' Grain

Runs Steady

The Minneapolis Separator has won its place in the hearts of American farmers and threshermen absolutely on its merits. It will stand the hardest kind of usage and thresh, save and clean in a satisfactory manner any and all kinds of grain and seeds.

WATCH THE STRAW STACK—ASK OUR CUSTOMERS



STEAM ENGINE

Without an Equal for Durability and Efficiency

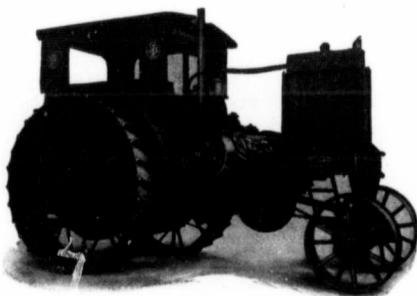
The Minneapolis Steam Engine has for years been a favorite with threshermen of the West and Northwest, because of its ability to develop extraordinary power economically, and to stand up to the most severe work.

It is very simple in design, handsomely finished, a free, easy steamer, in short, an engine that will please the most exacting.

THE MINNEAPOLIS 20 H.P. Universal

is the most popular light-weight gas tractor on the market. We lead where others follow. The "following" is excellent proof of our ability to design and build well.

Let your order be for a **MINNEAPOLIS UNIVERSAL** and you will have no regrets.



40 H. P. MOTOR

King of all Gas Tractors—THE MINNEAPOLIS 40

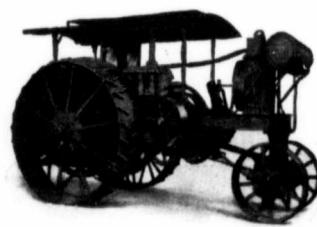
Of practically all steel construction
All parts easily accessible
Gas power is cheaper than horse power
Tractors that are durable, efficient and reliable
The kind you should buy for heavy work
MINNEAPOLIS 40

THE MINNEAPOLIS 25 H.P. Farm Motors

has made for itself an enviable reputation. It will do the work of 24 horses with ease and at a much less cost. It is guaranteed not to balk and eats only when at work. It does not require an expert to run a Minneapolis farm motor or a repair shop to keep it running.



UNIVERSAL TRACTOR



25 H. P. MOTOR

Investigate before Investing

Try Minneapolis Quality

There's None Better

The Minneapolis Threshing Machine Co.

HOME OFFICE AND FACTORY

West Minneapolis (Hopkins P.O.), Minn., U.S.A.

REGINA - WINNIPEG - CALGARY - EDMONTON

NOT IN ANY TRUST OR COMBINATION

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

THE MINNEAPOLIS THRESHING MACHINE CO.
West Minneapolis, Hopkins P.O., Minn., U.S.A.

Gentlemen:

Please mail to me free, printed matter as checked below:

Large General Catalog.

Threshers' Account Book.

Wall hanger of the Great Minneapolis Line in colors.

I will be in the market for.....

about.....1913.

Name

Town

C. T. F. Province

Good Roads in Western Canada

BY A. C. EMMETT

The writer of these articles (which will be continued from month to month throughout the year) has had a wide and severely practical experience and is specially engaged on the "Good Roads" movement.

THE Manitoba Good Roads Association has decided to again hold the split-log drag competition which has been so successful in past years. The rules governing the contest are practically the same as for 1912, but competitors will not be allowed to enter a stretch of road with which they have won prizes in the 1912 contest. This will give all those taking part an equal chance to secure the prize money and will have a beneficial effect on road improvement generally.

Rules for Split-Log Drag Competition, 1913, for Mud and Gravel Roads

Note—The following rules apply both to mud and gravel roads with the exception that the distance of gravel roads to be maintained is one mile only:

- 1. All municipalities members of the Manitoba Good Roads Association are eligible for entry.
2. Entries must be made with the secretary.
3. Entries must state mileage of road to be maintained under this competition and where situated.
4. Each municipality competing must have at least two miles leading clay road or roads kept under these conditions.
5. That the competition be confined to the months of July and August.
6. An amount may be paid by any municipality to contestants for the two miles allotted to them not to exceed \$15.00 for the said two months' work.
7. Municipalities competing to furnish contestants with split-log drag.
Prizes will be donated to individuals keeping the best two miles of road, namely: First prize, \$50.00; second prize, \$30.00; third prize, \$20.00.
9. That signboards showing section of road entered in competition shall be provided by the association, and that it shall be a condition of entry that contestants shall place one of these signs at every half-mile of the competition stretch and keep same in position during the contest.

10. The Provincial Highway Commissioner, A. McGilivray, and

W. F. Tallman, Street Commissioner for the City of Winnipeg, be requested to make an inspection of the road or roads selected prior to commencement of this competition and at least once during the two months in which same is being held. The final inspection to be on or about September 1st, 1913. The above named gentlemen to be judges and their decision to be final.

In addition to the amount paid to the contestant or contestants by each municipality competing, and the cash prizes given by the association, which for the year 1912 was \$200.00 (viz., \$100.00 for each class of the competition), extra prizes donated by leading Winnipeg firms will be given for winners in each class.

It is, of course, impossible for a great number of the western municipalities to compete in the competitions of the association, but there is nothing to prevent competitions being held locally, and it is earnestly hoped that this will be the case.

It has been demonstrated by the competitions held that the split-log drag is the most economical and efficient implement devised for keeping the surface of an earth or even gravel road in proper shape.

There is no doubt whatever that the municipality which adopts and uses the split-log drag systematically will reap many times its cost in benefits received and at the same time, by the example given educate the people to see the need of better and permanent roads as a means of progress, material and social. It has been said, and very truly, that mankind has never gotten anywhere without a road and the rate and direction of human progress has been always determined by the roads of a people. A community will never have a full share of progress without roads, and having acquired the roads, will not have to wait long for great progress.

Convict Labor

During last year permission was given by the Department of Public Works at Ottawa to make

use of convict labor in the Province of Manitoba for the construction of highways. The action of the Department resulted in considerable discussion as to whether the use of convicts in this manner was beneficial to the province.

In order to get a fair understanding as to the results that have followed the employment of convicts in road work the experience met with in the State of Virginia, U.S.A., will prove of the greatest interest. The custom in Virginia was to hire out the convicts to lessees who worked them in the quarries, mines, etc. Under this system the convicts were starved, poorly clad, abused, and generally treated like dogs, until public indignation was aroused and reforms took place. The state was then confronted with the problem of making the convicts self supporting and at the same time keeping them under state control. The solution was found by the institution of road gangs, which were placed under the charge of armed guards and housed in camps on the scene of their labors. The method of employing the convict labor is for the county desirous of undertaking road construction to make application for a gang of men who are supplied at the actual cost of their keep and maintenance of guards. The county bears the cost of supplying material and the tools necessary for the carrying on of the work. In the event of there not being convict labor available, the county is given State aid in a sum equal to the difference in cost for the employment of other labor. No county can receive cash and convict labor at one and the same time.

During 1911 the cost for convict labor, every expense included, was only 50.5 cents per man per ten-hour day, and from 34 to 36 cents per calendar day. Only such convicts as are serving less than a five-years sentence are allowed the privilege of becoming part of a road gang, and that it is considered a high privilege has been demonstrated by the uniformly good behavior of the convicts in the road gangs.

The longer time and bad character men are employed in the quarries where it is easy to guard them, and where they perform useful work in getting out the material to be used in road construction. As a result of the adoption of this system, the State of Virginia has one of the finest highway systems in America.

With such a successful result as an example, it seems folly not to make use of our convicts in the improvement of Manitoba highways at a considerably reduced cost and a corresponding decrease in the taxation of the community for the building of good roads which are, when all is said and done, the greatest incentive to the development of the country. It is to be sincerely hoped that a trial of the system will be made in the immediate neighborhood of our penitentiaries during the present year, and if it proves a success, there is no reason why road camps should not be established wherever a municipality is willing to pay for the labor and care of the convicts whilst they are employed.

The most noteworthy feature of the Virginia campaign is the fact that 12-foot macadam roads are being constructed at a cost of between \$3,800 and \$4,000 per mile, including the cost of culverts and bridges, whereas in other states where convict labor is not employed, similar roads are costing \$6,000 to \$10,000 a mile where contract labor is employed to build them.

"Why doesn't the baby talk?" inquired the curious little sister.

"He can't talk yet; small babies never do."

"Oh, yes, they do," was the quick answer. "Job did. Nurse read to me out of the Bible how Job cursed the day he was born."

"What were you and Mr. Smith talking about in the parlor?" asked her mother.

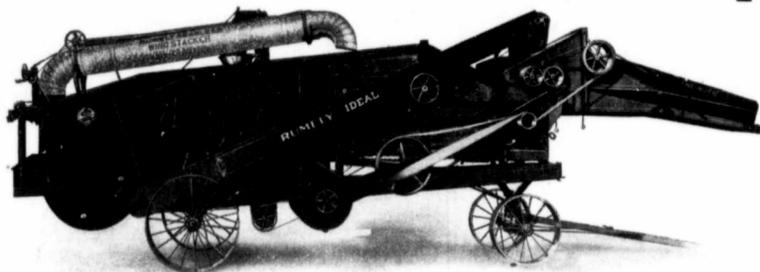
"Oh, we were discussing our kith and kin," replied the young lady.

The mother looked dubiously at her daughter, whereupon her little brother said:

"Yeth, they waith Mother. I heard 'em. Mr. Thmith asked her for a kith and she said, 'Y o u kin.'"



It's time now to Select Your Separator



Rumely Ideal

(Standard for 60 years)

The chain rake and beaters get 95% of the grain before it goes three feet from the feeder.

13 feet 9 inches more of carefully designed mechanism works furiously to get every kernel of that other 5%—and gets 'em.]

The Ideal is made in sizes from 28-44 to 40-60, and the Ideal Junior from 18-40 to 28-48.

Threshing will be early; the season is well advanced

Advance Separator

(For 32 Years a Leader)

Largest grate surface.

Teeth have large working face.

Improved No-Choke Chaffer.

Will run almost double capacity and still get all the grain.

Standard sizes from 24-40 to 44-64
Juniors from 18-36 to 30-44.



Machines or any parts rushed on shortest notice from any of these branch houses—

BRANDON, Man.
SASKATOON, Sask.

REGINA, Sask.
TORONTO, Ont.
VANCOUVER, B.C.

YORKTON, Sask.
ESTEVAN, Sask.
WINNIPEG, Manitoba

CALGARY, Alberta
EDMONTON, Alberta

Careful selection of a Separator is half the threshing

Write today for Separator Catalog

Ask us the name of our dealer nearest you



RUMELY PRODUCTS CO.

(INCORPORATED)

Power-Farming Machinery

La Porte

Indiana

GIVES IDEAL SEPARATOR AS DRY-FARMING PRIZE

The Rumely Company has given a Rumely Ideal Separator to the directors of the International Dry-Farming Congress to be offered by them as a prize in the exposition at Tulsa, Oklahoma, the last of October, this year. The directors will say in which competition it shall be the premium.

If the separator is won by a Canadian farmer, the Rumely Products Company will deliver it to him free of charge—freight and duty paid.

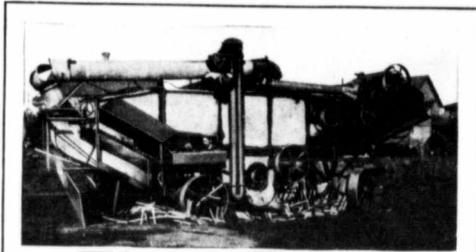
The winner of the Separator may select the size, up to 36 inches, best suited to his needs.

Last year at the Dry-Farming Congress at Lethbridge, Alta., the Rumely Products Company gave a 15-30 h.p. OilPull Tractor to the farmer raising the best bushel of hard wheat. The competition was open to the world, and about 250 entries competed. The OilPull Tractor was won by Henry Holmes of Raymond, Alta.



STANDING

Strong Evidence from Users of



Fire Tests

W. A. Ryder, of Crowell, Texas, Says:
"All that would burn of the inside of our Case Steel Separator was burned out clean. Three days later all necessary repairs were on the ground. The fourth day after the fire everything was in tip-top shape for threshing. Had it been of wood nothing would have been left but the trucks."

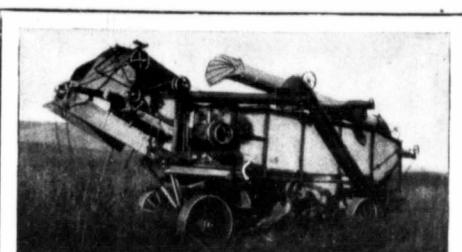
Frank Gooch and James Orr, of Grantsville, Utah, Say:
"Fire burned everything that could burn about our Separator. The promptness of your Salt Lake Branch House in supplying with extras, we were running again in a very short time, and at a nominal cost. Had it been a wood separator, it would have been a total loss."

J. H. Lane, of Marceline, Missouri, Says:
"Fire destroyed two oat stacks one 1200 bushels of timothy, and burned all the belts off my

Steel Separator which stood between the stacks. Aside from the belts my separator was not hurt to exceed five dollars. Had it been a wooden machine, my loss would have been complete."

Millard Bros., of Lamar, Colorado, Say:
"Our machine has caught fire three different times. If it had been made of wood it would have been gone long ago. After seven years of constant use, over all kinds of roads and in bad ditches, the frame is as true as the day we received it—not a loose rivet anywhere."

Chas. N. Wood, of Georgetown, Kentucky, Says:
"The Case Steel Separators are superior in every respect to those of wood. They will never warp, rot or get out of shape in any way. They are almost impossible to damage by fire."



Weather Tests

John Ulman, of Strassburg, Ill., Says:
"I bought one of your Case Steel Separators about six years ago and it is just as straight as it ever was—no loose rivets. It is the smoothest running separator that I have ever run. The weather doesn't hurt it. Never had a coar on mine."

N. H. Rhodes, of Belleville, Ill., Says:
"Case Steel Separator bought seven years ago is in as good running shape as when it came from the factory. It threshed the last bushel as well as the first. In five years my repair bill was only six dollars and that was no fault of the machine. Has stood in the field in the threshing season in all kinds of weather and never had a sheet on it. It is weather-proof."

George G. Patton, of Royal Center, Ind., Says:
"The Case Steel Separator bought in 1908 has stood out in the weather much of the time and has not cost me one penny for repairs. It is almost as good as new. The frame is as solid as the day it was unloaded from the car."

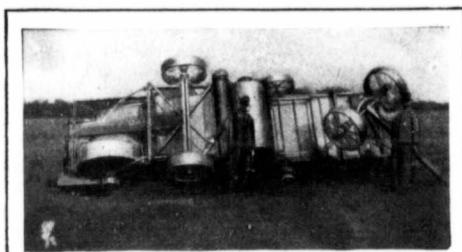
John F. Kempf, of Pond Creek, Okla., Says:
"The Case has a frame that never gets out of line, one that never rots out or rusts out. My machine has stood out for ten years and it looks as well as it did the year I bought it. If you have a Case steel separator you don't have to build a shed, as it is weather-proof. I never would buy a wood separator again as I never liked to go back to it after a big rain. Everything would be soaked and warped out of shape, as a result the machine would run very heavily."

Emil Blanck, of Billings, Okla., Says:
"My Case Steel Separator has run seven seasons and is good for ten years more. It has never been in a shed since it was bought. The weather does not hurt it. It is weather and fire-proof and the frame is just as solid and as good as the day it came out of the shop. I would not buy any other than a Case steel."



THE TEST

Strong Evidence from Users of



Accident Tests

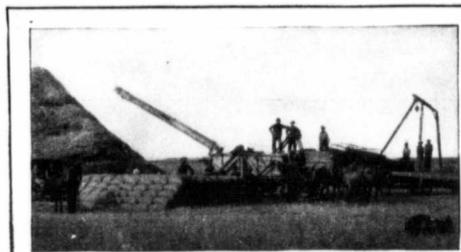
D. J. Frankenburg, of Tempe, Arizona, Says:
"Our outfit was handled roughly during the season of 1910, covering practically 100 miles. The Separator was upset and the return elevator smashed but the frame of the machine and steel housing is in perfect condition. Every angle iron is true, every joint is tight and every pulley is in perfect alignment."

S. M. McKee, of Frederick, Okla., Says:
"I turned the Separator over on its side but went to threshing again without spending one cent. If it had been a wood frame it would have been smashed to pieces as it fell in a ditch going down a steep hill. I have operated eighteen different makes in my time and I know now the Case is the best."

John E. Liston, of Oakland, Illinois, Says:
"In 1908 I fell through a high steel bridge with my rig. The accident nearly killed me but only cost \$10 for repairs on the rig. If the separator had been a wood frame it would have been broken in two for it rested amshup on the bridge abutment."

James Le Force, of Covington, Okla., Says:
"I turned my Separator over while traveling on the road. If it had been a wooden one it would have been ruined and ready for the junk pile but mine was back on its wheels in about an hour. The damage cost me \$1.25 and it is now just as good as ever."

B. Fuchs, of Cazenovia, Illinois, Says:
"Our machine was overturned in a deep ditch. To my surprise only a few parts were required to place it in same condition as before the accident. Had it been a wood frame machine it would undoubtedly have been a complete wreck."



Service Tests

Fred and Charley Seibert, of New Franken, Wisconsin, Says:
"We have had our machine six years and it is in good condition and will be good for at least twenty years more. It has been through one fire but only the wood parts burned. We have run it from thirty-five to sixty days in a season and have threshed between thirty and fifty thousand bushels of grain in a season. We prefer steel construction as it never gets out of shape. We have had both kinds."

C. M. Luttrell, of Amarillo, Texas, Says:
"My Case Separator has stood the test of time and is practically as good as new. Have threshed all kinds of grain every season. The separator is staunch and rigid and looks to be good for all time to come. If I buy another Separator it will be a Case."

C. J. Schwartz, of Hamlet, Indiana, Says:
"I have run my Separator three seasons and it is as good as new—not even a loose rivet. No Separator on the market can do better work than a Case Steel. People say I do faster and better work and they are glad to have the Case Steel Separator on their job."

F. M. McFeters, of Haskew, Okla., Says:
"With Case Steel Separator purchased in 1907, have threshed wheat, corn, oats, barley, millet, cane, kafir corn, alfalfa and alfalfa hay that had been baled. Have shipped the machine twice, upset it twice and had it on fire twice. It has stood out in weather all the time but is as solid as if cast in one piece. The Case steel machine is practically indestructible."

J. A. Strain, of Hooker, Oklahoma, Says:
"We have done all kinds of work with the Case Steel Separator purchased in 1906. Threshed milo maize and kafir corn cut with grain header and with corn binder. Machine has not been in a shed since shipped. The frame is rigid and in good condition and is, practically weather-proof. Wood separators must go."

F. J. Stull, of Mt. Airy, Maryland, Says:
"The Case steel Separator has given excellent service for past four seasons. I thresh grain in all conditions without any difficulty. It is always ready for business. Never had any bolts loose or rivets cut off. No more wooden ones for me."

KEEP THESE POINTS IN MIND WHEN
Economy — Faster and Cleaner
CASE Steel Threshing Machines are Durable

C. A. Rhoades, of Pampa, Texas, Says: "Last year I bought an old separator that had been run nine years and had been left standing out all this time. The frame was good as new and the machine did as good work as a new one. With a wooden frame the rain and sun cause the wood to swell and shrink and warp, resulting in loose bolts which if not tightened, mean that the machine soon goes to pieces. You never have this trouble with steel separators."

J. M. Dawson Company, of Wayne City, Illinois, Says: "The Case Steel Separator bought in 1908 has stood the test. Not a loose rivet about it. Has gone without a canvas through last three seasons. No loose pulleys. Turned it over on its side when a bridge went down but hurt nothing. Has run five seasons and is good for as many more."

John Gutermauth, of Cottleville, Missouri, Says: "Have run the Case Steel machine for five seasons and never had one minute's bother on account of loose rivets or bolts. Shows no sign of rust. Nothing built today to beat it. With proper care will last a lifetime. For smooth running and good cleaning you can't buy anything to beat the Case. Customers say it's the best in the country."

T. J. Marlow, of Downing, Missouri, Says: "Case Steel Separator bought seven years ago is still running and giving satisfaction. Can't be beaten for ability to stand rough usage. Have been in the threshing business twenty years and it's the best one I have ever run."

Howard Poe, of Dieterich, Illinois, Says: "Case Steel Separator bought in 1907 is in perfect shape; never had a loose rivet or bolt. Frame is so rigid that bearings are always in perfect line. Have never had a hot box. Would not have anything but a steel separator. The frame will never wear out."

Make No Mistake - Profit by the Experiences of Others

J. I. CASE THRESHING MACHINE COMPANY INC.

CANADIAN BRANCHES, TORONTO, WINNIPEG, SASKATOON, REGINA & CALGARY

YOU BUY A THRESHING MACHINE
Work — Satisfied Customers
CASE Steel Threshing Machines are Reliable

John Rehman of LaFayette, Indiana, Says: "The Case Steel Separator I bought of you four years ago has given me good satisfaction. It separates the grain from the straw, cleans well and satisfies my customers. It has stood in the weather a part of the time and there is no sign of loose rivets or bolts. The frame too is as solid as the day I bought it."

Wm. Mathew, of Marshall, Illinois, Says: "My Steel Separator is as solid as when it was made. There is not a single rivet loose in it. The weather has no effect on it. Is not a bit rusty and has been run six seasons—the last two were very rainy. I threshed in a hilly country and if I had had a wood machine it would be ready for the scrap pile now, but my steel is good for a long while."

J. J. F. Johnson, of Benton City, Missouri, Says: "The Steel Separator we bought in 1906 is still a leader. No thresherman in the Township did more or better work with his new machine last year. It is still solid, strong and good for many years."

E. Y. Barickman, of Downing, Missouri, Says: "There is no better separator built for durability and good work than the Case Steel. Bought mine in 1906 and the rivets and bolts are just as tight as they ever were. The separator is in good condition, does first-class work and is good for many years yet. No man can make a mistake in buying a Case Steel Machine."

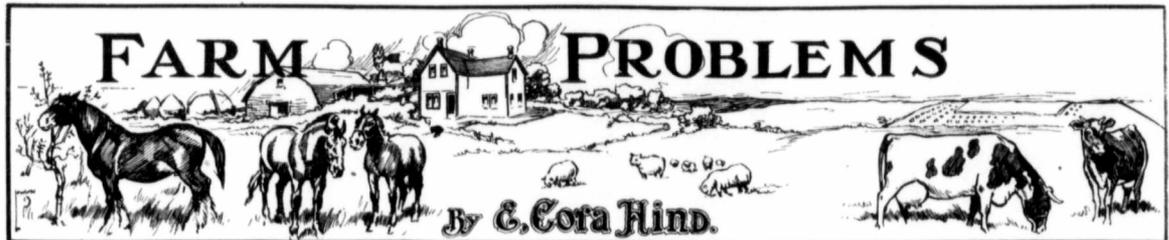
Jose Torres, of Tome, New Mexico, Says: "The Case Steel Separator which I purchased from you several years ago have stood the test, both in stability and durability. My separators have withstood all kinds of weather, and I believe they are good for several years more."

Buy the Case Steel Threshing Machine

741-791 STATE ST. RACINE, WIS. U.S.A.

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J. I. Case Threshing Machine Company,
743-793 State Street, Racine, Wis.
Please send me a copy of your Threshing Machine Catalog.
Name _____
Address _____



A good deal that bears more or less directly on the question of mixed farming has transpired during the past month; undoubtedly, one of the most important things was the special meeting of representatives of the various live stock associations of the four Western provinces, at Calgary, in connec-

ent provinces during March and April, and they came up to Calgary fully prepared to form a Western association if that was deemed necessary.

After a very full discussion it was decided that a union of all the live stock associations in the four Western provinces should be formed, to be known as the

brought to a close, and the very handsome prizes distributed.

This competition was of a nature to give us food for thought. The first prize was \$500 each for the best carloads (15 animals) 3, 2 and 1 year old. The cattle had, none of them, been kept indoors, and all of them had been fed simply with the ordinary coarse grains and hay of their district. The first prize three-year-olds were a bunch of grade Herefords, and big growthy steers very deeply fleshed. The first prize two-year-olds and yearlings were both owned by the same man, W. E. Tees, of Lacombe, Alberta. The yearlings were Galloways, and just here is where the value of well bred stock was in evidence.

The 15 yearlings were so uniform in type and quality that it would have been difficult to tell one from another. They not only won the \$500, but immediately after Mr. Tees sold them for 8c. a pound, and as they averaged 1,360 pounds a piece, his return was very handsome. He said there was nothing special in the method of feeding, and when he was asked as to the price he thought it would be necessary to sell coarse grains at in order to

sold in the Calgary market in the last five years."

The testimony of the other men who had fed steers for this competition was very much along the same line. They have decided that it is more profitable to feed coarse grains to steers rather than to sell the grains in the open market. The next question is: Where are the steers to be had? And in this connection J. D. McGregor, of Brandon, who addressed the Canadian Club on the subject of the live stock industry and who, by the way, was the first man to be asked to speak on so practical a topic before that body, stated that a true conception of the fact is that there was no place to-day where it was possible to buy stockers, and that the restocking of the West could only be done gradually by the keeping of all females on the farm, and the maturing of all calves.

He pointed out that the statistics showed a shortage of cattle the world over, particularly in the United States, where the number of cattle has been reduced one million, while the population has been increased two million, and he further pointed out that a reduction of the tariff would not mend matters.



Grand Champion Steer at Calgary

tion with the spring horse show and cattle sale.

This gathering was a very representative one of the pure bred live stock interests, and it was called together to make an earnest protest against the treatment which Western breeders of pure bred animals have been receiving from the various Dominion breed associations. The difficulty has apparently arisen from the fact that when the various breed associations were organized years ago, Ontario was practically the only province of the Dominion which was breeding pure bred animals extensively. It seems to be impossible for the men at the head of these organizations to realize that the West has grown up in this matter.

When the live stock records were nationalized in 1904, the understanding was that proper representation should be given of all the Provinces of Canada, on the executives of the various breed associations. This has never been done, and the feeling of injustice has grown until the Western breeders felt that some concerted action was absolutely necessary. The representatives of the meeting were elected at the annual meetings of the various breed associations in the differ-

ent Western Live Stock Union. This, and a scheme for equitable representation on the executive of the Dominion Association were the two things that were most fully discussed. A constitution for the union was adopted, and a scheme for representation drafted.

It was also decided that they would call special general meetings of all the various live stock associations in the four provinces, to be held during the summer fairs, to cement the action taken at Calgary and to prepare matter to lay before the Dominion Minister of Agriculture, and also to have things in trim to take up the whole matter at the annual meetings of the Dominion Breed Associations in Toronto next fall.

While the general farmer who is contemplating raising a certain amount of live stock may think he is not very directly interested in what the breeders of pure bred stock are doing, he certainly is interested indirectly, as the better the class of steers he can buy or raise for feeding purposes the better his chance of success. At the time that this meeting was held in Calgary the steer feeding competitions organized by the Natural Resources Branch of the Canadian Pacific Railway were



First Prize Yearling Car-load at Calgary.

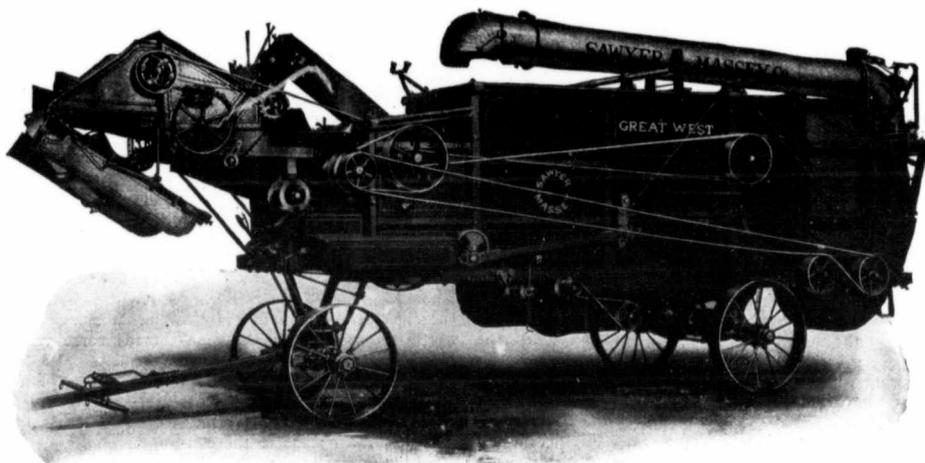
get a larger profit than by feeding to steers, he said: "I would like it to go on record that I can feed steers at a profit as long as the market price of coarse grains does not exceed \$1.00 a hundred-weight, and I do not mean that this applies simply at the present market price of steers, but at any price at which they have been

very much, so far as the meat from South America was concerned, because the South American herds had also been greatly reduced, and that country was only producing sufficient beef to supply their trade with England, and that if a portion of their beef was diverted to the United States it would simply mean higher



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SAWYER-MASSEY Class "C" Compound Steam Tractors are designed for heavy duty in the West. Built in 27 and 32 rated horse power sizes, they develop 82 and 100 brake horse power respectfully.

SAWYER-MASSEY Tractors fulfill satisfactorily every need of users of Farm Power Machinery. They are easy steamers, economical of fuel and water, and easy to operate.

SAWYER-MASSEY Machinery is backed by 77 years successful manufacturing experience. It is built of the best materials by skilled workmen, and no machine leaves our factory till it has been proved thoroughly efficient in every way. We have a splendid proposition for the export trade.

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No Hold-Ups for Repairs with "The Gandy Thresher Belt"

Right in the thick of the Harvest Season is a mighty poor time for a belt to "break down." That's one reason why 20,000 Threshermen use "THE GANDY THRESHER BELT"—the best by test. When buying "THE GANDY THRESHER BELT" you are protected by three identifying marks.

1. The Green Edge.
2. The Trade Mark a roll of belting with a bale of cotton laid across it.
3. The brand "THE GANDY THRESHER BELT" stamped at intervals throughout the length of the Belt.

Samples and prices on request. Write today.

GANDY BELTING COMPANY

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New York Office: 88-90 READE STREET

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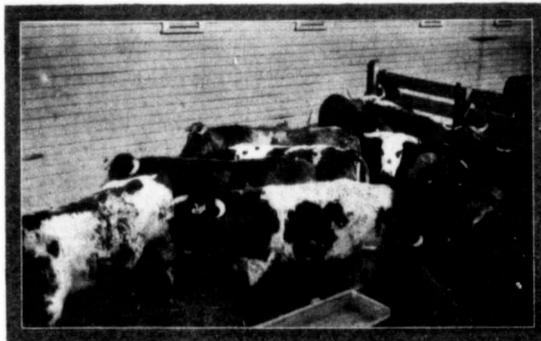
prices in England and in the United States.

The only way in which this business of restocking the country with cattle can be effectively done is for every farmer in Western Canada to-day who can at all see his way in the matter of food, to keep every calf that is dropped this spring whether it be a steer or heifer; having done this, he should also make a beginning in the matter of providing a feed for the development of these animals that will at once be reasonably cheap, help to maintain the fertility of his land and at the same time help to reduce the amount of labor in connection with feeding.

This is just one more plea for the beginning of planting alfalfa. It is hardly likely that there is any farm over three years old in the Canadian West where a corner could not be found for making a beginning along these lines. Good seed is obtainable this year, and the time to begin is now, for it is possible to seed the alfalfa up to the 1st of June. The spot chosen should be well drained, and the land top-dressed with well rotted manure, plowed deep and worked down to a good seed bed, and kept well harrowed until the time of seeding. It should be clipped back once during the summer, with the cutting bar of the mower set high. The second growth should stand for protection in the winter. If it is at all possible, for an acre of ground, get at least one hundred pounds of soil from an old alfalfa field, sow it broadcast by hand and harrow it at once before seeding.

Readers of this page may probably think that they are being bored with the question of alfalfa, but it is being harped upon just now, because in a very few weeks it will not be possible to seed it for this year, and it seems too bad to lose another year before beginning. If each farmer is content to begin in a small way,

everyone can begin this year. There is no use talking about every one going into mixed farming on any extended scale at once, it simply cannot be done, first, because it is quite impossible for the farmers to get the money to start, and second, given the money, they would find it, as already stated, extremely difficult to get the cattle, but every one that has a cow has dropped or will drop a reasonably decent calf this spring. Spring can make a beginning, and in the old Scotch phrase, "many mickles make a muckle."



First Prize 3 Year Old Car-lot at Calgary.

The Use of Tractors

To pass for a moment to the class of farming which is no doubt absorbing the attention of the great majority of western farmers at this season, it is of interest to note the way in which those who have had to depend on motor tractors have been delayed with their plows this spring. Even on the high lands in Manitoba and Saskatchewan, it was after the 20th of April before these machines could be used, and then only in somewhat limited areas. This is another proof that the man with good mares is better off for general work than the man with a tractor, as he has been able to work steadily from practically the first week in April

on his land, and give it more or less thorough cultivation.

It is feared that where the motor tractors have been depended upon there will be a very large amount of land seeded, and while there is a large amount of moisture in the soil all over the country this spring which may insure a tolerable crop, even planted in this way, it is certainly a most undesirable method of farming, and one which leads to the constant increase of weeds.

Once more let me issue the warning that wheat seeded after May 15 is an exceedingly doubt-

If any one who has not tried this before is in doubt as to the value of doing it, I would suggest their writing to Dean Rutherford, of the Saskatchewan University, who has had considerable experience along this line, and has made some very careful experiments.

Sheep

Again, let me urge the man who is leaving a considerable portion of his ground for summer fallow to endeavor to secure a small bunch of sheep and to get them right away and to pasture on the stubble until such time as he is ready to plow, and when he has plowed and cultivated a portion of his summer fallow, seed it to a mixture of oats and barley to keep a supply of green feed for the sheep; in this way, even a very dirty farm can speedily be cleaned and that too at a profit. People in these days in the west are apt to smile at the old saying that where the hoof of a sheep touches the soil it turns to gold, but it is nevertheless true, and the man who tried a small bunch of sheep on his summer fallow last year is almost invariably increasing the number this year.

In Conclusion

Just at this time, it is perhaps unreasonable to expect farmers to read anything on farm problems, or any other subject. They are too busy trying to get their seed in, but there are always half hours of waiting even in the best planned day, and perhaps some of the thoughts suggested in the above may prove both useful and practical.



Judge—"You are a freeholder?"
Talesman—"Yes, sir; I am?"
"Married or single?"
"Married three years last June."
"Have you formed or expressed any opinion?"
"Not for three years, your honor."

ful proposition, especially in the northern sections, and that it is infinitely better to increase the amount of summer fallow than to put in wheat late in the season, on badly cultivated or land which is not cultivated at all.

Harrowing Wheat

It will not be long before the first sown wheat is showing above ground; the spring is a late one, and there is much work to be done, but here is a suggestion for the man who is content to put in a comparatively small acreage of wheat on well tilled ground; begin harrowing wheat as soon as it has shown well above ground, and continuing this until it is five inches high.

Over 5,000 Ruth Feeders Sold Last Year



The Maytag Co., Ltd.
Winnipeg, Man.
Gentlemen:—I would just like to mention here that the Ruth Feeder is the best piece of machinery I ever owned. It certainly does all you claim for it. I do not believe there is another Feeder on the market that will feed a machine as perfectly as the Ruth. I know that mine has been a great advertisement for you around this part of the country.
Yours truly,
KENNETH SCHARF
La Riviere, Man.
Sept. 29, 1911

DOESN'T that prove that there is something behind the Ruth Feeder beside mere claims? Doesn't that prove that the Ruth is backing up all promises made for it and has become known the country over as the one best buy in the feeder line?

If this were not so, our sales would not have exceeded the 5,000 mark in one year.

We expect to install many more thousands of Ruth Feeders on the farms of America this year—and we want to know if we can't convince you of the wisdom of following the lead of the thousands of others who have shown their preference for our machine.

There is every reason why you should. One reason is that including the 5,000 machines we sold last year and the thousands of feeders we sold previously,

The Cost Per Machine for Repairs Averaged Less Than \$2.00

That means a great deal more to you than it appears. It means that the machine is so perfectly constructed, so full of real quality materials, so well designed and balanced that the chance for "break-downs" is practically eliminated.

That means much to you when you figure the loss of time and heavy expense of crew, which has to be paid whether machine runs or not.

Another good reason why the Ruth has become the preferred Feeder is that it requires less power than any other machine and that it runs more quietly—these things, coupled with the fact that seldom, if ever, is a Ruth out of order, is because

The Ruth Has Less Working Parts Than Other Machines

Our guarantee which appears on this page, is proof positive of the confidence we have in the Ruth Self Feeder — proof positive that we have not skimped on material or workmanship anywhere — proof positive that you will get satisfactory service out of it, always.

Our Guarantee

Such faith have we in the Ruth Feeder, that we guarantee every Ruth Feeder 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 any way you please,** without slugging the separator cylinder or loosening a spike, and do a **Faster, Cleaner and Better Job** of feeding than any feeder manufactured by any other company in the world.

We further guarantee every Ruth Feeder to be made of the best material by the most skilled workmen, and if

Within Three Years from Date of Sale

any part of the above described Feeder (except webs and belts) should break or in any way incapacitate the feeder, owing to defect in material or workmanship, and not on account of carelessness on the part of the user, we will replace such part or parts, absolutely **FREE OF COST** on return of defective parts, F. O. B. Winnipeg, Man.

This guarantee proves we have confidence in the Ruth Feeder to satisfy owners; that we have confidence in it because we know what it has already done, thousands and thousands of times over; that we know what it has done from actual experience ourselves and from the hundreds of letters we get every year from well satisfied owners all over the world.

Investigate—And You'll See That We have Understated Rather Than Overestimated the Merits of the Ruth.

THE MAYTAG COMPANY, LTD.
WINNIPEG MANITOBA

Course in Gas Engineering

Conducted by D. O. BARRETT

Carburetion

In order to burn any fuel in an internal-combustion engine it must first be mixed with the correct proportion of air. This mixing is done by the carbureter. Not only must the fuel be mixed with air, but it must be wholly or partially vaporized before we can have combustion. Liquid fuel will not burn. A burning match dipped into a vessel containing gasoline or kerosene will be extinguished just as readily as if it were dipped into a vessel containing water. When ignition does occur in a vessel containing liquid fuel, it will be observed that the burning occurs on or above the surface. It is a vapor mixed with air which burns, and the heat generated by such burning vaporizes more fuel, thereby causing the burning to continue until all the fuel has been used up. Exactly the same condition exists within the engine cylinder; a portion of the fuel is vaporized and ignited. In burning the vaporized portion, heat is generated and the fuel expands, radiating heat and vaporizing more fuel, which then becomes ignited. This process continues throughout the power stroke of the motor.

Contrary to general belief, the vaporizing does not occur until the fuel is within the engine cylinder. A carbureter does not vaporize fuel. To vaporize fuel one condition "must" exist, and that is the condition of heat. It must, of course, be admitted that only a small amount of heat is required to vaporize a good grade of gasoline, but it still requires heat. This can be proven by allowing a vessel containing gasoline to remain out in the open in the cold weather; the gasoline will not evaporate.

The function of the carbureter is to break the fuel up into small particles, and surround each particle with a sufficient quantity of air to cause complete combustion. A perfect carbureter would therefore be one which would divide the fuel up into molecules, and surround each molecule with a sufficient quantity of air to completely burn that molecule.

The process of breaking up the fuel is much the same as that used in lighting a fire in an ordinary stove. The two elements necessary to obtain a fire, would be wood and air, but a person would be looked upon as being very foolish who would put sev-

eral pieces of wood in the stove and expect them to burn by applying a lighted match. Yet it must be admitted that there exists within the stove the two necessary elements, namely, wood and air. The origin of the trouble must exist in the form of one or both of the elements. The same trouble would exist in the engine cylinder if gasoline and air were simply put in the cylinder. Having air and gasoline in the cylinder and causing a spark to occur, does not necessarily mean that the engine will start running.

In the case of lighting a stove we would split up the wood into kindling, and the finer we could split it up the better it could be surrounded by or mixed with air, and the more readily it would ignite. This is exactly what the carbureter does to the fuel, it splits it up into kindling, so to speak, and the more finely it splits up, the more perfect combustion we have in the engine cylinder. In other words, it delivers fuel and air to the engine cylinder in the form of a spray.

Some authorities on Gas Engines (Theo. Audel is one) claim that a carbureter vaporizes the fuel, but we cannot understand how a carbureter is going to vaporize fuel unless heat is applied.

It must be admitted that some carbureters do vaporize fuel; but the fuel is vaporized by the application of heat. One method of applying heat is that of drawing hot air from around the exhaust pipe. This practice is a poor one, when considered from the point of view of obtaining the maximum amount of power from a motor.

We know that hot air is lighter than cold air, therefore in comparing a given volume of hot air with the same volume of cold air we would have a greater weight of cold air; that is, we would actually have more cold air than hot air. The greatest amount of air and fuel that can be taken in an engine cylinder is an amount equal in volume to the volume of displacement of the engine piston. Therefore, if the air is taken in cold there will be more taken in than if it were hot; having more air we can burn more fuel; that is, we can get more mixture in the engine cylinder, and having more mixture we can get greater compression, which will result in better or surer ignition. If we get complete combustion of this greater charge of mixture, it stands to reason that we will get more power delivered. The more



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Harvester Oil



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Thresher
Hard Oil

Mica
Axle Grease

Stock carried in 300 tank and warehouse stations in Western Canada. For addresses, price lists, etc., write any agency.

THE IMPERIAL OIL COMPANY
Limited

Main Office: **WINNIPEG**

Regina, Moose Jaw, Saskatoon, Calgary, Edmonton, Lethbridge, Vancouver.



THE IMPERIAL OIL COMPANY LIMITED



THE IMPERIAL OIL COMPANY LIMITED

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

Cheaper Power for Every Purpose

Ask for New Booklets of Waterloo Boy Light Weight Caterpillar Type Oil Tractors, three sizes—15 H.P., and 25 H.P. Double Cylinders and 30 H.P. 4 Cylinders. These Tractors are exceptionally Light Weights. The 30 H.P. weighs less than 9000 lbs. Practically every part is made of steel.



The **WATERLOO BOY GASOLINE ENGINE** will run all day without attention, furnish exactly the power you need, maintain a uniform speed and save you money every hour it works.

Use either Kerosene or Gasoline for fuel—equipped for both at no extra charge.

The recent award of Gold Medal at Budapest, Hungary, in open competition with the best engines of all countries is clinching proof that the **Waterloo Boy** leads the World in Construction, Power, Service and Durability.

Has many important exclusive features—Speed Lever works like throttle on a locomotive; old reliable fly ball governor, automatic feed regulation, open jacket, starts easy in Winter, interchangeable parts, etc.

Lowest in price because made in largest quantities, at low manufacturing cost.

Guaranteed 5 Years. Stock free. Write today.

Heavy Weight Tractors pack the ground and injure it, they cannot get around over soft ground and they waste fuel moving useless dead weight. "Waterloo Boy Caterpillar Type" Oil Tractors are guaranteed to work on any ground that is in condition to be worked with horses. Mr. Farmer, this is just the tractor you have been looking for, for Spring Plowing.

Awarded Gold Medal First Prize at the International Gasoline & Oil Engine Show Budapest, Hungary

Burrige-Cooper Co., Ltd.
 Engine Gang Plows, Peerless Separators, Traction Engines, Grain Grinders and Power Washing Machines

Winnipeg, Manitoba Regina, Saskatchewan

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

Be sure To Renew Your Subscription Before It's Too Late

fuel we can burn in the engine and get complete combustion, the more power we get and the more efficient is the motor.

Those of us who have ever operated a plow engine or an automobile on a cool night in the summer, after running during the heat of the day, have noticed that the motor runs better and delivers more power at night. The cooler night air being heavier than the air is in the day time, permits the engine to take in more mixture, thereby delivering more power.

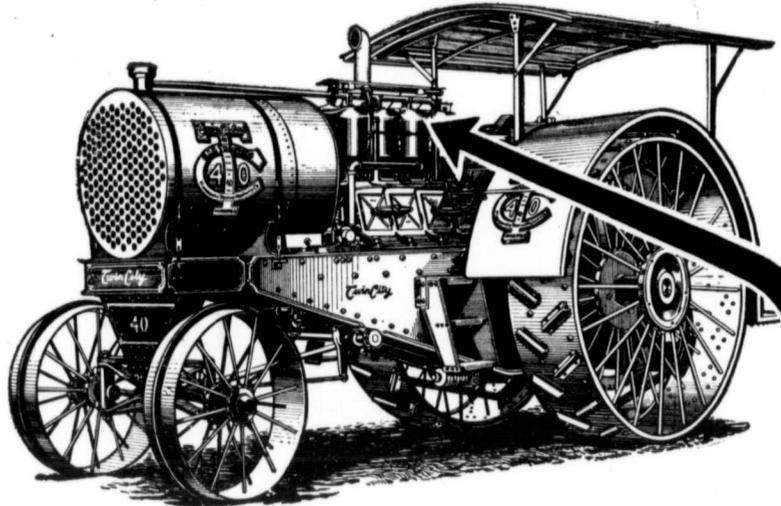
One of the weak points of a two cycle engine is that the amount of mixture that can be gotten into the engine cylinder is much less than in a four cycle of the same size.

Theoretically, a two cycle engine should deliver twice as much power as a four cycle of the same stroke and bore, but we know it does not. One of the reasons is because of its getting less mixture.

The volume of mixture taken into an engine cylinder cannot be increased, but the amount can be increased by lowering the temperature of the charge. Another method of causing fuel to be partially vaporized in the carburetor is to heat the fuel by means of a heat jacket, either connected with the cooling system of the engine or the exhaust. This does not reduce power so much as does the use of hot air, but the fact remains that the fuel by being heated, is partially expanded before it reaches the cylinder, and to obtain maximum power from the fuel, all the expansion should occur within the cylinder.

Heat is more commonly applied to kerosene carburetors than to gasoline carburetors, but it is quite unnecessary, for kerosene engines are invariably started on gasoline, and after the engine is heated up by the first few impulses we need have no fear about the fuel vaporizing when it reaches the cylinder. It is, however, a good practice to heat the intake manifold just enough to prevent the kerosene from condensing on the sides of the manifold.

The only time when hot air would be an advantage would be in starting, and that is just the time we don't get it, for the exhaust pipe is then cold. In starting an engine in ordinary summer weather we find that the heat generated by compression will generally vaporize sufficient of the fuel to give us the initial impulse, but in order to get sufficient vapor we find it necessary to open the needle valve more than when we are running. This is due to the fact that the fuel simply goes into the cylinder in a liquid state.



Uses All Its Power

First, a faultless motor—a motor that will develop sufficient power to pull through with the heavy loads, to meet every emergency.

Then, a perfect application and control of that power. Both of these vital features you will find in

Twin City Tractors

Two Sizes—25 and 40 Tractive H. P.
Burn Kerosene or Gasoline.

The motor is the product of the best engineering talent in the field of modern gas engine design.

Fewer parts, greater tensile strength of materials and mathematical accuracy in the workmanship.

Our transmission system is an improved type in tractor transmission. It has only four gears where others have five. It brings the power closer to the load. There is no unnecessary waste of power.

That's one of the reasons why the Twin City Tractor can pull a greater load than any

other tractor of the same rated horse power.

The elimination of the fifth and unnecessary gear in our transmission is also one of the reasons why the Twin City Tractor doesn't "get out of gear"—doesn't "wear itself out" so easily.

The many points on which the Twin City Tractor excels all others takes a 40-page book to describe. Its records of service and achievements as told by farmers all through the western states, fill another book. Write for both of them—ask for No. 10-J and No. 12-J. They're well worth reading.

Minneapolis Steel & Machinery Co. of Canada, Ltd.

REGINA, SASKATCHEWAN

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

While discussing the question of carburetion and of starting, it might be well to mention the carburetor used on the Walker starter. In turning over an engine by hand or mechanical means to start it, the suction through the carburetor is very slow and sluggish. The gasoline is therefore simply slopped into the cylinder, and is not broken up at all. If the weather conditions are favorable, and we open the needle valve enough, we generally get started with two or three revolutions, but sometimes we don't. If the engine is a small one we "turn the fly wheel briskly" according to the instruction

book, and thereby tear up the fuel until we get enough vapor to readily ignite. In starting with the Walker starter, which consists principally of an automatic air pump, air tank and carburetor, a current of air from the air tank is passed through the starter carburetor at a high velocity, being the condition which would exist if the motor were running. The current or air passing through the carburetor containing gasoline, tears up the fuel into a very fine spray. By holding the air valve open until the piston commences to move, a high compression is also obtained. Just as the piston starts to move

by the force of the compression a spark is caused to occur. The charge will immediately ignite, because there is a perfect mixture under high compression in the cylinder.

It can be readily seen that cold weather will not affect the working of this device, because it tears up the fuel into such a fine spray that it readily becomes partially vaporized by the heat of compression. A charge is also forced into the manifold of the engine, in preparation for the first intake stroke.

A hot engine is often just as hard to start as a cold engine, and it is because of poor suction

and poor compression. When an engine has been running under full load for half a day, it becomes very hot, and when it is stopped the lubricating oil is very thin, and runs off to the bottom of the engine.

We know that in order to have good suction and compression we must have a film of oil between the cylinder walls and the piston.

Knowing the cause of our trouble, we can easily find the cure, which is simply oil the cylinder and piston well before attempting to start with a hot engine. In starting a cold engine by hand it is a good plan to warm the gasoline, and if necessary the cylinder.

When using the Walker starter on an engine which is hot, or has poor compression, the air and gasoline are forced into the cy-

linder much faster than they could possibly leak past the piston, and the engine is readily started. Kerosene engines have been successfully started on kerosene with the Walker starter, after having been run for a short time, which goes to show that all that is necessary in a carburetor is to tear up the fuel into a fine spray, and mix it with the correct proportion of air. To facilitate the mixing of fuel and air the air passage in most carburetors is "L" shaped, or else they have a bend of some kind.

To prove that this will aid in the mixing, all that is necessary is to put a straight pipe in the bottom of a tank of water, and a solid stream of water will then flow out of it; then put an "L" on the end of the pipe, and the water will be delivered in the form of a spray.

Questions and Answers For Gas Engine Operators

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

Ques. In general, what causes failure to start?

Ans. In most cases this is due to some faulty adjustment or defect of the carburetor or ignition system.

Ques. What are the indications of misfiring?

Ans. Misfiring, that is, the missing of one or more cylinders, may be recognized by irregularity of motion, gradual slowing down, and, generally, by after firing, that is, explosions in the muffler. If the trouble cannot be located in one of the cylinders, the inference holds that there is some general derangement of the ignition circuit, or, the fuel mixture is not right.

Ques. What is back firing?

Ans. The ignition of the charge at such a point in the cycle that the motion of the engine is reversed.

Ques. What is "back kick"?

Ans. The result of back firing during cranking. If back firing should occur while the operator is holding the crank, it produces a back kick, which is liable to dislocate his shoulder or do other injury unless the crank throws off automatically.

Ques. What are the causes of back firing?

Ans. It may be caused by the overheating of the cylinder walls,

due to insufficient heat radiation (in an air cooled engine) or too little jacket water (in a water cooled engine).

Ques. Name some defects which cause difficulty in starting?

Ans. An obstruction in the jet of the carburetor, 2, a weak suction, 3, insufficient tension of the auxiliary air valve spring, or 4, insufficient retarding of the spark.

Ques. What is "running down"?

Ans. This term applies to the faulty operation of an engine when it starts well, runs for a while, then slows down and stops.

Ques. State some of the causes of running down.

Ans. The principal causes are: 1, water or sediment in the carburetor; 2, loose connections, breakdowns, or any other disarrangement of the ignition, such as would otherwise interfere with starting; 3, weak or imperfectly recuperated battery—frequently the latter—that suddenly fails to supply current; 4, a leak in the water jacket that admits water to the combustion space; 5, "seizing" or sticking of the piston in the cylinder on account of failure of the cooling system; 6, heated bearings that seize and interfere with operation; 7, poorly matched or badly adjusted new parts, particularly pistons, that cause heating and perhaps seizing from friction, and 8, lost compression,

Why every Tractor in Canada should be equipped with The Cuddy Patent Steering Device

How is it that the "Cuddy" has been adopted and pronounced by manufacturers and farmers as the only steering device that does what we say it does?

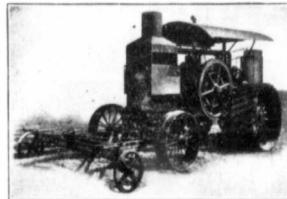
1. It plows a straight furrow with little or no attention and makes it possible for one man to operate the plowing outfit. **It's automatic.**
2. It is a great saving on the engine as it is carried in a straight line, instead of being subjected to the continual twisting and jerking of the front end. The engine is therefore more steady in motion.
3. It is a well constructed, perfect steering device, is made of 1 beam steel, and is practically unbreakable.
4. Testimonials from **satisfied customers.**

The Cuddy Steering Device works fine with my disc plows, making it possible for one man to operate the entire outfit alone, which I am doing at the present time. Plowed one hundred and forty-five acres in five days, running tractor and plows alone.

The Twin City "Twenty-Five" sure makes a hit with every one who sees it in action.

Yours respectfully,
R. E. ROBERTS.

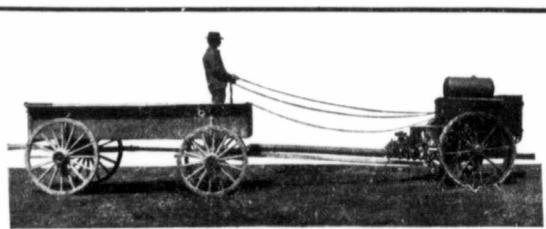
The self-steering device is a dandy and I surely would not be without one. Gentlemen, this is one of the most wonderful inventions that I know of. I would not be without one if they cost as much as the engine. I do not have to be blinded with dust and have plenty of time to see to all the working parts of the engine and plows, and without a steering device on my engine, it would be the same as a threshing separator without a blower.



Thanking you for the kind treatment received from you and your traveling salesman and the expert who came to start me out, I remain,
Yours respectfully,
C. J. LARSON

**THE WESTERN STEEL
AND
IRON CO., LTD.**
WINNIPEG CANADA
DEPT. G.

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



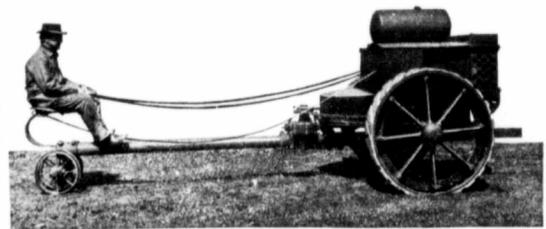
Catalogue Now Ready

THE Detroit Tractor is controlled by Reins, and one man operates both the Tractor and the Implement drawn by it. Can be used more hours per year, because it is adapted to every farm implement. The result of fifteen years' experience with tractors on our own farm.

Designed by famous Detroit automobile engineers.

The Detroit Tractor Company

807 Scotten Ave. - DETROIT, MICH.



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FAIRBANKS-MORSE 30-36 OIL TRACTOR PULLING 16 STUBBLE BOTTOMS

Here's Food For Thought If You're Thinking of Tractors

The farmers' question today is not "Shall I buy a tractor?" but "Which tractor shall I buy?"

When the choice lay between a steam rig and a gasoline burning outfit, gasoline secured the preference with most men. Nowadays the choice is

between a gasoline tractor and one that will burn kerosene or other cheap fuel. Gasoline goes steadily higher in price and this condition will become worse instead of better. To buy a tractor that will burn only gasoline is to place yourself at the mercy of future rises in the price of that fuel. To buy a

FAIRBANKS-MORSE OIL TRACTOR

is to run your outfit at such a saving of fuel that the difference in the cost of operating will pay for the tractor in three years. We prove the ability of every Fairbanks-Morse tractor to carry and maintain a load in excess of its rated horse

power. Our engines have always been noted for their economy. Over 115,000 Fairbanks-Morse engines have been sold to date.

Better Know All The Facts

Let us send you our booklet which fully describes our Oil Tractor, and tells why it is the best investment in tractors offered to the farmers of Western Canada today.

WE MANUFACTURE Fairbanks-Morse Oil Tractors, 15-30, 20-40 and 30-60 h. p.; Gasoline Engines, all types, portable and stationary, 1 to 500 h. p.; Binder Engines, adapted to all makes of binders; Marine Engines, 2 and 4 Cycle, 1 to 4 Cylinders; Hand and Power Pumps for every purpose; Truck and Pitless Wagon Scales.

The Canadian Fairbanks-Morse Co., Limited

WINNIPEG REGINA SASKATOON CALGARY

Montreal St. John Ottawa Toronto Vancouver Victoria

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

from stuck valves, leaky piston, etc.

Seizing of the piston on account of failure of the cooling system may result, in a water cooled cylinder, from:

- a—Exhaustion of the water;
 - b—Stoppage of the pipes or pump;
 - c—Breakdown of pump;
 - d—Failure of the oil supply;
- In an air cooled cylinder, seizing may result from:
- a—Insufficient radiation surface;
 - b—Obstructed air circulation.



Ques. What is a carbonized cylinder?
Ans. A cylinder whose walls and valve chambers during operation have become coated with a deposit of a hard, indurated form of carbon, similar to gas carbon. This carbon is a deposit of heat decomposition of the fuel or lubricant, or both, under pressure, and in the presence of too little air for combustion.

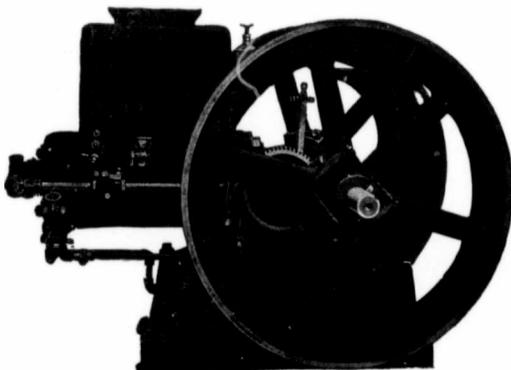
THE STOVER *Is the Very Best Engine to Buy*

Write for our Extraordinary Prices of

Dry Cells, Crusher Plates, Harness, Oils, Plow Shares, Bag Holders, Scales, Buggies, Harrows, Thrashers, Belting, Cultivators, Plows, Grain Crushers, Pole Saws, Etc., Etc.

NOTE: OUR PRICE for 12-inch plow shares is \$2.25, for 14-inch plow shares is \$2.50, for 16-inch plow shares is \$2.75. All Guaranteed.

We Can Save You Money



Canadian Stover Gasoline Engine Co. Ltd.

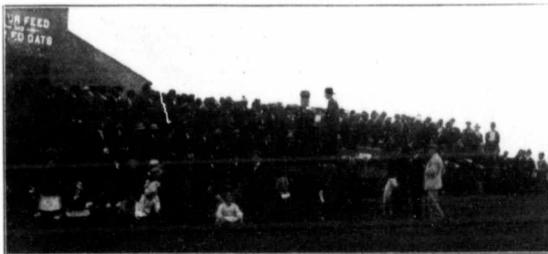
EIGHTH and PACIFIC AVENUE, BRANDON

The Original Farmers' Company

**BETTER FARMING
DEMONSTRATION
SPECIALS**

Preparations Now Being Made by the Provincial Department of Agriculture and the Agricultural College Staff to Eclipse All Records This Year.

PREPARATIONS are in full swing for the despatch of the Better Farming Demonstration Special Trains, of the Provincial Department of Agriculture, on or about June 3rd. There is every prospect of eclipsing past efforts this year, splendid though those past efforts have been. The history of this progressive educational campaign among the farmers of Manitoba has been marked by growing audiences and enthusiasm, while the staff of the Agricultural College, in whose charge these special trains are placed by the Department, have taken a keen interest in the arduous duties entailed. The railway companies have contributed their best efforts to make these educational specials a success, and with everybody



At Hamiota last year.—Note the keen interest manifested in Professor Bedford's lecture. Every head is turned his way in spite of the fact that the camera man was taking a picture.

aiming for higher efficiency, still greater interest and value still, this year's achievement will be the most striking of its kind ever attempted in Western Canada.

To transfer the living organism of a great educational institution from its shell of brick and mortar to a necklace of wooden railway coaches and roll it to the doorsteps of every farmer in the province is an undertaking of much interest to the farming community. It speaks well for the progressive spirit manifest in the Department of Agriculture and the faithful and energetic services of the Agricultural College staff. The manner in which the farmers of the province have been taking advantage of these efforts in their behalf speaks equally well for the forward tendencies of Manitoba agriculturists.

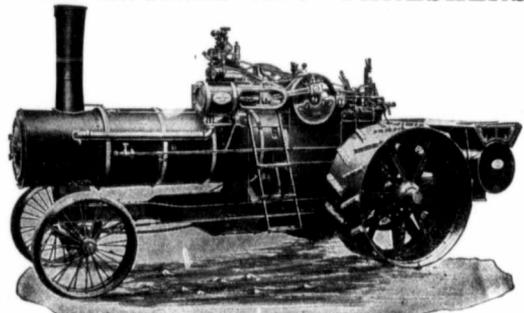
As was the case last year, two separate Better Farming Demonstration Special Trains will be run this year, one over the C.P.R. lines in the province and one over the C.N.R. lines. Each will have its quota of college professors, each will carry livestock and each will have specially equipped cars for different subjects. The Canadian Pacific

Special will be particularly devoted to demonstration of farm mechanics and to exhibits; while the Canadian Northern Special will carry lecture feature. Both trains will be on the road for three weeks.

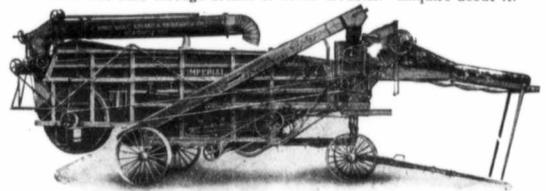
C.P.R. Special

The Better Farming Demonstration Special, which will travel over the Canadian Pacific lines, will really be a travelling exhibit. Great interest will undoubtedly be aroused by the demonstration in farm mechanics which will be made at each stop. Concrete and engine work will be fully dealt with, and all manner of home conveniences demonstrated. These will include the running of washing machines, churns, farm water supply, etc. The concrete demonstration will show foundation work, building floors, etc., and many farmers will find this feature alone well worth the trip to the station. Models of farm buildings will be carried in the car devoted to farm mechanics, so that the illustration of all features of this work will be thoroughly and readily under-

BELL ENGINES AND THRESHERS



Our 26 and 30 h.p. Rear Mount Plowing Engine. 175 lbs. steam pressure under Alberta Specifications. No Brackets attached to boiler with Stud Bolts or Cap Screws. Engine and Gearing mounted on separate Steel Frame. No strain on the boiler. Gearing, open hearth Cast Steel, guaranteed against breakage until worn out. Made to Plow without lost time through breaks or boiler troubles. Enquire about it.



Imperial Separators. Sizes: 28 x 42, 32 x 54, 36 x 60. Improved for 1913. Good in all kinds of grain. A wonder in Flax. Handsome, Speedy and Durable. Write for further information.

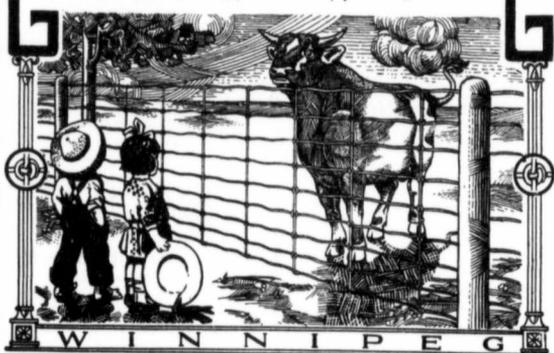
The ROBT. BELL ENGINE & THRESHER CO. LTD.

Branches: Winnipeg, Man. Saskatoon, Sask.

Factory: Seaforth, Ont.

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

GREAT WEST WOVEN WIRE FENCING



You will be on the safe side, like these two little kids, when you buy the

"Great West" Woven Wire Fence

If you want a fence which is guaranteed made from the heaviest and best obtainable Spring Steel Wire heavily galvanized THEN we are just the people you are looking for

Write for our ILLUSTRATED CATALOGUE and see for yourself

The Great West Wire Fence Co., Ltd.
76-82 Lombard Street, WINNIPEG, Man.

Distributing Agencies: Edmonton, Alta., Race, Hunt & Giddy; Calgary, Alta. Reynolds & Jackson; Saskatoon, Sask., Plasterers' & Builders' Supplies, Ltd.

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

stood. The baby gasoline engines will greatly interest the boy who is of a mechanical turn of mind. How electric light can be produced for the house, how the up-to-date farm is not a complicated possibility in the matter of modern conveniences, but a practical working fact, will be shown.

Another feature which is bound to prove a centre of attention will be the poultry car. Professor Herner is making great preparations, and will have an entire car to himself. He will give a demonstration of killing and dressing poultry at every point of call. The working models will include poultry houses, incubators, brooders, feeding and fattening crates, shaping boards, etc., and there will be samples of the proper mixed feeds and everything pertaining to profit-taking in poultry raising will be simply and clearly illustrated. There is a great amount of interest manifest throughout Manitoba in connection with the poultry industry, and in view of the wonderful market opportunities that prevail, the subject should prove of great value.

There will be live stock carried with the train, and hogs will specially occupy the attention of

Remember to Renew Your Subscription

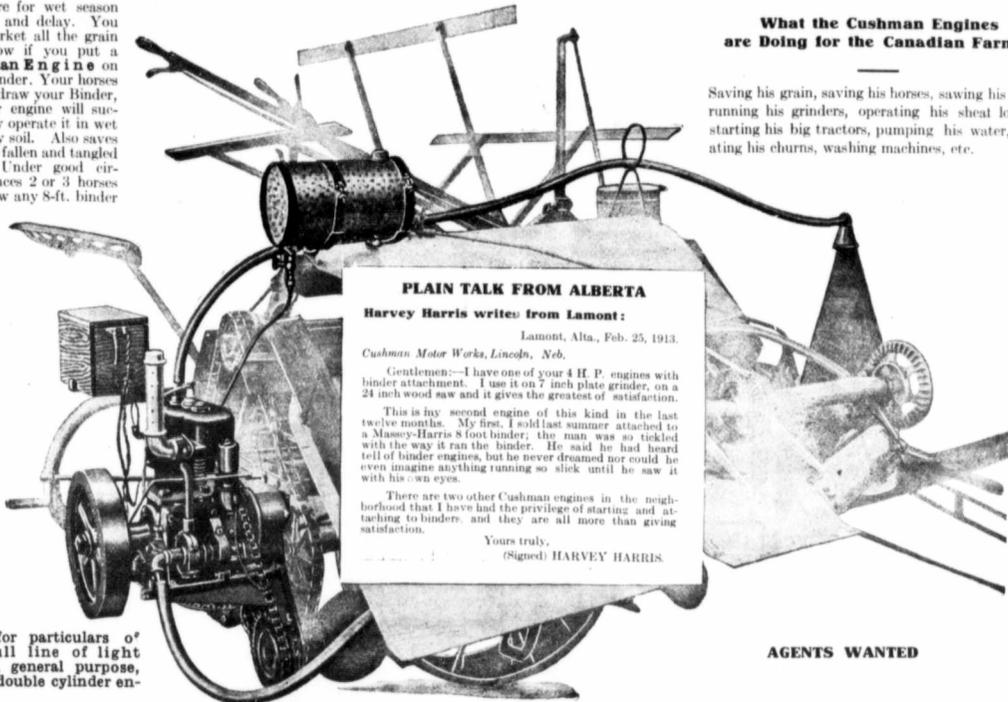
The Original and Only Successful Binder Engine

FARM CUSHMAN ENGINE, 4 H. P., 4 CYCLE

The cure for wet season trouble and delay. You will market all the grain you grow if you put a **Cushman Engine** on your binder. Your horses merely draw your binder, and our engine will successfully operate it in wet or sandy soil. Also saves all your fallen and tangled grain. Under good circumstances 2 or 3 horses will draw any 8-ft. binder made.

What the Cushman Engines are Doing for the Canadian Farmer

Saving his grain, saving his horses, sawing his wood, running his grinders, operating his sheaf loaders, starting his big tractors, pumping his water, operating his churns, washing machines, etc.



PLAIN TALK FROM ALBERTA

Harvey Harris writes from Lamont:

Lamont, Alta., Feb. 25, 1913.

Cushman Motor Works, Lincoln, Neb.

Gentlemen:—I have one of your 4 H. P. engines with binder attachment. I use it on 7 inch plate grinder, on a 24 inch wood saw and it gives the greatest of satisfaction.

This is my second engine of this kind in the last twelve months. My first, I sold last summer attached to a Massey-Harris 8 foot binder; the man was so tickled with the way it ran the binder. He said he had heard tell of binder engines, but he never dreamed nor could he even imagine anything running so slick until he saw it with his own eyes.

There are two other Cushman engines in the neighborhood that I have had the privilege of starting and attaching to binders; and they are all more than giving satisfaction.

Yours truly,

(Signed) HARVEY HARRIS.

Send for particulars of our full line of light weight, general purpose, single double cylinder engines.

AGENTS WANTED

Cushman Motor Works of Canada, Limited

202 Chamber of Commerce - - WINNIPEG, MAN.

the Animal Husbandry Department. Two representatives of six different breeds of hogs will be on hand for demonstration purposes. There will also be samples of feeds and charts of various feed values.

In the Field Husbandry car, emphasis will be laid upon barley growing for animal feed and weed destruction. Various rotations will be explained, together with the methods of cultivating all farm crops suitable to Manitoba.

Of special interest to the women will be the Home Economics exhibition car wherein will be displayed sewing, dressmaking and house furnishing. It will afford a splendid opportunity to the farmer's wives and daughters to pick up many a valuable hint and indulge in a very pleasant and profitable discussion of farm problems as they present themselves to the feminine side of the household.

The C.N.R. Special

On the Canadian Northern train many features above enumerated will be duplicated. The Field Husbandry car will be fitted up with samples of weeds, grains and fodders, and daily lectures on crop rotation and cultivation will be given.

There will also be a lecture on poultry, and the Animal Husbandry Department will carry representatives of the different types of farm horses, dairy and beef cattle, etc., which will be the subject of valuable lectures at each place.

thing is so arranged as to run without a hitch. No time is lost on the arrival of the train, which travels on a regular schedule. The professors and assistant lecturers obtain their meals while the wheels are turning between stops, and they are prepared to

the various stops in his district will greet every farmer as the time approaches; so that there can be no confusion in regard to this. Farmers are urged to keep their eyes open for these local announcements, to pick the nearest point of call, and lay plans to be present when the Demonstration Special pulls in; there will be no likelihood of them leaving the scene before the train begins to move because there will be too much of vital interest for them to suffer any lapse of attention.

Last year many farmers took their family picnic baskets with them and many a merry party was the result. In fact, the arrival of this year's Demonstration Special on either of the two railways will provide a grand opportunity for a outing. Every farmer will do well to plan for his whole family to be present on the occasion, as there will be much to interest every member — his wife, his daughters, his sons and even the small children. He will meet his neighbors for miles around, have an opportunity of doing shopping and altogether spend a very happy and profitable day. In some places the bands will be out, the boy scouts will be marching, and everywhere there will be a hearty welcome for all.



Principal Black of the Agricultural College in a favorite attitude—At Morden last year.

An added feature on the Canadian Northern train will be a dairy car, which will be made exceptionally attractive and interesting.

There are many features about the manner in which these Demonstration Specials are conducted which must appeal to the practical and busy farmer. Every-

answer questions on the various subjects in hand, so that the individual farmer has an opportunity of applying the instruction to his special individual needs and goes home with expert opinions and a quickened interest in his work.

Posters announcing the exact dates, arrivals and departures at



A General Purpose Barn

By Prof. L. W. Chase

THE outbuildings on the average farm seem to be the outcome of a process of evolution, instead of being the result of some preconceived and well thought-out plan. Usually a farmer starts out with a team of horses and one or two cows, and builds a small barn in which to house these four animals. But he soon buys another team, and each of the cows has a calf, so he puts the second team into the cows' place in the barn and builds a shed at one side for the cows and calves. As he prospers and increases the size of his farm, he needs more teams, and the cows rapidly increase, so that he needs more sheds. To get this additional room, he simply adds one shed to another without any care or effort to save material and labor in taking care of the stock.

By uniting all of these buildings into one, there would be a saving of material, a saving of steps in doing the chores, and a saving in the stock, because it can be so much better and so much more warmly housed.

There are at present very few farms upon which an entirely new set of buildings is being erected at one time, but it is not unusual to find the old buildings being improved by remodelling. In thus working over a set of buildings, as much as possible of the old material should be used in the new structure for the double reason of economy and to prevent its being left to decay and litter up the farm. If one cannot take care of the buildings which he already has, it is best for him not to build any new ones, because each one additional means one more to take care of and absorb the attention.

In planning a set of buildings for the farm, there should always be one building to serve as a central depot from which all chore operations are carried on, and on the general purpose farm this central building should be a general purpose barn.

It is sometimes said, by way of objection to a general purpose barn, that the dairy stock should not be kept in the same barn with the work horses. But objection

has not been justified by the observations which the writer has made, for it has been found difficult to see any marked difference in the condition of cows kept by themselves and cows kept in a barn with horses.

Where there is a large herd of dairy stock and a great number of work horses, it is unnecessary to have the two together. They can more conveniently be housed in separate buildings, or better, in separate parts of the same

with respect to each other. The same feedway can be used for both, the same haymow space can be used, and the same manure spreader and litter carrier and track.

In this barn the stock can all face away from the light, which is a good thing; it is convenient to feed hay to all and not inconvenient to feed grain. This type of construction is, however, more expensive than a type which will be shown later. The cross sec-

no waste caused by a duplication of feed alleys and feedways. The one disadvantage of such a barn is the inconvenience of getting the feed carrier, but this is relatively unimportant.

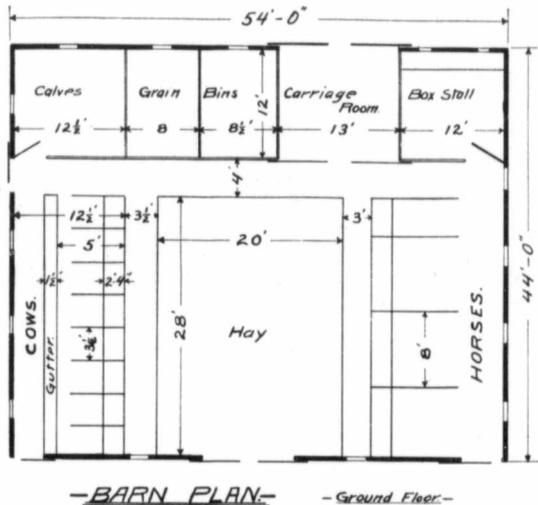
Fig. 4 shows one of the most convenient types of general purpose barn that can be designed. This barn is so designed that the cows and horses are fed from the same feed alley and the same feed room. The stable is equipped with a feed carrier, harness room, and milk room.

The location of the milk room, as it is shown here, is just as sanitary as if it were in a separate building. It will be noticed that to enter the milk room it is necessary to go through two doors and the feed room. These two doors shut the milk room away from the remainder of the barn and, by passing through the feed room, the feet are pretty well cleaned, probably better than would be the case if it were necessary to step out of the barn and wade through a muddy patch or road to the milk house.

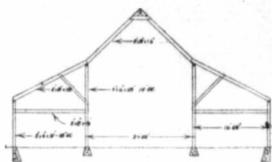
terior appearance and the strength

In designing any barn the exterior appearance and the strength of the structure, as well as the convenience, should be considered, and for this reason a discussion of the different styles of roofs is valuable. Illustration 2 shows a type of roof which is very strong and not hard to erect. A barn built in this way will probably stand heavier winds than either one of the other constructions taken up here. This type of roof, however, is more expensive than the other types: Illustration No. 5 shows a style of roof which is very convenient to erect, gives a very good appearance, and is not as expensive as the one previously mentioned. It, however, is more expensive than the following type, which is illustrated by Fig. 6 and which is coming into very common use.

This sort of roof adds to the convenience of removing the hay for the stock, and makes an exceedingly convenient haymow for receiving the hay, as there are no obstructions in the way of dropping the hay from any point in the mow. Furthermore, the hay should settle about straight, consequently not throw any strain upon the framework of the barn.



building. Thus by housing them all under one roof, even where the numbers are sufficiently large so that it requires one man to care for the horses and another to care for the dairy herd, the same space for supplies can be used. That is, one grain bin will serve for both cows and horses,



one feed room, one litter carrier, and one manure heap.

Fig. 1 shows a floor plan of one type of general purpose barn in which the horses and cattle and the young stock are practically housed as a unit, yet isolated

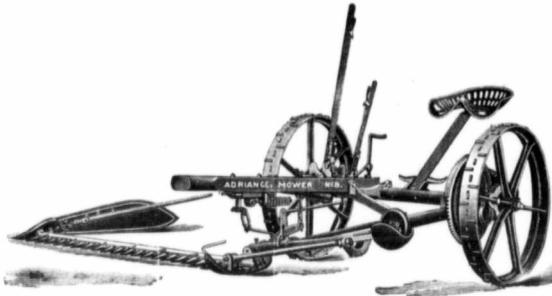
tion of the barn is shown by Fig. 2. This shows a considerable space in the haymow which cannot be used by the hay. It will be noticed also that the amount of space between the roof and foundation is small in a large part of the barn, and that there are two feed alleys, one being necessary in front of the cattle and one in front of the horses.

Illustration No. 3 shows an excellent type of barn for housing cows and horses in the same building and yet having the two classes of stock separated.

In such a barn as this the same feed room can conveniently be used for all stock; the harness room is close to the horses; the stock can face in or out at the desire of the owner, there is a good depth between foundation and roof; the barn may stand north and south so that light can shine in from both sides; and there is

THE ADRIANCE HARVESTER

used in the reaping of your Hay and Grain crops will mean a bigger profit than you have ever secured because the job will be done PERFECTLY and on RECORD TIME. There will be no pulling up for repairs. There will be no annoying breaks in your precious time to clear defective parts from the clogging you know so much about to your cost in handling other harvesting machines.



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has an Automatic Spring Draft—the best method of draft for a mower ever invented. It effectually prevents damage when striking an obstacle. It saves driver, team, and mower from shock or strain and reduces draft to the lowest possible minimum. The Drive Wheels are extra large, wide faced, wide apart and have visible driving pawls. Its Long Pitman is directly in line with scythe and well protected. The Forward Acting Foot Lever has bar conveniently raised with least possible effort to the driver. Level Crank Shaft with solid brass composition bearing at both ends. Roller Bearings with retaining cages holding the rollers in place and in line. Spring Balanced Finger Bar, adjusting pressure so that there need be no greater weight on the ground than desired.

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These Are a Few

advantages of the ADRIANCE and distinguishing features which it possesses over other mowers. We can give you a score of others, all of them valuable, and guaranteeing a machine that is unsurpassed for strength, durability and efficiency.

It is the Simplest and Best Proportioned of all Mowers
The Most Convenient to Handle and the Lightest Draft

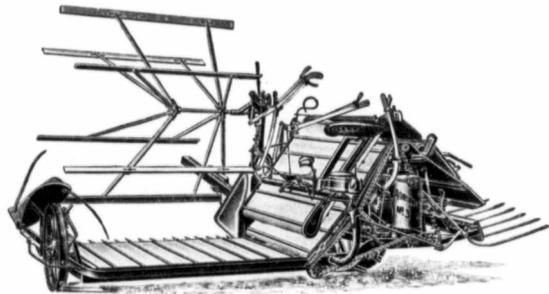
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6-Foot, 7-Foot or 8-Foot Cut. Either size is equipped with or without POLE TRUCK

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For your Fruit Garden make use of our Special Fruit Offer: 100 Raspberry Canes, 50 Currant and Gooseberry Bushes and 12 Fruit Trees, for \$10.00.

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The Oldest Horticultural Establishment in Western Canada

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Per cubic foot of space utilized in the barn, it is the cheapest type of roof that can be erected, and so far as strength is concerned, it apparently has sufficient, for none built after this

soon and which keeps the ground damp and muddy late into the spring and for a long period after each rain during the summer. Then, too, a barn set this way will not admit sunlight very

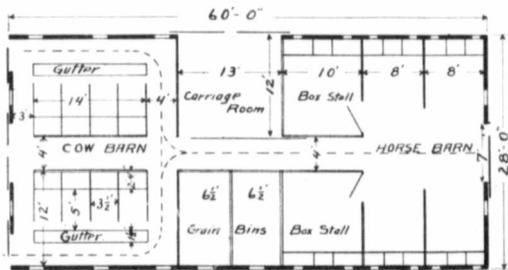
during the hot days in the summer time. Furthermore, the southern breezes can blow through the barn if there are sufficient openings in the south end, as the air will find a way to get out through the windows, the doors or the haymow at almost any time.

The opening through a barn to permit the passing of air currents should be utilized as the feedway or for a litter carrier. When used as a feedway, this opening should be from four to eight feet wide. Four feet is a trifle narrow; six feet makes an excellent width, while eight feet is wide enough to permit of the entrance of a wagon. This width, however,

is larger than needed ordinarily and should not be used unless necessary because of the labor needed to keep all surplus space clean.

A double row of stalls, one row on each side of a central feedway, seems the most convenient arrangement because it requires only one central hay chute from the mow above, and this hay chute forms an excellent ventilating shaft. The stock should face toward the centre, as that prevents their looking toward the light, and cold drafts from open windows should not strike the head first.

The height of ceiling for a barn may vary from seven to nine feet.



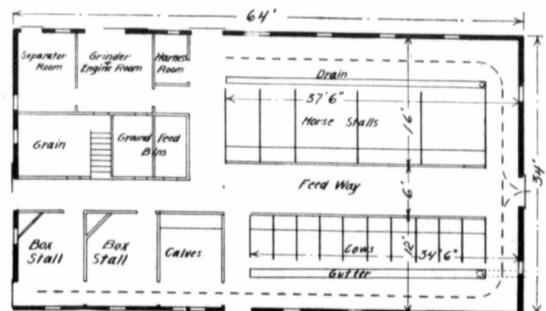
BARN PLAN. - GROUND FLOOR-
Fig. 3.

plan in the windy prairie country have been known to the writer to have failed in any way, notwithstanding the fact that one barn visited had been struck so hard by a heavy wind that the centre post raised, yet the roof was not affected.

For the middle western states a barn should be located so as to extend from the north to the south. A barn extending east and west forms a long, dark, north side which decays very

much except from the south side. The long north side, which will necessarily contain stalls, can never get any sunlight whatever, and as a result the barn must be damp and unhealthy.

In the middle west the winds blow from the south in the summer time. If the barn extends from north to south, and has one long clear opening through the full length, air currents, similar to those of a chimney, will be set up and cool the barn very much



Barn Plans Ground Floor

Seven feet makes a fair height for cows, but it is too low for horses, as it is not so high but that horses can toss their heads and either bump them or bruise the caretaker's hands while he is bridling or haltering. Eight feet makes an excellent height for horses and cows, while nine feet is the height which should be used for exhibition stables.

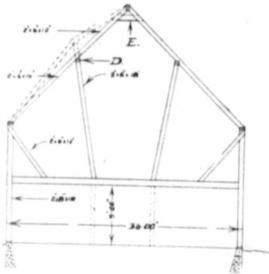


Fig. 5.

The distance from the front of the manger of the horse stalls to the rear of the barn should be not less than fifteen feet, and when the harness hangs behind the horses, it should be sixteen feet. Fourteen feet could be used without harness hanging behind the horses, but it would crowd the space somewhat. The mangers should be about two feet and four inches wide and three feet high. The stalls, where two horses are standing together, should be about eight feet wide. If they are large horses, nine feet is needed; and if they are small horses, a little less than eight feet may suffice. The stalls should be eight feet long from the front of the manger to the back of the partition. The width of the stalls should be four feet for small horses and five feet for large horses.

Box stalls are best twelve feet square, but stalls ten feet wide and any length, answer very well. These stalls should be equipped with a double manger so the stalls can be used for a team when necessary.

The distance from the front of the cow manger to the back end of the cow stalls or the end of the barn is twelve feet. The manger should be a trifle over two feet wide back from the centre of the cow stanchion to the front side of the gutter; the distance should be about five feet. This will vary from four feet and nine inches to five feet and three inches, according to the size of cows to be housed. Sometimes it is a good thing to have one end of the gutter closer to the manger than the other end, then it will be possible to arrange the cows according to their size.

The floor of the cow stable should drop one inch in passing from the manger to the gutter. The gutter should be at least eighteen inches wide and not less than six inches deep, nor more

than nine inches deep at the other end, and should have a slope of not less than one inch to fifteen feet. The space between the gutter and the wall of the barn should also slope toward the gutter so that the entire floor space can be flushed off.

The best size of box stalls for horses is 12 x 12. This, however, does not fit with all barns, and many such stalls are made 10 feet wide and 14, 15 and 16 feet long. With such box stalls double mangers may be put in and the stalls used for a team of horses or as a hospital for mares with colts.

The matter of floors for barns is as yet open for discussion. Dirt floors are very unsanitary and very hard to keep in good shape. When they are well kept they are probably easier on the horses' feet and warmer for the stock than any other type. Plank floors are likely to have currents of air passing beneath them, besides being very unsanitary and very expensive, yet they are not hard on the stock. Concrete floors are the most sanitary type that we have, fully as cheap as plank floors, very seldom need repairs, but it is claimed that they are cold, and some men claim that they are so hard that it is hard on the stock which must stand upon them. Others claim that they improve the horses' feet, making the feet stiffer and harder so they will stand the knocks of the road better. Probably the best type of floor for dairy stock is a concrete floor with plenty of bedding. The best type of floor for horses is a concrete floor covered with two by six's laid lengthwise so that there is a crack of about 3/4 in. between boards. This insures good drainage from the front of the stall back to the gutter. Then when it is desired to clean beneath these planks they can be raised

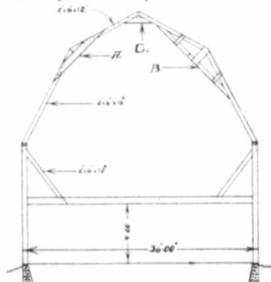


Fig. 6.

and the floor flushed or swept out.

Most barns have entirely too few windows. It is not a rare sight to see the stock led out of a barn stumble as they go out of the door. This is because they have such poor light in the barns that when the stock turn around and come toward the light they are blinded for a minute.



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BLUE RIBBON TEA will show you its delightful quality. So sure are we that you will be pleased with it, that we authorize your grocer to refund the full purchase price if you are not entirely satisfied. On this condition we ask you to say definitely "Blue Ribbon" when next you order tea.

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

It is ancient history now how the Australian stripper originated in Southern Australia in 1845, the invention of J. Ridley, and was built for bullocks, but it is not so well known what struggles and difficulties the early mechanics had before they brought the harvester to its present pitch of perfection. In 1879 the South Australian Government gave a great incentive to inventors by offering a prize of £4,000 for a satisfactory machine. This attracted, besides local men, competitors from Beaufort and Wangaratta, in Victoria, and even from far California. No machine was awarded the first prize, but £250 was divided among four of the competitors as an encouragement. After some trials held by the Adelaide Royal Agricultural Society in the following years, public encouragement ceased. The next move in the evolution brings some credit to "The Australasian." A special commissioner of this journal, travelling in California, saw the machine at work, the invention of Mr. S. L. Gaines, which had competed in South Australia, much improved, of course; and his description, which appeared on October 20, 1883, and strong advocacy of the Government giving encouragement to inventors, led to an offer of a prize of £250. A trial was held at St. Arnaud on December 31, 1884, at which four machines competed, and here again a certain amount was divided amongst the competitors, in order of merit. Since that time the machines of many different makers have gone on improving up till the present day.

General Points of Harvesting Machines

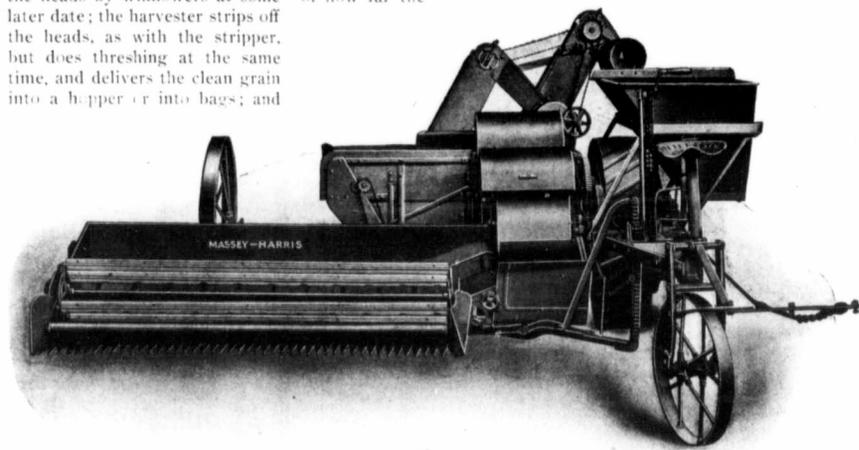
To a grain grower, it will seem waste of space to describe the different machines used in garnering the golden grain; but the general reader will appreciate some definition which will emphasize the difference between each of them and the latest effort. Briefly, the reaper and binder cuts and binds the crop into

The Genesis of The Harvester

sheaves, to be threshed later by a threshing machine; the stripper gathers the stalks into a comb, the heads are stripped off by beaters, and the grain threshed from the heads by winnowers at some later date; the harvester strips off the heads, as with the stripper, but does threshing at the same time, and delivers the clean grain into a hopper or into bags; and

the plants by the roots; at the same time a machine which will turn out as good a sample of grain as the best of the present harvesters. The ultimate verdict of how far the

breasting bar they come in contact with the reel, which pushes them when cut onto the conveyors behind. This reel travels round only at about the same rate of speed as the machine itself is moving forward, which prevents any shelling of the grain, and any tendency to throw the material forward by the centrifugal force developed in drums travelling at a high rate of speed. An ingenious mechanism at the side en-



Reaper-Thresher

the header of California cuts, threshes, and cleans the crop at one operation, but to win the short-strawed grain, takes in a lot of lengthy straw, as it cuts everything above the level of the knife, like a reaper and binder. This machine takes from 24 to 30 mules to draw it, and is cumbersome. While the Commonwealth possesses a variety of good strippers and harvesters, it is an axiom of implement manufacturer never to rest content with the present machine, but ever to push on with improvements. The aims which machinery firms have had before them are: Cutting a larger area in a given time; prevention of grain shelling; harvesting "lodges" crops, and dirty crops; and early, late, and damp weather worker, which will not drag out

which is the outcome of some eight years' experimenting on the part of the enterprising Massey-Harris Company, goes towards satisfying these requirements, must be left to the farmer; but a description of its working in the field, and the opinions of men who have been using it, will be of value to grain farmers, wherever this journal circulates. The machine carries a comb like a stripper, between which the stalks pass to be cut off at the back of the comb by an oscillating reaper-knife, similar to that used in the reaper and the binder. A breasting roller and bar limit the length of the straw, by bending down the long straw heads, being adjustably placed so to act; and as the heads emerge from under the

ables the blades of the reel to be set at any required angle, and an eccentric maintains these blades at the same pitch through the whole revolution of the reel, thus none of the cut stuff can be carried round on the blades. The cross-conveyor on which the reel delivers the heads passes them on to a steel conveyor (which rejects any loose grain) and thence the threshing drum. This drum is of a type used in English threshing machines, the effectiveness of which is well known; and its speed can be regulated to suit varying threshing conditions. The concave adjustment to fix the distance of the concave from the drum is quickly and easily performed. It is not necessary to follow the threshing operations in detail, resembling as they do



those of the ordinary self feeding thresher; but it must be noticed how effectively the straw is separated from the grain, so that the riddles are quite free from straw and consequent loss of grain.

The Draught of the Machine

As can be gathered from the illustrations and the foregoing description, the bulk of the machine is in the main line of draught, and there is little or no side draught. This can best be appreciated by standing straight in front of the team when drawing the reaper-thresher towards you; and then watching, in the same way, the line taken by a team when drawing an ordinary harvester. That the draught is comparatively easy is shown by the number of horses required. The cut taken by the reaper-thresher is eight feet, and the number of horses to work the machine all day seems to average about five. Mr. T. Grills, of Lynden, Mt. Coghill, on a hill side slope of 1 in 3, worked all day with five horses. On the flat he found four good horses sufficient. Messrs. Wm. Ross, Lismore; S. Tinkler, Werribee; and W. Agar, Werribee, all find five horses abreast, working the same team all day, quite sufficient. Messrs. F. Meinson and J. Missen, of Lismore, use six horses, arranged tandem fashion, but in each team were one or two light horses. What was particularly noticeable was the rigidity of the machine, notwithstanding its easy draught. The frame carrying the comb, knife, cross conveyor, etc., is of angle steel, arranged on the truss principle, the trusses crossing one another diagonally. So rigid, though light, is this frame that when the comb is removed a man can stand on the front outer corner without causing any appreciable deflection. For convenience in travelling, the comb attachment and frame may be removed, and the grain wheels set in, thus reducing the width very considerably. The winnower frame is also rigidly constructed, which insures easiness of running, and the strength necessary to sustain a grain-hopper of 5-bag capacity.

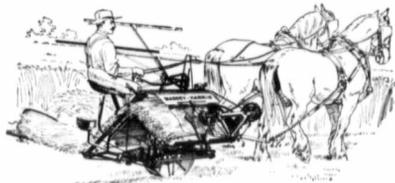
Field Observations

A point which struck the writer was the ease with which the comb is raised or lowered by means of a sprocket-wheel chain, assisted by attention sprung to take up the reaction. As far as manipulating a comb, and driving, are concerned, a boy can work this harvesting machine; but, of course, brains are required to adjust the working, to secure a good sample of grain. At one farm, a young fellow, who had never been on a stripper or harvester, and who was only two years out from the old country, was doing good work as far as getting the

grain went, but his seconds had in them too much good wheat. Some drivers went straight on, and round at the corners; but this was quite unnecessary, as a little skill carried the thresher round the corner like a binder. All the drivers seen were unanimous in stating that the thresher could be started an hour earlier than any other machine, and would work an hour later. While in the Lismore district, a shower of rain fell just before midday, and inquiry elicited the information that the thresher kept right on, while a harvester in the same or adjoining paddocks stopped working.

Mr. Grills said that he tried his machine in wheat, which proved too green to keep, but "she threshed it all right." On his hillside, when interviewed, he was working in Cape barley, cutting only one way on account of steepness—a shortish crop, and beaten down in places. He was combing right down to the ground to get the crop, and very little was missed. A point, which must be specially noted here, is that, if required to do so, the machine will handle all the straw necessary to secure a badly-loaded crop. A divider—comb attachment, which consists of long extension stump-jump teeth, lifts the tangled crop off the ground high enough to be reaped and the thresher can deal with it all. At Mount Coghill, too, was seen the use of the powerful brake, which held the machine safely while being turned round on the steep hillside. In dirty crops—though none of those inspected were very bad—thistles and other rubbish seemed to give no trouble at all. As to the quantity cut, amounts varied from 14 to 23 acres per day; but with five horses working from 7 a.m. to 7 p.m. and with two hours' spell at midday, about 18-20 acres seem a safe allowance to make. In a leaning crop of wheat, where other machines could only cut one way, at Mr. Miensen's the thresher went straight on. An enthusiastic admirer is Mr. W. Agar, who says that his machine, in Cape barley, turned out a beautiful sample "as good as a thresher." It was a lodged crop, but was all taken, and he "never sat on a better machine, or one with as little side draught." Mr. J. Missen says that he took off 180 acres of wheat in 10 days, and one could not wish for a better sample of grain. Very little grain is lost at the comb in his opinion, or at the winnower. In his paddock were seen a thresher and a harvester at work together; and this gentleman totted up that the farmer was securing 11 bags to about 6½ won by the latter in the same round. The sample in the early morning was free from

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Strictly on its own merits and by actual performance has the

MASSEY-HARRIS NEW BINDER ENGINE HITCH

pushed its way to the position of absolute supremacy which, hitherto, has been enjoyed by only the

WORLD-FAMED MASSEY-HARRIS BINDER

Binder Engine Hitch is simple in construction, easy to operate, fits any width of Massey-Harris Binder, direct connection from engine to all binders.

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Local Agents Everywhere



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herring-bones, which showed good threshing. At Mr. Tinkler's 1,800 bags of English and Cape barley had been cut in 14½ days, in a crop averaging nearly 32 bushels per acre. Another enthusiastic admirer, who is besides a free trader, and wants to know who pays the duty on newly-invented machines like this, is prepared to sell two harvesters cheap to buy a stripper-thresher. In the districts visited, viz., Ballarat, Lismore, Cressy, Geelong, and Werribee, the verdict of the farmers is strongly in favor of this machine, and it is hoped that these facts, gathered, with one exception, in the field, will induce others to examine the machine themselves. It was too late in the season to see any oats harvested, but a machine that will deal with Cape barley will have little trouble in oats. The reaper-thresher has now been working in the field for three seasons, and most of the hitches common with new machines have been eliminated. Several of those seen working were on their second season, and, as the owners are satisfied with them, it looks as if this grain-winner has come to stay.

**Made-in-Canada Exhibition
Train**

In no part of Canada has the preparation of the "Made-in-Canada" train met with greater encouragement than in Winnipeg and the West. Western manufacturers showed their zeal in the enterprise from its very inception. For their accommodation one car was allotted to exhibits west of the Lakes, contains goods from factories at Port Arthur, Fort William, Winnipeg, Brandon, and Moose Jaw, and will be attached to the train at Port Arthur.

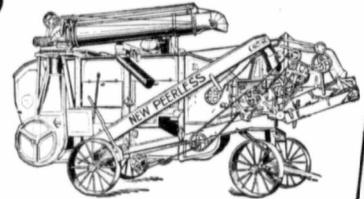
One of the features of this year's "Made-in-Canada" train will be a moving picture show, illustrating some phases of factory work. In addition to the lantern views which were shown last year there will be two or three moving picture films, which are bound to prove of interest to those who visit the train. This lecture in pictures will be given in the open or in some suitable hall at all evening stops, but in the day time it will be given in a car which will be equipped for this purpose.

The Canadian Home Market Association found it easy to decide to send the "Made-in-Canada" train to the West again this year. In the attendance and in the sympathetic and intelligent interest of visitors to the train last year, the trip far exceeded the expectations of the committee. All along the route leading citi-

"Biggest Money-Maker we ever saw"

Gentlemen:—
The Geiser Separator is so far superior to anything else ever used in this section that the farmers say they will buy machinery for themselves, if necessary, before they will have any other kind of machine thresh for them. In our twenty years threshing it is the biggest money-maker we ever saw in the way of a thresher.

(Signed) ROBSON & RYAN.



GEISER Separators

Are clean threshers. The GEISER has a perfect cleaning system—does as good work as any other separator ever built.

The GEISER is the separator without sieves or riddles—a distinguishing feature which makes it the leader in the modern threshing field.

The GEISER cleaning device consists of combs and grooved rollers—no more time lost changing sieves for different kinds of grain; no more packing sieves about from place to place.

The GEISER cleaner requires no attention when properly set and can be adjusted for different

grains while in operation. It saves grain ordinarily wasted by other machines when crowded for big work.

Please write for the GEISER catalog. Let us tell you about the modern GEISER cylinder and concave construction; the large oil boxes with glass gauge; the self-adjusting bearings; the self-regulating blast control; the flaring hopper; the iron sides not affected by wet or dry weather; the under-cutting front wheel which allows shorter turning; the special GEISER Feeler, and many other truly GEISER features.

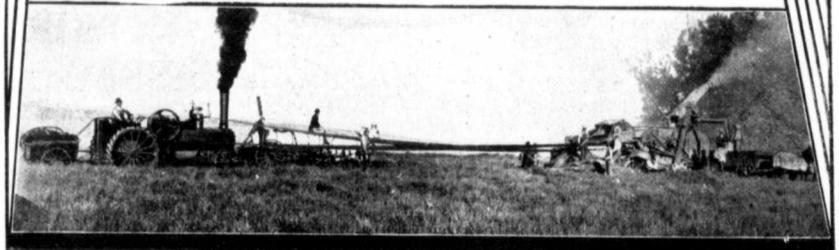
GEISER Engines

are built in single and double cylinder styles, 14, 18, 20, 22, 25 and 40-horse power sizes. No engine in the country has a better reputation as a reliable, consistent performer than the GEISER. For traction work, no other engine will transmit more of the power developed in the steam cylinder to the rim of the drive wheels. The GEISER fire-box boiler retains the water on crown sheet when going down-hill and keeps front end of tubes covered when pulling up-hill.

Write TODAY For Catalogue

Know all the good points of GEISER Threshing Machinery that will make you more money! Write us TODAY.

EMERSON-BRANTINGHAM IMPLEMENT CO., Inc., Rockford, Ill., Good Farm Machinery
BURRIDGE COOPER & CO., LTD., Winnipeg, Manitoba, Regina, Saskatchewan



zens, as well as the community generally, heartily endorsed the train as an educational undertaking, declaring that such a purely Canadian project was worthy of unanimous support and of repetition from year to year.

Representatives of the firms exhibiting on the "Made-in-Canada" special will be on the train, and will be glad to learn of the natural resources and other advantages for manufacturing of Western districts visited. In fact, the manufacturer of the East is depending on information gleaned on this trip, to give him an idea of what can be done along industrial lines in the prairie provinces. The exhibition and the various interesting features in connection with it will be thoroughly in accord with the policy of encouraging industries to locate in the various Western districts. Than

this train there will be no better opportunity afforded of acquainting the citizens of the West generally with the meaning of industries to the community.

British Firm to Locate in Saskatoon

Recently we enjoyed a visit from Mr. H. E. Lamb, who has come to Canada to open up business for Marshall Sons, and Co., of Gainsborough, England.

A new company will be formed, to be known as Marshall Sons and Co., of Canada, Limited, of which Mr. Lamb will be managing director.

It is the intention of the new company to erect a large warehouse and office building upon a site already acquired. A full

and complete stock of the already famous British colonial motors will be carried, together with a complete stock of repair parts.

Mr. Lamb has been in Canada more or less for the past four years, and it is largely due to his efforts and his encouraging reports carried home from the Dominion that induced his company to make the above move. The company also feels that by being located right on the ground it can better handle its business, which is rapidly becoming a large one in the Canadian West.

In our June issue we shall have more to say about this splendid old English company, whose very name stands for quality and service wherever the British flag waves.

We wish Mr. Lamb every success in his undertaking.

Fast Threshing Complete Separating Thorough Cleaning

"Why do men buy threshing machines?" says the old farmer. No, he was not asking a conundrum. We were talking seriously about threshermen's reasons for buying certain machines. "In the long run," he continued "every so-called buying reason leads up in one or another to a combination of three features, fast threshing, complete separating, thorough cleaning. Every thresher does one of these. Most threshers do two of them. There are a few that do all three, and when a thresherman finds one of the latter machines he is ready to spend his money. Light running, ease of transportation, and other lesser considerations are relative. The three-sided combination I have mentioned is what every thresherman is looking for."



Fast threshing, complete separating, thorough cleaning of the grain, not one or two, but all three are combined in the threshers we sell. There are individual reasons for the purchase of each of the threshers, but all combine the three important specifications. I H C local agents will give you complete thresher information, and will supply you with catalogues. See them, or, if you prefer, write to us for particulars.

INTERNATIONAL HARVESTER COMPANY OF CANADA LTD.

BRANCH HOUSES AT
 Brandon, Man. Calgary, Alta. Edmonton, Alta. Estevan, Sask. Lethbridge, Alta. North Battleford, Sask.
 Regina, Sask. Saskatoon, Sask. Winnipeg, Man. Yorkton, Sask.

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

Cushman Motor Works Established in Canada

The Cushman Motor Works of Lincoln, Nebraska, familiar to most Western Canadians as the Cushman Binder Engine, have decided, owing to the growth of their Canadian trade, to open a Western branch. The company, which will be known as the Cushman Motor Works of Canada, Limited, will be under the management of W. Ridler, formerly with the Harmer Implement Company, Winnipeg. They have acquired warehouse space in Winnipeg, and the offices will be located in the Chambers of Commerce.

The development of the Cushman engine is interesting. About 10 years ago the firm was engaged in the exclusive manufacture of small marine engines, but about five years ago, during a very wet season in Nebraska, several farmers utilized these engines for the running of their binders. The proposition looked a good one to the Cushman people, and they reorganized their company in 1908 for the special purpose of making binder engines. This engine has since been perfected until it is probably

the best known binder engine on the market.

The growth of the company has been as marked as the development of the engine. Their factory capacity has been doubled three times in five years. In 1912 they manufactured 2,500 engines, and that could not supply the demand. Their proposed output for 1913 will be between 4,000 and 5,000 engines. Distributing points will be located in Winnipeg, Moose Jaw, Cambridge, Calgary.

New Manager for Moline Plow Company

O. F. Berkey, who has recently come to Winnipeg to take charge of the Western Canadian business of the Canadian Moline Plow Company is by no means a stranger to our readers, he having previously occupied a similar position at Winnipeg.

Mr. Berkey has been with the Moline Plow Co. for over ten years. He started in with the Minnesota Moline Plow Co. as a traveller. He was later promoted to the position of house salesman at Minneapolis, and again received a promotion as assistant manager. He came to Winnipeg as manager in August,

1908, which position he held until January, 1911, when he was transferred to a similar position at the company's branch at Omaha, Neb. He has again come to Winnipeg to succeed



O. F. BERKEY.

R. J. McKay, who recently resigned.

The Moline Plow Co. has recently added to its already extensive line, the Adriance line of mowing and harvesting machines. This will come as welcome news

to a large number of Western Canadian farmers. The Adriance harvesting and mowing machines have won for themselves an enviable reputation on the other side of the line, and should meet with a large measure of success in Canada. The company is fully equipped to supply this line in 1913.

Referring again to Mr. Berkey, the Canadian Thresherman and Farmer takes a great deal of pleasure in again welcoming him to the Canadian West. His long experience, combined with unusual business ability, makes him a most valuable addition to the Western Canadian human implement equipment.



Dealers Increase Your Sales!

Take a Look at the

Strite Governor Pulley

It's the original and the only thing for driving cream separators with gasoline engines. Three tried, always said: "TRY ONE. More in use than all others combined. Costs no more than imitation. Also, ask about our friction clutch pulleys."

STRITE GOVERNOR PULLEY CO., 310 S. 3RD ST., MINNEAPOLIS
 Mention this magazine when writing advertisers

USE
**WHITE ROSE
 GASOLINE**
 More Power Less Carbon

Mention this magazine when writing advertisers

What the Auto Means to the Farmer

It was a hot day in August. The sun was making a brave attempt to chase the mercury out of the bottom of the bulb. Every bit of shade was at a premium, and it was harvest time.

Farmer Jones had several hundred acres of as fine wheat as ever grew on a Western Canadian prairie, and it was just at that stage of ripeness that demanded quick action on the part of the binder. The weather conditions were ideal for two things: first, for the immediate cutting of wheat; and, second, as the immediate forerunner of a heavy windstorm. The latter, naturally, made Farmer Jones very anxious, and he was making it his special business to drive men and machinery to the limit in order that he might save a crop that meant to him a summer's profits.

Farmer Jones was one of those men who had located several miles from town, and likewise a considerable distance from the railway. He had homesteaded a quarter, pre-empted a half, and purchased the remainder of his farm at bargain prices. By dint of hard and conscientious labor and a careful system of farming he had wrested from the virgin Canadian prairie as beautiful a farm as one would want to set eyes upon. The only drawback was the distance from town.

During the previous winter Farmer Jones, in looking over the columns of The Canadian Thresherman and Farmer, had seen an advertisement of Jos. Maw & Co., which illustrated the Hupmobile. Sitting by his fire-side on a cold winter's evening, the twenty-five mile ride between his place and town looked longer than ever before. He remembered that on several previous occasions machinery breakdowns had cost him a whole day's time, and some of these breakdowns had been attended by considerable loss. The advertisement of the Hupmobile took on a new meaning to Mr. Jones, and it occurred to him that here possibly was a means whereby he could shorten that twenty-five mile distance to one of four or five miles. He accordingly wrote for a catalogue which came in due time, and a few weeks afterwards when he was in town a dealer approached him to the effect that he understood that Mr. Jones was contemplating buying a Hupmobile. The upshot of it was that they got together and Mr. Jones purchased a car.

On that exceedingly warm day Mr. Jones was superintending harvest operations from his car. He had four binders hitched be-

hind a tractor and every round that was made meant sixty-four feet shaved off from the field. He viewed with pride that palpitating tractor while he watched it closely, for upon it depended to a very great extent the success or failure of his crop.

About 10 o'clock he decided to go to the house, about a mile distant, for a fresh supply of water for his men, and when he returned he found that his whole outfit was stalled on the other side of the field. He drove round to that side and on arriving at the outfit, he learned that the gearing which drove the circulating pump on his tractor had broken, thus rendering the tractor useless. The situation then stood something like this: several hundred acres of wheat, twenty-five miles from town, and nothing but a busted tractor to handle it with.

Mr. Jones lost no time in thought, but knew just what to do. He instructed the engineer to give him the numbers of the parts required and, advising his men that they could all turn in and help the stokers for an hour or two, in five minutes' time there was nothing to be seen of Mr. Jones but a trail of dust as his Hupmobile did twenty-five miles an hour toward town.

At one o'clock p.m. the sun was just as hot as ever. It mattered not to Mr. Jones, for his tractor was chugging merrily along pulling four binders. Farmer Jones in less than three hours' time had covered a distance of fifty miles, secured the repairs for his tractor, had put them in their proper places, and was cutting his field to the tune of sixty-four feet every round.

GENUINE GREGG EVENERS

SIMPLEST AND STRONGEST MADE



MADE for two, three, four and five horses abreast, for Wagons, Manure Spreaders, Gang, Sulky and Disc Plows; also five and six Horse Tandem for Gang and Sulky Plows. These are made of one-quarter inch heavier wood stock than similar eveners now on the market. Ironing extra heavy.

Look for the name **Genuine Gregg** on every Evenner. Ask your hardware or implement dealer. Write for Catalogue "T."

GREGG MFG. CO. Ltd., Winnipeg, Man. IF IT COMES FROM GREGG IT MUST BE WELL MADE

Short Course In Internal Combustion Engineering

A Short Course of Instruction in Internal Combustion Engines will be held at the College of Agriculture, Saskatoon, June 3 to 21. The Course will be in charge of the Engineering Staff of the College, and will be as complete as it is possible to make it in the time.

Particulars can be had from the **THE EXTENSION DEPT., COLLEGE OF AGRICULTURE SASKATOON**

Heider

Heider eveners are best by every test. Used by thousands of farmers because they are mechanically perfect. Made of finest material. Work better and last longer than any other. The 3-horse Wagon Evenner on wagon with hay loader makes haying easy. Can be used on any wagon, manure spreader, grain drill or implement with pole. We also manufacture complete line of plow eveners for 2, 3, 4, 5 or 6 horses. Wagons, doubletrees, single trees, neck yokes, etc.

Ask Your Dealer or Heider eveners and don't experiment with a substitute. Write for our free catalogue. Address: **HEIDER MFG. CO., 222 Main St. Carroll, Iowa**

Eveners

Mention this magazine when writing advertisers.

Erickson Leg

Does not chafe, over heat or draw end of stump.

Sold on Easy Terms

The largest limb factory in the world

K. H. Erickson Artificial Limb Co.
Washington Ave., N., Minneapolis, Minn. Send for catalog, 24

Mention this magazine when writing advertisers.

\$35 DOMINION \$26.50 BICYCLES FOR 26.50

BIGGEST AND BEST VALUE IN BICYCLES EVER OFFERED

THEY have mud guards, wood rims, Dunlop style tires, roller chain, New Departure coaster brake, large rubber pedals, pump & tools

Retail Price - - - \$35.00
Mail Order Price - \$26.50

SUNDRIES AND TIRES at Prices entirely unheard of in the West before. Send for large illustrated Catalog. It is free.

DOMINION CYCLE COMPANY
224-6 LOGAN AVE., WINNIPEG

Fish Bite Like hungry wolves any time of the year if you use **Magie-Fish-Lure**. Best fish bait ever discovered. Keeps you busy pulling them out. Write to-day and get a look at help introduce it. Agents wanted. **J. F. Gregory, Dept. 85, St. Louis, Mo**

THE STORY OF TWO FARMS AND ONE FLASH

PROTECTION POSITIVELY GUARANTEED

caused by lightning to any structure and its contents if said structure has been rodde by our ninety-nine p.c. pure copper cable. We give an absolute guarantee to this effect, and we know we are taking no risk in doing so.

IN OUR TEN YEARS' BUSINESS AS ELECTRICIANS

No building which has been protected by the "TOWNSLEY" system has ever been damaged by lightning storm, while others in the immediate vicinity have gone up in smoke.

IT CANNOT HAPPEN

and our protecting cover (which is the least expensive insurance you ever paid) not only guarantees you against loss of property, but the inconvenience arising from such destruction, and the double loss in being put out of business till it has been replaced.

Write us at once for full particulars Agents wanted in Western Canada

197 Main Street **Winnipeg**
O. W. TOWNSLEY, Manager

99 CANADIAN LIGHTNING ARRESTER 99
AND ELECTRICAL CO. LTD. WINNIPEG

RUINED BY SIMPLE NEGLECT OF THE FOLLOWING BEING UNPROTECTED

SAVED BY TOWNSLEY AND TAKING NO CHANCES

PURE COPPER

GET INTO LINE

WHAT LINE?

THE RED RIVER SPECIAL LINE—WHY?

Because it is different.

It is a line of only Threshing Machinery and Steam and Oil-Gas Tractors.

It has not been stretched to cover the whole field of farm implements and farm machinery.

All of the capital, all of the resources, all of the energy of a large factory and a large organization are wholly applied to the special line of Threshers and Tractors.

This means better machinery and better attention to customers.

We can build and handle one line better than we can a dozen.

Scattered resources, scattered facilities and scattered efforts can not produce good results.

The Great Red River Special is the result of concentration. Many men who have devoted a lifetime to the thresher business have given it their best thought. It is different from all other threshers because it was designed and developed by specialists.

The same is true of the Nichols-Shepard Steam Traction Engine, known for years as the very acme of engine design and engine building.

The Nichols-Shepard Oil-Gas Tractor stands out alone in a class by itself; different from all others; strong, powerful and durable; because it was correctly designed and is honestly built by men who know how.

It will pull plows strongly and will drive a thresher steadily.

The whole Red River Special Line is a specialty line.

It is all different from other makes and stands in a class by itself.

The greatest effectiveness. **The greatest convenience.**
The greatest power. **The greatest durability.**

And all because it is built by special thresher and engine builders who confine themselves to this line and nothing else.

It is sold for no more than the best other machinery is sold.

Write for our latest catalogue, for it tells all about this difference and why the Red River Special Line is most profitable for the thresherman. Full specifications furnished.

IT SAVES THE FARMER'S THRESH BILL. WRITE NOW.

NICHOLS & SHEPARD COMPANY

BATTLE CREEK

:::

:::

MICHIGAN

Sole builders of the Red River Special Line of Red River Special Threshers, Steam Traction Engines, Oil-Gas Tractors, Universal Self Feeders, Stackers, Weighers and Supplies.

Winnipeg, Manitoba

Regina, Saskatchewan

PRACTICAL TALKS TO THRESHERMEN

CONDUCTED BY PROFESSOR P. S. ROSE

Talk No. LXI

Note.—The term "gas engine" in these lessons will be used indiscriminately in speaking about all internal combustion engines.

WHEN a charge of fuel and air is drawn into the cylinder of the engine it is then compressed on the next stroke to a pressure of from fifty to sixty pounds, depending upon whether the motor is designed to burn kerosene or gasoline. If the former, the low compression will be used. If gasoline, then a higher compression pressure is permissible. Just before the piston reaches the end of the compression stroke, an electric spark is formed in the compression space at the head of the piston which ignites the charge. The fuel which is mixed with the proper amount of air burns very rapidly, and the temperature rises momentarily to between 2,500 and 3,000 degrees. It is the sudden increase in temperature of the gases that causes the pressure inside of the cylinder. We sometimes speak of the explosion of the charge, but this term is not quite correct. The fuel burns very rapidly but, nevertheless, it lacks considerable of being instantaneous, which is the distinguishing characteristic of a true explosion. Igniting the charge before the piston reaches the end of the compression stroke gives time for the fuel to be practically all burned by the time it starts forward on the power stroke. The highest pressure occurs when it should, at the beginning of the stroke, and rapidly decreases as the piston moves forward and the gases expand. The pressure on the piston at the beginning of the stroke varies from two hundred to three hundred pounds, and at the end of the stroke has dropped to anywhere from thirty to fifty pounds, depending upon whether the stroke is long or short. The average pressure throughout the stroke is usually below one hundred pounds for all engines using petroleum fuel. The pressure is caused by the heating of the gas and its consequent expansion. The high temperature in the cylinder exists only at the instant the piston starts forward on its power stroke and then very quickly decreases as the gas expands. The excess heat is carried away by the jacket water and by the exhaust gases.

Kinds of Motors.—Nearly every type and style of gasoline and kerosene motor is used by some of the tractor companies for the motive power of their tractors. Four cycle motors of one, two, three, four and even of six

cylinders have been tried. While there are a greater number of manufacturers that are making a four cylinder tractor than any other kind, still the greater number that have been placed on the market are of the one or two cylinder type. In other words the largest manufacturers are committed to the one and two cylinder machines. For heavy work requiring great weight with considerable power, the two cylinder machine is in the lead as to numbers annually manufactured. There is no likelihood that this condition will be changed very soon, for the reason that the companies best equipped to turn out a large number of machines will cling to that style of motor. It is true that a great many of the new companies are taking up the four cylinder motor, but as a rule they are not in a position to push manufacturing very hard. For light weight machines adapted to the small farm, the same conditions exist. However, most of the new tractors designed for orchard work, especially, are equipped with four cylinder motors. There are a number of notable exceptions to this rule, however, and it is too early yet to say what style will be found best adapted to light work. One of the most recent of these new machines, contrary to a statement that appeared in the last lesson, is provided with a four cylinder two cycle motor.

The single cylinder motors are all heavily built machines similar to the ordinary stationary farm engine, with a heavy base, large fly wheel and speeded at about three hundred revolutions per minute. The cylinders range in size from six by eight to ten by twelve inches. A motor of the latter size should develop about 25-horse power when in good condition with all valves ground to fit and the piston and cylinder in first class condition. Some larger cylinders have been made but, as a rule, such engines are not very successful for heavy, continuous work under the severe conditions of field work. Where more power is demanded it has been found advisable to build two cylinder motors.

Two Cylinder Motors may be arranged in any one of three ways. When the cylinders are placed horizontally and on opposite sides of the crank shaft, the motor is said to be double opposed. When both cylinders are placed side by side on the same

side of the crank shaft a twin cylinder motor is produced. Another style of twin motor has the cylinders arranged vertically. All of these arrangements may be found on tractors now on the market. In fact, all of these three styles are quite popular with the twin motor predominating among the heavy tractors. The opposed motor for some reason is used mostly on the light or medium weight machines. All of these motors are of the slow or medium speed type, running at from three hundred to four hundred revolutions per minute. The heavy twin motors will develop from 45 to 55-horse power on the brake and the lighter opposed motors with smaller cylinders, generally develop from 30 to 40-horse power. There is no reason why fully as large motors cannot be made in the opposed style, but the objection seems to be that when large motors are used the length of the motor becomes almost unmanageable, and makes a handy arrangement difficult.

Three Cylinder Motors have been adopted by only a few manufacturers. The cylinders of these motors are placed vertically, as shown in the illustration. The advantage claimed for this arrangement is that it gives a more uniform turning effort on the crank shaft, due to the way the cranks are placed. The motor is also somewhat better balanced. These features will be explained more fully presently.

Four Cylinder Motors.—Generally, these are arranged vertical on one side of the crank, just as they are in automobile engines. Motors of this style may be built in almost any style desired, and in power from these adapted to small farm tractors up to 100-horse power. Owing to the work they have to perform, they are all of the heavy duty type and consequently run quite slowly, usually not faster than five or six hundred revolutions per minute. As usually built, the heavy machines will develop about 60-brake horse-power, or from 30 to 40-horse power at the draw bar. The latter may roughly be assumed as equal to fifty or sixty per cent of the brake horse power for all tractors. At least one company builds a four cylinder horizontal motor with cylinders placed on opposite sides of the crank shaft—a double-double opposed motor.

Six Cylinder Motors.—These have not yet been developed, and so far as the writer knows none of the American companies have even experimented with a tractor motor of this type, fearing that many cylinders will defeat the aims sought after; namely, a rugged farm tractor that any unskilled operator can keep in fair working order continuously. Such a tractor has been experimented with in England by at least one company, and favorable reports have been sent out. It is too early yet to prophesy in regard to the future of six cylinder motors for farm purposes, but for the present, at least, there is not much likelihood of their being adopted in this country. They possess, however, certain characteristics that would be very valuable; namely, absence from vibration and an almost uniform turning effort at the crank shaft. The use of heavy fly wheels is not necessary, and an almost perfect balance can be obtained. Against these manifest advantages there is the disadvantage of keeping a multi-cylinder machine in order. Ignition trouble is more difficult to locate, and there are more valves and pistons to keep in condition.

All of the powerful companies have adopted the one and two cylinder motors, and consequently for a number of years to come these machines will predominate in this country. Whether they are the best adapted in all particulars for tractor service the writer does not profess to know. At any rate, they have the advantage of simplicity and relatively low manufacturing cost.



Distinctions

When Mr. Man looks out and sees The glint of sunshine on the trees He shuts his desk and says it's just Another case of "wanderlust."

When Mrs. Lady hates the cares Of home and for a scene prepares Which will express her discontent, That is a case of temperament

But when, as vernal days draw near, The hired man shirks his toil severe And turns up peevish, more or less, That's ordinary laziness.

You Can Make This Saving

IN THE United States over 400,000 cars have been equipped with No-Rim-Cut Tires. Over two million tires were bought by men who watch tire-mileage closely. In Canada, in scarcely more than two years, we have sold 90,000 tires, enough to equip over 20,000 cars.

The output of our Canadian factory has jumped from 25 tires to 500 tires per day.

All but two of the Canadian automobile makers have contracted for No-Rim-Cut Tires for their 1913 cars. In a new market, could we have made this record if No-Rim-Cut Tires were not giving increased mileage?

WHAT SELLS THESE TIRES?

There are two main causes of short life in ordinary tires. Rim-cutting and Overloading.

No-Rim-Cut Tires cannot rim-cut. No-Rim-Cut Tires are 10% oversize. These two features cut the cost of Tire mileage. These money-saving features are responsible for our record sales in Canada and the United States.

No-Rim-Cutting

Before we made No-Rim-Cut Tires nearly one tire in four was wrecked through rim-cutting. The tremendous pressure on the fabric of the tire, where it was held by the hook-shaped side ring of the rim, brought about a constant friction that soon ruined the tire. 23% of ordinary tires are still wrecked by rim-cutting. No-Rim-Cut Tires save this waste.

10% Oversize Saves 25%

The car manufacturer provides tire equipment for ordinary loads. But men will overload their cars. They will add heavy equipment that is not provided for by the manufacturer. No-Rim-Cut Tires are fully 10% over the rated size. Experts will tell you that each 5% increase in size adds 15% extra mileage. When we place the added mileage at 25%, we feel that we are estimating conservatively what the average car owner may expect from No-Rim-Cut Tires.



The Passing of "Rule of Thumb"

When rubber is such a variable product, how can we keep No-Rim-Cut Tires uniform in quality?

This is how:

At our Bowmanville plant we maintain a staff of chemists—graduates from leading universities. These men analyse in a completely equipped laboratory every shipment of raw rubber that enters the plant, every roll of duck used in Goodyear products.

They refine a sample of the rubber in miniature machines. They "cure" it in a miniature furnace. The product of this test is the same as our factory would produce from the same raw rubber.

The sample is then tested for strength, toughness and elasticity. It is chemically analysed to see what must be combined with it to give the greatest tire wear.

Every roll of duck used for building tires also goes through a laboratory test.

Duck that looks alright and feels alright is often rejected because it does not measure up to specifications which we know to be the best for making tires.

This preliminary testing, careful inspection at every stage of manufacture and mechanical test of the finished tires, convert varying materials into a product of No-Rim-Cut Tires which give every purchaser increased tire mileage.

GOODYEAR

No-Rim-Cut Tires

Fit all Standard Makes of Rim

You have a friend who can show you the saving in tire cost made by these tires. Ask to see his mileage records.

168

THE GOODYEAR TIRE & RUBBER CO. OF CANADA

Head Office, TORONTO

LIMITED

Factory, Bowmanville

BRANCHES at Victoria, Vancouver, Edmonton, Calgary, Regina, Winnipeg, Hamilton, London, Toronto, Montreal, St. John.

All kinds of Rubber Belting, Hose, Packing, Bicycle and Motor Cycle Tires, Truck Tires.

The
**Thresherman's Question
Drawer**

ANSWERS TO CORRESPONDENTS

Q. J.R.F. Is a fire brick arch in a fire box boiler considered advantageous, as regards the steaming qualities of the boiler? Does it protect the flues, and if so, would an arch made of one and a half inch piping, tapped into the sides of the fire box on each side and arranged so that the circulation of the water would be taken care of, be an improvement?

A. A fire brick arch is an excellent thing under certain conditions. If you are using straw for fuel, where the temperature is apt to change rapidly, or where the flame may even go out, it is advisable to use fire bricks. The brick becomes red hot, holds the heat and prevents sudden changes in temperature. It is also hot enough to ignite the straw, and prevent the dying out of the flame. In addition to this, it prevents cold air from rushing through the straw chute, and striking directly upon the boiler tubes. Fire brick has been used extensively in the fire boxes of locomotives, especially where the fire box is wide and high, and where a heavy induced draft is employed. Out in the western part of North Dakota, when lignite is used for fuel, the fire brick arch has apparently proven more satisfactory than an open fire box, especially in the large traction engines. The use of tubing to hold an arch does not strike us very favorably; it will not give you the same advantages as the fire brick because the temperature of the tubes will be held down to that of the water in the boiler. Moreover, such tubes are dangerous; they are liable to become filled with scale and burn out. When they burst they are liable to injure the fireman or engineer. The fire brick arches and locomotives are supported with tubing and quite frequently one or more of these tubes will burst and scald the fireman.

Q. J.H.S. I ran a compound this fall that I could not get to run without knocking unless I hooked her way up. Do the compound engines knock unless hooked up very close?

2. How can I line up and rebabbit the crank shaft on this engine without taking out pistons and get a first class job done?

3. The boxing next to crank disc is about 1/4 inch too low, while the boxing next to fly wheel seems all right. Would it be necessary to rebabbit both boxings in order to get a good job done?

4. Is the valve gear used on these engines one of the manufacturer's own patents, or what is the name of it?

5. After shutting off steam this gear seemed to run awfully hard, in fact, I could hardly hold the reverse lever still with my hand, although valve was getting plenty of oil.

6. We had a double oil pump, and forced oil into steam pipe and low pressure steam chest independent of each other. Is this a good way?

7. What is the most practical way of setting the valves on this make of engine?

8. How shall I proceed to rebabbit the eccentric straps, and how can I find out if the eccentric is true?

9. The South Dakota artesian water is very salty, especially so after boiler has run a few days. Now this water forms no scale, but I have heard that this salty water will eat the inside of boiler. How about it?

10. My employer seemed to think that I used too much coal this fall. The engine was a 30-horse compound, and had been run by Tom, Dick and Harry for five falls, this fall making six and my first fall with this engine. This fall the owner bought a new Minneapolis separator, 40-62. We started threshing at 6 a.m. and quit at 7.30 p.m. Four men feeding machine at all times, and the grain was very tough this fall. We threshed 24 days, and I used 32 tons of good coal, and never had unnecessary black smoke. Do these figures indicate waste of fuel?

11. What are the requirements of the Canadian boiler inspection and license law?

12. What is the practical way of taking out old flues and stay bolts and putting new ones in, and what tools are needed?

13. In closing, will say that I have not failed to notice you are improving your paper right along, which I know we all appreciate.

A. 1. The knocking in your engine may be due to lack of compression when the engine is not

**Install a Gould Balance Valve
in your Engine and "Increase the
Power from 15 to 30 per cent"**

Save Both
Fuel
and Water



Use Less
Lubricating
Oil

This Is What We Guarantee The Gould Balance Valve To Do
When a Gould Balance Valve is properly seated and fitted in a traction engine to develop from 15 to 30% additional power and save the wear on valve gear and valve seat.

This is What Three of Our Customers Say It Will Do
INCREASES THE POWER—SAVES OIL.
Gentlemen—After using the Gould Balance Valve, that I bought of you last summer, and which we fitted to our sixteen horse power American Abell engine, ourselves, we are satisfied that it was two horse power stronger. We had more power with less fuel and water. If I bought another engine it would have to be equipped with a Gould Balance Valve. My engine was delighted with it, and those who visited us while threshing remarked how well our engine was running and what a fine sound the exhaust had. Summing the whole thing up, it is the only valve.
Yours truly,
Mt. Tolmie, B.C., Dec. 7, 1912. **JAMES TODD.**

SAVES FUEL AND WATER—WORTH THE PRICE ALONE IN HANDLING OF ENGINE.
Gentlemen—In regard to the Gould Balance Valve I will say that it is sure a fine thing. It will save the price of itself in a short time in wear on the reverse gear, saving in fuel and water, and increase in power of engine. A person has no idea how much it will increase the power until they use the valve themselves, and, besides, that the man at the throttle is not worried to death with that everlasting rattling noise at the reverse.
Yours truly,
Troquois, So. Dak., Dec. 7, 1912. **GEO. LANDON.**

EASY TO INSTALL.
Gentlemen—We fitted your Gould Balance Valve to our fifteen horse power Case traction engine ourselves and it worked fine right from the start. The engine develops about two horse power more than with the plain slide valve. Our valve gear runs perfectly smooth now and I can handle reverse lever with two fingers with the throttle open. We would recommend it to any thresher who is short of power, or on any engine with a hard working valve gear.
Yours truly,
Killaly, Sask., Dec. 23, 1912. **W. S. SMITH.**

10,000 users of the Gould Balance Valve will tell you the same story. Write us for catalog and "The Evidence", which contains the experience of over five hundred users. Address

GOULD BALANCE VALVE COMPANY
KELLOGG IOWA, U.S.A.

Steam or Gas Tractors



Equipped with
"THE GOVERNOR WITHOUT JOINTS"
give greater efficiency

Equally satisfactory for **STEAM and GAS TRACTORS**

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

The Pickering Governor Co.
PORTLAND CONN., U.S.A. 



**SIX REASONS WHY YOU SHOULD HAVE THE
Morris Improved Beading Tool**

1. Because it can be used on any and all makes of boilers.
2. Because it does not require an experienced hand to operate it.
3. Because it expands the tube at the same time of beading.
4. Because it compels you to fire all parts of bead alike.
5. Because it expands under a spring pressure allowing tube to upset and reinforce in tube sheet, instead of being crushed away as by other expanders.
6. Because tubes beaded with the Morris Improved Beading Tool will last twice as long as tubes beaded in the old way.

G. E. MORRIS, Esq., Minneapolis, Minn. WILKIE, SASK., February 5th, 1911.

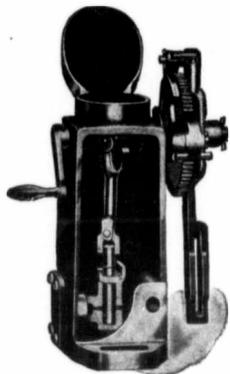
Dear Sir,—The beading tool that I purchased from you last year has given me entire satisfaction. In the plowing season I had all kinds of trouble trying to keep my boiler flues from leaking. I would generally have to bead the flues every second night, and sometimes use an expander. I had come to the conclusion that I would have to refuse my boiler, the flues were leaking so bad. When at the Saskatoon Fair I saw you give an exhibition of what could be done with your Improved beader on leaking flues. I purchased one at once and used it according to the directions that you gave me. Since then I have used my boiler thirty-five days, and sometimes we had very bad water, but there has never been a sign of a leaking flue in all that time.

Every man that owns a boiler has trouble at some time or other with leaking flues, and every man who is troubled with leaking flues, should own a Morris improved beading tool, it will save him money, time, skinned knuckles, and a whole lot of temper. You can use my name at any time for a reference if you want to. I am well satisfied. The tool suits me fine, I would not part with it for \$100.00—if it was the last one I could get.

I remain, yours truly, **WM. S. THOMPSON**
BAKER VALVE CO., Canadian Agents 100 James Street, WINNIPEG

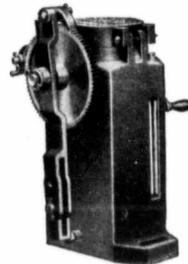
Madison Kipp Oil Pumps

Are Built for Any Service



Note the Simple Construction, Strong and Rugged. Built for Service

No Checks, Valves, Springs or Packing to cause you trouble, has an Oil Strainer, hand crank to give the engine a little extra oil when desired without changing your fixed regulation, also a register glass to show you at all times the amount of oil in the tank. Our catalog tells the whole story—get it!



Canadian Agents: MAYTAG COMPANY, Winnipeg, Man.

MADISON KIPP LUBRICATOR COMPANY

MADISON

::

::

WISCONSIN

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

hooked up. When it is hooked up the compression is increased. This compression acts as a cushion, and tends to soften any looseness in the parts of the engine. The knocking may also be caused by the slapping of the valves. This is peculiar to this make of engine, and the valve is more apt to leave the seat when running at full stroke and hooking up of the valve gear has a tendency to quiet the valves.

2. If the connecting rod is disconnected from the crank pin, and left in the cross-head, the rod cross head and piston may be pulled from one end of the stroke to the other, and the measurement taken from crank pin boxes to the crank disc at both ends of the disc, and in this way you can ascertain whether or not the shaft is square with line of the cylinders. If it measures more at one end of the crank disc than at the other, it will readily be seen which way to move the shaft.

3. If the box is 1/4 inch too low, and it is necessary to raise it, this will throw the shaft out of line with the other box, so it will be necessary to rebabbit both boxes.

4. Valve gear on Russell engine is a patented mechanism, and is owned by that company, and is known as the Russell gear.

5. The Russell engine is equipped with the Giddings valve, which is called an Equilibrium valve. There are two small holes in the valve; one to let the steam into the steam chest and another one to let the steam out into the exhaust. The hole of admitting steam into the steam chest is half the size of the one passing it into the exhaust. Therefore the pressure on the back of the valve is one half of what it is inside the valve. When the steam is throttled from the inside of the valve, the pressure in the steam chest has to pass through the small hole into the exhaust, and it takes some time to accomplish this. While this pressure on the back of the valve is being released, the valve gear has an extra load to carry, due to this pressure on the valve.

6. It is the best practice to have a force feed oil pump on the steam pump and an independent one on low pressure cylinder.

7. The ports in this engine cannot be seen on account of the valve covering them, and there are therefore marks on the valves and steam chest. There are either two marks on the valve and one on the steam chest, or one mark on the valve and two on the steam chest. Either way will suffice; and in setting the valve

place engine on the dead center and have these marks to register. Place the engine on the other dead center and other marks will register.

8. To babbitt an eccentric strap take the old babbitt out, put the strap in place with the proper amount of liners between each part of the strap, bolt each part together, pour the metal in the strap; see that the liners are down against the eccentric, so that they will divide the babbitt is poured in, scrape the surface to fit the eccentric. If you want to test the eccentric, take a large caliper, and measure it at all points; and if it is larger one way than another, this will show that it is out of round.

9. Salt water will not injure the inside of a boiler, but if there is a leak the outside of the boiler may be damaged, due to the atmosphere acting on the surface.

10. The quantity of coal you indicate as being used in running your engine for the given time and load you describe, seems a little excessive to us. The pistons and valves may leak, and no doubt are causing the trouble.

11. To get information regarding boiler inspection and license law in Canada, write to the Minister of Public Works residing in the province in which you are in-

terested. While the laws are very similar in British Columbia, Alberta, Saskatchewan, and Manitoba, yet you will find a slight difference and you had better get the information from the place in which you expect to operate.

12. To get tubes out of a boiler, cut the tube off just inside of the tube sheet. Get the old tube through the hand hole, and if this is not possible it can be taken out of the hole in which it was formerly located. There is no set rule to get tubes out of a boiler.

13. To get stay bolts out of their hole drill a hole in the centre of stay bolt a little smaller than the bottom of the thread and a little deeper than the thickness of the sheet, cut the stay loose at each end and remove the part of the bolt which remains in the holes with a narrow chisel. If possible procure a tap to clean the threads. The old stay bolt can be taken out of the bottom through the hand hole.

Q

Q. L.G.O. I am having trouble with my steam engine governor. It seems to work all right when the throttle is about half open, but when the throttle is wide open the valve drops down and does not move. I have had the governor apart several times, and

examined each part closely, but cannot find the trouble. The only time the valve raises is when the cylinder of the thresher is slugged. I am using a Waters governor on a 12-horse power Case engine.

A. The fact that your governor works part of the time appears to indicate that there is something wrong with the driving mechanism, and our first suggestion is that you examine both of the driving pulleys to make sure that they are fast on their shafts; then examine the bevel gears which drive the governor balls, and make certain that they are either keyed or pinned in place. Next examine the governor belt. It may be slack, or it may be greasy. We have run across conditions where the drive belt was greasy and slipped, thereby causing the governor to act irregularly. Also determine if the valve stem is of the right length, so that when the governor balls are out straight the valve is closed. We believe by following these directions you will locate the difficulty.



Q. L.M. About two weeks ago I loaded an old engine on a flat car and noticed, while doing so, that the rivets which hold the rear axle in place were leaking badly, and that there were leaks around several other rivets. I considered it dangerous to run such a boiler, and for that reason never ran the pressure above one hundred pounds. I asked several engineers about it, and they all replied that the boiler is just as safe for one hundred pounds as any other. What do you think? The stop valves between the check valves were also leaking. What is the best way to regrind them? How does one babbitt a split box? Where do they pour the babbitt, and are the paper discs put around the shaft on the outside, or are they just inside of the box?

A. We are unable to say whether the boiler you describe is safe for one hundred pounds pressure or not. A boiler that has leaked for a considerable length of time around the rivets is usually badly rusted at that point, and the rivets are weakened. Another thing, one never knows the condition of an old boiler, and it is difficult, even if you make an examination, to determine how much pressure it will safely bear. The difficulty is greatly increased when you neither know the history of the boiler, nor how long it has been used. For these reasons we cannot give you any definite advice. The mere fact that the rivets leak is not necessarily evidence of great weakness. This some-

times happens with new boilers. If, however, the rivets have been leaking a long while, then it is evidence of weakness.

The best way to repair a leaky valve is to use a regrinding machine. You will find one or more advertised in this publication that are suitable for that kind of work. It is possible to regrind a valve with fine emery and oil, using a carpenter's brace and a screw driver with which to turn the valve on its seat. Care must be taken not to employ very much pressure and to turn first in one direction and then in the other. Do not continue grinding after the seat has been made. In babbitting a split box the liners between the two halves should touch the shaft, and notches should be cut in them so that babbitt which is poured into the upper half can flow freely through into the lower half. The discs of paper around the shaft, if these are used, should be placed outside of the boxes, and should be held in place with stiff clay. The babbitt may be poured through the oil hole on the top or a spout can be made of clay at one end and the babbitt poured at that point.



Q. E.J.P. 1. I have just taken charge of a 12-horse power engine in which the flues seem to be bent downwards about an inch. Can you tell me the cause of this condition?

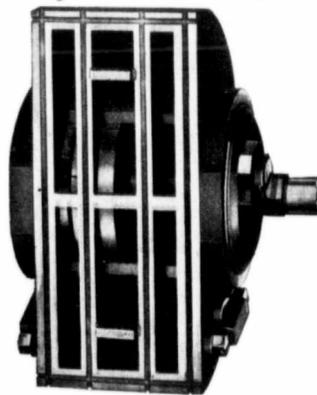
2. The engine seems to pull well in the belt, and cuts steam correctly, running either way, but it will not pull on the road. The liners have nearly all been taken out of the pillow boxes and the pedestal is clear down to the frame. Would the rebabbiting of these blocks have any effect on the pulling power of the engine?

3. Explain how to line up an engine for babbitting, and how to set the valve on an engine of this kind. It has a Woolf reverse gear.

A. 1. Sagging of the flues is undoubtedly due to over heating, and this could be caused only by an accumulation of scale around them which prevented the heat from passing readily through into the water. Our advice would be to drain the boiler and see if you can remove the scale from around the tubes.

2. We apprehend that the reason your engine does not pull well on the road is due either to a faulty setting of the valve or to the wearing down of the main shaft in its bearings to such an extent that the steam distribution is faulty. The Woolf reverse gear, as well as the other valve gears of the radial type, requires close adjustment in order to do the best work. The wearing down of the

They Win Their Way Because They Pay



The Baker Balance Valve is considered by all mechanics to be the finest principle of a balance valve in existence, and will increase the power of the engine from 20 to 30%. The Baker Valve can be attached to any kind of slide valve type of engine without facing the valve seat. Note the soft metal packing around the face of cage.

They pay for themselves in a short time in actual saving of oil, fuel and water. Read what Mr. Partridge says about them. He is only one of hundreds.

Baker Valve Co., Winnipeg, Man.

Oakburn, Man., March 6, 1913

Gentlemen,
In reply to your letter of March 3rd, would say that I did not have a single complaint last fall from any customer using the Baker Valve. In fact every man was more than pleased with the results gained by using the Baker Valve. The engines use much less water and by so doing steamed much easier. A child can reverse the engine under full head of steam.
I might say that I had about ten of these valves on my territory last season.
Yours truly,
J. W. Partridge.

We want agents everywhere. We want you to sell them in your locality. Write us to-day. We pay a liberal commission.

BAKER VALVE COMPANY

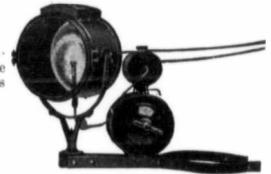
100 James Street

Winnipeg, Man.

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

SPARK ARRESTER

One that gets all the sparks without clogging or interfering with the draft. Fits any engine. Screens adapted to any fuel.



ACETYLENE GAS HEADLIGHT

Turns night into day. Bracket to fit any make of engine. Throws light 400 feet. Operating expense about 1c. per hour.

FLUE CUTTER

You need this tool to get ready for your Spring Plowing. Is adjustable in length and size. Cuts the flue without burring the end. Try it.

Estate of E. M. POPE, Watertown, S. Dakota, U. S. A.

Send for Catalogue and Price List to

THE MAYTAG COMPANY, LIMITED,

Winnipeg, Man.

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

Special Cold Water Ejector



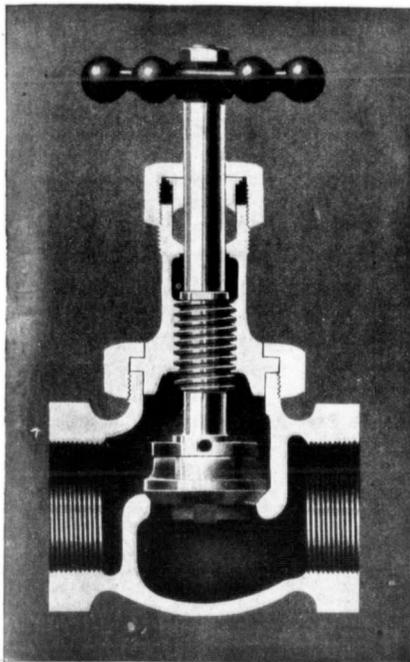
For elevating large quantities of water quickly and without raising the temperature, we have designed our No. 77 Ejector, which will elevate 3,600 gallons of water per hour with scarcely any increase in temperature. This Ejector is a necessity for engineers who have been bothered with hot water.

Ask your dealer, or write us for particulars

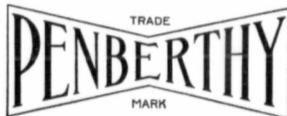
DESMOND-STEPHAN MFG. CO., Urbana, Ohio

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

Patronize those who patronize this Magazine



Write for this Booklet today
"Something Better in Valves"



Buy a Good Valve

AND THAT IS

"The All-Quality Penberthy Regrinding"

Guaranteed for 200 lbs. Working Pressure

THEY HAVE PASSED GOVERNMENT INSPECTION FOR THE PROVINCES OF ALBERTA AND SASKATCHEWAN

SPECIALLY SUITED FOR WESTERN CONDITIONS, BECAUSE

1. They are designed for high pressures and severe conditions.
2. They require no new parts such as discs, etc., which flake and crack under continuous usage.
3. Bonnet head cannot become corroded to body as threads are on outside away from action of steam and liquids. Easy to take apart.
4. Regrinding feature enables both the seat of body and seat of disc to be reground at same time and without taking valve from pipe line.
5. Can be repacked under pressure.
6. They are efficient and economical.

STOCKED BY LEADING JOBBERS
MANUFACTURED BY

Penberthy Injector Co., Limited, Windsor, Ontario

main shaft a very slight amount will disturb the adjustment a great deal.

3. Our advice would be, in this case, to take the number of the engine and its horse power, and write to the manufacturer for the correct distances between centers for the valve gear. In reabbaiting the Woolf gear it is necessary to know the correct distances between the center of shaft and the center of the block, and also the correct length of eccentric rod. These dimensions should be kept on file by the manufacturer for just such emergencies as yours.



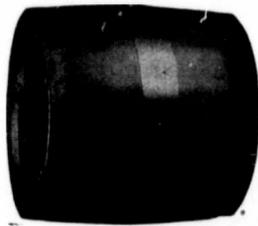
Q. J.J.N. I am running a 32-horse power engine in plowing and have trouble with the flues leaking. The engine was run two seasons; in all about fifty-six days in threshing, and at the end of that time fourteen flues in the lower rows began to leak. I used the roller expander, and then headed them down tight and they held for about two weeks. On the last day of threshing three flues started to leak again. I should like to know how to repair them. Shall I expand them and bead them while the boiler is full of water? The seam around the fire box door on the lower side also sprung a leak. How shall I proceed to make it tight? I run

the engine myself, and fire with coal, and am very careful not to let any cold air in over the flues, and still they leak. What is the cause? The water we are using is quite strongly alkaline. Does that have anything to do with the trouble? From which end of the fire box should I take the draft when firing with coal? I have tried both the front door and the rear, and seem to get better draft from the front. Would you advise using a fire brick in a coal burning boiler of this size?

A. You did about the only thing that could be done with the flues—that was to expand them and bead them. This can be done two or three times if you are

very careful, and after that the only remedy is to take out the old flues and where an engine does heavy work, as in plowing, there is bound to be more or less trouble. This is the principal objection to the use of a steam tractor in an alkaline country. In some parts of North Dakota the alkaline water is so bad that a set of flues will not last more than a single season. We suggest that you keep down the percentage of alkali in the water by blowing out a part of the water each day. You can take out some of the water at noon and put in new and part again at night. You understand, of course, that the alkali salts do not evaporate

and pass out with the steam, but remains in the boiler. Consequently, if you do not wash out some of the water each day, the alkali will accumulate in the boiler and add to your troubles. We are inclined to think with a large boiler, such as you are using, that a fire brick arch would be advisable, provided you are careful to remove the ashes and carbon from the top of the arch at least twice every day, and keep the lower flues clean. In that case it will not make much difference whether you use the front draft door or the rear draft door, though if you can do so we advise the front door.



Have You Received Your Copy?

"HERE'S THE PROOF"

A book giving the experience of a number of live threshermen last season with

The Rockwood Paper Cylinder Pulley

IT'S A MONEY MAKER AND A GOOD INVESTMENT ON ANY RIG.

Are you willing to be convinced?—Write for circular and prices
Don't buy a new machine without the Paper Drive Pulley.

THE ROCKWOOD MFG. CO. 1928 English Ave. Indianapolis, Ind., U.S.A.

Rumely Separators have lowered the cost of clean bread for 60 years.

RUMELY
LA PORTE

RUMELY
LA PORTE

Canadian Power, Seed and Soil

VOL. 1.

LA PORTE, INDIANA.

May, 1913.

No. 5.

\$18,000 IN ONE THRESHING SEASON

This Rumely Separator Ran (only) Three-Fourths of its Capacity in the 57 Days' Work

"I threshed 57 1/4 days. My expense was \$130 a day, and my earnings with the threshing, \$18,000."
W. H. Fletcher,
Nanton, Alta.

Page after page of catalogs have tried to tell the advantages of using a Rumely Ideal Separator. The above two short sentences from Mr. Fletcher's letter give all the argument which should be needed to convince anyone that a Rumely Ideal Separator is a first-class investment.

Mr. Fletcher's letter of May 7, 1912, is as follows:

"I threshed 57 1/4 days; carried eleven bundle wagons, had five pitchforks in the field and three spike pitchforks. My expense bill was \$130 a day, and my earnings, with the threshing, \$18,000. The machine went steady nearly all the time. It hardly ever stopped from start to finish, and I did not give the separator more than three-quarters of its capacity."

"I can only say that I am more than satisfied with the machine."
How this \$18,000 threshing season was possible — the separator construction

which enabled Mr. Fletcher to run his machine to such large capacity—is explained in part by the following letter from W. J. Newman, of Belle Plaine, Sask.:

"I hardly know where to start to mention the good points of my Ideal Separator. I did not lose three hours on account of the separator during the entire 34 days.

"Regarding the main features, I like the straw carrier just back of the cylinder, as it helps wonderfully in separation. I also like your decks the best of anything I have seen, and I think the hard oil cup a great advantage.

"I have shipped 4 cars of wheat and was not docked a single pound on account of dirt, seeds, nor chaff."

The Rumely Ideal Separator is not built especially to thresh logging chains, but when forced to do so, it handles them in a more than creditable manner. This is shown in a letter from James Gardiner and J. W. Sholdice, who operate an Ideal near Cypress River, Man.

"One of our pitchforks," say these gentlemen, "accidentally threw a logging chain on the feeder and it went through the cylinder. All the damage done was the cracking of one concave, and one or two bent teeth, which did not delay us five minutes."

"The separator cleans the wheat almost as good as can be done by a fanning mill and saves it all. We can't recommend your separator too highly, as it appears to us to be a perfect grain saver and a machine that is very easy to operate. We like it extra well on account of the working parts all being on the outside which can be seen at all times."

The Ideal Separator's ability to separate the grain under very unfavorable circumstances is shown in the experience of P. R. Brunskill, of Maidstone, Sask. He says:

"Although 1911 was a very exceptional year because we were required to handle double the amount of straw for the amount of grain, as compared to other years, and the grain was of an exceptional frozen and tough character, yet our Rumely Ideal Separator handled this double portion of straw with ease, and gave us perfect satisfaction."

GIVES A SEPARATOR TEST OF 11 YEARS

Rumely Company Also To Pay Duty if Canadian Wins Prize

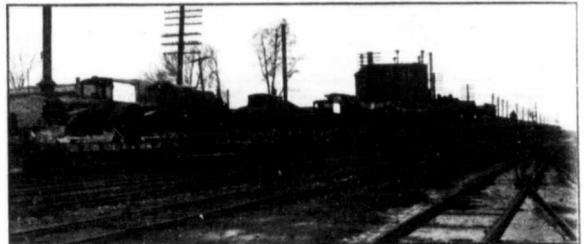
The Rumely Products Company, of La Porte, Ind., has given a Rumely Ideal Separator to the directors of the International Dry-Farming Congress to be offered by them as a prize in the exposition at Tulsa, Oklahoma, the last of October, this year. The directors of the Congress will say in which competition it shall be the premium.

If the separator is won by a Canadian farmer, the Rumely Products Company will deliver it to him free of charge—freight and duty paid. The winner of

Advance Separator Is Still First Choice when L. E. Morrison Buys Second Machine

The Advance Separator, now manufactured by the Rumely Company, has been tested through many years' work. Here's the opinion of L. E. Morrison, of Albion, Wash., concerning the Advance Separator:

"The Advance, 32x56, I purchased of you this year, to take the place of my old Advance Separator which I ran eleven seasons, has proven to me that I made no mistake in taking another Advance Separator. I gladly recommend an Advance to anyone wishing a good, reliable threshing machine."



Would Be Almost Impossible To Overload Oil-Pull E in Threshing

the separator may select any size best suited to his needs up to 36 inches.

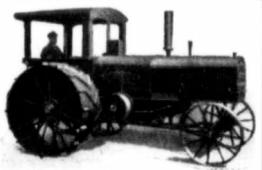
Last year at the Dry-Farming Congress at Lethbridge, Alta., the Rumely Products Company gave a 15-30 h.p. OilPull Tractor to the farmer raising the best bushel of hard wheat. The competition was open to the world, and about 250 entries competed. The OilPull Tractor was won by Henry Holmes, of Raymond, Alta.

At North Battleford, Sask., Bellah Bros. bought an Advance Separator in 1908. Here is what they said of the machine after four years' use:

"We have always operated in a scrubby and rough country, necessitating many long moves, but we have threshed 3,600 bus. of wheat in 11 hours. We have never threshed a full day on outside but we have put through 800 bushels at the rate of 18 bus. per minute, which we consider a remarkably good showing."

"Your separator is one of the best savers we ever handled and we find it almost impossible to crowd it."

"This outfit has given ourselves and customers the very best satisfaction, and we have no hesitation whatever in recommending this line of machinery to prospective purchasers."



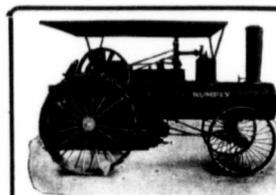
Steers Like Your Auto

On the Rumely GasPull Tractor instead of a front axle, the wheels are attached to knuckle joints. This makes steering positive, and quick. It gives the operator a chance to look after the plows or other load.

This ease in handling is only one of the many good reasons the Gas Pull is the best one-man tractor.

Write for GasPull Book 352 and ask us the name of our dealer nearest you.

Rumely Products Co.
(INCORPORATED)
Power-Farming Machinery
La Porte :: Indiana



Steamers in these Sizes

Threshing	Plowing
12-36 25-75	25-75
16-48 16-48	30-90
20-60 30-90	36-110

Write us for booklet, "From Track to Stack," giving detailed descriptions.

Rumely Reliability

Each Engine, before it leaves the Rumely shop, must pass five consecutive inspections. The boilers are tested under hydrostatic pressure in the presence of the workmen who made them—naturally they exercise the greatest care in construction. The final examination is made independently by two inspectors, each of whom must report in writing on 86 different points.

Rumely Products Co.
(INCORPORATED)
Power-Farming Machinery
La Porte :: Indiana

All About the Power Machines

If your farm is netting anything short of maximum profits, you probably will be interested in learning about these power farming machines. Your letter to any of the branches in Canada will receive prompt attention. Here is a list of a few of the Rumely catalogs:

- Rumely Power-Farming Machinery.
- Gaar-Scott Engines and Separators.
- From Track to Stack (Steam Engines, Tilling and the Soil No. 351 (OilPull Tractors).
- Rumely GasPull Tractor No. 352.
- Rumely Grain Elevator No. 514.
- Rumely Automatic Baler No. 254.
- Rumely Engine Gang Plow No. 338.
- Rumely Sanders Disc Plows No. 327.

CANADIAN POWER, SEED AND SOIL

Canadian Power, Seed and Soil
 Vol. 1. Established 1913 No. 5
 Published Monthly by
RUMELY PRODUCTS CO., INC.
 La Porte Indiana

RUMELY COST IS LOWEST

The United States crops of oats, wheat, barley, buckwheat, rye, kaffir, emmer and rice covers 93 million acres and yields something over 1,200 million bushels. The Government has figured that threshing costs 33½ cents an acre in wear and tear, interest, etc., on a threshing outfit in Northwestern Minnesota. At this rate, threshermen must give up over \$31,000,000 a year just for their machines alone. Good machines would cut this cost.

Last year our total repair sales for Rumely, Advance, Gaar-Scott, and all the lines were only about one per cent of the total value of the machines of these lines already in use. Our intention is to

United States than anything else since Jefferson. Immense tracts of land lay wholly idle before the recent coming of the tractor, because soil and climatic conditions make horse farming impossible. The land might as well have remained undiscovered as far as producing any food was concerned.

Jefferson added white space to the map.

The tractor has changed ten million acres from barren white on the map to growing fields of golden grain.

ARE CANADIAN MADE

Rumely Factory at Toronto Builds Advance and Ideal Separators

The Rumely Products Company, of La Porte, Ind., recently acquired the property of the American-Abell Company at Toronto, Can. The new company

controls it, and easy for the engine which pulls it. The gang is flexible—each bottom is separately controlled. Ample space is left below the beams to prevent clogging with trash. All Rumely plows are built alike so that any part can easily be replaced—even an exchange of beams can easily be made in the field.

Detailed information on these gang plows may be had upon request to the Rumely Products Company, La Porte, Ind.

Hay Baler Is Automatic

The Rumely Automatic Hay Baler is all that its name implies. It is automatic because it feeds itself and thereby eliminates the man on the platform. Not only does it save the wages of this platform man, but it does the work faster than he could do it, and thus makes additional profit.

The Rumely Automatic is the only baler on the market which has this self-feeder; no others can use this feeder because it is entirely protected by exclusive patents. Any farmer who is thinking of getting a baler will of course investigate this Automatic Baler first, because it offers the one best money-maker on the market.



If He Kept Horses Enough To Haul This Grain, He Would Have To Keep It To Feed the Horses.

furnish machines that don't wear out.

In Minnesota and the two Dakotas 355 separators were owned among 3,456 farmers—one to every ten farms. A canvass of 1,850 farmers showed a total of 255 traction engines. Farmers in those states know the threshing game as few others do. Twenty per cent of the tractors are Rumely tractors, and nearly 19 per cent of the separators were made in Rumely plants. There were 11 separator and 14 tractor concerns in the list.

All these facts go hand-in-hand—a big national cost in machinery for threshing—a low cost for Rumely up-keep—and as a result, a big percentage of Rumely machines in use in comparison with all other makes.

BIG LAND INCREASE

Thomas Jefferson stands first in annexing territory to the country. Many millions of producing acres were added by his purchase of fourteen states west of the Mississippi River for 15 million dollars.

Rumely tractors have added more to the producing area of the

formed, The Canadian Rumely Company, Ltd., is now busy manufacturing Rumely Ideal and Advance Separators for the farmers of Canada. The Advance and Ideal are Canadian-made for the Canadian farmers.

The Best Engine Gang Plow

The Rumely Products Company first designed a gang plow because they were determined that behind their OilPull tractors should be hitched the best gang plow which it was possible to build. The utility of the tractors depended in large part upon an engine gang plow properly designed and substantially built. It was up to Rumelys to build the best plow in the market.

The Rumely Engine Gang Plow is easy to operate, easy for the plowman who

Upon request from you, The Rumely Products Company, of La Porte, Ind., or any of its branch houses, will promptly mail you a booklet "The Rumely Automatic Baler Book, No. 245," which gives complete information about the construction of this baler and the work it will do.

Rumely Sanders Disc Plows

For engine gangs the Rumely Sanders Disc Plows are the best to be had anywhere. All the principal parts of this disc plow are bolted direct to one solid steel frame, thus obtaining a unified strength necessary for engine work. Exclusive patents cover the most important features of the frame—a specially designed solid steel bar, to which are bolted the extra strong beams carrying

the discs. The discs can be set to cut 6, 8 or 10-inch furrow; each disc is fastened with just one countersunk head bolt at the centre where there is motion. The number of discs in each gang vary according to the job under way.

How best to handle your disc plowing will be shown in a booklet, "Sander's Disc Plows Book, No. 327," which will be sent you upon request to the Rumely Products Company, La Porte, Ind.

TEN CANADIAN BRANCH HOUSES

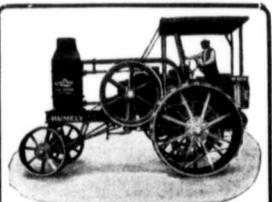
Rumely Power - Farming Machinery Is Delivered Quickly Through General Branches and the Many Agents

Farm machines with their various equipments must be within easy reach, if they are to be of the most benefit to the farmers using them. This fact has been recognized by the Rumely Products Company, which has established, not only a complete factory at Toronto, but also ten general distributing stations, known as branches.

These branches keep at all times complete lines of Rumely machines and supplies. It is from these branches that the hundreds of agents and dealers receive shipments. This enables the farmer to get a tractor or separator or any supplies from a nearby branch in a very short time.

If you will write to the Rumely Products Company, La Porte, Indiana, they will be glad to tell you the name of their dealer nearest you, and you can see from the list below where they have a general branch house nearest you. Branch houses have been established in these Canadian cities:

- | | |
|------------------|-----------------|
| Estevan, Sask. | Brandon, Man. |
| Regina, Sask. | Winnipeg, Man. |
| Saskatoon, Sask. | Calgary, Alta. |
| Yorkton, Sask. | Edmonton, Alta. |
| Toronto, Ont. | Vancouver, B.C. |



Always on Oil

The Tractor uses oil at all loads and no load, in summer and winter, anywhere and any time.

This is made possible by the Secor-Higgins Carburetor, found only in Rumely engines.

If you want a tractor using oil (the cheapest fuel) all the time, you want an .

"Toiling and Tilling the Soil" tells in an entertaining way about the Tractor. Write for this booklet today.

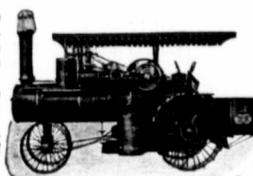
Rumely Products Co.
 (INCORPORATED)
 Power-Farming Machinery
 La Porte Indiana

Gaar-Scott Engines for 77 Years

Away back in 1836 a steam engine was built in the Gaar factory at Richmond, Ind. Each of the 77 years since then has seen better engines bearing the same name.

The active period of one lifetime was spent building Gaar-Scott boilers. This foreman, now 80 years old, has retired. His position descends to his son, already a master builder, who inherited a thorough knowledge of boiler construction.

Rumely Products Co.
 (INCORPORATED)
 Power-Farming Machinery
 La Porte Indiana



A request from you will bring a Gaar-Scott catalogue by return mail. Write today.



Safe Exercise-Lots for Farm and Dairy Stock

To be healthy and profitable, livestock need exercise—in winter as well as in summer. Formerly stockmen and dairymen used high stone fences and dense hedges to shield their exercise-lots from wintry blasts. Since such wind-walls have objectionable features, and are also not everywhere possible, many farmers are now building their wind-breaks of concrete.

Begin constructing the wind-break on that side of the exercise-lot from which the winter winds most often blow. A very convenient way to build the wall is in panel sections 12 feet long, 6 feet high and 6 inches thick, with a foundation 1 foot thick and extending 3 feet into the ground. Supporting one end of this panel, and built at the same time, is a large concrete post 1 foot square, 6 feet above the ground and 4 feet below. The other end of the panel is keyed into the mortise in a similar large post molded at the previous operation, as shown in drawing below.

The forms for the panel are simply two independent walls of 1-inch siding on 2 by 4-inch uprights 6 feet in length and spaced 2 feet apart. The mold for the post is merely a 6-foot box 12 inches square on the inside and open on one face and at both ends. It is made of 2-inch lumber. The open side butts against the end 2 by 4 uprights of the panel forms. To the inside of the board opposite this open face is nailed the wedge-shaped timber which forms the mortise lengthwise the post into which the next panel is keyed. For this wedge-shaped timber use a 3 by 4 (or a built-up piece) with the 4-inch dimension nailed to the form and the sides beveled to produce a 3-inch face. Through this beveled piece, 3 inches from the top and bottom, bore two 5/8-inch holes in which 2-foot lengths of 3/8-inch rods are placed and allowed to project 1 foot into the next panel.

Using the post mold only, build the end or corner post of the wind-break and, if necessary, make an extra mortise in it. Dig the hole 12 inches square and 4

feet deep. Set up the post form, plumb it carefully with a carpenter's level and fill with mushy wet concrete. Proportion the concrete 1 bag of Portland cement to 4 cubic feet of pit gravel, or 1 bag of cement to 2 cubic feet of sand and 4 cubic feet of crushed rock. Reinforce the post, 1 1/2 inches from each corner, with a 3/8-inch rod 9 feet long. Wire these rods securely together, diagonally, near the top. Remember to insert the short lengths of rods which tie the post to the next panel. In warm weather the post form (as well as that for the panel) may be removed in three days. Then dig the next 4-foot post hole and 3-foot panel trench. Fill them with concrete and immediately set up the post and panel forms with the latter butting against the last-made concrete post. Reinforce the post as before and also the panel, 3 inches from the top and the bottom and halfway up the wall, with two 3/8-inch bars equally spaced from each other and the sides of the form. Labor of lifting the concrete can be lightened by slipping the boards in place on one side of the panel form as they are needed. Build section after section until the wind-break is completed. Keep animals away from the wind-break until it is two weeks old.

For one section of panel and post, 12 feet 9 inches over all, there will be required 5 barrels of Portland cement, 1 1/2 cubic yards of sand, 3 cubic yards of crushed rock and 10 pieces of 3/8-inch by 12-foot steel reinforcement bars. The usual cost of these materials is \$12.00.

Dairymen find that an exercise-lot, enclosed by a concrete wind-break, largely increases the milk yield of their dairy cows. Such a paddock ensures a safe and secluded enclosure for bulls and stallions. Paved with concrete, it is an ideal feed lot where not a particle of grain or manure need be wasted. The same general plan is adaptable to building ornamental garden walls.



If a man has any sense at all it shows up before he gets engaged or after he is married.

More Money

Than it has been possible to get from your dairy product by using "any old" way or any other machine to find the butter fat.

IS ONLY POSSIBLE THROUGH THE MEDIUM OF THE

"MAGNET" Cream Separator



With this matchless and perfect skimmer you have got the all-important requisites to complete and uniform success in Dairy Farming. If you have cows that give milk—good quality and in reasonable quantity—"The Magnet" will give you the last particle of the product that can be converted into cash.

"The Magnet" has them all "skinned" for clean skimming and if you will take the trouble to send us a card we will at once satisfy you beyond all doubt that it is the Cream Separator for You to Buy.

Our Slogan is "TO SATISFY"—and we will do it at all costs.

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

The Petrie Mfg. Co., Ltd.

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

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

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

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

BLATCHFORD'S CALF MEAL
The complete milk substitute, raises calves without milk, prevents scouring, insures early maturity, raises 3 feed calves at the cost of one. Send for free booklet, how to raise calves cheaply and successfully without milk.
STEELE BRIGGS' SEED COMPANY, WINNIPEG, Man.

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

Patent Notice

Anyone desiring to obtain the invention covered by Canadian Patent No. 133079 granted on the 16th day of May, 1911, for Grain Shocking Machines to Theodore Swanson, Thomas Carmody, Casper Keene, Jr., Henry Keene, and Anthony Keene, all of Whittemore, in the State of Iowa, United States of America, may do so upon application to the undersigned who are prepared to supply all reasonable demands on the part of the public for the invention and from whom full information may be obtained.

FETHERSTONHAUGH & CO.
209 Bank of Nova Scotia, Portage Avenue, Winnipeg, Man.
GERALD S. ROXBURGH, Resident Manager.

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

Why it Pays the Farmer to Build Good Roads

By A. R. McFADDEN, Macleod, Alta.

A good road should be regarded as an asset to every person living within the community through which it passes, and especially to farmers whose property is saved by such road. A farm may be ever so efficient from the standpoint of buildings, cultivators, etc., but if difficult of access, to and from the outside world, its value is very greatly impaired.

Among reasons may be mentioned, first, the reduction in the cost of hauling products and necessities to and from the farm. The cost of transportation with the farmer, as with the railway companies, depends upon the scale upon which it is conducted. Thus it costs but little more for one man and horses to draw two or three tons than for the same equipment to draw one ton, providing the state of the road is such as to permit, and this in the aggregate provides an economy scarcely to be estimated to the country at large, especially where distances from town are frequently great. The cost of delivering a carload of wheat from the farmer's granary to the railway station often exceeds the freight charges to the terminal elevator, although the latter distance may be incomparably greater, and this is determined by the state of the road over which it must pass.

Then, too, the marketable value of a property is much increased if reached by a good road. First impressions of a purchaser are usually the most lasting, and these are not likely to be favorable if the farm must be reached over ruts, stones and slough holes, and he will probably go elsewhere.

These may be called apparent reasons for the building of good roads, but there are others which, though less apparent, are none the less real. For example, a farmer fills his wagon box with wheat and starts for town. He soon passes over a stone or through a hole, and the jar shakes off a quantity of wheat. This is repeated several times. Other farmers do the same, until the wheat scattered along the trails would form the output of a moderate farm. Such shaking is also very trying on wagons, and after a few years of such treatment they show unmistakable signs of wear, and do not last more than half the time. The farmer may attribute the loss of his grain, or the wearing of his wagon, to the roughness of the road, but nevertheless, they are

"Kill-Em-Quick"

The Poison That's Guaranteed To Kill Gophers For 1c Per Acre



THERE'S 154 deadly doses of poison in every ounce of Mickelson's Kill-Em-Quick. A 75c box contains 13 ounces, or over 2000 death-dealing doses.

For less than one cent per acre you can save fully \$400, since each gopher eats, destroys and stores away about 10c worth of grain every summer, and each pair reproduces 20 to 36 young ones every year.

Why It Is The Most Effective, Cheapest, Best Gopher Poison!

Poison is not only the cheapest gopher poison you or any other man can use, but it is absolutely the most effective you ever saw of any price. My poison is the result of many years experience as a compounder of medical ingredients, and ten years study of gophers. From actual farm experience I have learned the habits, tastes, haunts, all about gophers. The sum total of my experience, I offer you in Kill-Em-Quick. You can't compare it with old-fashioned "farm made poison" can't beat Kill-Em-Quick for price—you can't beat it for quality.

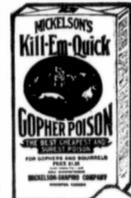
Buy it in boxes from your druggist. It's easy to use. Simply soak grain in water overnight, drain the water and mix the grain with Kill-Em-Quick. For instant use soak grain in hot water for 10 minutes, then mix with Kill-Em-Quick. It can't sour or lose its strength. Mix with wheat, oats, oat meal, shorts or cracked corn.

Kill-Em-Quick has a peculiar odor that attracts the gophers. They love juicy, and it's not to eat it. And one single dose of Kill-Em-Quick will kill just as sure as they eat it. When a gopher gets Kill-Em-Quick in its mouth he swallows it because the taste is good. They like it and they die in their tracks. Read what Mr. Andrew Amundson, McClusky, writes: "Your Gopher poison is the best I ever had. It is certainly doing the work." And Mr. P. W. Kinair, Palermo, writes: "Your poison takes the least and gives the farthest." Hundreds of letters like these prove that Kill-Em-Quick is surely doing the work. Get your package today.

Get "Kill-Em-Quick" Now Kill-Em-Quick comes in sealed boxes. Every box exactly the same—with an individual guarantee that protects you. If Kill-Em-Quick does not kill gophers for less than 1c per acre—I'll have your money returned to you.

What better proposition could I make? Visit your druggist today, NOW and get your supply. Don't wait another day. The longer you wait the more the gophers rob you. If your druggist does not have Kill-Em-Quick we will ship direct from our store, 7c and \$1.25. For special advice or booklet address

ANTON MICKELSON, Pres. MICKELSON-SHAPIRO CO. Dept. C Winnipeg, Can.



FREE—This attractive and handy leather coin purse—the finest you ever saw. In every box of Kill-Em-Quick there is one coupon. Send two with the one in this advertisement and the purse will be sent you by mail. Get two boxes of Kill-Em-Quick at once. Clip coupon and send all three to us and get the purse free.

Coin Purse Coupon

This coupon and two coupons from packages of Mickelson's Kill-Em-Quick, entitle you to one Leather Coin Purse Free. Send no money—just this coupon and two coupons from Kill-Em-Quick packages.

Mickelson-Shapiro Co. Dept. C Winnipeg, Can.

A concrete milk-house makes milk worth more

PEOPLE are willing to pay more for milk that comes from a clean, sanitary dairy. In nearly every city such dairies charge from 50 per cent. to 100 per cent. more than others—and even then they can't supply the demand for pure, high-grade milk. You will get more value out of your cows if you properly cool and store the milk. Such milk is not only more wholesome—and therefore can be sold for a better price—it is also slower to sour than milk handled by ordinary methods. Ask for the free book,



"What The Farmer Can Do With Concrete"

IT will tell you how to build a concrete milk-house, and also describes scores of other uses for concrete around the home and on the farm. It is not a catalogue. Its 160 handsomely illustrated pages are devoted entirely to the subject—in which every progressive farmer is interested.

YOU do not place yourself under the slightest obligation in asking for the book. We do not even ask that you agree to use cement. Just sign the coupon attached to this advertisement, or send your name and address by letter or post card, and the book will be mailed to you at once. Address,

Please send me your book

Publicity Manager

CANADA CEMENT COMPANY LIMITED

513-Herald Building, Montreal 560

WHEN you buy cement, remember that the farmers of Canada have found that "Canada" cement is best. Look for the label on every bag and barrel.



DE LAVAL CREAM SEPARATORS

Cheapest as Well As Best

Every sensible person wants the best of everything, but in many things the best is beyond their means and they must necessarily be content with something less.

In the case of the Cream Separator, however, the best is fortunately the cheapest as well, and it is of the greatest importance that every buyer of a separator should know this.



Moreover, the best is of more importance in the case of the Cream Separator than in anything else, since it means a saving or a waste twice a day every day in the year for many years.

It is true that DE LAVAL Separators cost a little more in first price than some inferior separators, but that counts for nothing against the fact that they save their cost every year over any other separator, while they last an average twenty years as compared with an average two years in the case of other separators.

And if first cost is a serious consideration a DE LAVAL machine may be bought on such liberal terms that it will actually save and pay for itself.

These are all important facts which every buyer of a Cream Separator should understand and which every local DE LAVAL agent is glad to explain and demonstrate to the satisfaction of the intending buyer.

If you don't know the nearest DE LAVAL agent please simply address the nearest of our main offices as below.

De Laval Dairy Supply Co., Ltd.
Montreal Peterboro Winnipeg Vancouver

Mention this magazine when writing advertisers.

USE WHITE ROSE GASOLINE

More Power Less Carbon

Making High-Priced Pork While Grinding their own Feed.



Canadian Hog Motor Co. Ltd.
372 Portage Ave. Winnipeg, Man.

Mention this magazine when writing advertisers.

In Answering Advertisements in this Magazine be sure and mention where you saw the advt. Remember we guarantee the reliability of all our advertisers.

chargeable, in no small degree, to this cause.

A horse may also be sweened or otherwise injured by the jolt of a heavy load over a rough place, and the owner not know how or when it was done.

For the above reasons it is a safe statement that under ordinary conditions any administration having the oversight of road-making would be justified in creating a bonded indebtedness for the purpose, leaving posterity to pay, and the benefits arising would repay the interest many times over in the social and moral uplift which it would provide.

Preservation and Application of Manure

The causes, conditions and results of fermentation.—Fermentation, or rotting, is brought about by the agency of certain microscopic plants known as bacteria. The extent of the fermentation, a process which necessarily means a greater or less loss of the organic matter and nitrogen of the manure, will depend chiefly upon the temperature, moisture and the amount of air through the heap. Rotting is not a simple process, the decomposition that takes place resulting from the development of two classes of bacteria. (1) aerobic, or those requiring the oxygen of the air for their existence, and (2) anaerobic, or those which can develop in an atmosphere destitute of oxygen. As the conditions for their development are different, so are the compounds produced by their life functions. The manure on the top and sides of the heap is freely permeated by air. It is here that the aerobic ferments set up a combustion of the organic matter, which is burnt by union with the oxygen of the air in the interstices of the manure, forming carbonic acid. Much heat in consequence of this combustion is generated. Fire-fangling is the result of excessive fermentation of this character, usually caused by lack of sufficient moisture. Lower in the heap, the heat decreases, since there the aerobic ferments cannot live for want of air. The anaerobic ferments that thrive at the bottom of the heap disengage marsh gas as well as carbonic acid, and produce but little heat. In the superficial layers the soluble carbohydrates (gum, sugar, etc.) are burnt; in the lower part of the heap, the cellulose or fibre is principally decomposed.

Bacteria are present in both solid and liquid portions of manures, but, as it has been already stated, it is more especially in the latter that they find a favorable medium for their growth. Drenching the manure heap with the



Buy Roofing For What It Protects

Let's have a little cold-blooded reasoning. You've got several thousand dollars' worth of perishable property under cover. A little dampness—a trickle of rain—might cost you more than the price of a dozen roofs. Same next year. In 20 years one good roof will protect a fortune. In one year a poor roof may destroy it. Now—can a roof be too good? Is it a thing to bargain about—to buy with narrow-minded economy?

When you can secure for only a little more the absolute protection—the positive insurance—which NEPONSET Paroid Roofing gives, can you afford to experiment with cheap, bargain roofings?

NEPONSET

Waterproof Building Products

Roofings

NEPONSET roofings are a fire protection, leak-proof and long lived. Any one can lay them. NEPONSET Paroid Roofing is for general use. NEPONSET Prostate Roofing is an ornamental roofing for dwellings. Attractive colors.

Building Papers

NEPONSET Waterproof Building Papers are built into walls and floors, the building will be warmer, will cost less to heat and will last years longer. Recommended by architects, engineers and building owners everywhere.

Wall Board

NEPONSET Wall Board is a scientific product which takes the place of lath and plaster, comes in sheets 12 inches wide. Remember, it is the only wall board with water-proof surfaces that requires no further decoration. Anyone can put it up.

Are you going to build? Write for valuable information about modern ways to waterproof and weatherproof. Send for samples, free booklet and name of nearest NEPONSET dealer.

BIRD & SON Est. 1876 861 Heintzman Bldg., Hamilton, Ont.
(F. W. BIRD & SON) Montreal St. John, N.B. Winnipeg Vancouver

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



Perfect Lubrication

is necessary for perfect separation. Get both by using

STANDARD Hand Separator Oil

A light colored, light bodied oil, compounded especially for the delicate bearings of a separator.

Insures free, even spinning. Never gums. Never rusts. Never corrodes.

Prolongs the life of the machine and increases the cream yield.

Ask your dealer for Standard Hand Separator Oil. One gallon cans.

Main Office: WINNIPEG
Regina, Moose Jaw, Saskatoon, Calgary,
Edmonton, Lethbridge, Vancouver.

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

Don't Fail to Renew Your Subscription Before it is Too Late.

drainage liquid, therefore, not only affords the necessary moisture to retain the ammonia, but also introduces ferments which act beneficially.

We have hitherto considered the action of the bacterial ferments on the non-nitrogenous compounds of manure. It now remains to be stated that the nitrogen of urine and dung may in part be liberated as free nitrogen or in part converted into ammonia and finally into nitrates by their agency. The alkaline fluid produced by the solution of the ammonia in the liquids of the dung is able to dissolve unattacked nitrogenous substances both in the litter and dung, thus preparing for assimilation much plant nourishment otherwise valueless. Rotting or fermentation results in the breaking down or destruction of organic structure in the dung and litter, humus-forming materials being produced. For this reason the mass of rotted manure is more uniform and homogeneous than fresh manure.

Fermentation always entails a loss of organic matter; it also means an escape of a part of the nitrogen. The looser the pile, the greater will be the deterioration. Fire-fang is injurious to the quality of the manure, and results, as already remarked, chiefly from an insufficiency of moisture. Liquid excrement by itself rapidly loses in value, its nitrogen escaping as carbonate of ammonia. These facts point to the great desirability of controlling fermentation, (1) by fermenting the solid and liquid excreta together (this can only be accomplished by using a sufficiency of litter or absorbent), (2) by fermenting "hot" and "cold" (horse and sheep excreta belong to the first class, that from the cow and pig are of the latter class) manures together, (3) by keeping the heap compact and moist, thus excluding excess of air. Fermentation must be regulated and controlled by these means or the losses that ensue fill more than out-balance the benefits to be gained.

Eight for weight, rotted manure is more valuable than fresh manure. The losses during fermentation are principally in the destruction of the organic matter and loss of nitrogen and do not, under the best farm conditions, lead to much loss of phosphoric acid and potash. It might be possible with a perfectly water-tight concrete floor to prevent all loss from drainage, but as the flush is extremely soluble it is impossible without such means to prevent some loss of this element. The decrease in weight takes place, due chiefly to the combustion or burning away of the organic matter, will depend upon

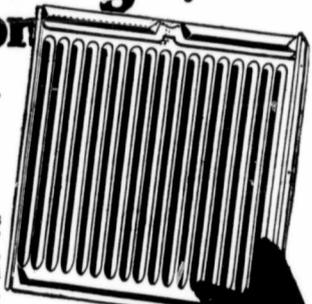
"Use My New Big Shingle, and My Corrugated Iron to Make Your Barn Cost You Less than Wood"



I MEAN what I say by the words 'cost you less than wood.' Labor for putting barns up and the cost of lumber and wood shingle is very high now.

Wood used the way your father followed, puts wooden barns tremendously high in cost to-day. I have a new and better way that avoids repairs too."

"To put it in simple words, I give you a manufactured metal roof and manufactured metal walls for your barn. This roof and wall comes in big units. It takes about the same labor to set a 4 square foot size metal 'George' Shingle as to nail 5 or 6 wood shingles on a barn roof. So much labor is saved, and the cost of my metal shingle is so comparatively low, that my shingle works out as costing you less than a cedar shingle roof. The same thing applies to your barn walls. My big sheets of corrugated iron beat out boards. A single sheet is like nailing a dozen boards at a time. The saved labor offsets the margin of cost. You save money. Use my metal shingle, and my corrugated iron for barn walls. It lasts, repairs free, and safe for years to come."



HERE is my 'George' Shingle, just placed on the market. My son, the late Geo. H. Pedlar, Jr., invented it. It is 2 feet by 2 feet in size. This is bigger than my famous 'Oshawa' Shingle, which is 16 x 20 inches in size, and is sold all over the world."

"These shingles are made in 100-year metal. This is a special metal that will not corrode like iron, tin or steel. In addition, I galvanize each shingle with zinc. Once you lay a roof, it needs no paint, no repairs, and no attention. It is good for 100 years, and weighs just one-fourth of cedar. Get full details in my book."

G. H. Pedlar

Get my Book on Barns At Low Cost—FREE

"I have a book showing a fire-proof, lightning-proof barn, warm, dry, clean, wind-braced, and strong. It costs less than wood. Every stage of building is shown in pictures. I want all my friends to have a copy. Write nearest branch for yours, to-day."

Send to My Nearest Branch for 'George' Shingle, Book No. 166



Address nearest Branch

Established 1861 The PEDLAR PEOPLE LIMITED

MONTREAL 321-3 Craig St.	TORONTO 113 Bay St.	OTTAWA 432 Sussex St.	WINNIPEG 76 Lombard St.
CHATHAM 290 King St. W.	QUEBEC 127 Rue du Pont	ST. JOHN, N.B. 42-46 Pr. William St.	LONDON 86 King St.
MEDICINE HAT -- Toronto St.	EDMONTON 563 3rd St. W.	HALIFAX 16 Prince St.	MOOSE JAW 202 Fairford St.
SYDNEY 194-208 George St.	SASKATOON Box 1645	CALGARY Rm. 7, Crown Block	VICTORIA 434 Kingston St.
PORT ARTHUR 45 Cumberland St.		VANCOUVER 108 Alexander St.	LETHBRIDGE 1262 1st Ave. So.

Head Office and Works, OSHAWA, CANADA

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

the extent of the fermentation. Some of the nitrogen will always escape, either in the free state or as ammonia, but under right conditions of fermentation the percentage of this element will always be found to be considerably greater in rotted than in fresh manure.

The advantages gained by rotting may be enumerated briefly as follows: The manure becomes disintegrated and of uniform character throughout, allowing an easier and more uniform distribution in the field, and a more intimate mixing with the soil; the coarse litter is decomposed and its plant food thus made more available; compounds are formed from the organic matter that more

readily produces humus within the soil; the availability of the nitrogen of the solid portion of the manure is increased; the phosphates are made more assimilable; there is less weight of manure to haul to the fields; the larger number of weed seeds that may be present are destroyed.



It is not a world for men to take their ease in; but a world to work. It is not a world for the selfish greed of gain; nor the selfish pantings of ambition; nor the selfish struggles of power; but a world for generous self-abandonment, for sacrifice and heroic toil. Only he shall be loved of God

and honored of men, who is found to have accomplished something for human happiness and human good.

Roswell D. Hitchcock

DR. WARNOCK'S ULCERKURE

The wound healing wonder. Heals without leaving a scar or the usual aftergrowth of white hairs. Ulcerkure is the surest and safest of all antiseptics.

Sold in bottles, 50 cents and \$1.00

Western Veterinary Co.

Sole Proprietors

P.O. Box 2132. Winnipeg, Canada

Mention this magazine when writing advertisers

The Dust Mulch

If one turns over a board or scrapes away some straw lying upon the ground, the ground is seen to be moist while the surrounding, exposed ground may be dry. If one scatters straw upon dry ground, it will be found in a few days that the dry ground has become moist. The upper few inches of surface will be seen to have accumulated moisture. This moisture would have been given up to the air and thus lost to the soil had not the straw been applied. A layer of dry soil acts in the same way when applied to land. It is plain that this layer of dry soil can be applied to the land from the land itself, by the use of suitable machinery. The dirt mulch can be applied with but little cost and because of this, and because it saves the moisture so well, it becomes of incalculable value to farming in such a state as North Dakota. After a heavy rain, one observes the soil in the garden or in the corn field to be packed and hard; by running over the ground with a cultivator, the packed soil is broken and a mulch is established. The formation of the mulch prevents in great measure the loss of moisture. The loss of moisture is prevented by the stoppage of the capillary movement of water. It would be much the same if one were to cut off a lamp wick and fasten the two cut ends by wires. Oil would not pass from one part of the wick to another. Forming a mulch on land does not entirely prevent the loss of moisture, but the moisture saved may amount to fifty per cent or even considerably more.

There are several conditions that affect the dirt mulch. The deeper soil mulch is the more effective, but the deep soil mulch is more expensive to make, and the deeper the mulch the more fertile soil there is lost for the plants. A soil mulch becomes poorer with age and so it may have to be renewed occasionally. This is especially true if a rain should come. Dirt mulches can be better made when the soil is moist.

A Timely Warning on Weeds

The following happy suggestions have recently been made public by H. N. Thompson, Weeds and Seed Commissioner, Regina, Saskatchewan:

Cities, towns and villages must this year appoint weed inspectors. It is not necessary to enlarge upon the importance of this—streets, lanes, and vacant lots, full of weeds and unattended all summer, is sufficient evidence of

the need of some one to pay special attention to matters of this nature.

The simple enforcement of the act will keep a town free of weeds, but why not take steps to beautify the town? The same amount of energy properly directed would result in the planting of trees, flowers and ornamental shrubs, and in the making of lawns. Your weed inspector has, or can obtain, from the Department of Agriculture, a list of planting material suitable for the West. The council should set the example by keeping the streets, lanes, and vacant lots in proper order; indeed, why should not the council take charge of all vacant lots, cultivate them and rent them out to suitable parties for garden plots?

Why should not the boy scouts attend to the matter of keeping the town free of weeds and in a neat, tidy state. It seems to me that the boy scouts is just the body to handle this work; there is no doubt as to their ability to cope with the problem. At any rate, whatever is done should be done at once. Let not your town, from lack of proper attention, become a disgrace to this agricultural country.

Co-Operative Egg Circles

An important part of the poultry work of the Live Stock Branch of the Department of Agriculture, during the past year, has been the organization of Co-operative Egg-Circles. Ten circles in all have been organized under the auspices of the branch, working in conjunction with the provincial and agricultural college authorities and the Poultry Producers' Association of Canada. The preliminary work in connection with a number of others has been done, and from present indications it is apparent that this phase of co-operative work is likely to have a rapid growth in the near future.

Being primarily concerned with the improvement of the Canadian egg trade, the Live Stock Branch has encouraged the formation of these circles because the movement affords a means whereby the quality of eggs can be improved, as they leave the farm, and the pernicious practice of holding eggs both on the farm and in the country store largely eliminated. Co-operative effort of this kind also affords a medium whereby the eggs in any given community may be collected and marketed frequently and regularly, and insures to the consumer a new-laid egg of uniform quality at no great increase in cost.

At the time of joining the association the members agree to



The Fence You Ought to Buy at the Price You Want to Pay is Standard Fence

We believe it to be the best Fence sold in Canada. It's the one fence that through all the price cutting—HAS NOT CUT THE QUALITY. It's made from guaranteed full gauge No. 9 hard drawn galvanized steel wire.

Send for our catalogue—it contains full particulars—and besides gives you a lot of useful information about how to build fence, how to judge your requirements exactly and how to order to your best advantage.

DON'T BUY FENCE until you have received a copy.

Write for it now before you forget. A postal will do. Address:

Standard Tube & Fence Co. Limited

BRANDON, Man. and WOODSTOCK, Ont.

Dept. R Live agents wanted for Standard Fence, Posts and Gates. Write for special terms today.

STANDARD FENCE

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

Cream Shippers! We Pay Full Prices!

Ship your cream to us and realize its full value to the last cent. We furnish tags free, and supply cans without charge until you are satisfied with our treatment. By our fair and square methods, we have kept some of the biggest shippers in the West dealing with us for years. CASH PAYMENT goes out promptly for every can of cream received. We return cans in 48 hours and pay all charges. WRITE US and let us prove that it will be to your interest to ship here.

The Brandon Creamery & Supply Company
BRANDON MANITOBA

Brandon Creamery & Supply Company
BRANDON, MAN.

Tie This Tag to Your Cans

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

The Double Action Harrow For The West

Proper cultivation and clean fields are the needs of every Western farmer. The plates in the Bissell are the correct shape to cut, pulverize and work the ground properly.

BISSELL DISK HARROWS

Simplicity of construction, every part built for business, proper balance and the knack to get right down to perfect work make the 'Bissell' ideal for Western farms. These double action harrows have one disk out-throw, the other in-throw, giving two full width cuts. Connect up 4, 6 or 8 harrows with engine power for a large complete Disking Outfit. Write Dept. L.

Manufactured exclusively by
T.E. BISSELL COMPANY, LTD., ELORA, ONT.

Write to any of the
Jno. Deere Plow Company's Branch Houses 78

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

stamp each egg with a given number designated by the Board of Directors. This is done so that the eggs of each member may be identified when graded and payment made according to quality.

A manager is appointed by the Board of Directors whose business it is to collect, grade, sell the eggs and apportion the returns among the members according to the quantity and quality received. In most circles the eggs from each farm are collected at intervals, but in others the members deliver the eggs to some central point such as a creamery, cheese factory, store or house, from which the manager makes the shipment.

It is well known that at certain seasons of the year there is a wide difference between the price received for eggs by the farmer in the country store and the price paid by the consumer in the city. This difference is not nearly so marked in the spring of the year as it is in the late summer, fall and winter. In other words, as the quality of ordinary farm eggs becomes more uncertain the premium placed on new-laid circle eggs increases. While during the spring of the year prices received by circle members may not greatly exceed those paid in the local store, it is a fact that for the eggs produced in the month of December last year the majority of circles in the provinces of Ontario and Quebec received a price of from 45 to 50 cents a dozen.

A limited number of circles will no doubt be able to take advantage of the rapidly growing select trade in the larger Canadian cities, but from the fact that the wholesale egg dealers in Ontario and Quebec have recently adopted a new system of buying on a basis of quality, it is likely that the product of the majority of circles will find its way to the consumer through the more recently established channels of trade.

The Live Stock Branch stands ready and willing to help on the Egg Circle movement in every possible way. Officers of this branch are now in the field, and there is available a quantity of literature, including outlines of constitutions, by-laws, etc., dealing with the work, copies of which may be obtained upon request from the Live Stock Commissioner, Ottawa.



Kansas Legislature is considering a bill to "standardize" hash, and compel hash-makers to let those who eat it know what is in it.

We warn Kansas that such a law would defeat its own purpose. Who would eat hash then?

Do they Use Pedlar Culvert on Your Roads?

Use It On the Farm, Too

Pedlar Culvert makes farm bridges at ditches, gates, etc. Time saving, frost-proof. It never washes out. Lasts for years. Sizes 8 inches to 7 ft. in diameter.



Put the small sizes in your open drains like this everywhere needed on your farm.



Or use it under your gateway bridge, or as a well curbing, if desired.

Instead of doing statute labor, year after year, on a rotting bridge, throw it out and install our Pedlar Culvert in a few hours.

A Sample of Pedlar Culvert and a Special Book about it to every Farmer or Reeve or Municipal Officer —

FREE

THIS culvert is made in sizes from 8 inches up to 7 ft. It is very strong. It is proof against ice, frost, freshets, and corrosion. It saves road troubles and excavating. Does your township use it?



Nested bundles like this

—make interlocking sections which—

—a man clamps—

In Toncan Metal

Pedlar Culverts are not made in ordinary metal, and do not corrode. Toncan is a peculiar anti-rusting metal. It is used only in Pedlar Culverts. It makes the culvert good for years to come.

There are imitations. Be sure and get the genuine Pedlar Culvert, which will not corrode. Write us at our nearest branch for full details.

—into complete culverts—

—over which the road is built.

SEND for our Free Sample of Pedlar Culvert and Book to-day to the nearest branch below.

OUR NEAREST BRANCH WILL TAKE CARE OF YOU

- | | |
|---|---------------------------------|
| TORONTO
113 Bay Street | MONTREAL
327-3 Craig St. |
| LONDON
86 King Street | OTTAWA
432 Sussex St. |
| CHATHAM
206 King St. W. | QUEBEC
127 Rue du Port |
| EDMONTON
563 3rd St. W. | LETHBRIDGE
1302 1st Ave. So. |
| ST. JOHN, N.B.
42-46 Pr. William St. | HALIFAX
14 Prince St. |
| SYDNEY
134-208 George St. | |



- | | |
|----------------------------------|--------------------------------|
| PORT ARTHUR
46 Cumberland St. | MOOSE JAW
202 Fairford St. |
| WINNIPEG
76 Lombard St. | MEDICINE HAT
-- Toronto St. |
| SASKATOON
Box 185 | CALGARY
Rm. 7, Crow's Block |
| VANCOUVER
105 Alexander St. | VICTORIA
431 Kingston St. |

WRITE NEAREST BRANCH FOR CULVERT BOOK 255

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

C. H. Stinson Joins the Minneapolis Steel & Machinery Co.

Mr. C. H. Stinson, whose likeness appears on this page, has just accepted the position of sales manager of the Minneapolis Steel and Machinery Co., to succeed Chas. Barnard, deceased.

Mr. Stinson is very familiar to our readers, and while he has been temporarily out of the implement game for nearly a year, his old friends will be very glad to know that he is again back in harness.

Mr. Stinson was the man to coin the phrase in the machinery business, "Honest goods to honest people by honest methods" and in our long acquaintance with him we have found that he has attempted to carry out this slogan to the best of his ability.

Mr. Stinson was connected

with the Advance Thresher Co. for a number of years, and for



C. H. STINSON.

seven years was manager of that company's branch at Watertown, South Dakota. He comes from a

family of machine men. At one time five of his brothers were with the Advance Thresher Co., two being in South America.

In 1909 Mr. Stinson came to Winnipeg, to take charge of the western business of the American Abell Thresher Co., which position he held until January, 1912, when the American Abell business was taken over by the M. Rumely Co. Mr. Stinson remained with the Rumely Co. for a few months, going to California to clean up some business for them in that section of the country, but on account of ill health was forced to resign, and has spent practically all of the past year in a much needed rest.

We are more than pleased to welcome Mr. Stinson into the implement business again, and predict an increased tractor business for the Minneapolis Steel and Machinery Co., under his supervision.

**No. 1
Hard**
May, 5th 1913

Thanks to tremendous efforts put forth with icebreakers, lake navigation opened April 24th this year, nine days earlier than last, and at the hour of writing many millions of bushels of Western grain are en route to seaboard. A large number of American vessels wintered at Canadian Terminals, and so the first movement of grain this year is phenomenally heavy. Thousands of cars now under load will be released in the next three weeks, and the rail movement will likely be fairly heavy again by May 15th, though the percentage of grain still in farmers' hands is relatively smaller than usual. One has to note the considerable percentage of tough and off grade grain still coming ahead.

The easing up of money conditions in Europe, following the surrender of Adrianople, the disappointment felt at the poor quality of the wheat Russia has shipped since navigation of the Black Sea opened, and the dropping off in Argentine offerings, all formed a combination which resulted in Great Britain and the Continent coming actively after Canadian and American wheat in the last thirty days. The buying has been good, and once more it looks as if Europe must turn to North America for considerable supplies of high grade wheat before her own new crops are available. The balance of our crop should now find a market at even better prices.

Seeding has been commenced both in the three big spring wheat states and all across our own prairies, in good average time and with soil in condition rather better than the average. The flour demand on both sides of the line has been good, and buyers are showing a more active interest in the market, which is suggestive of broader business a little later on, as old stocks have been fairly well absorbed. Europe is bound to be a big buyer for the next few months. The

**HOW TO MAKE AN ORCHARD
IN BRITISH COLUMBIA**

Send twenty-five cents for book written by J. T. Bealby, B. A., the prize-winning British Columbia fruit grower. Full information for beginners or experienced growers.

**INTERNATIONAL SECURITIES COMPANY,
LIMITED,**
844 Somerset Building,
Winnipeg, Canada.

Mention this magazine when writing advertisers

outlook for immediate peace in Southern Europe is rather poor at the present time, and any general outbreak would bring a sharp upturn in wheat values.

In the United States of America the winter wheat outlook is excellent, and spring wheat prospects so far are also first class. It is anticipated that their wheat stocks will move abroad more readily now that Argentine shipments are dropping off, and their offerings are dearer. Great Britain let the continent take a larger percentage than usual of the cargoes arriving in the last few months; now it appears she must buy steadily our higher grade wheat for the rest of our crop year. And yet statistics go to show that nowhere in Europe is there a dearth of supplies. Perhaps the fact that American wheat is much cheaper than a year ago, and our own wheat about 12c a bushel cheaper, has led foreigners to buy readily, especially when beef has now gone much higher. Unless foreigners liquidate some of their big purchases by reselling in our markets, it is likely the demand will continue good, and prices be well maintained. But crop prospects with the U.S.A. and with us will henceforth decidedly influence markets.

Some statistics are of interest. Grain inspections past Winnipeg to April 29th are approximately:

Wheat	115,630,900 bus.
Oats	42,965,100 bus.
Barley	12,201,250 bus.
Flax	16,276,460 bus.

Lake shipments of wheat to April 28th, including wheat stored in boats in the winter, are 11,142,942 bushels.

Coarse Grains

Both oats and barley were helped by the strength in wheat, but now that large quantities are being shifted on the opening of navigation not much change for the better need be anticipated. As the malting season ends May 21st high grade barley should be marketed now. The country offerings of oats will likely not be heavy enough in the next few weeks to depress the markets. Farmers holding coarse grains at home should constantly examine same, as oats are not good keepers this year, because of so much moisture.

Flax

Despite the quantity of this grain shipped to date, as evidenced by the inspections given above, it has been demonstrated that flax has been artificially depressed, and it recently rallied sharply. It should do better yet, especially if building operations increase in the United States, and the new tariff bill does not hinder an easier financial outlook.

FARMERS! SHIP YOUR GRAIN

TO THE

CANADIAN ELEVATOR CO. LTD.
GRAIN COMMISSION MERCHANTS, WINNIPEG

It is as much our business to give satisfaction as to secure grain shipments. We watch the grading of each car and allow liberal advances on all bills of lading.

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

Better Prices for Your Grain

THE farmer is progressive who ships his grain and so puts it in the secondary markets, where there is real competition. For the last seven months it has paid well to consign. In choosing a Commission House to sell your grain, you may as well pick one whose members are experienced and energetic in your behalf.

TRY OUR SERVICE

BLACKBURN & MILLS (A. M. Blackburn)
(D. K. Mills)
531 Grain Exchange Winnipeg, Man.

Licensed Reference: The Royal Bank of Canada Bonded

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

Grain Growers

Over fifty years' experience in the grain trade of Canada and the facilities to enable us to give every necessary attention to all carlot shipments entrusted to our care, are at your service.

Ship us your grain on consignment. We will handle strictly on commission and give you full advantage of any premiums obtainable.

Should you wish net quotations at any time you have cars loaded, will be pleased to quote by wire.

Liberal advances and prompt adjustments.

Write us for any information you might wish re shipping and disposition of grain in carload lots. Have you one of our "Data for Grain Shippers?" It will prove of value to you.

James Richardson & Sons, Limited

COMMISSION DEPARTMENT

Trust & Loan Building - Winnipeg
Grain Exchange - Calgary

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

Removal Notice

Canadian Port Huron Co. Limited

To our friends and customers we wish to announce that we have removed our offices from 232 Chambers of Commerce Bldg., Winnipeg, to 147 Bannatyne Ave. East, Winnipeg. This is just one block east of Main St. and is directly opposite Ashdown's Wholesale Hardware Bldg.

Take a Main Street car and get off at Bannatyne and walk one block East.

Canadian Port Huron Company Ltd.

147 Bannatyne East TELEPHONE MAIN 1064 Winnipeg, Canada

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



Nature Gives No Guarantee!

Freedom from hail in your district in the past is no guarantee for the future. The record of last season demonstrates this fact.

The wise course for farmers living in districts less subject to hail than others is to take advantage of the low rate at which reliable protection can be secured under our system of hail insurance. For such districts the premium is in all fairness made lower than for localities where hail is more common.

Any of the Companies shown here, or any one of our 1,500 Local Agents, will be pleased to give you full information, or write to

Insurance Agencies Limited
 BRANDON WINNIPEG REGINA
 SASKATOON EDMONTON CALGARY

THE CENTRAL CANADA INSURANCE COMPANY
 THE SASKATCHEWAN INSURANCE COMPANY
 INSURANCE AGENCIES LIMITED
 General Agent Jos Cornell
 THE ALBERTA-CANADIAN INSURANCE COMPANY

BEST SERVICE AT LOWEST POSSIBLE COST

8



Keep Your Threshing Machine Going Through The Busy Season

If there is one thing more than another which gives the thresherman the right to express himself in plain language, it is an engine breakdown in a busy season with no repairs at hand.

The purchase of an I H C engine or tractor puts you in the best possible position when accident occurs. We don't claim that our machines will not break down, but we do arrange to prevent annoyance to you as far as is humanly possible. Here is our claim. Ask any thresherman or farmer who operates an I H C engine or tractor whether we make good or not.

I H C engines do as much work as any other—often-times more. I H C engines and tractors cost no more to operate than any other—in many cases less. I H C engines and tractors are dependable; they rarely give trouble. I H C local dealers and general agents keep very complete repair



part stocks on hand, so that it is possible to keep an I H C engine or tractor in good running order practically all the time.

There is a policy in our business which we refer to as I H C service. It means the selling of machines made as well as such machines can be made. It means that we stand behind them after we make the sale and see to it that they do the work we sold them to do. Our motto is "Satisfy the Customer." See the I H C local agent and get from him a confirmation of this story. If you are interested in an engine or tractor, he will see that you get complete information, or you can get it by addressing a letter to us.

International Harvester Company of Canada, Ltd.

BRANCH HOUSES AT

Brandon, Man.

Calgary, Alta.
Regina, Sask.

Edmonton, Alta.
Saskatoon, Sask.

Estevan, Sask.
Winnipeg, Man.

Lethbridge, Alta.

North Battleford, Sask.
Yorkton, Sask.

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

Our Great Canadian Biscuit Industry

Long ago, Canada earned her title to the proud distinction of being "The Bread Basket of the World." If she holds that place in these early days of her progress, to what may she not attain when her broad acres that are now lying fallow shall also be given up to the feeding of the nations?

The very best food product known on earth is No. 1 Hard Wheat. Under the severest baking tests, there is nothing the world over to match its flour product. That being so, why the farce of sending so much of the grain to Europe to be manufactured and re-shipped as "Bread" when at our very doors we have the factories that are making it at least as good, in some cases better, and delivering it in far more wholesome and palatable condition than it can possibly be found after thousands of miles of sea and railway transportation?

There still exists, a strange hallucination to the effect that no "home-made" article can be named in the same class with the "Imported" product. This absurd myth is never so ridiculous as



Winnipeg Factory of the Mooney Biscuit Co., Limited.

when we look at it as it affects our food stuffs, and more particularly our finer biscuit trade.

Realizing the absurdity of the situation and the call of the West for the very finest food that quality and human skill can make without having to pay two prices for it, a far-sighted enterprising firm of Canadian biscuit manufacturers stepped into the breach not many years ago and have now established four great factories at Montreal, Stratford, Winnipeg and Vancouver. We refer to the Mooney Biscuit Co.

Their business instinct led them to appreciate the fact that self-contained and self-respecting Canada could not continue to support a myth and would welcome any enterprise having the purpose of going a bit better than many European exporters do in turning out a grade of food stuffs specially manufactured for the "foreign trade."

They also believed that Canadians would recognise in no uncertain terms any organization that would enable them to obtain the finest food products that could be made from their own finest wheat and eat it fresh as the prairie breeze within a fortnight at the most (depending on distance only) from the moment

it came hot from the oven. Their hopes have been more than justified in the result, for from a very small beginning, they have grown in a remarkably brief space of time till they now operated four great biscuit bakeries, and employ a large army of the most skilled and best paid confectionery and biscuit experts in North America.

What a romance could be written about that little household dainty, the common but ever-popular soda biscuit—if we just knew and could manipulate the little trick that makes all the difference between the "flat, stale and unprofitable" passover cake and one of the most delicious mouthfuls Western Canadians know of. There are soda biscuits and "soda biscuits." What we refer to are, of course, such as the Mooney Biscuit Company makes and is famous for all over Canada.

This great Canadian house will give the visitor every courtesy who desires to visit one of their great biscuit bakeries. They will exhibit the whole process from start to finish and lay no restrictions on what one might care to eat in the course of a tour of inspection. You can have it hot from the oven before it reaches the long line of clever little women who pack the biscuits for the market at a speed which could never be reproduced by any photographic jugglery; or you can have it cool and refreshing as an ice wafer from one of the beautiful airtight cartons that will deliver it to any part of the globe as fresh and crisp as the moment it was hermetically sealed.

It is an easy thing to satisfy a ravenous craving for food. Almost anything will "go down" with the gourmand or the man dying from hunger, but it is quite another matter to make an irresistible appeal to the jaded or constitutionally morbid appetite. This is just where the wholesome home-made specialties of the Mooney people step in and perform an office in our social life that ought to be spoken of and written about in language far above the ordinary terms of commerce.

"Made in Canada" is a fine sentiment that we all hug in these days as we do our dearest possessions, but people cannot subsist and develop a robust existence on mere sentiment. Fortunately we have here "the goods" to back up the sentiment to a degree that is rapidly unexampled by any other Canadian industry. Having visited some of the older and much-advertised European houses in the same line, we can say without any reserve that none of them in their most novel developments exhibit anything finer in the sanitary

3 More Months

AND YOU WILL NEED A

Stewart Sheaf Loader

By Fall, we fully expect that at least 1550 farmers and threshermen will be equipped with the machine that **Saves Labor Costs**, because it works without pitcher, loads every kind of grain, either loose or bound, stooked or lying in the swath.

SAVES TEAMS

ordinarily required in threshing; **saves hundreds of dollars** in grain, wages and time. It is no experiment, already having been used by hundreds of farmers, who continue to write us along the following lines:

"Picks up loose sheaves cleaner than pitchers." McGregor Bros., Rosetown, Sask.

"Saved us \$638 in 29 days." Jas. Glenn & Sons, Milestone, Sask.

"Worked to our entire satisfaction." Jos. Chapman & Sons, Beresford, Man.

"Wouldn't be without it for a good deal more than we paid." Fenwick Bros., Milestone, Sask.

"Again gave perfect satisfaction, this being my second season." Elmer Graham, Dominion City, Man.



MR. FARMER: There is absolutely no question about your needing a STEWART SHEAF LOADER to handle your 1913 crop. It is simply a question of whether or not you wish to make money by saving it.

MR. THRESHERMAN: You can double your fall's run by having a STEWART SHEAF LOADER as part of your equipment. It will increase the efficiency of your outfit and at the same time leave behind you a train of satisfied farmers, who will do their best to meet their thresh bills on your account.

Owing to the heavy demand for Stewart Sheaf Loaders all over the West, and the rapidity with which orders are coming in, we would advise intending purchasers to be certain of securing one for the coming season by placing their orders early. We are building one for YOU, but don't forget that the other fellow may get it.

Stewart Sheaf Loader Co., Ltd. 804 TRUST AND LOAN BUILDING WINNIPEG

handling and disposal of their products, or offer anything better in economic methods of marketing the goods.

In point of quality and absolute purity of raw material, the Mooney Company have no rivals, because it is not possible to work

with anything better than the best, and the best is the only grade this firm recognizes in any department, and in every detail of its wide field of operations. To this end, it employs a specially qualified food chemist, whose sole business is to examine and test all deliveries before they are handed out to the factory operatives. This is the all-important first "process" in the manufacture of any Mooney product, whether it is the homely biscuit or the most ethereal bit of confectionery they make.

More descriptive matter will carry no idea of the wonderful operations and the almost human-like machinery employed in this great industry. The human touch is eliminated wherever human genius has been able to provide something that will perform the function more rapidly



The Mooney Biscuit Factory, Toronto, Ont.

The Canada Hail Insurance Company

Incorporated at Ottawa April 2, 1913

WILL obtain in a few days licenses from the Dominion and Provincial Governments to transact business in MANITOBA, SASKATCHEWAN and ALBERTA. The Company's policy contract will appeal to the Farmers of Western Canada, as regards SECURITY, RATES and SIMPLICITY.

RATES BASED UNDER THE GRADUATED OR CLASSIFICATION SYSTEM

General Agents:

Matthews Wrightson & Company (Canada) Limited

722-8 Union Bank Building, Winnipeg

Branch Recording Agencies: REGINA, SASK. CALGARY, ALBERTA

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

and with greater accuracy. Together with the spotless cleanliness of the walls, floors, tables and utensils; the white clad, clear skinned army of operatives, it is this fact that more than anything else impresses the visitor, whets the appetite and creates that unlawful impulse to purloin at every table he passes. Indeed, one can rise from a full banquet at any time and find that a "vacancy" is still left, or has been created the moment he comes within touch of that unspeakably "hungry" aroma of this home of gratifying odors and the finest of our wheat being hurried on its way to the service of mankind.

It is not within the scope of this article to deal with floor space measurements. Mere feet and inches give no possible conception of the Mooney organization as represented by its four great factories feeding the people from Atlantic to Pacific.

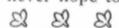
The history of the firm points a moral and adorns that fascinating tale of the rapid march of Canadian industry in a way that is certainly not surpassed by anything in manufacturing records since we began to make things for ourselves in Canada. "Imported novelties" are beginning to lose their hold on the public imagination in these Western provinces as it begins to realize

the fact that when the much-lauded importation is stripped of its advertising verbiage, our home product invariably turns the scale in its own favor when we get down to quality. When it means quality, service and eco-

household word, the firm is scarcely less celebrated for those enticing little mysteries we have been familiar with since childhood—the macaroons, shortcake, the ginger snaps, etc., not to speak of certain allurements in

fondants and other sweets which are now an indispensable accompaniment to every party or social gathering. Not only do they bear the impress of purity, but they have the flavor of quality, and moreover they are presented to the public through those artistic little air-proof paper sachets and fancy boxes which are works of art of no mean order, and in point of cleanliness and convenience are greatly to be preferred to the old system of dealing them out from the open bulk.

Whether it is to the farmer's wife or the presiding genius of the city home, these Mooney products have proved a veritable god-send. She no longer dreads the advent of the family party with all its costly experiment in "making things"—the loss of times, money and temper. The hot days are now in season and make the thought of having to cook anything abhorrent. Here are "things" — everything she could bring within her horizon, done to a turn at a fraction of the cost and having a quality and an attractiveness she might covet but could never hope to emulate.



"When the Lord sorts out the weather," as Riley says, some farmers get all out of sorts.



Montreal Factory of the Mooney Biscuit Co., Limited

nomical advantages (in the absence of ocean freight and duty) it runs the "European novelty" out of the market place.

In addition to the Perfection Cream Sodas, which have made the name of Mooney a

high-class confectionery such as the renowned "Superba" chocolate and scores of other delicacies, which are their exclusive specialty.

They also fill a large space in the popular taste for quality

WHEN THE BELT IS BROKEN AND THE GANG IS IDLE

That is when you, Mr. Thresherman, will appreciate the meaning of
QUALITY, VALUE AND SERVICE
IN A THRESHER BELT

These are not mere "talking points" but are the actual character features of all Thresher Belting made and sold by the Winnipeg Rubber Company. One can BUY a reputation but character cannot be bought by any process of squaring or boosting. It must be FOUNDED and BUILT from something so good that it cannot be wrecked. Our friends have taken care of our reputation. Had there been a loose joint in the character of our belts at any time, our foes and astute competitors would have buried us long ago.

These Belts are Known as the



LION BRAND

Rubber Belts

and the



MAPLE LEAF

Endless Thresher Belts

The very finest grade of material only is used in every detail carried out in our factories; the best workmen employed in this industry and the experience of a long lifetime are co-operated and concentrated on the one business of making these goods. The result is--belts that GRIP, belts that PULL and belts that WEAR, and they have stood the test of more threshermen in Western Canada than all other brands put together.

With That New Outfit For 1913

See that it is provided with a

"Lion" or "Maple Leaf" Brand

Any Thresher Company can supply you with our Belt. In fact the majority use them exclusively. Don't accept a substitute, you will regret it just when you most need belt service. If you have any difficulty in getting our goods, write direct to the

WINNIPEG RUBBER COMPANY LIMITED

WINNIPEG

NOT IN ANY TRUST OR COMBINE

CALGARY



See that? If this plow hadn't been equipped with wooden break pins, our friend would take a day off and go to town for a new bottom. Then maybe he'd have to wait a week while they sent to the factory. As it is, he can insert a new pin in a few moments and proceed with his work, saving time and the price of a new bottom. We are the originators of the pin break feature, and while some have tried to imitate it, none have approached it in effectiveness.

IT'S EASY ENOUGH

"To be pleasant, when life flows along like a song"—

How true that is of people.

But we're going to apply it to plows.

When conditions are just right—soil neither too wet nor too dry, no roots nor stones to disturb the operator's serenity—almost any plow can make good.

Unfortunately conditions are seldom "just right." In new ground, which is usually full of roots and stones, covered with brush, grubs, etc., things are bound to happen.

Then it is that it makes a lot of difference what plow you are using. Such conditions call forth reserve strength and fitness, and if the plow hasn't got it, it goes to pieces, and is likely to find its way to the scrap heap. If it's a

P. & O. Mogul

you don't need to worry, for such conditions only serve to accentuate its ability to make good. It has a surplus of adaptability over and above all such emergencies. We have never known it to fail under the conditions described. If you don't own a MOGUL you won't need to go far to find some one who does, and we aren't afraid to advise you to ask him what it will do. We are confident that you will find him enthusiastic about his plow.

If you want to know all about it write for booklet on P. & O. Mogul Engine Plows.

International Harvester Co. of Canada
 LIMITED
 Sales Agents for Canada

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

TRACTION farming has introduced a new element into agriculture, and has brought into the work a new class of farmers. It also offers an opportunity for great improvement in agriculture or for methods tending toward deterioration and injury of the soils.

The men who are opening up these new lands, whether we speak of them as homesteaders, real estate men, or other business men, are men of intelligence. Accordingly, as they handle the land when they first break it, so will the harvest be in the near future. This cropping of the new lands can be done in the right way, or it can be done in the wrong way.

Diseases

The diseases of the flax crop are very serious. They are caused by root, seed and stem-injuring and leaf-modifying organisms which are capable of maintaining themselves in the soils for a number of years after they have once been introduced through improper seed or other methods. Such diseases are very destructive to the crop when under best conditions and, of course, are more destructive under poor conditions

*Extracts from a Bulletin prepared by North Dakota Agricultural College.

Cropping for Flax on New Land*

By PROF. H. L. BOLLEY.

of cropping. If the fertility, or the moisture content, of the soil is low, or abnormal, these diseases, which destroy the roots, are all the more effective in preventing the crop from introducing a pay yield. It is, therefore, of great importance that the methods of cropping with reference to diseases be correct.

The organisms which produce the flax diseases are plants and must have certain growth conditions. Therefore, tillage, moisture and types of fertility do largely affect their development. Later we shall see that the conditions of tillage most suitable for the development of the crop, which them in the field and the conduce large yields, have been largely beneficial because they have tended to keep these organisms in control.

1. The soil must be properly broken and tilled.

2. It must be properly packed and tilled so as to reduce the development of any parasitic fungi, and also to give the roots of the

flax crop the best possible growing conditions.

3. Seed must be selected, graded and treated so as to prevent much introduction of disease into the soil.

4. Such crop rotation should be conducted that in case a certain amount of disease is introduced it will die out.

5. Such steps should be taken as to preserve soil texture and fertility.

The Root and Seed Diseases of Flax

If one expects to succeed with the culture of flax he must take into consideration the characteristics of the root and seed diseases of the crop. He must learn to know them in the field and the condition or portions of the soil in which they are most destructive. He must learn to recognize the types of seed which are liable to introduce diseases. The sick plants have a very characteristic appearance. When a field has become infected, the diseases tend to kill out the plants in the spots. The plants in such areas come up

yellowish, die early and wilt, and blight very characteristically. On new lands one often finds scattering sick plants in the drill rows which have been introduced by the seed. If flax is allowed to follow flax, wherever a sick plant stands the first year, the next year there will be an enlarged area of "flax-sick" soil.

Flax canker is a disease which accounts for the breaking over of plants near the ground line which many farmers have attributed to the action of insects, such as ants. The plants which break over were, in most cases, internally diseased in the seed before the seed was planted. When the ground becomes thoroughly sick with flax canker, the plants are yellowish and weak and sickly in the spring, and later tend to die up when the hot weather sets in.

Grading Flax Seed

The farmer should save only the best, most mature, bright properly colored plump seed, and should thoroughly grade it to remove the straws, chaff, dirt particles, and immature or shriveled seeds. We have never seen any sample of flax seed that did not contain some diseased seeds due to wilt, canker and other root destroying flax diseases. However if nice, bright, plump seed has been selected, saved dry and pro

LOOK OUT! DON'T LET ANY ONE FOOL YOU

YOU ARE NOT satisfied with the feeder on your machine, and would be foolish to get another that works on EXACTLY the SAME PRINCIPLE. But you will have to "WATCH OUT," or you will get STUNG. The smooth salesman is abroad in the land, and will "pull the wool over your eyes," unless you PIN HIM DOWN TO FACTS. Ask him if the governor on his machine is not controlled by the SPEED of something, and MAKE HIM ANSWER TRUTHFULLY. He will have to "OWN UP;" but will try to make you believe that his way is the correct way. Don't you believe a word of it. You have that kind of a feeder now, and KNOW it is "NO GOOD."



The Garden City Feeder has Two governors, one to keep the cylinder clear when starting or stopping, and the other to Prevent any Variation in the speed of the machine: You don't have to knock out the motion of Anything, in order to get the governor to work.



A separator fed by a Garden City Feeder maintains a Uniform Speed. No "Ups" or "Downs," just one steady hum all the time, that's the way a separator Should run, and Must run, in order to do Good and Fast work; that's why Every Thresherman Needs a "Garden City."



The Garden City Feeder

At work on the Rumely Separator of Smith Bros. at Selly, Sask., fall 1912. Taking care of FLAX as fast as FOUR men can supply it. The PROOF of the Feeder is the Feeding. Smith Bros. were obliged to throw off a Feeder that had been used but ONE SEASON, because it could not feed FLAX.

This is Our Ironclad Warrant

The GARDEN CITY FEEDER is positively warranted to feed any separator to its full capacity, with any kind of grain in any condition, without slugging the cylinder, breaking any concaves or sp kes, winding on any part, littering underneath the feeder, or causing any burned belts; and to deliver all bundles to the cylinder END FIRST, regardless of how they are piled upon the carrier.

No other guarantee covers so many points. No other guarantee means one-half so much. No other feeder can make good on that guarantee. Every claim can be tried out on YOUR separator. NO "IFS" or "ANDS" about it. NO EXCEPTIONS, NO CLAIMS THAT CANNOT BE DEMONSTRATED, NO "CRAWFISHING," just "PLAIN TALK" that means exactly what it says. That's the guarantee printed in every order for a Garden City Feeder; that's the guarantee that PROTECTS YOU. If the Garden City Feeder fails to "MAKE GOOD" on it, your money or notes will be immediately returned to you.

Wouldn't You Like to Try One?

It will Pay You to do so.

Write today for terms and prices

THE GARDEN CITY FEEDER CO., LTD.

REGINA



SASK.

La Compagnie Desjardins Famous Small Threshing Machines

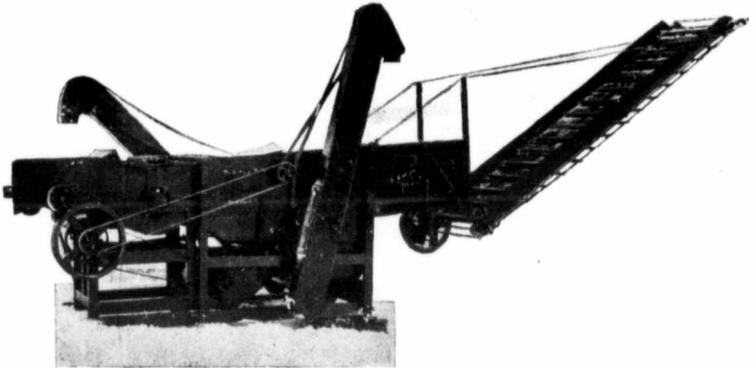
"THE CALL OF THE WEST" Sold by

A. STANLEY JONES :: North Battleford, Saskatchewan

General Sales Agent for Saskatchewan and Manitoba

Offices: "The Industrial Spur East" Phone 223 and 220

Prices from \$425.00 to \$680.00 including engine, separator and all belts, carriage paid to any point in SASKATCHEWAN. It can all be mounted on one good wagon complete. Capacity from 400 of wheat to 600 or 700, and of oats from 700 to 1500 and more according to size taken. The \$680.00 outfit will easily thresh 600 of wheat and as much as 1500 of oats if in average grain and fed properly, although only sold to thresh 600 to 800 of grain. If you have any size farm your usual threshing bill will be more than your payment on this machine. La Compagnie Desjardins have made these machines since 1864 and were the original makers of the Champion, but owing to the makers of other machines calling theirs Champions we have called ours by what it proved to be last year—



"THE CALL OF THE WEST"

We make every bit of it. Don't buy any other machine or any sort of small outfit till you have had my prices. Outfits on show in running order at North Battleford. Drop a card RIGHT NOW.

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

perly graded to blow out the light weight seeds which may chance to be present, the number of internally diseased seeds which may be present will be reduced to a minimum.

Treating or Disinfecting Flax Seed

All flax seed, no matter what the variety, whether called "wilt resistant" or not, no matter how bright and plump or how well it has been graded, should be thoroughly treated or disinfected with formaldehyde before it is sowed upon the land. The purpose of such treatment or disinfection is to destroy the very minute spores of diseases which may be dusted over or scattered upon, or included in the hulls of flax seed. Use the standard strength formaldehyde and sixteen ounces avoirdupois to each 40 gallons of wine and water. Wet the flax seed thoroughly in any manner you see fit in which you can do the work and yet not have the seeds mat together.

It is easier to treat flax seed for sowing purposes than it is to disinfect any other type of seed grain. Remember, the grains must be thoroughly wet or evenly wet over the entire surface so that each grain has received the moisture. It can be done if the grain is evenly raked, shovelled or stirred during the time when a

fine forceful spray is being thrown upon it. The most successful way and most economical way is to prepare a box or boxes with handles which can be easily handled. Then do the treatment in the open air in the field at the time of seeding.

The best form of box is perhaps shown in figure 10. Best results have been obtained by all those farmers who have sowed the seed while it is yet damp, not waiting for it to become thoroughly dry. If it is done in a wagon box, or other large box, or is treated upon a large canvas, the grain can be left piled in a pile for a time covered by blankets or canvas, and the seed will take up the excess moisture. Fine results have been obtained by those who have treated the seed once, then allowed it to become nearly dry, and then have given it another treatment. In this manner they are able to use about twice as much solution, and in all probability succeed in soaking up the seed coats or hulls in such manner as to do a better killing of the fungi which are there included.

Preparing the Seed Bed

The flax crop needs a good, even, continuous, deep supply of moisture coming from below throughout the entire growth

season. It is a lover of hard, firm soil; therefore the soil must be packed down, excluding essentially all air spaces. All of the fungi which attack the roots of the flax crop are air-loving organisms. They, therefore, are lovers of a loose, mellow, open soil. They cannot thrive well in a compact, properly constructed seed bed. A firm seed bed tends to confine the activities of these roots, destroying organisms more nearly to the surface, and thus tends to check destructive agencies of the sun and air drying.

Work by Team

To those who do not have traction outfits, we say: Start early, plow as much as you can do the same day. Do not continue this process until you have the entire area you intend to seed to flax done before you commence to seed. Be satisfied to prepare the seed bed for from 10 to 20 acres, then sow. Start seeding just as early in the spring as you can without too much danger from frost. Young flax will stand a rather heavy frost in the spring. It is better to have it frozen off twice in the spring than once in the fall. After you have the first 10 or 20 acres seeded, prepare a similar area, and do likewise.

Soil should not be worked

when it is wet, for that spoils its texture. It is, however, hardly possible to do much work upon soil or sods when in good tillage as, by any chance, to make them too firm.

Types of Tools

There are many types of tools which are satisfactory. The stock raiser makes a success of raising a certain kind of stock because he has a liking for that particular kind. So it is with the man who undertakes to make a seed bed on sod. He makes a success because he understands or knows how to make use of the particular kind of tools which he is using. One principle, however, should be kept in mind: do not cut up the sods or loosen the sods in any manner. The purpose of all the steps is to cause the sods to lie flat.

Depth of Plowing

Plow as deep as can be done and yet have the sods mash flat. Three and a half to four inches on most types of soil is about right. If you have a light team, be sure not to cut more than can be properly turned down flat. In dragging, discing or harrowing, have the tools so set as not to stir the sod, but rather to work it flatter and form sufficient subsoil moisture, shallow breaking properly handled to form a seed

1913 MADE-IN-CANADA

Exhibition Tour

COME SEE WHAT CANADIAN WORKMEN ARE MAKING

THIS is the most realistic demonstration of Canada's advance to leadership in manufactures. What the Agricultural shows prove of the Dominion's pre-eminence in the fields—the Made-in-Canada Exhibition Train does for her development in the Factories.

TEN CARS FULL OF INTERESTING EXHIBITS

From the leading Canadian Manufacturers we have gathered exhibits of what is newest and best for farm and home. Just a walk through the train will be an education and delight. Make especial note to see the Exhibit of Produce from the Mixed Farming Districts of Ontario.

EVERYONE WELCOME ADMISSION FREE

The Made-in-Canada Tour was a tremendous success last year in every town on the route. Don't miss it this year. It has been improved in many ways.

MAKE THE EXHIBITION A FAMILY HOLIDAY

There will be FREE MOVING PICTURES and LANTERN SLIDES. Nearly 100 Fascinating Exhibits.

TIME TABLE

May 19, PORT ARTHUR	May 27, REDVERS	June 2, REDCLIFFE	June 6, OKOTOKS
" 20, FORT WILLIAM	MANOR	MANOR	CALGARY
" 21, DRYDEN	CARLYLE	" 3, BOW ISLAND	" 7, CALGAR /
KENORA	ARCOLA	TABER	" 9, CROSSFIELD
WINNIPEG	" 28, STOUGHTON	LETHBRIDGE	OLDS
" 22, WINNIPEG	FILLMORE	STERLING	INNISFAIL
" 23, WINNIPEG	OSAGE	RAYMOND	RED DEER
CARMAN	FRANCIS	MAGRATH	LACOMBE
" 24, TREHERNE	May 28, REGINA	CARDSTON	PONOKA
HOLLAND	" 29, REGINA	" 5, MacLEOD	WETASKIWIN
CYPRESS RIVER	" 30, MOOSE JAW	CLARESHOLM	DAYSLAND
GLENBOROUGH	" 31, SWIFT CURRENT	NANTON	" 11, STROME
SOURIS	MAPLE CREEK	HIGH RIVER	SEDGWICK
May 26, BRANDON		" 6, ALDERSYDE	HARDISTY
" 27, RESTON			



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

bed will very often give a good yield of flax. When there is sufficient power, we recommend the deeper plowing. Yet there is no object in plowing so as to turn up the light gravel in some of the lighter lands.

The Time of Seeding; Sow Early
Each man must be his own guide and act according to the natural atmosphere environments of his own farm.

Liability to frost action varies in different localities of approximately similar regions. The region for which we are writing represents the high table lands or foot hills of the Rocky Mountains. When spring opens there is not again apt to be heavy frost action which will be likely to be destructive to the young flax. If, however, it is frozen off while it is quite young, only the seed is lost. The work necessary to seeding the ground again will only be that much improvement on that which has already been done. On the other hand, in the same regions, frost is liable to come early in August, and sometimes is very destructive. Furthermore, the flax crop, when it is in blossom or when the seeds are not perfectly formed is very badly injured even by a comparatively light freeze. Even though frost does not come in the fall in time to prevent maturity, if fall

rains set in and cold nights come on, the crop tends to remain green and grows a lot of new seed pods so that there is no time when an evenly matured crop can be harvested. Sow early.

Calibrating the Drill

It is usually supposed that any ordinary drill can be set to sow a given amount of seed. This is not the case. Drills of the same make vary greatly in this respect. Even the two sides of the same drill may sow at a different rate. The size of the seeds of a particular sample of grain determines how many pounds should be used per acre. It is well, therefore, to set the drill to do the particular piece of work which each man has to do. Adjusting the drills to do the exact amount of seeding is called calibration. There are 43,560 square feet in an acre. Divide this number by the number representing the width of the drill in feet. Divide the number thus obtained by the number of feet represented in the circumference of the wheel. This will give the number of revolutions which the wheel would make in drilling one acre of ground.

Jack up the wheels and turn enough times to represent the distance which would be travelled in sowing one-fourth of an acre. Collect the seed and weigh it. If

it is too much or too little, the drill should be readjusted until it will throw the amount of seed desired. If large areas of flax are to be seeded, it will be found that this method of testing out the drill will pay for itself in the seed saved and a very great improvement in the evenness of the crop will be obtained.

A very efficient method of trying out the rate of seeding is to set the drill to sowing over a smooth roadway. Count the number of seeds which fall in a yard of distance which a shoe travels. This will tell rather accurately, approximately, how many seeds are falling per inch. If the flax seed is good and the seed bed is properly prepared, one seed per each three-fourths inch of distance will be enough. He who sows on an unprepared seed bed had best stay by the old rule of sowing approximately one-half bushel to the acre.

Planking

Many who have had success have followed the system of planking after the drill. This is done even though the ground is well plowed, dragged, harrowed or disced and drilled. The planker usually consists of three or four heavy planks built together in the form of an old-fashioned stone boat in the manner characteristic of weather

boarding. This is dragged behind the drill so that the overlapping edges of the planks point backward. The action tends to pack down the fine dust particles, even up the ground, and cover seeds that might lie on the ridges uncovered. It also tends to firm the ground upon the seeds, and gives an opportunity for all of them to get an even start, which tends to give even ripening. In the drier regions the old-fashioned press drill or press attachment will be found to give exceedingly fine results with flax. Any type of heavy plank or beam will tend to do the same kind of work.

It is not intended to carry the discussions beyond the finish of seeding operations. It may, however, be well to remember that the work done upon the preparation of the ground, for this crop, should not be lost, and the proper crops should be seeded afterwards in order to make use of the conditions here provided.

Crop Rotation

So far as flax is concerned, crop rotation is an absolute necessity. In spite of all the care which may be taken with the seed with regard to the prevention of disease, some of the root and seed diseases of the crop will yet be introduced into the land. Some wilt-sick and canker-sick

Continued on Page 72

Just a Bit of History— The Hart-Parr Company

HE who chronicles the history of the internal combustion tractor, will in all probability begin with Hart-Parr.

The unusual development that has taken place in the internal combustion tractor business, and the number of different machines now upon the market, may to a certain extent lead us astray as to the real beginning of the gas tractor industry, but when it comes to pioneering, it most certainly started with the Hart-Parr.

The writer well remembers this concern when it first started to do business. In looking for a stray cow in one of the low marshes near Madison, Wisconsin, he came across a small sheet iron building with an almost obliterated sign thereon, which read as follows: "Hart-Parr Oil Cooled Engines." The old building is still standing, or at least it was a year or two ago. It almost beehives the tractor fraternity to tear it down and erect upon its site a monument to the beginning of the internal combustion tractor industry.

In the early 90's C. W. Hart was a young man working upon the farms of Northern Iowa. C. H. Parr was engaged in the engine shops at Beloit, Wisconsin. The one was greatly interested in the mechanical appliances for accomplishing farm work, the other was acquiring the machinist's trade. A little later these two young men came together in the University of Wisconsin and joining forces proceeded to specialize in their study of the gas engine as it might be applied to farm conditions. At graduation, they scraped together a little means and started a small gasoline engine factory at Madison, Wisconsin. For five years, they developed, built and marketed small gasoline engines of a highly efficient type. The trials and discouragements of those first five years would have put most young men out of business. Persistence and hard work, however, won out. The experience was a wonderful preparation, and laid firm foundations.

Believing that a little more Western situation would be more favorable, and wishing to enlarge their work, the business in 1901 was moved to Charles City, Iowa, where the construction of the present Hart-Parr works was commenced. The early years of experience had taught these young men the essentials neces-

sary for the building of a great manufacturing enterprise. Before introducing their work at Charles City, there was conceived and brought into force a wonderful system of scientific or efficiency management. Much of the success has resulted from this scheme of work, which accomplishes the greatest economy - supervising force, smooth machinelike action, a neat and harmonious plant, fair treatment to employees and development of their greatest efficiency, a true knowledge of costs and business upon the surest and safest lines.

In 1902 was developed the Gasoline Tractors suited for threshing and other kinds of belt work and for general farm cultivation. The production of a farm tractor had, from the very beginning of the college work of Messrs. Hart and Parr, been their steadfast purpose. All the years of development had been the mere stepping stones to this end. They had the far-seeing foresight to know the tremendous development which lay before them. They had in the very beginning absolute faith and confidence that this development would bring about the greatest progress in agriculture ever known. At that date, fifteen years after their great conception, the world was just beginning to recognize what they then saw.

The Hart-Parr Co. have the credit of first introducing the gas tractor into all lines of agricultural tillage. They, and they alone, have demonstrated beyond a doubt that deeper and better plowing, harrowing, seeding, harvesting and hauling can be done by gas power at less cost than by any other means. Their work is rapidly solving the problem of deep cultivation and permanent fertilization of land. They have been instrumental in putting into the hands of a single individual ten times the force for work upon the farm which he could heretofore control. Their work is having much to do with the tremendously rapid development of the great American and Canadian Northwest and the semi-arid regions of our West. To the Hart-Parr Co. the world owed the ability to make several blades of our grass grow where one grew before. To produce the sustenance for increasing millions of human beings is no longer an unsolved problem. The

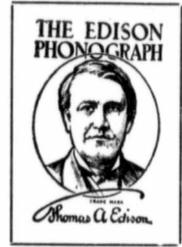
Gas Tractor, with cheap oils or alcohol for fuel will do it.

Among the developments which have made the Gas Tractor possible and for which the Hart-Parr Co. must have the entire credit, is the development of the oil cooling system for cooling the cylinders of such engines. They originated this scheme in 1898, and after many trials and a great amount of experimental work, brought it to a high state of perfection. The water cooled Gas Engine or Tractor for agricultural work, especially in our northern country, is almost useless. It is cumbersome and clumsy. The minerals in the water soon stop up passages and jacket spaces around cylinders and the slightest approach of frost works ruination to the most expensive engine. The oil cooling system, originated, invented and developed by the Hart-Parr Co. obviates all these drawbacks.

Another development quite as important as the oil cooling system is the ability to use oils for fuel instead of gasoline. The earlier Hart-Parr Tractor utilized gasoline, but its increasing price and scarcity compelled a substitute to be found. The burning of kerosene and the lower grade oils in gas engines for stationary work has been accomplished after a fashion for many years. Engines so adapted have, however, been ponderous in size and their development of power per pound of weight precluded their possible use for tractors. The Hart-Parr Co., ever alert to increase the efficiency of their work, has the entire credit of introducing into the Gas Tractor of higher compression and higher power development, the ability to burn kerosene, distillate, and oils. In 1905, after many years of careful thought and study and experiment upon this problem, they succeeded in producing the first satisfactory system for using the lower grades of fuel. It consists of a peculiar combination feeder or carburetor, whereby a slight quantity of water is fed with the fuel. The chemical combinations resulting therefrom produce combustible mixtures igniting easily, burning clean, enabling higher compression and producing great and efficient power. Soon after 1905 this device was put into use on all Hart-Parr Tractors, and since that date their tractors have been kerosene oil burning engines.

While the two features above mentioned have been the most prominent to make the Hart-Parr Tractors famous, hundreds of other smaller inventions and developments have marked the progress in the development of Hart-Parr tractors. The tractor itself is a masterpiece, and, while

Continued on page 73



Mr. Edison meant the phonograph for the home and there is where he wants to see it.

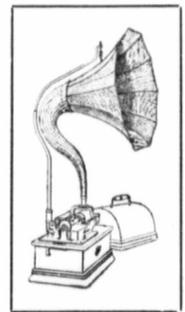
Not alone in the homes of the rich, not alone in the homes of the musical, but in EVERY HOME.

We are co-operating with Mr. Edison, and in accordance with his wishes, we are authorized to give a

Free Demonstration of the Edison Phonograph and Blue Amberol Records in EVERY HOME IN CANADA

Mr. Edison does not ask you to buy. He wants you to see and hear this most brilliant achievement of his brain.

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Doherty Piano Co., Ltd.

WINNIPEG - MAN.

Please send, without obligation on my part, catalogue of Edison Phonographs and Free Demonstration offer.

Name

Address

C.T.F.

Better Farming in Manitoba

Fodder Crops—Perennial Grasses

THE Manitoba Government is advocating mixed farming; the Saskatchewan Government is heading in the same direction; the Alberta Government urges mixed farming; the Canadian Pacific Railway is preaching the gospel of mixed farming to the vast population within reach of their publicity; if you happen to get into serious conversation with leading agricultural authorities in the Canadian West you will find them talking mixed farming "till the cows come home," as the saying is. They declare it to be the only permanent kind of farming. It is.

Of all agricultural authorities in Western Canada today, it is

conclusion to be reached would be that the country could produce no class of fodder but wild hay and straw. As a matter of fact, many excellent fodder plants can be grown in all portions of Western Canada.

"For a fodder plant to be valuable it must not only be nutritious and palatable," says Mr. Bedford, "but also readily grown and productive. Among the true grasses the highest standard of excellence is no doubt the well-known timothy. On the right class of soil, especially during the season of abundant rainfall, timothy is undoubtedly the most desirable of all the grasses. The seed is cheap and easily procurable. Only a small amount of it is required per



Taking Home their Supper

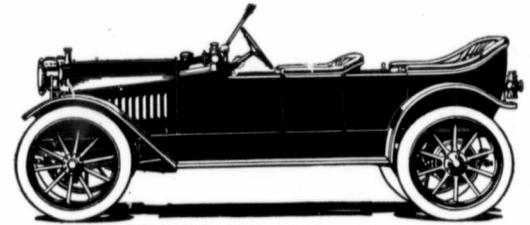
doubtful if there is one man who enjoys the absolute confidence and respect of farmer, collegian and expert to a greater degree than Prof. S. A. Bedford, Deputy Minister of Agriculture for Manitoba. Mr. Bedford's record has been one of faithful study and sincere and broad-minded effort. He has spent a lifetime in acquiring practical knowledge of agricultural matters. As superintendent of the Brandon Experimental Farm for eighteen years, he has accomplished many things in the interest of his province. Anything he has to say about mixed farming or cultivation of grain or, in fact, any agricultural subject, therefore, may be eagerly listened to and wisely practiced.

For the general adoption of mixed farming it is not only necessary that the country should be well supplied with first-class stock of all descriptions, but there must be available an abundance of palatable and nutritious fodder of suitable kinds. If one were to take the bill-of-fare that is available on some farms in this country as a criterion, the

acre and all weed seeds are readily detected if mixed with the grass seed. When properly cured, timothy is exceedingly palatable and nutritious. Being a well-known hay, the demand for it is steady among all feeders of horses as well as horned stock. It has the further advantage of succeeding well when sown with a nurse crop, and in the average season it is easy to handle as hay, and takes very little time to cure.

"Unfortunately, however, much of the western prairie land is unsuitable for timothy. Some of it lacks humus, and some of it has a soil which is naturally too light and dry for this plant. The yield under such circumstances is small. Where timothy is a success, however, it is not necessary to introduce any other grass.

"It is the usual practice to sow about six pounds of timothy seed to the acre. Seeding may be done with a Thompson wheelbarrow seeder and harrowed in at the same time the grain is harrowed; or, what is better still, it may be sown with a grass-seed attachment to the ordinary drill.



'32" Touring Car, \$1225 f.o.b. Winnipeg, Fully Equipped

WE believe the Hupmobile to be, in its class, the best car in the world. This belief is proved by the fact that more than 30,000 Hupmobile owners share the same opinion.

In the '32" long-stroke motor we have Americanized the highest principles of International Engineering by quantity output with quality mater-

ials and workmanship. Is just as sound, just as trustworthy as the best big car built.

Let us show you our en bloc motor unit power plant, 13 inch disc clutch, 3 bearing crank shaft, circulating oiling system, full floating rear axle.

Let us show you its satisfactory performance, its pulling power, flexibility, silent running qualities and speed on the high or low throttle.

Hupmobile

Let us convince you of our belief that the Hupmobile is in its class the best car in the world.

Every motor car manufacturer for 1913 is calling your attention to their long-stroke motor, Coventry silent chain driven cam shaft and magneto, full floating rear axle, etc., specifications which the Hupmobile used all during 1912. Many automobile com-

panies, selling from \$2000 and up, have adopted them for 1913. There is not a car in the class of the Hupmobile which possesses all these high quality specifications.

A demonstration will convince you. Call to-day. It will be a pleasure to show you what this car can do.

JOSEPH MAW & CO. LIMITED

Distributors for Western Canada

WINNIPEG



How's the Colt?

A little colt—like a little baby—must have careful feeding, if you want to raise a sturdy, valuable animal. As soon as the colt outgrows its mother's milk, add a little INTERNATIONAL STOCK FOOD to its regular feed. This will help the colt to grow in size, vigor and strength.

International Stock Food

is the greatest tonic known for all classes of horses. Your horses will keep healthy, their coats will be glossier, and they will have more life and vim on 6 quarts of oats and INTERNATIONAL STOCK FOOD than they would on 6 quarts without it. Besides this it will assist in keeping your horses free from distemper, colic, influenza, etc.

It will pay you to use INTERNATIONAL STOCK FOOD every day for your horses, as well as all your other live stock. Tell us how many head of stock you own and we will send you, free, a copy of our \$3.00 Stock Book. You need it on the farm.

International Stock Food and Veterinary Preparations, also Poultry Food and Poultry Remedies, are for sale by dealers everywhere. Every preparation is sold on a spot cash guarantee to give satisfactory results or your money refunded. If your dealer cannot supply you write us direct.

International Stock Food Co., Limited

TORONTO

THICK, SWOLLEN GLANDS

That make a horse Whoose, Hoarse, have Thick Wind or Choke-draws, can be removed with

ABSORBINE

also any Bruise or Swelling. No blister, no hair gone, and horse kept at work. 64 per bottle delivered. Book \$1 free.

ABSORBINE, J.H. Liniment for manking, Reduces Gout, Rheumatism, Swollen Varicose Veins, Ulcers. \$1.00 and \$2.00 a bottle at dealers or delivered. Book with testimonials free.

It is spelled A.B.S.O.R.B.I.N.E. and Manufactured only by W. F. Young, P.D.F., 112 Lyman's Building, Montreal, P.Q. Also furnished by Martin Bell & Wynn Co., Winnipeg, The National Drug and Chemical Co., Winnipeg and Calgary, and Henderson Bros. Co., Ltd., Vancouver.

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SEND 1 DOLLAR Receive by return mail post paid Two pretty Fall and Winter Dresses for little girls age 1 to 10. Material is soft warm goods for winter wear in checks and stripes in various pretty colorings made just as pictured. Add 10c for postage. Order at once.

Standard Garment Co.

17 Standard Building, London, Ont
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Portable Corrugated Granaries

This is the only thoroughbred Granary with a real pedigree.

Write today for full particulars. WINNIPEG CEILING AND ROOFING CO., LTD. P.O. Box 2186 G. WINNIPEG, Man.

USE **WHITE ROSE GASOLINE** More Power Less Carbon

“THE STAMPEDE”

At Winnipeg, August 9 to 16, 1913

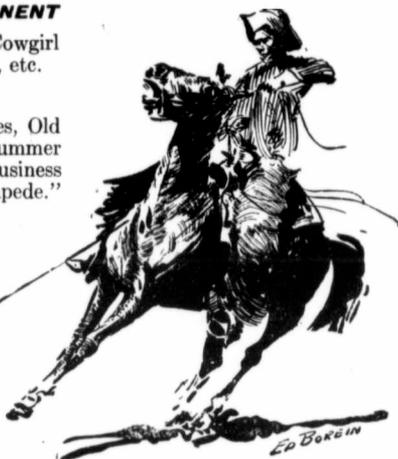
BIGGEST WEEK ON THE AMERICAN CONTINENT

Contests for World's Titles in all Cowboy and Cowgirl Sports. Broncho Busting, Steer Roping, Races, etc., etc.

\$20,000 in Cash Prizes

Contestants from every part of the United States, Old Mexico and Canada. Arrange to make your midsummer shopping trip to Winnipeg combine pleasure with business and be one of the 100,000 visitors to see “The Stampede.”

One Wild Delirious Week!



For all information write to

GUY WEADICK, Mgr., Forum Bldg., 445 Main St., Winnipeg, Man.

Finance Committee: JAMES RYAN, Sr., Chairman; W. H. FARES; F. H. MOON, Treas.; A. P. DAY; Arena Director

REFERENCES—THE DOMINION BANK

Special Railroad Rates Ask Your Agent

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

Very few men have sufficient experience to sow timothy evenly by hand; it can be done only by experts in calm weather, as the least wind will cause uneven seeding.

"In no case is it possible to leave timothy sod unbroken for a number of years. Two or three years at the outside is all that can be expected of timothy.

Western Rye Grass

"This variety of grass is a native of the province and is growing in importance. Although not as desirable as timothy in some respects, it has certain advantages. It will succeed on lighter land than timothy and will give a fair crop also where the soil is deficient in humus. Although it takes rather more seed per acre, the seed is easily obtainable and usually cheaper. It does not succeed as well as timothy without a nurse crop, however; the injurious effect of the nurse crop moreover extends to two or three years after seeding.

"At the Manitoba Agricultural College a new plan has been adopted for the growing of this grass. A field somewhat run down and requiring a summer-fallow is selected. The land is plowed as early as possible and then harrowed and cultivated to destroy the surface weeds until

the 15th of June, when the field is sown with western rye grass seed at the rate of fifteen pounds per acre, without a nurse crop. This treatment gives the soil the advantage of a partial summer-fallow, and frequently a small crop of hay may be obtained the first fall with an assurance of an abundant yield of hay for the two following years.

"Another excellent plan is to sow fall rye on the land intended to be seeded, then cut the fall rye in early summer for hay, plow and seed at once with western rye without a nurse crop. This gives a quantity of very good rye hay and at the same time ensures a good catch of rye grass.

"Western rye grass is unpalatable if allowed to form seed. For hay the crop should be cut just as soon as the heads are well formed, and hay must be cured as soon as possible and immediately stacked. As a rule, western rye grass gives a yield of at least fifty per cent more than timothy on the dryer lands.

Brome Grass

"This much discussed variety has some excellent qualities to recommend it. In the first place, it starts early in the spring—much earlier than any other variety—and it also remains green until very late in the fall. It is ex-

ceedingly succulent and palatable to all classes of stock. But the plant being very vigorous, it should not be sown on the moist rich soils of the Red River Valley and similar districts or there will be difficulty in its eradication. In the lighter rolling land of the province, however, there is very little danger in this connection. All that is necessary, is that the sod should be properly plowed (the furrows being thin and straight so that none of the plants are missed), and well rotted; it should be backset a little deeper than the breaking, then disced.

"Brome grass seed is somewhat difficult to sow, as the seed is very light and the ordinary grass seeder attachment will not handle it. I have found the Thompson wheelbarrow seeder the most satisfactory for this purpose. There is a special make of this implement for brome grass seeding which is satisfactory.

"The usual practice is to sow from twelve to fifteen pounds of this seed to the acre. The seeding may be done any time between the first of May and the first of June. Although a nurse crop may be used, better results are obtained if the grass seed is sown alone, in which case the young grass should be cropped once or twice during summer to

check the weeds. (This applies also to western rye grass or any other grass seed sown without a nurse crop.)

"Excellent crops of hay are obtained from brome for the first two or three years. After that time it makes excellent pasture. In fact, it is now generally conceded that brome is the best pasture grass obtainable for Canada.

"Some years ago on the Experimental Farm at Brandon two steers were maintained for the whole summer on one acre of this pasture. Although it may be objectionable to sow brome grass for hay on some classes of soil, there is no objection whatever to its use as a permanent pasture where it is not required to clear the land again for a grain crop.

"Sometimes it happens that a brome grass field becomes so sod-bound that the yield is greatly decreased. In that case, it is advisable to break the land thinly without backsetting it; this thins out a number of the plants, and the remainder become more vigorous, greatly increasing the yield of fodder or pasture.

"Brome grass hay requires an entirely different treatment from either timothy or western rye. As before mentioned, it is very succulent, and it has very large leaves. For this reason, it should be well shaken out shortly after



WINNIPEG, JULY 8-16, 1913

The Greatest Year for Western Canada's Greatest Educational Exhibition—See the Amazing

FRONTIER DAYS EXPOSITION

Bucking Bronchos—Real Cowboys and Rough Riders—World's Supreme Wild West Show.

Grain Cleaning Competition

Interesting, Instructive, Unique—Only Contest of its kind ever devised in America.

Huge Farm Motor Contest

Displaying the greatest developments of Mechanical Genius in Farm Tractors.

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mowing and allowed to cure thoroughly in that condition before placed in the coils; otherwise it ferments in the coil and becomes either dusty or moldy. A tedder for shaking out the crop will soon pay for itself on the farm where much brome grass is used. This implement so separates the grass that it quickly cures, and is not only free of mold and dust, but also retains its color and pleasant odor.

"Brome grass usually takes twice as long to cure as either timothy or western rye. When properly cured it is very acceptable to all classes of stock, particularly to milch cows."



Cropping for Flax

Continued from page 67

plants occur in every crop under the best conditions. The straw, stubble and roots from these wilt and canker-sick plants when plowed under will soon distribute the diseases to large areas of ground. If the flax be put on the land the following year, the roots from the young plants, as soon as they come in contact with this old straw will become infected, and thus the spread of the disease will be rapid. While the crop the second year may not fall off in the yield to such ex-

tent as to cause alarm, the amount of disease which is introduced into the soil and seed is greatly increased, so that it takes a strenuous system of ground cleaning to purify the soil so that a pay crop of flax may again be produced there.

Volunteer Flax

Where a previous first crop has shelled so that a good deal of seed is left on the ground, many farmers are inclined to sow flax there the second year because they think they will be able to procure the volunteer crop which comes. This is an error. If the seed bed is properly prepared the volunteer flax will practically all be destroyed. If not properly prepared, the volunteer flax will be mature many days before the seeded crop is ready. It is usually impossible to save the seeds from a volunteer crop and yet have a reasonably good yield from the new crop. In regions of sufficient sub-soil moisture, wheat is by far the best crop to follow on such lands, and the stubble should not be plowed. As soon as the flax is headed or taken off, the stubble should be disced, knocked down to prevent the upstanding stubble from acting as wicks to draw away moisture. First, disc in direction of the furrow slices,

afterwards in the diagonal or cross direction. On the last discing a clod crusher following the disc makes a fine improvement. The seed bed should essentially be prepared in the fall so that the wheat can be seeded at the earliest possible time after the snow leaves the ground in the spring. The volunteer flax, if any comes, will be saved in a wheat crop.

Finally

To preserve the new lands from becoming flax-tired or flax-sick, the farmer should cut his crop when it is dry, thresh it when it is dry, and never allow the seed to become mouldy and damp if it can possibly be helped. It will be wise to discontinue the process of throwing loose bunches on the ground to remain there an indefinite time subject to the action of rains and soil moisture. Under such conditions, the fungi form their mould like threads through the straw of the dampened bundles and gradually infect all seeds. They also produce great masses of spores which are scattered by the wind and washed water to large adjacent areas. In all cases in which the flax is long enough to be tied by a binder, that is the most satisfactory method. Wet flax and mouldy seed means deteriorated seed, rapid crop deterioration and flax-sick soil.

Makes Washday Brighter

Dear "Thresherman":—At last I have something to tell to the readers of your fine magazine, although, perhaps, many of them have tried it. I have just bought a vacuum washer and am delighted with it. I can get through my washing in half the time it used to take with my old machine, and it is so easy to use, and washes the clothes thoroughly, no matter how dirty.

I felt I must write and tell you all about it, for we have had so many helpful hints and advice from the "Thresherman" and washday on the farm is always so tiring a day, that I know every one will be pleased to hear of anything that will lighten the labor a little. This washer is within the reach of every one, as the cost is small in comparison with the great help it is to every one who uses it.

This is my first letter to your paper, but I will write again when I have some other helpful hint to give, for I have found much useful advice and helpful letters from your pages, and feel sure of a welcome from you.

"Martha Strang."

(We are very glad to hear that the vacuum washer is so satisfactory and helpful. You are indeed welcome and we hope you will come again.—C.T.F.)

Just a Bit of History

Continued from page 68

others are slowly following into this industry, the Hart-Parr Co. is far in advance, ever improving and developing, and producing other masterpieces of their class.

In the Hart-Parr Works are found hundreds of ingenious special machines and tools for the production of their output. The laying out of their grounds, their trackage systems, the design and construction of their buildings, much of their machinery and the production of their wonderful manufacturing system, are all absolutely of their own work and ingenuity. Outside experts or even contractors are never employed by the Hart-Parr Co. They have absolutely within themselves the power to originate and develop and fabricate, not only every piece of the tractor which they build, but also every feature of the great works which they have produced, and will continue to produce.

The Hart-Parr tractor is being found to-day in almost every grain raising country in the world. In the United States and Canada numerous branches are maintained with full stocks of machinery and repairs. Illustrations of these branches are shown on another page. These branches are under the supervision of W. H. Williams, who for a number of years has been sales manager of the Hart-Parr Co., and who was a classmate of both Mr. Hart and Mr. Parr at the University of Wisconsin in the early 90's.

Short Course in Internal Combustion Engines

A short course of instruction in internal combustion engines will be held at the College of Agriculture, Saskatoon, June 3 to 21. The course will be in charge of the engineering staff of the college, and will be as complete as it is possible to make it in the time devoted to it. The instruction will be thorough, and will include such subjects as parts of engines and their functions; the conditions of compression and exhaustion; the operation and efficiency of the gas engine, carburetters, vaporizers, etc., ignition, batteries, the nature and use of lubricants, and the care and handling of gasoline engines. There will be various kinds and makes of engines on the ground for practice and illustration. Students who desire to become proficient in the operation of all makes of tractors will find this the most valuable opportunity presented to them. Particulars can be had from the Extension Department, College of Agriculture, Saskatoon.

START RIGHT

THE WALKER STARTER
FOR INTERNAL-COMBUSTION ENGINES OF ALL TYPES.

RIGHT NOW

The Walker Starter is a device which is guaranteed to start any size or type of internal-combustion engine without cranking, provided the engine is in running condition. It is specially designed for heavy duty tractors and after seven years of experimenting has proved to be a complete success. A gas engine equipped with the Walker Starter can be started from the footboard as easily as any steamer. It uses the right principle—starts on gasoline—uses a charge under high compression to start the engine.

Saves hours of valuable time and eliminates all danger of accident's due to back-firing when cranking. A written guarantee sent with each machine. Order now to ensure early delivery. Write for booklet.

The Walker Starter Co. of Canada - 112 Phoenix Building, Winnipeg

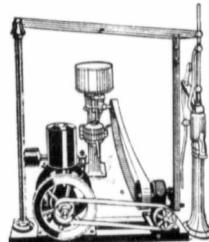
START RIGHT

WRITE NOW

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Handy Small Power for Farm Use

The "IDEAL" Vertical Engine — 1½ and 2½ H.P. — is designed to furnish a reliable, inexpensive light power on the farm. It will run pumps, cream separators, churns—in fact, any light machinery. In spite of its small size, it is built with the same care as the largest engine we turn out. Crank shaft is of hammered steel, bearings of finest phosphor bronze, materials throughout of the very best. We claim this to be the highest grade small engine built. Crank shaft is lubricated in the same manner as on high-priced automobiles. Hopper cooling system works to perfection on very little water. Latest type Wizard magneto is supplied and works in all weather, no batteries being required. This great little engine will run pump and separator at the same time. Jack operating at same speed as pulley for separator gives right speed for each. Send for free booklet containing full description.



IDEAL Vertical Engine, Running Pump and Separator at the same time.



The Double-Geared Ideal Windmill

WE MANUFACTURE

"IDEAL" Gasoline Tractors, "IDEAL" Hopper-Cooled Gasoline Engines, "MAPLE LEAF" Grain Grinders, Windmills and Pumps of every description, Wood Sawing Outfits, etc., etc.

Goold, Shapley & Muir Co.
WINDMILL, REFRIG., S.A.L.G.A.R.Y. LIMITED

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

Beauty and Charm with Economy

The first impression on entering a room decorated with "Alabastine" tints is one of Beauty. But—while the effects are charming in the highest degree, yet "Alabastine" is the most economical wall finish.

You can make every room in your home glow cheerily by using "Alabastine"—

"Alabastine" tints impart that soothing, restful effect so much desired by people of good taste. Anyone can apply "Alabastine"—

Mix with cold water and apply with flat bristle brush. With the numerous tints and white, any color scheme can be easily produced.

"Alabastine" is just the famed Alabaster rock ground into a fine cement—hence its bewitching and permanent colors. It won't rub off. You can re-decorate at any time—one coat makes an excellent foundation for another.

Free Stencils: Our staff of trained decorators will draw up any color scheme for you free of charge.

We also supply free stencils suitable for your purpose. "Alabastine" is sold by all Hardware and Paint Dealers. Write for full particulars and free booklet.

The Alabastine Co., Limited
Willow St., Paris, Canada.



CHURCH'S COLD WATER Alabastine

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



**FOR MAKING SOAP
FOR WASHING DISHES
FOR SOFTENING WATER
FOR DISINFECTING SINKS
CLOSETS, DRAINS ETC.**

MADE IN CANADA
E.W. GILLETT CO. LTD.
TORONTO-ONT.
WINNIPEG MONTREAL

Mention this magazine when writing advertisers



THE BUTTER-BUYER said—
"Your two lots of butter taste all right—but will they keep? What kind of salt did you use?"

THE FIRST FARMER said—
"I don't know—the storekeeper gave me what he had".

THE SECOND FARMER said—
"I used Windsor Dairy Salt".

THE BUTTER-BUYER said—
"I want your butter. I know all about Windsor Dairy Salt—and the man who is particular enough to always use Windsor Dairy Salt is pretty sure to be particular to make good butter.

I'll take all you make—as long as you use

WINDSOR DAIRY SALT

Mention this magazine when writing advertisers.

SCHEDULE OF FAIR DATES IN ALBERTA FOR YEAR 1913.

Circuit No. 1.

Crossfield..... Friday, June 20.
Lethbridge..... Tues.-Sat., June 24-28.
Calgary..... Mon.-Sat., June 30-July 5.
Okotoks..... Tues.-Wed., July 8-9.
High River..... Thur.-Fri., July 10-11.
Innisfail..... Tues.-Wed., July 15-16.

Circuit No. 2.

Claresholm..... Tues.-Wed., July 29-30.
Granum..... Thur.-Fri., July 31-Aug. 1.
Macleod..... Tues.-Thur., Aug. 5, 6, 7.
Gibichen..... Thur.-Fri., Aug. 7-8.
Carmanngay..... Tues.-Wed., Aug. 12-13.
Stavelly..... Thur.-Fri., Aug. 14-15.
Nanton..... Tues.-Wed., Aug. 19-20.

Circuit No. 3.

Cardston..... Tues.-Wed., Aug. 19-20.
Magrath..... Fri.-Sat., Aug. 22-23. (Deserett)
Raymond..... Tues.-Thur., Aug. 26-27-28.
Pincher Creek..... Thur.-Fri., Aug. 28-29.

Circuit No. 4.

Daysland..... Tues.-Wed., Aug. 5-6.
Sedgewick..... Thursday, Aug. 7.
Chauvin..... Friday, Aug. 8.
Edmonton..... Mon.-Sat., Aug. 11-16.
Vegreville..... Tues.-Wed., Aug. 19-20.
Red Deer..... Wed.-Fri., Aug. 20-21-22.
Wetaskiwin..... Tues.-Wed., Aug. 26-27.
Munson..... Friday, Aug. 29.
Trochu..... Mon.-Tues., Sept. 1-2.
Strome.....
Killam..... Wednesday, Sept. 3.
Hardisty..... Thursday, Sept. 4.
Stettler..... Fri.-Sat., Sept. 5-6.
Cochrane..... Tues.-Wed., Sept. 9-10.
Olds..... Thur.-Fri., Sept. 11-12.
Fort Sask..... Tuesday, Sept. 16.
Stony Plain..... Wednesday, Sept. 17.
Innisfree..... Thur.-Fri., Sept. 18-19.
Mannville..... Mon.-Tues., Sept. 22-23.
Vermilion..... Wed.-Thur., Sept. 24-25.
St. Albert..... Friday, Sept. 26.
Kitsooty..... Tuesday, Sept. 30.
Lloydminster..... Thursday, Oct. 2.
Paddle River..... Friday, Oct. 3.

Circuit No. 5.

Louisa..... Thur.-Fri., Sept. 11-12.
Castor..... Tues.-Wed., Sept. 16-17.
Coronation..... Thur.-Fri., Sept. 18-19.
Carrouse..... Tues.-Wed., Sept. 23-24.
Dux..... Thur.-Fri., Sept. 25-26.
Alix..... Tuesday, Sept. 30.
Lacombe..... Wed.-Fri., Oct. 1-2-3.
Leduc..... Tuesday, Oct. 7.
Provost..... Wed.-Thur., Oct. 8-9.

Circuit No. 6.

Medicine Hat..... Tues.-Fri., Sept. 9-12.
Winnifred..... Tues.-Wed., Sept. 16-17.
Taber..... Thur.-Fri., Sept. 18-19.
Milnerton..... Tuesday, Sept. 23.
Three Hills..... Wednesday, Sept. 24.
Lamerton..... Thur.-Fri., Sept. 25-26.
Carbon..... Mon.-Tues., Sept. 29-30.
Swalwell..... Wed.-Thur., Oct. 1-2.
Bowden..... Friday, Oct. 3.
Didsbury..... Tues.-Wed., Oct. 7-8.
Pridlie and Millarville..... Thursday, Oct. 9.

Circuit No. 7.

Tofield..... Thursday, Sept. 18.
Wainwright..... Friday, Sept. 19.
Irma..... Tuesday, Sept. 23.
Viking..... Wednesday, Sept. 24.
Holden..... Thursday, Sept. 25.

Circuit No. 8.

Mt.-Pembina..... Friday, Sept. 5.
Falles and Rosboro..... Tuesday, Sept. 9.
Onoway..... Wednesday, Sept. 10.
Nakamun..... Thursday, Sept. 11.
Webamun..... Friday, Sept. 12.
Edson..... Tues.-Wed., Sept. 16-17.
Finstville..... Thursday, Sept. 18.
North Alberta (Kinnaild)..... Friday, Sept. 19.



A practical politician is a politician who knows how to get up a sham battle that will seem real to as many of the people as much of the time as need be in order to keep his party in office.

OUR FUR STORAGE

Absolute Insurance Against Moths, Fire, and Loss By Theft

By the best process known to science, we not only protect furs from damage of every known sort but we completely renovate them.

Repairing and remodeling at special summer prices

Orders executed during the summer will receive every attention, and charges will be smaller than during the "rush" season—customers saving about twenty per cent.

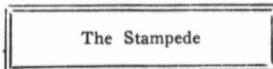
As soon as they are placed in our representative's hands they are fully insured—and at a very moderate cost.



Mail us a card stating your wishes, and we will have them instantly attended to.

297-9 Portage Ave. WINNIPEG

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



A real exhibit of the virility, skill and unrehearsed daring of Western life is something that will never pall on the public craving for the spectacular. Witness the motion pictures of today. What incidents of these remarkable tableaux have such a fascination for old and young as the stirring and sometimes hair-raising cowboy episodes that are projected on the screen? What literature makes so strong an appeal to the suffrage of men and women all the world over as those unconventional, but absolutely clean stories of the rulers of the plains in their daily life and in the unique setting of the far-flung cattle ranch?

Such of them as we know to be living examples of the gloriously picturesque frontiersman in the natural coloring of his life's work are a precious and splendid portion of the history of our North American domestic life. "Their homely joys and destiny obscure" have more of

FARMERS ATTENTION

Canadian-American farmers and your sons, who have for 18 years been buying Rawleigh's Medicines, Extracts, Spices, Etc., in the United States on Rawleigh's Pay-After-You-Are-Satisfied Plan are all invited to call and see us at our new Canadian factory in Winnipeg.

FARMERS' SONS AND OTHERS who want to make not less than

\$100 PER MONTH CLEAR PROFIT

above all expenses selling our goods direct to farmers from wagons should write us at once for our matchless offer to salesmen.

NO DUTY ON LONG HAUL FREIGHT TO PAY. Practically no competition. We are the only large Company of our kind in Canada. Every farmer in Canada needs and uses our kind of goods.

We want a man at once in every locality to represent the greatest buying, manufacturing, distributing and selling organization in North America. Established 18 years. Capital and surplus now \$2,000,000. Reference: Canadian Bank of Commerce. Address

The W.T. Rawleigh Medical Company

IMPORTERS - CHEMISTS - MANUFACTURERS
94 Gunnell St., WINNIPEG



Mention this magazine when writing advertiser

real human interest in them than all that could be written of that portion of our modern civilization which preserves its records in the "Society" columns of the daily newspaper.

As announced elsewhere in this paper, there will be held at Winnipeg this summer, the greatest exposition of this phase of Western life it has ever been possible to bring together. The event has already become widely known as "The Stampede," and the whole acreage of the Canadian Industrial Exhibition grounds have been secured for the purposes of the contest—lasting from August 9th to the 10th (inclusive).

As indicated, it is a contest, pure and simple—not a mere swashbuckler show of tin-foil and stage heroism. Contestants from every part of the United States old Mexico and Canada will take part in it because the splendid financial backing the incident has commanded will make it worth the while of the world's skill in broncho busting, steer roping, etc., to come from any distance and strain every nerve to capture the trophies and prize money offered.

A great and special feature of this record round-up will be the splendid galaxy of cowgirls who will take their place in the same trials, independently, and without handicap from any "mere man" who cares to enter the ring. Further particulars will be announced in subsequent issues of this paper. Meanwhile we are glad to express our satisfaction that it has been found possible to hold this event of world-interest at Winnipeg and to congratulate our readers on the opportunity to be present, and which we feel sure will be taken advantage of by every one who can possibly reach Winnipeg at some time within the dates announced.

CASH FOR YOUR CREAM EVERY SHIPMENT

Free Cans For A Months Trial Shipments If Required



Write For Free Illustrated Booklet

CRESCENT CREAMERY CO. LIMITED
WINNIPEG And BRANDON
LARGEST BUYERS OF CREAM IN CANADA
 PAID UP CAPITAL. \$268,725.00

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

Saskatchewan Summer and Fall Fair Dates 1913

Lampman July 22. Postern, Aug. 12-13.
 Colgate July 24. Watrous, Aug. 15.
 Melfort July 25. Carnduff, July 31.
 Gainsboro July 29. Alameda, Aug. 1.
 Oxbow July 30. Francis, Aug. 5.
 Revels Aug. 1. Stoughton, Aug. 8.
 Celyle Aug. 5. Creelman, Aug. 7.
 Churchbridge July 22. Arcola, Aug. 6.
 Siltcoats July 23. Vonda, July 29.
 Foam Lake July 24. Humboldt, Aug. 19.
 Frow, July 25. Invermay, Aug. 1.
 Canora, Aug. 5-6.
 Inyanard, July 29. Yorkton, July 30-31.
 Langan July 30. Togo August 7.
 Frow, July 31. Arcola, Aug. 1.
 Imperial, Aug. 1. Ffrmede, Aug. 5.
 Nulomis, Aug. 5. Windthorst, Aug. 6.
 Panchy, Aug. 6. Qu'Appelle, Aug. 7.
 Kerber, Aug. 7. Wolsley, Aug. 12.
 Langham, July 25. Uxley, July 29.
 Uxley, July 29. Wile, July 29-30.
 Frow, July 31. Broadview, Aug. 14.
 North, Aug. 1. Alaskan, July 22.
 Starbuck, Aug. 5. Kindersley, July 23.
 Carlton District, Aug. 7. Zealandia, July 24.

Rock, July 25. Moosomin, Aug. 12-13.
 Bounty, July 29. Whitehead, Aug. 14.
 Plenty, July 30. Kerrobert, Aug. 1.
 Lussland, Aug. 1. Hawarden, July 30.
 Fort Qu'Appelle, Aug. 5. Bladworth, July 31.
 Aug. 5. Saskatoon, Aug. 4-9.
 Watrous, July 23. Govan July 24-25.
 Southey, July 29. Hanley, Aug. 12.
 Lipton, July 30. Lumsden Aug. 13.
 Abernethy, Aug. 1. Melville, Aug. 15.
 Dubus, Aug. 5. Radisson, Aug. 11-12.
 Stockholm, Aug. 6. Paynton, Aug. 13.
 Tantaloo, Aug. 13. Lashburn, Aug. 14.
 Wapella, Aug. 8. Lloydminster, Aug. 15.
 Weyburn, July 24-25. North Battleford, Aug. 19-22.
 Milestone, July 29. Prince Albert, Aug. 20-28.
 30. Melfort Aug. 29.
 Herbert, July 31. Melfort Aug. 29.
 Mortlach, Aug. 1. Tisdale, Sept. 16.
 Moose Jaw, Aug. 5-8. Kinistino, Sept. 17.
 Estevan, Aug. 12. Maymont, Sept. 18-19.
 14. Outlook, July 31.
 Aug. 1. Duck Lake, Sept. 23.
 Indian Head, Aug. 5-6.
 Grenfell, Aug. 7. Wadena Sept. 25.
 Kennedy, Aug. 8. Quill Lake, Sept. 26.
 Watsou, Sept. 30

Pelly, Oct 1-2. Craik, Aug. 5.
 Davidson, Aug. 6.
 Maple Creek, Aug. 28-29. Strassburg, Aug. 7.
 Brownlee, July 25. Swift Current, July 9-11.
 Regina, July 28-29.

Was This Only Horse Sense?

A certain man living in a New England village lost a horse one day, and failing to find him, went down to the public square and offered a reward of five dollars to anyone who would bring him back.

A half-witted fellow who heard the offer volunteered to discover the whereabouts of the horse, and sure enough, he returned in half an hour leading the animal by the bridle.

The owner was surprised at the ease with which his half-witted

friend had found the beast, and on passing the five dollars to him he asked:

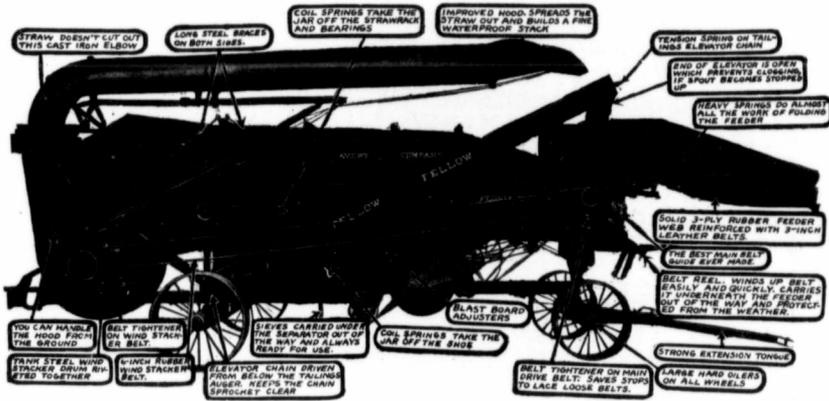
"Tell me how did you find him?"

To which the other made answer, "Wal, I thought to myself where I would go if I was a hoss; and I went there, and he had."

Care killed a cat, but has anyone ever tried it on a dandelion?

The diligent hand maketh the light task, particularly where it has the backing of the long head.

Easy work and happiness are not identical, but they are somewhat alike in that either is likeliest to be had by those who seek it the least.



"TEETH TALK"

Get a Separator that you won't have to "patch up"

Save yourself work, worry and expense by getting a separator that you won't have to patch up.

The Avery Company receives practically every day letters from men who bought separators that fail to do the work and that they are trying to patch up.

Read these letters. They are samples:

"Can you furnish Jumbo teeth for a — machine, 20 bar, 32 x 52 cylinder? If you can, I would like to get a set of them. Will you please send me a sample tooth by parcel post? I enclose 10c. to pay postage. I have also got your I.X.L. separating device in our machine, which works fine. Please state price of your Jumbo tool steel teeth. The straw was so tough last fall we broke over 100 — teeth in one season."

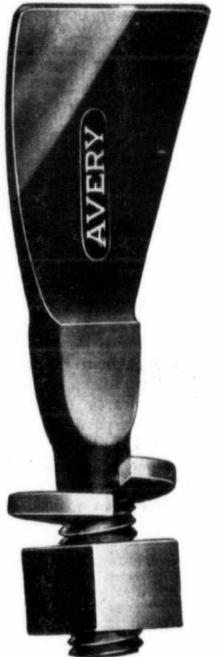
"I am going to write you a few lines and ask if it is possible to get you to make cylinder teeth to fit a — machine. The teeth are the most worthless teeth that there was ever put in a machine, and the Avery are the best teeth ever made. I have used them, but I never broke one yet. Now the — that I have got has got a six-cornered shank

and it is about one-half inch longer than the Avery tooth. Now if you would make these for me, I will take 700 of these teeth, as there is another party that has got the same trouble and we will take these together."

"Can your belt guides be attached to a — machine without too much trouble, as I intend to put one on my machine?"

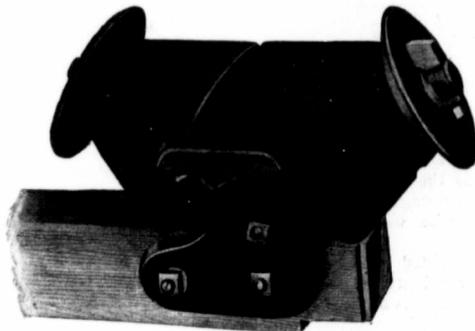
We are willing to help a man out when the special Avery Improvements will fit in his machine, but even though a thresherman might get Avery Jumbo Tool Steel Teeth, an Avery Belt Guide, Paper Centre Cylinder Pulley, Lifting Jack, I.X.L. Separating Device, and other Avery Features, to help cure the troubles, he finds in some other make of separator, it would add just that much to the cost of his other machine, and after getting all these he would still not have the Avery Heavy Crank Shaft, Steel Rod Pitmans, Double Belting System, Belt Winder, Steel Bottom No-Choke Elevator, Heavy Tongue, and all the other improved features found in the Avery "Yellow-Fellow."

The only way to get all of these Improved Features is to buy an Avery "Yellow-Fellow" Separator.



The Wonderful Avery Jumbo, Tool Steel Tooth, showing tempered wearing corner.

Also Guaranteed to Save and Clean the Grain

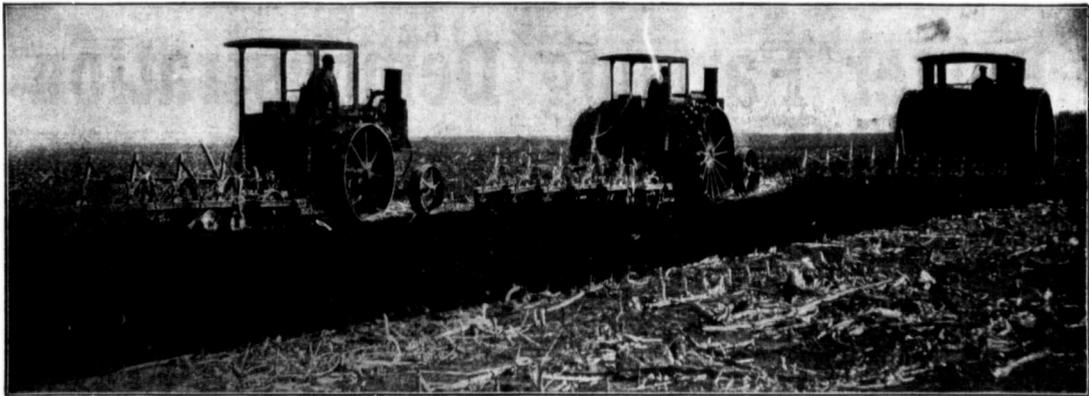


The Famous Avery Double Cone Pulley Belt Guide

There's no other separator that has anywhere near the many improved features of the Avery "Yellow-Fellow." And besides this, it's the strongest guaranteed separator built. It's guaranteed to save 99 52-100 per cent or more of the grain. In 27 field tests Avery "Yellow-Fellows" actually averaged a saving of 99 9-10 per cent, an almost perfect record.

You surely must know all about this separator before you buy. Write today for a complete Avery "Yellow-Fellow" Separator catalog. You won't have to patch up an Avery and it will do crackerjack work for you in saving and cleaning the grain.

AVERY COMPANY
 675 Iowa Street Peoria, Illinois
 Haug Bros. & Nellermore Co., Ltd., Winnipeg, Regina, Calgary
 Western Canadian Distributors



Don't be "Gold-Bricked" on a Tractor and Plow

Broad claims are being made about some Tractors and Plows without being tied up to definite facts to prove them. There are a lot of general names being used very loosely in describing these machines. Manufacturers are learning that certain features of construction are being insisted upon by prospective purchasers which is resulting in many general claims being made as to the possession of these features without all the facts behind the claims being given. "Light-Weight," "Self-Lift," "One-Man Outfit" and others are some of the general names being used, but when you get ALL the facts behind them you find that the meaning of these words is far different when applied to different makes of machines.

There is a whole lot of difference between the meaning of the word "horse" when applied to different animals. Don't be fooled by any general names applied to Tractors and Plows without finding out what's behind them. Here are three broad claims we make for Avery Tractors and Plows and the facts to back up each of the claims.

<p>CLAIM No. 1</p> <p>That Avery Tractors and Plows have EVERY important feature of advantage found in ANY and ALL other makes of Tractors and Plows.</p> <p>THE FACTS</p> <p>Others claim they can burn either gasoline or kerosene. So do Avery Tractors. You can use either fuel you wish.</p> <p>Some claim three speeds as a wonderful feature. Every Avery Tractor, from the first one up, has been built with three speeds.</p> <p>Others claim self steering. The Avery Company builds a Self Guide Attachment special for Avery Tractors.</p> <p>A few claim proper distribution of weight. Look at the illustration of the top view of an Avery Tractor in our catalog and see how the weight is correctly distributed between the front and rear wheels and also between the two sides. Compare this with many others having the motor on one side or corner of the frame which would be like piling a load of hay on one side or corner of your rack.</p> <p>One or two offer to sell on approval. So does the Avery Company and besides this when you buy an Avery Tractor and Plow you are backed up by strong guarantees after you accept the machines.</p>	<p>CLAIM No. 2</p> <p>That Avery Tractors and Plows have MANY important features of advantage NOT found in ANY other makes of Tractors and Plows.</p> <p>THE FACTS</p> <p>We claim that Avery Tractors that they are the Lightest Weight Tractors built considering their power and strength of construction. Avery 12-25 H.P. Tractors weigh approximately 7400 pounds, Avery 20-35 H.P. Tractors approximately 11,500 pounds, and Avery 40-80 H.P. Tractors approximately 20,000. And with this extremely light weight they have also a strong construction. Don't accept any Light-Weight claims without having the figures and then comparing them with the power and construction. Be sure you get all the Facts. Avery "Light-Weight" Tractors save fuel and power and are able to travel over soft ground.</p> <p>We claim that the Avery "Self-Lift" Plow not only entirely outclasses every hand lever plow built but also all other so called "Self-Lift" plows which have all the way from one to two hand levers for each plow bottom.</p> <p>We claim that the Avery is a real One-Man Outfit. Others claim to have a One-Man Outfit. Get all the facts behind these claims. See how they actually operate. Then compare with the Avery REAL "One-Man Outfit."</p>	<p>CLAIM No. 3</p> <p>That Avery Tractors and Plows do NOT have ANY of the glaring faults found in other makes of Tractors and Plows.</p> <p>THE FACTS</p> <p>At one of the fairs a man climbed up on an Avery Tractor which he saw there for the first time and after carefully looking it over said, "I can't find any of the faults in your Tractor that I have found in mine."</p> <p>These are some of the things he couldn't find:</p> <p>He couldn't find any intermediate gear for travelling ahead. He couldn't find any intermediate gear shaft. He couldn't find any idle gears engaged in belt driving. He couldn't find any bevel drive pinions. Instead, he found nothing but spur gears and the least gears and shafting on any Tractor built, which means less loss of power in transmission.</p> <p>He couldn't find any fan to waste power or cause trouble. He couldn't find any fuel pump. He couldn't find any water pump. He could only find one clutch which served for traveling forward or backward or belt driving. He couldn't find the terrible vibration common with many other tractors. Instead he found the simplest tractor built and one without any of the glaring faults found in others.</p>
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The Avery "Light-Weight" Tractor and "Self-Lift" Plow is the only outfit built that actually has EACH and ALL of these important advantages: "Light-Weight," "Self-Lift," "One-Man" Outfit, Simplicity, Strength, Three Speeds, Combination Gasoline or Kerosene, Low Price, Sold on Approval, Guaranteed, and many others, and does NOT have ANY of the glaring faults of others.

For your protection, get ALL the facts about Avery Tractors and Plows and about all other Tractors and Plows and compare them. All we ask is for you to know ALL the facts. Write for a complete Avery 1913 "Light-Weight" Tractor and "Self-Lift" Plow catalog. Address

EVERY COMPANY

675 Iowa Street :: :: Peoria, Illinois

Haug Bros. & Nellerhoe Co., Ltd., Winnipeg, Regina, Calgary

WESTERN CANADIAN DISTRIBUTORS

Better Farming Demonstration

SPECIALS LEAVE WINNIPEG JUNE 3rd



PROFESSOR PETER'S DISCUSSING LIVE STOCK AT MANITOU, 1912

Of Exceptional Interest This Year To Every Farmer And His Family

The Provincial Department of Agriculture takes pleasure in announcing the despatch on June 3rd of a Better Farming Demonstration Special over the lines of the Canadian Pacific Railway within the boundaries of the province and a similar Special over the Canadian Northern lines, leaving Winnipeg on or about the same date. Each train will be on the road three weeks. Local posters will announce the date of arrival at the various stops, and a cordial invitation is extended to every farmer in every community in Manitoba to be at the nearest station with his family when the Special arrives.

The Better Farming Demonstration Specials this year will have many distinctive, interesting and valuable features. No expense or effort is being spared to make their success greater than ever. The staff of the Agricultural College, who will be in charge, are making enthusiastic preparations and the program will be so varied and complete that nobody will fail to be entertained and instructed.

Farm Mechanics

Would you like to see **models of up-to-date farm buildings?** Is there anything to interest you in a demonstration of **modern conveniences for the farm home?** Do **concrete** and engine work mean anything to you?

You will be shown washing machines at work, churns busy, farm water supply, foundation work and building floors, **how to produce electric light for the house** and many other things.

That boy of yours with the mechanical turn of mind will become absorbed in the **baby gasoline engines.** Bring him along.

Poultry

Professor Herner of the Poultry Department of the Agricultural College will have a car to himself in keeping with the importance of this industry to Manitoba farmers.

The car will be fitted up with **models of poultry houses, incubators, brooders, fattening and feeding crates, shaping boards, etc.** **Samples of mixed feeds,** etc., will also be displayed.

A practical demonstration of **killing and dressing poultry** will be included at every stop and Professor Herner will be glad to answer any questions which may bear upon the discussion.

Animal Husbandry

On the C. P. R. train special attention will be devoted to **Hog Raising** and two representatives of six different breeds of hogs will be carried for demonstration purposes. There will also be **samples of feeds and charts of feed values** to illustrate the discussion which will be of particular value.

On the C. N. R. train lectures will be given at each place on **farm horses, dairy and beef cattle** and different types of these animals will be carried for practical demonstration.

Field Husbandry

The Field Husbandry cars will be fitted up with samples of **weeds, grains and fodders** and the subject of **rotations and cultivation** of all farm crops suitable to Manitoba will be clearly illustrated.

Special emphasis will be laid upon **Barley growing for animal feed and weed destruction.** How to eradicate weeds and grow a crop of Barley at the same time and how to **convert barley into prime bacon** will form a basis for an interesting discussion. Questions may be asked and will lead to a discussion of **difficulties and their practical solution.**

Home Economics

On both the Better Farming Demonstration Specials there will be an entire car devoted to an exhibition of **sewing, dress-making and house-furnishing.**

Every farmer's wife and daughter should see this Exhibit. The discussion which will take place in the Home Economics car between the ladies assembled will prove exceptionally interesting and profitable.

Other Features

There will be a special **Dairy** car on the Canadian Northern train, but it was found impossible to carry it on the C. P. R. train this year in view of the accommodation required by the Farm Mechanics and other Departments. The Canadian Pacific train will lay emphasis upon demonstrations and exhibits, while on the C. N. R. special lectures will be given by members of the College staff.

EVERYBODY WELCOME

Watch The Posters

For Exact Date of Arrival in Your District



OBITUARY

WILLIAM A. CAVANAUGH



The entire farm machine industry will hear with regret of the death of William A. Cavanaugh, assistant manager of the Experimental Department of the International Harvester Company, who died April 21st, 1913, after a somewhat extended period of ill-health, marked by intervals of improvement approaching complete recovery, only to be followed by sudden and distressing relapses.

Mr. Cavanaugh began his career in the farm machine business as far back as 1883, when he was first employed by the McCormick Harvesting Machine Company as an expert and canvasser in the field. He did his first work under the late A. E. Mayer, who was then general agent at Columbus, Ohio. During that same year, however, he was transferred to Fargo, which was then considered the ultimate agricultural west, and for ten years he was employed in sales and collection work at that place. In the early days and during the development of the binder trade, manufacturers found some difficulty in securing the service of good salesmen, who were at the same time men of unusual mechanical ability. Mr. Cavanaugh rendered such efficient service along both these lines that he attracted the attention of the McCormick managers, and in 1893 was made general agent at Winnipeg, Man., which at that time included all of Western Canada. After occupying this important position until 1901 he was called into Chicago, where he could not only give his attention to field work, but could make use of the knowledge he had gained by his field experience in the improvement and development of the different machines.

To his painstaking efforts, and to his determination to give at all times a fair hearing to every invention which was presented for consideration, must be attributed much of the success which up-to-date farm machines have achieved.

DON'T WORRY ANY MORE
About Your Threshing



THIS OUTFIT WILL ANSWER THE PURPOSE

This is our No. 8 Thresher, 28 inch Cylinder, with Straw Carrier, Tailings Elevator and Grain Bagger

Thresherman like this size because it has a large capacity, does a first class job, does not throw any dust to the operator, is strongly made and easy to move

We manufacture this machine to run with 4, 5 and 8 H.P. Engines. We also manufacture the One and Two Horse Tread Powers

WRITE TODAY FOR CATALOGUE

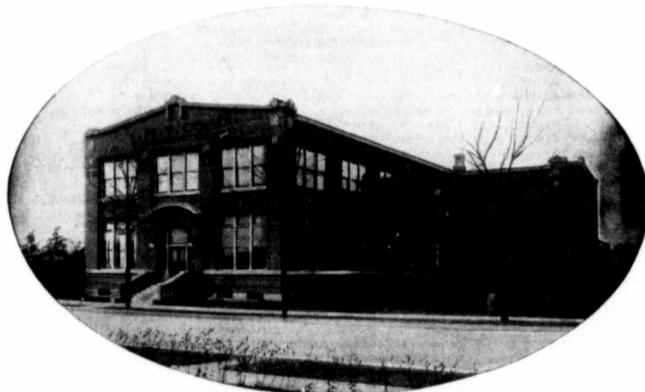
and prices to the manufacturers of the Genuine **AMERICAN CHAMPION** Threshing Machines

WE WANT A GOOD RESPONSIBLE AGENT IN YOUR DISTRICT

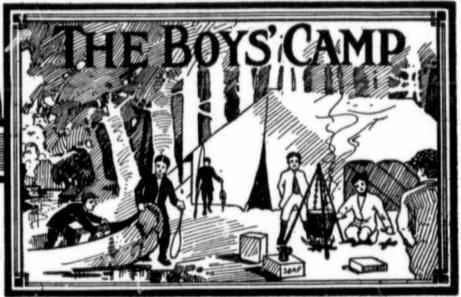
P. T. LEGARÉ, LIMITÉE,

273, 287 St. Paul Street, QUEBEC.

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



New Office Building of the Minneapolis Threshing Machine Co., at Hopkins, Minn.



Girls' Cozy Corner

SPRING'S NEW GOWN

M. Louise Ford.

Dame Springtime stood at her cottage door

And looked on the fields so brown,
And she said, "Indeed, it is surely time
I put on my new green gown.

"The winds of March are fierce and cold,
But April will soon be here,
And the children will all come tripping
forth
To greet her with merry cheer.

"And close behind her, with skies of
blue,
Will come dancing sunny May,
And before we know it sweet June will
come,
And that brings Children's Day."

So she sent the word both far and near,
That Springtime had come to stay,
And every trace of ice and snow
Said good-by and ran away.

A wireless message she also sent
To the daffodils underground,
And the snow-drops white, and the cro-
cuses—
They were glad to hear the sound.

"The long cold winter has gone at last,"
She heard them softly say,
"Thank God that Springtime is here
once more,
She has surely come to stay."

A beautiful gown she began to weave,
Of the brightest, softest green,
And over the fields and through the
wood
Her handiwork was seen.

She summoned the birds from the sunny
south,
And the butterflies and bees,
And the hum of bees and the songs of
birds
Were heard in the budding trees.

The children laughed in merry glee,
As they hunted the violets sweet,
And happy songs of springtime sang,
With tripping, dancing feet.

And by and by her task was done—
A dainty, dazling gown,
With buttercups for buttons bright,
And daisies up and down.

And apple-blossoms and lilacs sweet,
And snow-balls white and pure—
There never was a prettier gown
In all the world, I'm sure.

She smilingly viewed her work of love
As she stood at her cottage door;
"I think I've done as well," she said,
"As I've done in years before."

Girls' Prize Letter

Rathwell, Man., Jan 21, 1913.

Dear Cousin Doris:—I have been a silent reader of your page for quite a while. I am sending a little story, which I would like very much to see on your page. I took the headings and made up the story.

THE STORY OF AN INDIAN CHIEF

Very many years ago, when this country was first known, the Indians lived here. There were three principle tribes. Hurons, Algonquins, and Iroquois. The Hurons and Algonquins were friendly with the French. But the Iroquois were friendly with the English and on the war path with the other two tribes and the French.

Long-Hair was a chief of the Iroquois. His name means, that his long coarse, black hair was longer than any of his true friends.

He was tall straight and wise, and his long coarse hair was always in two plaits down his back. He was a very good tempered man for his race. His men would do anything for him.

On this day Long-Hair was sitting by the fire smoking when his son rushed in saying, in Indian language, "The French are down by the river marsh with many warriors, coming to make war upon us. I have six of my men, Yellow Quill, Guisant, and his two sons, and Fato and his friend all taking up arms and they are coming with some more Indians."

"No rush my son, don't be a fool, get my sword." For I won't say where the sword came from but he had one, in his hand was a big battle axe.

"Go my son to the warriors, tell them to hide behind the trees and we'll see who are the French."

Long-Bow did what he was told. For I forgot to say that was his name.

Just a moment to describe Long-Bow. He was tall and straight and as strong as a giant. He also carried a battle axe.

Long-Hair went to his tobacco pouch tied it to his belt and went down the path with his followers.

The French came marching on, not aware of their enemies behind the trees when they got up at an even shot, out sprang Long-Hair and his son and the rest after. The fight went on. It was more like a slaughter than a fight. If we just take a peep behind a huge tree we would see Long-Hair lying dead and the blood oozing out of his side.

Now Long-Bow and a few others had escaped. For they knew the country better than the French. The French did not see Long-Hair and after they had gone Long-Bow took his dead father and buried him in the Indian manner.

Long-Bow took his father's place as chief. But the Indian did not like him as well as Long-Hair.

Newdale, Man.

Dear Cousin Doris:—Is there room in this corner for a new visitor?

I am nine years old and go to school in summer all but rainy days.

I wish the Editor would write and tell the cozy corner girls to write.

Say cousins, don't you think it would be nice if Doris would teach us something? Would like her to teach us to sew or cook, wouldn't you? Next time I write I will tell you how to sew a pin cushion, no I will tell you a receipt. It is a candy this time. Maple Cream. 1 pound sugar, ¼ teaspoon of cream tartar, ½ cup milk. Boil all these together until when dropped in very cold water it will form a soft ball then beat until creamy. Now I must close. A new Cozy Corner girl, Laura Patterson.

Keeler, Sask., Feb. 13, 1913.

Dear Cousin Doris:—This is my first letter to your Cozy Corner. My brother

takes The Canadian Thresherman and Farmer and likes it very much. I don't go to school any more as I have to help mother keep house and help her do the sewing. I like doing fancy work, cooking and baking very much; I am going to tell you how I make oat meal cookies. First you take 2 cups of flour and then 3 cups of oat meal, 1 tea spoon of baking powder, 1 cup of sugar and half a cup of butter, then mix it all up, then add 1½ cups of milk or water, roll out very thin and bake in a hot oven.

I will close wishing your club every success. Florence Adamson. Age 13.

Bardo, Jan 12, 1913.

Dear Cousin Doris:—Hello, girls, how are you getting along? I wish some of the girls would send in some drawings and poems because I like to read the poems and to look at the drawings. My brother takes the Canadian Thresherman and Farmer and I like to read the letters on the Cozy Corner page, and to see all the girls enjoying it. We have a big stock farm but we want to sell our farm now because papa is tired of it. We have a lots of horses and cattle. I am eleven years of age and am going to school every day and like it very much. My studies are the following—Arithmetic, Grammar, Reading, Spelling, Canadian and English History, Drawing, Writing, Physiology, etc. We have not very much snow yet but it has been very cold the last days but hope it will be better soon again. I have three sisters and two brothers, so we are eight in the family. My letter is getting long now so I will close with a couple of riddles.

1. A house full and a hole full but you never can get your bowl full. Answer.—Smoke.

2. Crooked as a ram horn, flat as a plate, all the king's horses can't pull it straight. Answer.—River.

Your Cousin, Mathilda Lerbeckmo.

Asker, Alta., Jan. 1913.

Dear Cousin Doris:—I will take my time and write a few lines. My father takes the Canadian Thresherman and Farmer. I hope to see my letter in print. Our school has not started as we have not been able to get a teacher. I am 8 years old, I have 3 brothers and 4 sisters. The names of my sisters are, Marie, Ethel, Ruth and Emilie. The names of my brothers are, Victor, Arthur and Earl. I am in grade two. There are 4 of us in the class. My biggest sister is 10 years old. She is in grade 5. I will say, Good-bye, from Myrtle Kreiting.

Asker, Alta., January, 1913.

Dear Cousin Doris:—I will now take my time and write you a few lines. I have written two letters to your charming club. Both those letters were printed in the Canadian Thresherman and Farmer. Father has got a 15 horse engine and a new 28-50 Case separator. He was out threshing for about two months. I see that the boys are catching up to us so girls we will have to get busy and come ahead of them now—again I see that there are two girls who wrote very long letters indeed. The boys have been writing pretty long letters too, but the girls are ahead of the boys anyway. I have got 3 brothers and 4 sisters. For pets I have got a cat and a dog. I call the cat Kitty, and the dog's name is Fido. Do you not think they are pretty names? Well Doris, how are you getting along now?

I hope you are well. I suppose you are pretty busy reading all the letters you get from all the boys and girls. Well I guess I will have to close my letter and say Good-bye, Marie.

Manor, Sask., Jan. 20, 1913.

Dear Cousin Doris:—This is my first letter to your club. My brother takes the Canadian Thresherman and Farmer and we all like the paper. I like to read the girl's letters. I am seven years old and in the second grade at school. We have no school now because our teacher went away and we could not get another.

I have a dear little baby brother. He is nine months old today. He can say "papa." I will close now hoping to see my letter in print, I am, Yours sincerely, Albertine Ruel.

Stony Plain, Alta., Jan. 18, 1913.

Dear Cousin Doris:—This is my second letter to the Girl's Cozy Corner. I am going to be twelve, Feb. 2, 1913. I am in the third book. My sister Mathilda and my sister Elnora were sick. I stayed with my sister. We had not much snow. I did not have a sleigh ride yet. The snow is not very deep. I saw two sleighs, but the horses were pulling quite hard. My father is taking the Canadian Thresherman and Farmer. He has taken it for two years. I guess I will close with some.

As I crossed the London bridge I met a London scholar. Andrew off his coat Andrew off his collar. I told you the name of the London scholar. The answer is Andrew.

What is the key of Thanksgiving? The answer is turkey. What is the key of liquor? The answer, Whiskey.

A man is standing on top of the hill and yet he's at the bottom. Answer this one next time.

Well I guess I will close and leave room for another member. How is Cousin Doris and her girl? I remain, Yours truly, Mable Umback. Box 15

Reston, Man.

Dear Cousin Doris:—This is the second time I have come to visit the Cozy Corner. We take the Canadian Thresherman and Farmer. I like to read the letters very much.

I am going to school now. We drive ourselves. I am in grade five. I will be thirteen years old on Feb. the 6th. We had a Christmas tree. It was on Dec. 20th. We had drills and recitations.

We have reading every Friday afternoon at our school. The teacher is going to show us how to make baskets and tissue paper roses.

I like reading very much. I have read four books this winter. We each got a book on the Christmas tree. Mine was called Brave and Bold. I liked it very much.

I like riding horse-back. This fall when the cows were away I used to ride on horse-back for them. I have a pony called Nell. She is grey. She is very quiet.

I am taking music lessons. I do not like practising very well. I have been taking them for a year and a half.

We have a threshing machine. It is a Case.

We live about a quarter of a mile from the creek. We had a boat but someone took it for a ride and forgot to tie it up. It went down stream. It got frozen in the ice. It was no good

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

after that. There are wild plums, saskatoons, choke, and cranberries at the creek. I like to go picking them.

When we started school first with the cutter we forgot to lengthen the traces. Coming home the horse ran away. He ran about 3/4 of a mile.

I would like to correspond with any girl of my own age (thirteen).

I will close wishing the club every success. From Julia W. Fraser, Box 79.

Canadian Boys' Camp

BOY'S PRIZE LETTER

Okotoks, Alta., Feb. 26, 1913.

Dear Canadian Campers:—This is my first letter to your camp. I have three sisters, and two brothers. We have a big ranch here, and are one mile from town. We run a dairy here, and have about fifty head of cattle, and about thirty head of horses, and five of which are my own. We have about two hundred chickens, twenty head of turkeys, three ducks and one pair of pigeons.

I am fourteen years old and in the sixth grade. I do not get to school half of the time. I have not been to school for two weeks. I have been on the sick list with the ear-ache. Our studies are Reading, Spelling, Literature, Geography, History, Grammar, Nature Study, Writing. My favorite studies are Nature Study, Grammar and History, but I can't remember half of the dates or names.

My father takes The Canadian Thresherman and Farmer and I like reading it much. I noticed that not many of the boys were writing so I thought I would write to it. Well I will close hoping to see my letter in print. from

A. N. Blain.

Beatty, Sask.

Dear Cousin Doris.—This is my first letter to the "Boy's Camp." We have taken The Thresherman and Farmer for about three or four years. It has been showing quite a lot this winter, there is about three feet of snow on the ground yet. I am in the fifth grade. I am ten years of age. My studies are reading, writing, g-o-g-a-h-y, history, drawing and spelling. My favor'te studies are drawing, reading and g-e-o-g-r-a-p-h-y. We have great fun playing games at school. My favorite games are pump, pump, pull away and steel sticks. I will close with a few riddles. Upon the hill here is a red bull, he eats and he eat, and he never gets full. An?—A fire. Flour from England, flour from Spain,

Meet together in a shower of rain. Put in a bag tie it up with a string. If you guess me this riddle I will give you a ring. Ans.—Plum pudding.

I will close now as my letter is getting rather long. Yours truly,

John R. B. hn.

Penkill, Sask., March 13, 1913.

Dear Cousin Doris.—This is my first letter to the Canadian boy's camp. I hope to see it in print. I am nine years old and I help with some of the chores, and about the house. We have four horses, one cow, three pigs and about fifty chickens. I got a little steam engine which I can run with alcohol. I saw three gophers on the tenth of March. We have lots of fun snaring them in the summer time. I also like to ride on my father's big engine which he got last fall to do breaking and threshing with it. We lived here three years and live twenty-five miles from town. I will close with a riddle. Round as an apple, deep as a cup and all the men in the world can't pull it up. Ans. A well. Yours truly,

George William Brust.

Blake, Ont.

Dear Cousin Doris.—This is my first letter I have written to the Boy's Camp. My father has taken the Canadian Thresherman for three years. We live near the lake in the summer. Me and my brother went out at night to catch some perch. We caught seven fish and when we were coming in to the shore it was pretty dark and we ran into a stone and nearly broke the boat. I am eleven years of age, my birthday is on the tenth of April. I guess I will close for this time hoping to see my letter in print. Sincerely yours,

Leonard Talbot.

Macleod, Alta., March 14, 1913.

Dear Cousin Doris.—There are very few Boy's Camp letters so I thought I would write a letter hoping to increase the Club by one more letter.

We take The Canadian Thresherman and we have been taking it for a number of years for we have a threshing machine. I hauled straw last fall to fire with, one day someone else drove my team while moving so I got up in the tender (that is a tank and rack combined) and sat down. We came to some rough ground so the engineer went slowly until we had crossed it, and then started up quickly giving the tender a jerk which broke a casting under it, the front wheels pulled out and left me on the ground with a generous splash of water. I remain,

Charles Miller.

(Age 12)

Hague, Sask., Feb. 27, 1913.

Dear Cousin Doris.—This is my first letter to your camp. I have 5 brothers and 4 sisters. We live 5 miles from Hague. My brother Henry has a threshing machine, he has not got it home yet he is going to take it home next spring. Henry takes The Canadian Thresherman and Farmer. We have eight horses, two colts and 6 cows and nine pigs. We have half a section of land, we sold half a section lately. We have lots of snow. My father has a little 2 1/4 horse power gasoline engine, it makes me pleasure to work with such a little engine. Today is my birthday. I am 14 years old. When the weather is nice I drive with our horses and sleigh along the street. I do not see very many letters in the camp from around my place. I think I will go to Saskatoon next summer for Exhibition. Well I must close hoping to see this letter in print. Yours truly,

Klas Peters.

Earl Grey, Sask.,

Feb. 23rd, 1913.

Dear Campers:

I have never wrote to this club before, so I am going to try this club.

I am interested in the "Boy Scouts" because my parents have promised me to join them. I would like to get an answer to this question. Can a Boy Scout leave them when he has been there for a time?

P.S.—Does a boy scout go to school?

Yours sincerely,

Alfred Forsman.

Morden, Man., Jan 6th, 1913.

Dear Campers:

I see that the girls are getting ahead of us campers, so I will write a letter too. This is my second letter to your valuable camp. We had a fine Christmas this year. The weather was very nice and the weather also suits for trapping and hunting this year. I have trapped four weasels already and I have set a trap for a wolf but I only caught one of his toes, but I hope to get himself next time. Last year I advertised a bicycle and I sold it to Carel Soli and he was more than pleased with it. I will give you another offer better than before. It is a 4 horse-power motor cycle, everything in good order, tires and motor and all running parts as good as new and as I have no use for it next year I will sell it very cheap for \$30. Any one who owns it can travel any speed he likes from 5 to 75 miles an hour. I think I will close for this time, wishing the club every success.

I remain, yours truly,

Lewis Kruschel.

Write for description.

P.O. Morden, M.n.

Arnaud, Man.

Dear Cousin Doris: This is my second letter to the Canadian Boys' Camp. Thank you very much for the book that you sent me, I am proud of it.

The girls are ahead of the boys, this month. "What is the matter, boys?" We are having a fine winter here; there is hardly any snow. There are as many wagons running as sleighs. I am in Grade VIII at school. My favorite studies are composition, geometry, history and spelling.

I have had lots of fun this winter skating and sliding.

Well, as I cannot think of any more news. I remain,

Clarence Brunton.

Botha, Alta., Feb. 2, 1913.

Dear Cousin Doris:—I am a boy of thirteen years. I am in the 7th grade at school, but unfortunately I could not go to school until I was nine years old. I am fond of horses, last summer I had a black horse she was 28 years old, although she was old she was a good roadster and when I fell off her she would stop till I got on again. I have a colt now, it will be two years old this spring. I am going to break him to ride. The sire was owned by the Rev. Mr. Dowie, the founder of Zion city. Hoping this will bring a prize—at least miss the W. P. B. Hoping the camp every success. I am your cousin. Douglas McLeod.

Mozart, Sask.

Dear Cousin Doris:—This is my first letter to C. B. C. My father has taken The Canadian Farmer for nearly three years. I am 14 years old. I have been going to school for 3 years and I am in grade 6. I started to go to school when I was 12 years old. I go to school only six months each year. We came from South America, Brazil, about 7 years ago and it is very much different. I never saw snow until we came to Canada. I would like to correspond with any boy or girl of my own age 14. Wishing the Club every success, I remain, Albert Isfeld.

Violets.

Under the green hedges after the snow, There do the dear little violets grow, Hiding their modest and beautiful heads Under the hawthorn in soft mossy beds. Sweet as the roses and blue as the sky Down there do the dear little violets lie; Hiding their heads where they scarce may be seen; By the leaves you may know where the violets hath been.

—J. Moultrie.



Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



Two Women

One sanctified her homely household la-

bor
With patient kindness, and with ten-
der grace;
Love set his seal upon her faithful ser-
vice;

Sweet peace and joy illumed her
placid face.

Her presence seemed to those for whom
she wrought

With blessing and with benediction
fraught.

The other toiled with fretful, weak re-
pinning.

Sullen of visage, cheerless, heavy-
eyed.

Missing the joy of love's unselfish la-
bor.

"I'm weary of this ceaseless toil," she
cried;

I hate these narrow walls and duty's
chains.

And long for broader fields and higher
plains."

One caught the morning sunlight on
the mountain.

The noontide splendor and the twi-
ght's spell;

And heard with joy Creation's vocal
anthem.

The other walked alone where shad-
ows fell.

One face uplifted shone with Heaven's
own light.

The other downcast, made of noonday
night.

—Elizabeth Clarke Hardy, in Good
Housekeeping.

Home Economics

The reports sent in from our Home Economics societies prove that the organization is in a very prosperous condition, and the different branches are greatly blessing their communities. Letters from Alberta and Saskatchewan readers express their appreciation of the reports of the Manitoba organization. They say they learn extremely helpful ideas from the reading of these reports. We are making the Home Economics reports a special feature of our department, because we believe the ideas as expressed by the women of Manitoba are most practical and helpful to all women. A careful study of similar organizations across the line and in the east convinces us that they have not been given as much assistance and attention as our Manitoba societies have from the Agricultural College, and from what I hear I feel that our Manitoba societies realize that without the support of the Agricultural College the organization could not be so helpful and useful. The teachers on a staff at the college are making this a life work, and are highly qualified to direct the work in such a way that the best results will be realized. The equipment of the new college will enable the staff to bring the work of the college to women all over the province. Every motive, every ambition seems to be inspired with the purpose of helping the home life of the province. This field is so broad and the influence so essen-

tial that every effort possible must be made to strengthen all departments of home life. The harmonious co-operation of the staff of the Agricultural college with our women of the province makes this organization a powerful factor in the development of our future men and women. The work of this organization since its foundation has made us personally acquainted with its members who are women with broad minds and sympathetic hearts. I trust the president of every branch in the province is optimistic. Believe that yours is without doubt, the most progressive society in the province. This spirit is the life of any society. A president who thinks that the members are not helpful and that the society is dying will kill it instead of revive it. It is gratifying to know that the societies are all in a prosperous condition, and under the management of Principal Black and his associates, with the co-operation of the women of the province, the Home Economics Society will be a power in developing the province intellectually, financially and morally.

Though I think I have never mentioned this fact in this department before I feel that I must now, and I speak in all sincerity of soul. The desire of my life for seven years has been to help the girls and young women of Western Canada. During the past few years girls have come to me from different parts of our own city, and from every province in Canada. According to population more girls in distress have come to me from country communities than from the city. Most pathetic have been the cases of the country girls.

They tell me these causes have initiated their downfall:

(1) Lack of sympathy and confidence between mother and daughters.

(2) They are all misunderstood by their brothers and sisters.

(3) They have little safe social life.

(4) They bear vulgar and common talk from the hired men.

They are left alone for the evening with hired men. Some of these hired men propose to them, and on the eve of marriage the girl learns he has a wife and family in the old country, but it is too late. She sold her soul for the false proposal.

(5) Hunger for an interest in the affairs of the home and more encouragement.

I might relate more causes, but it is not necessary.

It is just one phase of work needed to be done in rural communities. There is a young men's problem too.

The weakening of parental control is one cause of young girls drifting away from home.

Do you tell me that matters pertaining to the home and community do not furnish a broad enough field for woman's work?

The power of the child in the cradle is more potent in the governments of men than the strength of politicians. In the exaltation of life is the remedy for the evils that threaten the race.

Principal Black and his assistants have the interests of Manitoba home-makers at heart, and every idea advanced by them is prompted from a sincere desire to help the women of Manitoba. With this in mind, let us all as members of the Home Economics Societies determine to exert every effort to unite in harmonious co-operation with the one idea in view—that the Home Economics Societies shall promote

in Manitoba a province of home prosperity.

This department has been in close touch with the work in both the Agricultural College and the province, and I believe the members all realize that they are deeply indebted to the college in many ways for personal and financial help.

A short review of the Home Economics work might be interesting to our readers.

The first provincial convention of women interested in the improvement of condition affecting country homes was called Feb. 16 and 17, 1909, at the Agricultural College. There was a very satisfactory attendance.

In 1910 Principal Black arranged for organization of the Home Economics Societies. He called for the co-operation of the agricultural societies at a number of points, to aid in giving publicity to the first meetings, and received a hearty response. Seventeen societies then organized. In 1910 he was instrumental in inducing the Board of Directors to include home economics work in the curriculum. He secured the services of Miss Jupiter and Miss Kennedy as instructors. The first household service course was put on in April, 1910.

In 1911 the Home Economics Convention met in February. There were four sessions. The attendance was large, and the meetings were enthusiastic. Two courses in home economics were offered to the students.

In 1912 the home economics work was given the same status as agriculture in the Agricultural College. Thus the college became in the fullest sense a co-educational institution. The first home economics car in Canada was attached to the educational train. It was the first in North America. The home economics car was on each of two trains, 149 meetings were held, and over 15,000 women reached. Lectures were given at 78 points during the months of May and June, and approximately 8,000 women of Manitoba listened to these lectures, or were instructed by demonstrations of interest to home-makers. The Agricultural College sent four delegates to the Dry Farming Congress at Lethbridge, paying their expenses. These four delegates were highly honored by this opportunity, for it brought them into personal acquaintance with women from all parts of the world.

The Agricultural College gave special prizes to winners in Home Economics at the Dry Farming Congress.

The college has also established a library, and issued a handbook, for free distribution, in the interest of work of Home Economics societies.

The Home Economics Convention of 1912 lasted two days. There was a large attendance, and much appreciation of the programme was shown by those who attended it. The convention held three sessions. There was the largest attendance of any convention to date. More interest was taken in the proceedings than ever before. There were more women from the country than at any previous time.

Last winter speakers were sent out to address women's meetings at 20 places; 41 addresses in all were delivered under the auspices of the Home Economics Society, or other women's organizations. A second travelling library has been established.

The first class graduated in the two winters course as home-makers in Home Economics course.

A new residence for girls is being built at a cost of \$200,000.

An equal share with the young men will be given to the young women of Manitoba in all the buildings, which will cost upwards of \$3,000,000.

The college has given free entertainment to visitors to all conventions held from the beginning. The department of agriculture assumed the entire expense of the meals provided.

The department of agriculture has paid all expenses connected with the Home Economics Conventions for the four years during which they have been held. During the past two years it has paid the expenses of members of the Advisory Board attending the conventions—also the members of the board who attended the meeting in September last, while arranging for the Lethbridge convention.

The college has aided the societies in every possible way from time to time by means of correspondence. In no province in Canada, and in no other state of the American union has greater progress been made in the development of Home Economics work in the first three years of its existence. More money has been spent in the interests of this work in Manitoba than in any part of North America, considering the extent of our population.

The extension section of the Agricultural College intends continuing its aggressive campaign in support of Home Economics work. The minister of agriculture has consented to support this work from his department, and the prospects for the future are even brighter than in the past.

With Principal Black and his staff at the head, assisted by the splendid women of the province, the Home Economics society is entering on a great future.

"The reformations that men and women are attempting in the social, religious, political and industrial world are but attempts to change the flavor, or quality of the fruit when it is ripening on the tree. The true remedy lies in the life of the tree; in the soil from which it springs; in the source from which the fruit derives its quality and flavor. In the appreciation of life, in the passion of life in the production of life, in the perfection of life, in the exaltation of life is the remedy for evils." (Wright). With this object in view, can any one say that the field concerning home life is too narrow? No, it is too broad for most of us to fill. And so, whatever pertains to home life is the most essential work for women. It seems to me that no other organization can be of so much power in the moulding of our men and women as the Home Economics Society, for it welcomes all women regardless of creed or race, and has for its aim the development of true home life, and every feature that tends to strengthen and assist the home work the Home Economics organization encourages.

P. R. H.

VALLEY RIVER

The Valley River society is having very interesting meetings. Their papers are helpful and practical. The following papers sent us by their secretary, Miss Taylor, are full of good ideas for our readers.

Soups, Stock and Beef Tea

It is a generally acknowledged fact that the French excel all others in the



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"LET MOONEY DO IT"



making of soups, but English people are rapidly becoming experts at soup-making too.

Soups are divided into two classes, soups with stock, and soups without stock. My subject is restricted to the former. I might speak of one of the latter that I got at Lethbridge and have since tried.

Soups with stock have as their basis, beef, veal, mutton, fish, poultry, or game separately or in combination. There are five classifications of the soups made from stock. Bouillon, Brown soup stock, White soup stock, Consomme, and Lamb stock.

Bouillon is made from lean beef, very little seasoning is used, and the stock is usually cleared.

Brown Soup Stock is the one, perhaps, with which most of us are most familiar. It is made from beef, half of it being lean meat, and the remainder fat and bone. It has generally a generous amount of vegetables in it, and some season this kind of soup quite highly with spices or sweet herbs.

White Soup Stock is made from either chicken or veal, and very little seasoning is used. These have dumplings or noodles served with them as a rule.

Consomme is made from two or three kinds of meat. Beef, veal and fowl being used. It has vegetables, and is highly seasoned. It is always served clear.

Lamb Stock, delicately seasoned, is served as mutton broth.

The winter vegetables most useful for soup are turnips, carrots, celery, onions and potatoes. Sweet herbs mixed for flavoring are thyme, savory, marjoram, and some like bay leaves. Spices which are useful for soups are whole cloves, allspice berries, peppercorns, and sticks cinnamon. A good many people do not use spices of any kind in their soups, while others think them essential. These seasonings with the addition of salt, pepper and parsley, are sufficient for soup stocks.

To give nourishment or thicken the soup anyone of these may be added, flour, cornstarch, arrowroot, tapioca, sago, pearl barley, rice bread crumbs or eggs are added. Mrs. Stevens.

Different Cuts of Meat and How to Serve Them

The tender juicy roasting joints lie along the back of the animal, on either side the back-bone. They get this quality because there is not much muscular work taking place there.

The continual movement in the neck and legs and lower parts of the body of any animal naturally produce stronger muscle and gristle and toughness, which need sugar and moisture cooking than the more tender pieces at the middle of the back and the thickest part of the leg, which is called the round, and also some of the thickest part of the shoulder. All these parts have various names—the ribs and sirloin are well known to us all as good roasting pieces. The ribs commence near the shoulder and join the sirloin which reaches to the thick part of the end of the body where we also get the best steak, beef, and rump of beef and round. If we want a very large roast of beef we take about 40 lbs of the round with as much fat as possible, bind it firmly with tape and skewers, place it in a large tin and send it to the baker, who places it in a warm brick oven just as he takes the bread out and leaves it in all night when it is usually beautifully done through and ready for a big cold dinner or for hundreds of sandwiches.

The boiling joints are taken from the lower parts of the animal and are called bristles, flat ribs, scotchin, etc., the neck and the thinner parts of the leg are nice stewed and make good beef tea and gravy.

All kinds of joints seem to be nice if cooked in the self-heating tins, which keep in the steam, make more gravy, and turn out even the tougher parts quite brown and as tender as chicken, it only they are given a steady heat and plenty of time.

By M. E. Taylor.

HAMIOTA

Although Tuesday was All Fool's day, those who were fortunate in being able to attend the Home Economic found themselves by no means fooled,

as the meeting was well attended, and the afternoon address both interesting and instructive.

The minutes of the last meeting were read and adopted; four new members being reported. In the business that followed, one item of special interest to the ladies of the community was a communication from the directors of the Agricultural Society granting a change in the prize list. A certain rule regarding the exhibits limited the number of articles that could be shown in women's work and fine arts to ten articles for the dollar entrance fee, and ten cents for each additional article. It was considered this rule handicapped exhibitors and its withdrawal will be to the benefit of the Fair.

Mr. Morrison, Public School Inspector, then gave a talk on education from the standpoint of the home and of the school. In his remarks, Mr. Morrison laid great stress on the value of the initiative, showing the necessity of letting the child's mind develop naturally, and in its own regular way. The child is not wicked, and his will is to be guided and controlled, but not broken if his highest development is desired. During the first years of the child's life the training naturally is in the mother's hands, but the father's part must not be ignored. This is especially true with boys. The feeling of manhood develops very early in the boy's life, and the man who first recognizes this feeling is the one whose influence will be the greatest over the boy. This is the special privilege of the father but too often this is neglected by him, and the man who first appeals to the boy becoming his ideal is one of a much lower moral standard than the father, in all probabilities the hired man. If this occurs, the father's greatest opportunity of influence over the boy is gone forever. In regard to school, Mr. Morrison referred to the gradual spread of technical education through our land, and its splendid results were cited.

In the recent teachers' convention in Winnipeg the matter was impressed of raising the standard of Public School education. There are only about ten per cent of the pupils in the public school who advance to take High School work, and of the ten per cent, three who will take a University course. The tendency of the curriculum has been too much for the advancement of the ten per cent and to the disadvantage of the majority. If it is necessary that a child in grade seven should leave school, it should be possible that before this he should have received the education needed in his sphere of life.

Mr. Morrison's address, which was much appreciated, was followed by a discussion, after which the meeting closed with the singing of the National Anthem.

MIAMI

The Home Economics Society of Miami held their regular meeting on Friday, March 31, in the vestry of the Presbyterian Church. About twenty ladies were present.

After singing "The Maple Leaf Forever" the minutes were read and adopted. One of the chief features of business was the drafting of a programme for the rest of the year. A new programme committee was formed to act for the next three months.

The topic for this month was "Young Ladies Cake Day," and as our meeting fell on Good Friday a goodly number of young ladies were present. Some of the cakes which were made were very tempting. I enclose a couple of recipes of them.

One of the most pleasing features of the programme was the reading of "The Pioneer Story of Mrs. McIntosh of Neepawa." This was indeed interesting and every one present could not help but admire the dear lady. One more member was added to our list.

Roger Cake.

1 egg
1 cup brown sugar
3/4 cup syrup (1/2 molasses and 1/2 table.)
1 pinch of salt
1/2 cup buttermilk
1 teaspoonful soda
2 cups flour
1 package dates cooked slightly with a little water and brown sugar.

Iceing—1 1/2 cups brown sugar, 1/2 cup cream or milk, 1 teaspoonful vanilla.

Helen—

Rebecca Cake.

1 cup gran. sugar
1/2 cup butter
1 beaten egg
1 cup sweet milk
1 pint flour, 2 teaspoons baking powder, 1 teaspoon each of cinnamon, cloves, allspice, sifted 3 times. Hazel—

MANITOU

The regular monthly meeting of the Manitou H. E. S. was held on Sat. March 15th in our new piece of meeting—the Town Hall, which has been granted as free of charge by the Council. There was a large number of ladies present; several new names were given in. After the discharge of regular business, correspondence etc., several items were discussed. Among others the purchase of a vacuum cleaner for the use of members. The most important matter was the arrangements for a St. Patrick's Social, to be held on March 17th, the proceeds to be devoted to the furnishing of a rest room to be opened in the near future. I might say our social came off and in every way was a complete success.

Mrs. M. E. Moore.

MANITOU

The regular monthly meeting of the Manitou H. E. S. was held on Sat. Feb. 15th at the usual hour, 3 o'clock; the president, Mrs. Armstrong was in the chair. Quite a number of ladies were present. After reading of minutes and correspondence, the different matters for discussion were taken up; the ladies reported on the results of bulbs secured through the Society. It was moved and seconded that the Society purchase a vacuum cleaner for the use of members. The delegate to the convention then gave her very excellent report—or rather half of it—she brought back such a full report that the president thought it wise to reserve part for the next meeting. All of the delegates report a splendid convention.

Mrs. E. J. Moore.
Correspondent.

OAK LAKE

The Home Economics Society held its monthly meeting for March in the rest room and it was well attended.

The principal item of interest on the programme was a demonstration of how to make a sick bed. This demonstration was ably carried out by an ex-nurse and one of our members. The ladies found it very interesting and helpful, as many of them were totally ignorant as to the method of changing sheets etc., with a patient in the bed. The members had a social time together afterwards and several musical selections were given which were much enjoyed. Mrs. Wm. Cochrane
Corr. Sec.

CARMAN

The Carman society is adding new members at nearly every meeting.

The Dufferin Home Economics Society held a very interesting meeting on February 19th.

E. W. Jones of the M. A. C. gave a short talk on the Home Economics work and brought greetings from the College to our society.

Miss Hall, one of the teachers in the Carman school very kindly consented to give a paper on her trip through Egypt last summer. Her paper was interesting, instructive and greatly appreciated by all who had the good fortune to hear it.

Miss Jones gave a short review of the Home Economics convention held at the College. A vote of thanks was given her for her excellent report.

Mr. Villimaux of the M. A. C. spoke at some length on dairying, laying particular stress on cleanliness all the way through. He also said in his opinion he thought it would be best if the farm girl would stay on the farm and help milk the cows, instead of going to Winnipeg, where they are exposed to all kinds of mischief.

At the close of the meeting light refreshments were served.

The regular meeting of the Dufferin Home Economics Society was held on the 19th of March in the usual place.

The newspaper "Economics" was given by one of our members, Mrs. Cochrane, and several interesting articles were given, among which were, "That Tired Feeling in the Spring," "Spring Diet," and "How to Keep Young."

At the close of the regular meeting, the committee in charge revised the prize list of the Summer Fair on women's work. H. C. F.

VIRDEN

Virden, April 3, 1913.

Our society seems to be getting along splendidly—good programmes and always a good attendance. The attendance is very seldom below seventy and sometimes reaches the one hundred mark.

During the winter we have not undertaken any special line of work. Doing what we can to help the rest room, and lending our support to any cause that needs help.

At our meeting held last Saturday a very practical paper was given by one of our doctors, Dr. Maines on "The Value of Sunshine and Fresh Air in the Home." It was full of information and easy suggestions that might be carried out in any home.

We aim every meeting to have at least two selections of the best music we can get, sometimes vocal, sometimes instrumental.

At each meeting three members volunteer to act as hostesses for the next meeting and tea and cake are served.

We feel the social part is one of the good features. Women meet there who do not meet at any other time and I am sure we are getting to know each other better and to understand and appreciate each other better.

Yours very sincerely,

Mr. L. Bayne.
Sec. Treas.

Mrs. E. E. Bayne.

MINNEDOSA

The March meeting of the Minnedosa Home Economics Society was a very pleasant one, held at the house of Mrs. A. Boyd. The afternoon tea is always much appreciated and it affords a chance for a pleasant social chat with the different members, many of whom live so far apart that this is almost the only time they see each other.

There was a good deal of business to be settled after the meeting was opened by the singing of "The Maple Leaf."

After some discussion it was decided to send an exhibit to the Home Economics section at the Winnipeg Exhibition, so I hope Minnedosa will make a good showing.

The programmes arranged for the meetings during the year, were read and approved, of course some alterations may be required in these.

The committee who have charge of collecting money for the rest room gave a report of money in hand, also of rooms they have in view. It is hoped we will be able to have the rest room opened by the beginning of May.

A report of the second day at the Home Economics convention at M. A. C. was read by the Secretary who referred her hearers to the Canadian Thresherman for Mrs. Chisholm's and Miss Cora Hind's papers, which she was much pleased to see there, in full.

It is to be hoped that some of Mrs. A. V. Thomas's suggestions as to Labor Saving devices, will be put into effect on many of the farms.

The meeting was brought to a close by singing "God Save the King."

E. M. Ewens, Sec. Treas.
Bethany Man.

We are delighted to have this report from Saskatchewan. Will more send in reports from Saskatchewan?

GLENROSE

Glenrose Home-makers' Club (Sask.)
The Glenrose Home-makers' Club met in Glenrose School on Thursday, Mar. 27. Eleven members being present.

After the minutes of the last meeting were read and adopted the Secretary read a letter from one of our members who has been very ill in a hospital in Ontario.

Our president had received a letter from the Y. W. C. A. of North Battleford asking if our club would join with them in furnishing a rest room for the



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JUST A FEW OF THE THOUSANDS OF UNSOLICITED TESTIMONIALS WE RECEIVE

Cap St. Martin, Comte Laval, P. Q. I beg to acknowledge your letter in which you thank me for the order, to the contrary it should be I who should thank you for your marvelous washer, and for the perfect results that we have from it, and I can do nothing else but recommend the I. X. L. Vacuum Washer to everybody. Yours truly, A. LOOD, Miami, Man. I have used one of your I. X. L. Vacuum Washers for some time, and find that it beats everything in the washing machine line that I have ever tried. Yours truly, MRS. H. F. DUNCALFE, Lingan Road, Cape Breton, N. S. I have used the Vacuum Washer at home, and find it to do all you claim and more after giving it a test. Yours truly, GEORGE MAHAN.

Taber, Alberta. The I. X. L. Vacuum Washer which formed part of the prize which I won at the Seventh International Dry-farming Congress at Letkloidge. I find to be a real labor-saver. I have done four washings with it, and it is an unqualified success cutting the time of washing one-half with less labor. MRS. R. McALLISTER, Leithville, Gull Lake, Sask. Dear Sirs—I wish to thank you for your kindness in sending a French letter re your washing machine. I am very well satisfied with it, but you should never have invented such a machine because every one of our husbands wants to get one, and the girls are taking a fit lest they should never get married. With such a machine there is no need of a wife. You told me to give my opinion of it, here it is. Yours truly, (Sgd) RAOUX MOREAU, Saltonst, Sask. Having purchased one of your Vacuum Washers and the great satisfaction my wife is getting from it prompts me to write you. If you would care to send me one down on consignment I believe that they could be disposed of quickly, if you care to do this, please state terms, and oblige. PARTRIDGE BROS., Chateaufay Basin, P. Q. Enclosed find coupon and \$1.50 for I. X. L. Vacuum Washer. I got one a short time ago, and want this for a friend to whom we have recommended it as being a good article and worth the cost price; we are well satisfied with ours. Yours truly, ROBERT ORR,

Ser. St. Laurent Quarry, Laval County, Cap St. Martin, Quebec. Gentlemen—Enclosed please find \$1.50 and coupon for one I.X.L. Washing Machine. My woman will go crazy if you don't send her one. Quite a few around here have them, and they seem to be very satisfied with them. If you walk around the village on washing day you will see them all with a stick in their hand. Yours truly, (Sgd) J. A. POULIN, Wapella, Sask. I enclose a coupon for an I. X. L. Vacuum Washer and \$1.50. Will you send one to the name and address enclosed. I got one for myself a little while ago, and I never used such a handy good little washer in my life. I have recommended it to about a dozen people in Wapella. Yours truly, (MRS.) R. P. HUTCHINSON,

St. Theophile Beauve, P. Q. We have received our Vacuum Washer in perfect condition, and delighted with the work that it does. I would like the agency, as I know that I would have no difficulty whatever in selling them. Yours truly, NAPOLEON BOUTIN, 195 Bishop St., Montreal, P. Q. We have received our I. X. L. Vacuum Washer, and it is so perfect in every way that I am sending an order for two more for a friend and an extra for myself. Yours sincerely, MRS. A. G. OSTELL, Bie, Quebec. We are in receipt of our I. X. L. Vacuum Washer, and must say that we are more than satisfied with the work that it does. Yours truly, MR. GEORGE LAVOIE. It's so Easy and Simple Kiddie Can Do It.

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All charges prepaid anywhere in Canada on condition that your money is to be refunded if the Washer does not do all that is claimed. 3-5-13

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women and girls. It was decided that we help in any way we could.

Miss Richardson read a splendid paper on "Raising Young Chickens." Another paper on "Making Home-made Cheese," was read by Mrs. Finlayson. Mrs. Bailey and Mrs. Roulston took charge of the question drawer.

The meeting closed with "God Save the King." A dainty luncheon was then served by Mrs. Finlayson and Miss Richardson.

Will the societies send in their reports by the 10th of every month as we go to press on the 15th? Some reports came in a day or two late for the press. P. R. H.

CARE OF YOUNG CHICKS

In beginning my paper on this subject I would like to say that to have strong healthy chicks it is necessary to begin at the very beginning, and exercise care in choosing things; also the hens, if they are to be used. A hen that is nervous and jumps off the nest whenever any one goes near, should never be set with eggs, nor one that will peck at you if you go near; such hens should be broken off their desire to sit; for if used will cause nothing but worry for fear they should break the eggs, or kill the chicks when hatched, but a quiet hen that has set closely to the nest for two or three days may be safely used. Prepare the hen by dusting well with insect powder; fill the nest with nice soft hay, making a hollow in the middle; dust insect powder all around that too, and also it is well to powder the hen again once or twice during the time of setting, so that the young chicks may not get infested with lice, which would cause a drawback to growth. Then it is wise to give a little care in selecting the eggs; pullets' eggs are not likely to hatch out strong chicks, nor should very large eggs be used; a medium size with smooth shell will be most likely to give good results. Put as many as you think the hen will cover well, place the hen down in front of them, and let her settle herself comfortably, putting a box in front of her to keep out the other hens.

When the chicks are hatched do not be in too big a hurry to feed them, the yolk of the egg which the chick absorbs just before leaving the shell is quite sufficient to keep them alive for three days, and if food is given too soon it will cause diarrhoea, which kills more chicks than anything else, especially in incubator chicks. For the first few feeds dry bread-crumbs is best; finely grated and dried in the oven till quite crisp, then rubbed small, rolled oats are good; bread soaked in milk or water, squeezed quite dry and mixed with cornmeal, cream of wheat, or bran, a little salt or sugar being added; ground wheat; never give whole wheat until chicks are at least a week old. I grind a little through my meat mincer for them, if I have no other, and always let them have a good supply of grit or sand with small stones in it. I always put a layer half an inch deep in a tin and place their food on top of that. A little boiled rice mixed with dry meal or potatoes or boiled vegetables of any kind is good; boiled eggs mashed up; shell and all, may be given. Try and give as much variety as possible, but always start the day with dry bread-crumbs and rolled oats or wheat. Feed four times a day for the first two weeks; then as they begin to pick up and run around, three times is sufficient. After the first day take care to let them have plenty of water or milk to drink. Make little fountains for them so that the chicks can't fall in and drown themselves, in this way: take an empty condensed milk tin, pry off the lid and punch four holes around it, half an inch from the edge; fill with water and invert it into a saucer, this fills up to the holes and as the chicks drink, flows out through the holes while there is any water left in the can. For the first few days it is best to keep them cooped up, and not allow them to ramble; rest and warmth are nearly more necessary than food, after that they may be allowed to go out, always making sure that they have a good feed

before starting out and seeing that their crops are reasonably full before shutting them up for the night.

Mothers' Corner

THE WELL-BORN

(By Ella Wheeler Wilcox)

So many people—people—in the world;
So few great souls, love ordered, well be-
gun,
In answer to the fertile mother need!
So few who seem
The image of the Maker's mortal dream:
So many born of mere propinquity—
Of lustful habit—or of accident.
Their mothers felt
No mighty, all-compelling wish to see
Their bosoms garden-places
Abloom with flower faces;
No tidal wave swept o'er them with its
flood;
No thrill of flesh or heart; no leap of
blood;
No glowing fire, flaming to white de-
sire
For mating or for motherhood,
Yet they bore children.
God! how mankind misuses thy com-
mand,
To populate the earth!
How low is brought high birth!
How low the woman; when, inert as
spawn
Left on the sands to fertilize,
She is the means through which the race
goes on!
Not so the first intent.
Birth, as the Supreme Mind conceived it,
meant
The clear imperious call of mate to mate
And the clear answer. Only thus and
then
Are fine, well-ordered, and potential
lives
Brought into being. Not by church or
state
Can birth be made legitimate.
Unless,
Love in its fullness bless,
Creation so ordains its lofty laws
That man, while greater in all other
things,
Is lesser in the generative cause.
The father may be merely man, the
male;
Yet more than female must the mother
be.
The woman who would fashion
Souls, for the use of earth and angels
meet,
Must entertain a high and holy passion.
Not rank, or wealth, or influence of
kings
Can give a soul its dower
Of majesty and power,
Unless the mother brings
Great love to that great hour.

CORRESPONDENCE

Dear Madam—In your department of the Canadian Thresherman and Farmer you tell us so much that is both practical and interesting at the same time that it is becoming quite a fixed habit of mine to quote some saying or part of a paragraph as a law of itself. I was much interested in the reports of the Home Economics societies, as well as the article by Miss Cora Hind. To my mind she is the right kind of a suffragette. I don't like that name at all, but it seems to be the only one carried at the present time to distinguish a woman who is in favor of reforms being made. And I do not hesitate to say that Miss Hind is getting at the root or beginning of the matter of reform when she tells us mothers to care for our babies before we ever see them. I think the beautiful verses "At Bay" by May Bryon are just what real mothers' hearts are echoing to-day. We are home makers—we must also be home keepers.

The article Reminiscences of Pioneer Women is delightful. I hope all the young readers of your department will appreciate dear old Mrs. McIntosh, and learn from her experience how much "I'll and I can do," without the aids of frills, etc., seemingly so necessary. You have offered "Helps for Expectant Mothers" so patiently through your columns that at last I venture to ask



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P. PAYNE,
President

W. I. SMALE,
Secretary

for one. I have often wished for the book.

Wishing your paper and your department every success, I remain
A Home-Maker.

Thank you so much for your lovely letter. We are pleased to send a copy of "Helps to Expectant Mothers" to any wife who asks for it free of cost.—P.R.H.

THEIR YESTERDAYS

I have been reading a book lately entitled "Their Yesterdays" by Harold Bell Wright, and I quote here from a chapter his idea of the up-to-date woman. It has given me food for serious thought, perhaps my readers will write me what they think of it. This is the quotation: "From the down-to-date woman, the all-the-way-down-to-date woman I mean, one gains new and modern ideas of the service that woman-kind is to render to the race. Almost it is as though God did not know what he was about when he made woman. To place a home above a club, a nursery above the public visit form, a fireside above politics, the prattle of children above newspaper notoriety, the love of boys and girls above the excitement of social conquest, the work of bearing strong men and true women for the glory of the race above the near intellectual pursuits and the attainments of a shallow thinking—all this is to be sadly old-fashioned. All this is so behind-the-times that one must confess such shocking taste with all humiliation. I hereby beg pardon of the down-to-date powers that be, and most humbly pray that they will graciously forgive my boorishness. I assure you that, after all, I am not so benighted that I do not realize how seriously babies would interfere in the affairs of those down-to-date women who are elevating the race. By all means let the race be elevated, though it perish, childless, in the process. Very soon, now, womanhood itself will be out-of-date, for the world, in this, seems to be evolving something new."

"A baby in its mother's arms is the fullest expression of Divinity." (Wright).

"A child is nearer, by many years, to God than the grown up rebel who traitorously holds his own mean interests superior to the holy will of Life, as vested in the sacred person of a boy or girl."

"The day my little son puts his chubby arms around my neck and cuddles, oh, so closely to me, and whispers: 'I dot th' bestest muzzer in the world,' I shall be a thousandfold happier than when the newspapers all over the world printed my picture as the world's most beautiful woman."

That is the way Mrs. Elwin Neame, who was Miss Ivy Close until December 26, 1910, introduced her baby boy to a London newspaperman. Two years ago she was pronounced the "most beautiful woman in the world" by nine celebrated artists who judged the London Daily Mail beauty contest, in which more than 15,000 celebrated beauties were entered.

After the contest Miss Close married Elwin Neame, the photographer who had taken the photographs of her for The Daily Mail. Recently Mrs. Neame became the mother of a bouncing baby boy.

SILVER ARROWS

There are many trials in life which do not seem to come from un wisdom or folly. They are silver arrows that form the elbow of God, and fixed inextricably in the quivering heart. They were not meant, like snow or water, to melt as soon as they strike. But the moment an ill can be patiently borne it is disarmed of its power though not of its pain."

Henry Ward Beecher.

SECOND CHILDHOOD

By WILLIAM F. KIRK.

I'm celebrating, sweetheart: I am seventy-to-day.
I saw the neighbors laughing when they saw me getting gay.
"He's in his second childhood," was one sly remark I heard.
"He's in his second childhood"—and I laughed at every word.
They did not understand, dear, when I danced in childish joy;
There is no second childhood when a man remains a boy.

I've been a man fifty years, all wearing, tearing years;
For fifty years I've laughed away a million tears and fears.
The joy heart is the boy heart, that never stops its beat
Until the soul speaks, laughing, up to the Judgment Seat.
And so I mock the Reaper, who finds nothing to destroy.
There is no second childhood when a man remains a boy.

MEASURE FOR MESSURE

Mrs. Homer has various friends who come frequently to her home and enjoy her luncheons. Among these friends is Miss Gesty, a maiden lady. She was dining the other day when Mrs. Homer said to her:
"Do have some more of the pudding, Miss Gesty."
To which Miss Gesty replied:
"Well, if you insist, but just a mouthful only."
Then Mrs. Homer turned sweetly to her servant and said:
"Jane, fill Miss Gesty's plate again."

SNAP SHOTS

To recognize a virtue is to stimulate it.

What doth it profit parents to gain the whole world of wealth and lose their own son?

Lessons learned in the cradle last to the grave.

Sensitiveness is the price which high strung souls must pay for the privilege of being "keyed up" for work of a fine order.

Religion is the touch of God—the Infinite—in all of our affairs.

Shakespeare had a fondness for killing off his characters, but he was frugal enough to postpone their death till the final act.

When a woman has more babies with her on the street than she can well manage, she usually also has a feather on her hat which the wind has blown out of place.

Give a woman a rocking chair and a handkerchief, and she is prepared to weep with the whole world.

"Girls! Do not speak to strangers!" This sign is soon to appear in Chicago street cars if the plan of Young Women's Christian Association workers carry.

Some people have the idea that if you scatter vice throughout the body politic it won't show so much, and then by the whitening face powder of hypocrisy the pimples may be quite concealed.

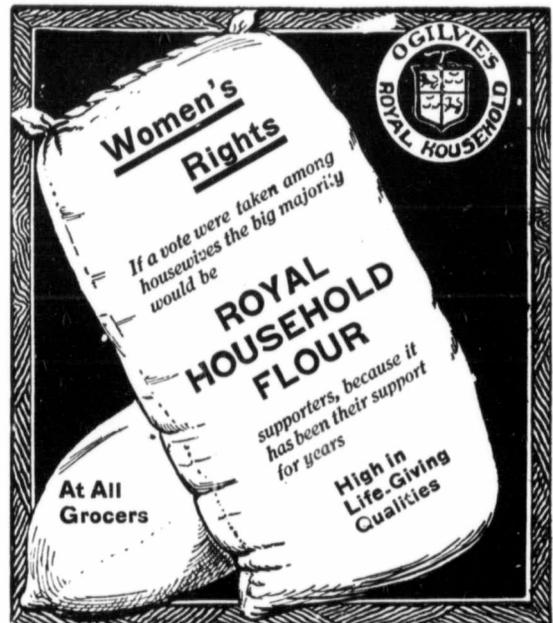


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A JOB OF WORK

By P. G. WOEDHOUSE
(Concluded from April)

"You attending to this table?"
"I am."
There was no doubt about the puglist's appetite. It gave Freddie quite a thrill of altruistic pleasure to watch him eat. He felt like a philanthropist entertaining a starving beggar. He fetched and carried assiduously for the diner, and when at length the latter called for coffee and a cigar and sank back in his chair with a happy sigh, he nearly cheered.
On his way to the kitchen he encountered his employer, Mr. "Blinky" Anderson, looking depressed. Freddie gathered the reason for his gloom. He liked "Blinky," and thought respectful condolence would not be out of place.
"Sorry to hear the news, sir."
"Hey?" said Mr. Anderson, moodily.
"I hear the main event has fallen through."
"Who told you?"
"I have been waiting on one of the fighters upstairs."
Mr. Anderson nodded.
"That would be the Tennessee Bear-Cat."
"Very possibly. He had that appearance."
Like the Bear-Cat, Mr. Anderson was rendered communicative by grief. Freddie had a sympathetic manner, and many men had confided in him.
"It was One-Round Smith who backed down. Says he's hurt his foot. Huh!" Mr. Anderson grunted satirically, but pathos succeeded satire again almost at once. "I ain't told them about it yet," he went on, jerking his head in the direction of the invisible audience. "The preliminaries have just started, and what those guys will say when they find there ain't going to be a main event I don't know. I guess they'll want to lynch somebody. I ought to tell 'em right away, but I can't seem to sorter brace myself to it. It's the best audience, too, we've ever had. All the sports in town are there. Rich, guys, too—none of your cheap skates. I just seen old man Dunlop blow in with a pal, and he's worth all sorts of money. And now there won't be no fight. Wouldn't that jar you?"
"Can't you find a substitute?"
"Substitute! This ain't a preliminary between two dubs. It was the real thing for big money. And all the sparts in town come to watch it. Substitute! Ain't you ever heard of the Bear-Cat?"

He's a wild Indian. Who's going to offer to step up and swap punches with a terror like him?"
"I am," said Freddie.
"You!"
"Me."
"You'll fight the Tennessee Bear-Cat?"
"I'd fight Jack Johnson if he'd just finished the meal that fellow has been having," said Freddie simply.
Mr. Anderson was not a swift thinker. He stood, blinking, and allowed the idea to soak through. It penetrated slowly, like water through a ceiling.
"He'd eat you," he said, at last.
"Well, I'm the only thing in this place he hasn't eaten. Why stint him?"
"But, say, have you done any fighting?"
"As an amateur, a good deal."
"Amateur! Say, can you see them sports down there standing a main event between the Tennessee Bear-Cat and an amateur?"
"Why tell them? Say I'm the heavy-light-weight champion of England."
"What's a heavy-light-weight?"
"It's a new class, in between the lights and the welters."
By this time the idea had fairly worked its way through into Mr. Anderson's mind, and its merits were beginning to appeal to him. It was certain that, if Freddie were not allowed to fill the gap, there would be no more main event that night. And in the peculiar circumstances it was just possible that he might do well enough to satisfy the audience. The cloud passed from Mr. Anderson's face, for all the world as if he had taken a Dawn of Hope cocktail.
"Why, say," he said, "there's something in this."
"You bet there is," said Freddie. "There's the loser's end, three hundred of the best."
Mr. Anderson clapped him on the shoulder.
"And another hundred from me if you last five rounds," he said. "I guess five'll satisfy them, if you make them fast ones. I'll go and tell the Bear-Cat."
"And I'll go and get him his coffee and the strongest cigar you keep. Every little helps."
Freddie entered the ring in a costume borrowed from one of the fighters in the preliminaries, and, seating himself in his corner, had his first sight of Mr. "Blinky" Anderson's celebrated basement.

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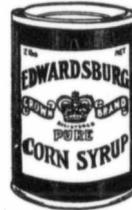
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Most of the light in the place was concentrated over the roped platform of the ring, and all he got was a vague impression of space. There seemed to be a great many people present. The white-shirt-fronts reminded him of the National Sporting Club.

His eye was caught by a face in the first row of ring-side seats. It seemed familiar. Where had he seen it before? And then he recognized Mr. Bivatt—a transformed Mr. Bivatt, happier looking, excited, altogether more human. Their eyes met, but there was no recognition in the millionaire's. Freddie had shaved his moustache as a preliminary to the life of toil, and Mr. Bivatt, beaming happily up at him from beside that dead game sport, T. Mortimer Dunlop, had no recollection of ever having seen him before.

Freddie's attention was diverted from audience to ring by the arrival of the Tennessee Bear-Cat. There was a subdued murmur of applause—applause had to be merely murmured on these occasions—and for one moment, as he looked at him, Freddie regretted the contract he had undertaken. What Mr. Anderson had said about wild Indians came home to him. Certainly the Bear-Cat looked one. He was an extraordinarily - muscled young man. Freddie was mainly muscle himself, but the Bear-Cat appeared to be a kind of freak. Lumps and cords protruded from him in all directions. His face wore a look of placid content, and he had a general air of happy repletion, a fate-cannot-touch-me-I-have-dined-to-day expression. He was chewing gum.

A shirt-sleeved gentleman of full habit climbed into the ring, puffing slightly.

"Gents! Main event. Have an apology to offer—behalf of the management. Was to have been ten-round between Sam Proctor, better known as th' Tennessee Bear-Cat, and One-Round Smith, at one-thirty-three ringside. But —seems to have been a—naccident, One-Round havin' sustained severe injury to foot. Rend'rin' it—impossible—appear t'night before you. Deeply regret unavoid' ble dis'pointment."

The portly man's breath was going fast, but he still had sufficient for a brilliant flight of fancy, a vast improvement on Freddie's humble effort.

"Have, honor, however, present t' you Jimmy Smith, brother of One Round—stranger to this city—but—well known on Pacific Coast—where—winner of forty-seven battles. Claimant to welter-weight belt. Gents, Jimmy Smith, the Santa Barbara Whirlwind!"

Freddie bowed. The speech, for some mysterious reason, probably explainable by Christian Science, had had quite a tonic effect upon him. The mere thought of those



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You have kept on wearing stockings with a seam up the back—shapeless, uncomfortable things! because you probably didn't realize the perfection reached by Pen-Angle Seamless Full-Fashioned Hosiery. These are hose *without the sign of a seam*—look for the sign of the trademark. As they are being knit they are shaped lastingly to the curves of the foot and leg. *They fit*—they wear better—and the utter absence of any seam at all makes them ever so much more comfortable. No difference in cost—but much in quality, in economy and in comfort when you buy

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forty-seven victories gave him heart. After all, who was this Tennessee Bear-Cat? A mere walking repository of noodle soup, weakfish, fried chicken, eggs, corn apple dumplings, lager-beer, and cup-custards. A perambulating bill of fare. That was what he was. And, anyway, he was probably muscle-bound, and would be a slow as a top.

The introducer, however, presented him in another aspect. He had got his second wind now, and used it.

"Gents! The Tennessee Bear-Cat! You all know Sam. The toughest huskiest, wickedest little old slugger that ever came down the pike. The boy who's cleaned up all the light-weights around these parts, and is in a dead straight line — for — the champenship of the world."

He waved his hand dramatically. The Bear-Cat, overwhelmed by these tributes, shifted his

chewing gum to the other cheek, and simpered coyly, as who should say, "Stop, your nonsense, 'Archibald!" And the gong clanged.

Freddie started the fight with the advantage that his plan of campaign was perfectly clear in his mind. Rapid attack was his policy. When a stout gentleman in shirt-sleeves has been exhausting his scanty stock of breath calling you a whirlwind, decency forbids that you should behave like a zephyr. He shook hands, and, on the principle of beginning as you mean to go on, proceeded without delay to poke his left earnestly into the middle of the Bear-Cat's face. He then brought his right round with a thud on to what the latter probably still called his ear—a strange, shapeless growth rather like a leather cauliflower—and sprang back. The Bear-Cat shifted his gum and smiled gratefully.

A heavy swing on the part of the Bear-Cat was the next event of note. Freddie avoided it with ease and slipped in a crisp left. As he had expected, his opponent was too slow to be dangerous. Dangerous! He was not even making the thing interesting, thought Freddie, as he side-stepped another swing and brought his right up to the chin. He went to his corner at the end of the round, glowing with satisfaction. This was easy.

It was towards the middle of the second round that he received a shock. Till then the curious ease with which he had reached the opponent's head had caused him to concentrate on it. It now occurred to him that by omitting to attack the body he was, as it were, wasting the gifts of Providence. Consequently, having worked his man into an angle of the ropes with his back against a post, he fainted with his left, drew

a blow, and then ducking quickly, put all his weight into a low, straight right.

The effect was remarkable. The Bear-Cat uttered a startled grunt, a look came into his face of mingled pain and reproach, as if his faith in human nature had been shaken, and he fell into a clinch. And as Freddie vainly struggled to free himself a voice murmured in his ear:—

"Say, cut that out!"

The stout referee prised them apart. Freddie darted forward, missed with his left, and the Bear-Cat clinched again—more, it appeared, in order to resume the interrupted conversation than from motives of safety.

"Leave me stummick be, you rummy," he hissed, rapidly. Ain't you got no tact? 'Blinky' promised me fifty if I'd let you stay three rounds, but one more like that, and I'll forget meself and knock you through the ceiling."

Only when he reached his corner did the full meaning of the words strike Freddie. All the glow of victory left him. It was a put-up job! "Blinky," to ensure his patrons something resembling a fight, had induced the Bear-Cat to fight false during the first three rounds.

The shock of it utterly disheartened him. That was why his jabs and hooks had got home with such clockwork precision! Probably his opponent had been laughing at him all the time. The thought stung him. He had never been remarkable for an even temper, and now a cold fury seized him. He would show them, by George!

The third round was the most spectacular of the fight. Even the regular patrons of "Blinky's" Saturday night exhibitions threw aside their prudence and bellowed approval. Smiling wanly and clinching often, the Bear-Cat fixed his mind on his fifty dollars to buoy himself up, while Freddie, with a nasty gleam in his eyes, behaved every moment more like a Santa Barbara Whirlwind might reasonably be expected to behave. Seldom had the Bear-Cat heard sweeter music than the note of the gong terminating the round. He moved slowly to his corner, and handed his chewing gum to his second to hold for him. It was strictly business now. He thought hard thoughts as he lay back in his chair.

In the other corner Freddie also was thinking. The exhilarating exercise of the last round had soothed him and cleared his brain and he, too, as he left his corner for the fourth session, was resolved to attend strictly to business. And his business was to stay five rounds, and earn that hundred dollars.

Connoisseurs in the ring-seats, who had been telling their friends

"Just as it was pictured"



This picture depicts a moment of intense pleasure and supreme satisfaction—when the thing one has eagerly waited for and wanted so much arrives, "just as it was pictured," and just as good as the Catalogue said it was.

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during the previous interval that Freddie had "got him going," changed their minds, and gave it as their opinion that he had "blown up." They were wrong. He was fighting solely on the defensive now from policy, not from fatigue.

The Bear-Cat came on with a rush, head down, swinging with left and right. The change from his former attitude was remarkable, and Freddie, if he had not been prepared for it, might have been destroyed offhand. There was no standing up against such an onslaught. He covered up and ducked, and slipped and side-stepped and slipped again, and, when the gong sounded, he was still intact.

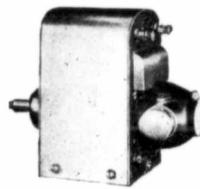
Freddie came up for the fifth round brimming over with determination. He meant to do or die. Before the end of the first half-minute it was borne in upon him that he was far more likely to die than do. He was a good amateur boxer. He had been well taught, and he knew all the recognized stops for the recognized blows. But the Bear-Cat had either invented a number of blows not in the regular curriculum, or else it was his manner of delivering them that gave that impression. Reason told Freddie that his opponent was not swinging left and right simultaneously, but the hard fact remained, that, just as he guarded one blow, another came from the opposite point of the compass, and took him squarely on the side of the head. He had a disagreeable sensation as if an automobile had run into him, and then he was on the floor, with the stout referee sawing the air above him.

The thought of a hundred dollars is a reviving agent that makes oxygen look like a sleeping draught. No sooner had it returned to his mind than his head cleared and he rose to his feet, as full of fight as ever. He perceived the Bear-Cat slithering towards him, and leaped to one side like a Russian dancer. The Bear-Cat collided with the ropes and grunted discontentedly.

Probably, if Freddie had had a sizable plot of ground, such as Hyde Park or Dartmoor, to manoeuvre in, he might have avoided his opponent for some considerable time. The ring being only twenty feet square, he was hampered. A few more wild leaps, interspersed with one or two harmless left jabs, and he found himself penned up in a corner, with the Bear-Cat smiling pleasantly again now, making hypnotic passes before his eyes.

The Bear-Cat was not one of your reticent fighters. He was candour itself.

"Here it comes, kid!" he remarked, affably, and "it" came. Freddie's world suddenly resolved



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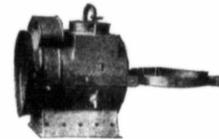
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Any person who is the sole head of a family or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

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W. W. CORY,
Deputy of the Minister of the Interior
N.B.—Unauthorized publication of this advertisement will not be paid for.

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itself into a confused jumble of pirouetting stars, chairs, shirt-fronts, and electric lights, and he fell forward in a boneless heap. There was a noise of rushing waters in his ears, and, mingled with it, the sound of voices. Some person or persons, he felt dimly, seemed to be making a good deal of an uproar. His brain was clouded, but the fighting instinct still worked within him; and, almost unconsciously, he groped for the lower rope, found it, and pulled himself to his feet. And then lights went out.

How long it was before he realized that the lights had actually gone out, and that the abrupt darkness was not due to a repetition of "it" he never knew. But it must have been some length of time, for when the room became suddenly light again his head was clear, and, except for a conviction that his neck was broken he felt tolerably well.

His eyes having grown accustomed to the light, he saw with astonishment that remarkable changes had taken place in the room. With the exception of some half-dozen persons, the audience had disappeared entirely, and each of those who remained was in the grasp of a massive policeman. Two more intelligent officers were beckoning to him to come down from the platform.

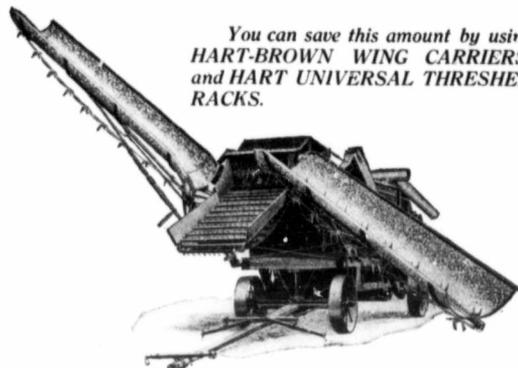
The New York police force is subject to periodical attacks of sensitiveness with regard to the purity of the city. In between these spasms a certain lethargy seems to grip it, but when it does act its energy is wonderful. The East Side Delmonico's had been raided.

It was obvious that the purity of the city demanded that Freddie should appear in court in a less exiguous costume than his present one. The two policemen accompanied him to the dressing room.

On a chair in one corner sat the Tennessee Bear-Cat, lacing his shoes. On a chair in another corner sat Mr. Franklyn Bivatt, holding his head in his hands.

Fate, Mr. Bivatt considered, had not treated him well. Nor, he added mentally, had T. Mortimer Dunlop. For directly the person, to be found in every gathering, who mysteriously gets to know things in advance of his fellows had given the alarm, T. Mortimer, who knew every inch of "Blinky's" basement, and, like other dead game sports who frequented it, had his exits and his entrances—particularly his exits—had skimmed away like a corpulent snipe and vanished, leaving Mr. Bivatt to look after himself. As Mr. Bivatt had failed to look after himself, the constabulary were looking after him. "Who's the squirt?" asked the first policeman, indicating Mr. Bivatt.

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By using these wings on my separator (a 40-inch cylinder), I saved \$26.00 a day and the separator does better work, being fed more evenly than is possible without the wings.

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Big Ben is the biggest thing today in the alarm clock business.

He is only two years and a half old, but he's already getting more work from the Dominion than any clock alive.

In two years and a half time, 6,000 Canadian dealers have adopted him. Nearly half of the families in Canada leave it to him to call them up in the morning; nearly half the families in Canada use him all day long to tell the right time by. He is really two good clocks in one—a crackerjack of a time-keeper and a crackerjack of an alarm.

Big Ben stands seven inches tall. He is triple nickel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves. He rings five minutes steadily or ten intermittently. If he is oiled every other year, there is no telling how long he will last.

Big Ben's price is \$1.00 anywhere in Canada. If you cannot find him at your dealer's, a money order sent to *H. Eaton, La Salle, Illinois*, will bring him to you, carefully packed and duty charges paid.

BIG BEN

Big Ben Alarm Clocks

Are illustrated in the catalogue of

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JEWELLERS, WINNIPEG

Write for a copy of this book

"I don't know," said the second. "I caught him trying to hook it, and held him. Keep an eye on him. I think it's Boston Willie, the safe-blower. Keep these three here till I get back. I'm off upstairs."

The door closed behind them. Presently it creaked and was still. The remaining policeman was leaning against it.

The Tennessee Bear-Cat nodded amiably at Freddie.

"Feeling better, kid. Why didn't you duck? I told you it was coming, didn't I?"

Mr Bivatt groaned hollowly. Life was very grey. He was in the hands of the police, and he had indigestion and no pepsin tablets.

"Say, it ain't so bad as all that," said the Bear-Cat. "Not if you've got any sugar, it ain't."

"My doctor expressly forbids me sugar," replied Mr Bivatt.

The Bear-Cat gave a peculiar jerk of his head, indicative of the intelligent man's contempt for the slower-witted.

"Not that sort of sugar, you rummy. Gee! Do you think this is a tea-party? Dough, you mutt."

"Do you mean money, by any chance?" asked Freddie.

The Bear-Cat said that he did mean money. He went further. Mr. Bivatt appearing to be in a sort of trance, he put a hand in his pocket and extracted a pocket-book.

"I guess these'll do," he said, removing a couple of bills.

He rapped on the door. "Hey, Mike!"

"Quit that," answered a gruff voice without.

"I want to speak to you. Got something to say."

The door opened. "Well?"

"Say, Mike, you've got a kind face. Going to let us go, ain't you?"

The policeman eyed the Bear-Cat stolidly. The Bear-Cat's answering glance was more friendly.

"See what the fairies have brought, Mike."

The policeman's gaze shifted to the bills.

"Say," he said, severely, as he held out his hand, "you don't reckon I'd take a bribe, I hope?"

"Certainly not," said the Bear-Cat, indignantly.

There was a musical rustling.

"Don't mind if we say good night now, do you?" said the Bear-Cat. "They'll be getting anxious about us at home."

The policeman with the kind face met his colleague in the basement.

"Say, you know those guys in the dressing-room," he said.

"Uh-huh," said the colleague.

"They overpowered me and got away."

"Halves," said the colleague

Having lost the Bear-Cat—no

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

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Ford
THE UNIVERSAL CAR

The value goes up with the volume. We're making Ford cars better as we make more of them—that's the reason we can't keep pace with the demand. Insure yourself against disappointment by getting your Ford today.

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OF CANADA
Established 1875

Capital Authorized	\$10,000,000
Capital Paid Up	6,820,000
Reserve Fund	6,820,000
Total Assets	73,000,000

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Brandon Portage la Prairie Winnipeg

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Double-acting Lift, Tank and Spray PUMPS
Stove Ladders, Etc.
MYERS HAY TOOLS
of all kinds. Write for catalogue and prices.

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with steel roller bearings, easy to push and to pull, can be shown off the track—hence its name—“Stayon.” Write for descriptive circular and prices. Exclusive Agency given to right party who will buy in quantity.

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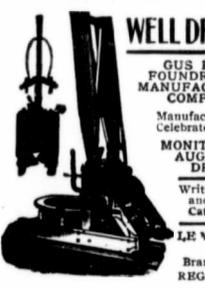


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More Power • Less Carbon

WELL DRILLING



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Celebrated
MONITOR WELL
AUGERS AND
DRILLS

Write for prices
and Illustrated
Catalogue.

LE MARS, IOWA
U.S.A.
Branch House—
REGINA, SASK.

difficult task, for he dived into the first saloon—Mr. Bivatt and Freddie followed their steps towards Broadway. A certain dignity which had been lacking in the dressing-room had crept back into Mr Bivatt's manner.

“Go away,” he said. “I will not have you following me.”

“I am not following you,” said Freddie. “We are walking arm in arm.”

Mr. Bivatt wrenched himself free. “Go away, or I will call the police—er—go away!”

“Have you forgotten me? I was afraid you had. I won't keep you long. I only wanted to tell you that I had nearly made that five hundred dollars.”

Mr. Bivatt started and glared at Freddie in the light of a shop window. He gurgled speechlessly.

“I haven't added it all up yet. I have been too busy making it. Let me see. Twelve dollars from the hotel. Two weeks as a waiter at five a week—twenty-two; tips, about another dollar. Three hundred for the loser's end—I can't claim a draw, as I was practically out. And “Blinky” Anderson promised me another hundred if I stayed five rounds. Well, I was on my feet when the police broke up the show, but maybe, after what has happened, he won't pay up. Anyway, I've got three hundred and twenty-three —”

“Will you kindly stop this foolery and allow me to speak?” said Mr. Bivatt. “When I made our agreement I naturally alluded to responsible respectable work. I did not include low prize fighting and—”

“You said manual work or brain work. Wasn't mine about as manual as you could get?”

“I have nothing further to say.”

Freddie sighed.

“Oh, well,” he said, “I suppose I shall have to start all over again. I wish you had let me know sooner. I shall try brain work this time. I shall write my experiences and try and sell them to a paper. What happened to-night ought to please some editor. The way you got us out of that dressing-room! It was the smartest thing I ever saw. There ought to be money in that. Well, good-night. May I come and report later?”

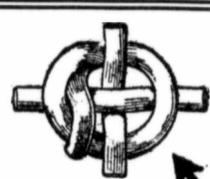
He turned away, but stopped as he heard an odd choking sound behind him.

“Is anything the matter?”

Mr. Bivatt clutched him with one hand and patted his arm affectionately with the other.

“Don't—er—don't go away, my boy,” he said. “Come with me to the drug store while I get some pepsin tablets, and then we'll go home and talk it over. I think we may be able to arrange something, after all.”

A Fence That Will Outlast Its Posts



The Leader Fence Lock is making history. It has solved the problem of durability in a woven wire fence. The Leader fence will last a lifetime for not a single joint can slip, the Leader Lock tightening with any pressure and practically interlocking itself.

The Leader fence is made in a great variety of styles. Write for catalogue “F,” showing our different styles of fences, gates, etc.

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Security to Policy-holders .. 640,817.29

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HEAD OFFICE: WAWANESA, MAN.
A. F. KEMPTON, Secretary-Manager

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Assets over Liabilities .. \$587,557.67

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Metallic Shingles

pay for themselves. They save you time and money in both the laying and the upkeep of your roof.

With "EASTLAKE" Metallic Shingles on your roof you are sure of protection for your Crops, Stock and Implements.

"EASTLAKE" Metallic Shingles are Fire, Lightning, Storm and Rust-proof. Write us for booklet.

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THE METALLIC ROOFING CO. LIMITED
 MANUFACTURERS
 TORONTO & WINNIPEG

Western Canada Factory
 797 Notre Dame Ave.

WINNIPEG - MAN.

Mention this magazine when writing advertisers

Enough to Make a Cat Laugh



A Quick Way to Dispose of Chickens

If for any reason you cannot get rid of your chickens, try the following old-fashioned method. It never fails:

Once upon a time a youth who had commenced to navigate the sea of matrimony went to his father and said:

"Father, who should be boss, I or my wife?"

Then the old man smiled and said:

"Here are 100 chickens and a team of horses. Hitch up the horses, load the chickens into the wagon, and wherever you find a man and his wife dwelling stop and make inquiry as to who is the boss. Wherever you find a woman running things leave a chicken. If you come to a place where man is in control give him one of the horses."

After 79 chickens had been disposed of he came to a house and made the usual inquiry.

"I'm boss o' this ranch," said the man.

"Got to show me," said the youth.

So the wife was called and she affirmed her husband's assertion.

"Take whichever horse you want," was the boy's reply.

So the husband replied: "I'll take the bay."

But the wife didn't like the bay horse, and she called her husband aside and talked to him. He returned and said:

"I believe I'll take the gray horse."

"Not much," said Missouri; "you'll take a chicken."

Nailing on the Feet

Little Elmer—"Mamma, I saw a man down at the blacksmith's making a horse."

Mamma—"Not making it dear; a man couldn't make a horse."

Little Elmer—"But this one could, mamma. I saw him. He had the horse nearly finished, when I got there. He was just nailing on the feet."

Ontario Wind Engine & Pump Company's LINES ARE SUPREME

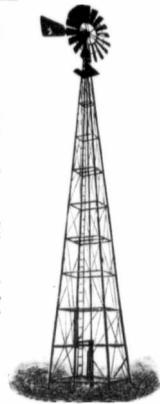
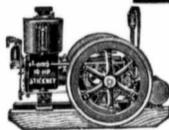
Majesty of the Law

A notorious Texas judge, at an inquest of a dead stranger, found with \$40.00 in one pocket and a six-shooter in the other, said, "As it is against the law to carry a gun, I fine the corpse \$40.00."

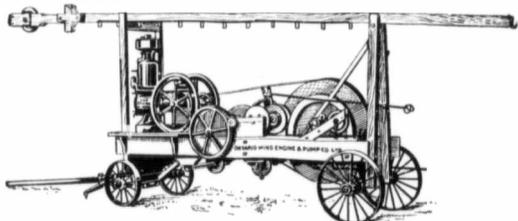
Mr. Catalogue House says to the unfortunate purchaser of a cheap machine, "I know your machine is no good, but you didn't pay much."

Why experiment? Buy the O.W.E. & P. Co.'s Engine, Windmill, Well Drill, Grinder or Pump, and escape such a Judge.

If your Dealer does not handle our lines, write the



ONTARIO WIND ENGINE & PUMP COMPANY LIMITED, at
 MONTREAL TORONTO WINNIPEG OR CALGARY



"Chapman Well Drill"

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

DON'T WAIT

but order early your supply of

Drewry's Bock Beer

The Spring Tonic for which there is always a big demand.

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Spring and Summer clothing for ladies, gentlemen and children. Do not fail to send for our handsome illustrated book of this season's fashions. You will find our prices most interesting.

Metropolitan Mfg. Co. Limited
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FLOWERING BULBS GLADIOLUS

These are most effective in the garden, the colors are magnificent and they are easily grown. We offer:

Choice Mixed—10 for 30c.; 25 for 65c.; \$2.25 per 100—postpaid.

Groff's Hybrid Seeding, Mixed—10 for 40c.; 25 for 75c.; \$2.50 per 100—postpaid.

Bruce's White and Light Shades—10 for 50c.; 25 for \$1.00; \$3.50 per 100—postpaid.

Childs Mixed—10 for 60c.; 25 for \$1.25; \$4.25 per 100—postpaid.

Bruce's Superb Mixed, made up by ourselves from all varieties the best—10 for 60c.; 25 for \$1.35; \$5.00 per 100—postpaid.

Named Varieties, any color (see catalogue) 10c. to 50c. each—postpaid.

DAHLIAS

Splendid named sorts, all colors, 22c. each; \$2.20 per doz.—postpaid.

Ordinary varieties, mixed, 12c. each; \$1.20 per doz.—postpaid.

FREE—Our handsomely illustrated 128-page Catalogue of Vegetable, Flower and Farm Seeds, Bulbs, Plants, Poultry Supplies, Garden Implements, etc. Write for it. 135



John A. Bruce & Co. Ltd., Hamilton, Ontario
 Seed Merchants Established 1880

The "Eagle" Steel Scrub Cutter (Built in 3 sizes.)

- No. 1 cuts 4 feet swath for use with 4 to 6 horses.
- No. 2 cuts 5 1/2 feet swath for use with tractor of 20-25 h. p.
- No. 3 cuts 6 1/2 feet swath for use with the heaviest tractor.

The best solution of the problem of cleaning scrub land in a cheap, rapid and satisfactory manner, saving at least 75% of the cost of hand labor.

The Eagle Manufacturing Company
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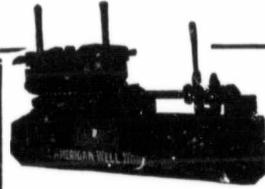
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 A Safe, Speedy and Positive Cure for
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 Every bottle of Caustic Balsam sold is
 Warranted to give satisfaction. Price \$1.50
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Per 1,000

Hand or
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FARMERS' CEMENT TILE MACHINE CO.
 WALKERVILLE, ONT.

Mention this magazine when writing advertisers

When Women Get Men's Salaries

O. Henry did not favor women suffrage, and his views were known to a friend who sat next to him at a large dinner where this subject happened to be discussed. "But," the friend insisted, "you will admit that a woman should receive a man's wages." "Why, they do," O. Henry retorted. "My wife gets all mine."

"Dat's an uncommon fine goose yo' got dere, brer Williams," he said to his host. "Where'd yo' git it?"

"Well, now, Mistah Rawly," he answered with sudden dignity, "when yo' preaches a fine special fine sermon does I ask yo' where yo' done git it?"

Good Reason

"Hear that hen of mine cackling? She just laid an egg," said the first woman.

"Hear that husband of mine cackling? He's just laid a carpet!" said the other.

"Better Not Inquire"

"Yes," said Swagger, "this is a turkeze ring."

"Excuse me," said Beggs, "the correct pronunciation of that word is 'turkwoise.'"

"No, 'turkeze,' excuse me."

"I say 'turkwoise.'"

"We'll let's go to a jeweler and ask him."

"Right."

"In order to settle a wager," said Swagger to the jeweler, "would you mind telling me if the correct pronunciation of the stone in this ring is 'turkeze' or 'turkwoise'?"

The jeweler took the ring and examined it carefully.

"The correct pronunciation," he said, "is 'glass.'"

Sharpers

During the dinner hour two bricklayers were playing cards in the house they were building.

"Look here, matey," said Bill, "this 'ere game is too slow. Let's try something more exciting. I'll bet you two bob that I cut the ace of diamonds first time."

"Done!" said Jack, his companion.

Bill borrowed a sharp knife of another workman, and cut the pack fair in half.

"There," he cried. "And over the money, sonny. The ace of diamonds is cut first go."

Jack grinned.

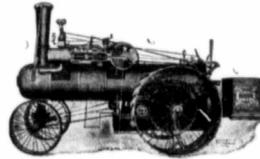
"I reckon it's yo what'll do the 'anding over," he said. "I put the ace in my pocket while you was a-borrowing the knife."

A woman may be known by the company she isn't at home to.

Waterloo "Lion Brand" Machinery

(Made in Canada)

TRACTION
 ENGINES
 FOR
 THRESHING
 AND
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 PURPOSES

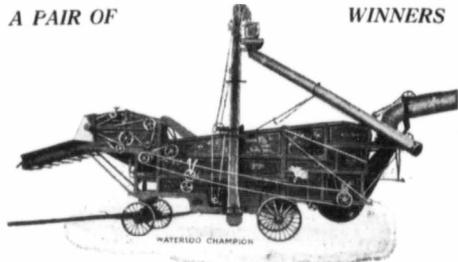


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 16, 22, 25,
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 HORSE
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Strongest Pullers on Earth
High Pressure Boilers

A PAIR OF

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"Champion" and "Manitoba Champion" Separators
 Constructed in sizes from 28 x 42 to 40 x 62.

Headquarters for Threshers' Supplies

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THE "EMPIRE" BRANDS

of GYPSUM PRODUCTS are essential to FIRE-PROOF and FIRE-RETARDENT construction

STANDARD of quality is rigidly maintained in everything we manufacture

Write for Specification Booklets.

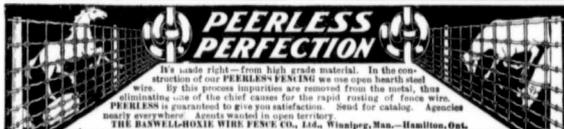
Sole Manufacturers

Manitoba Gypsum Company Ltd.

WINNIPEG

MANITOBA

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PEERLESS PERFECTION

It's made right—from high grade material. In the construction of our PEERLESS FENCING we use open hearth steel wire. By this process impurities are removed from the metal, thus eliminating one of the chief causes for the rapid rusting of fence wire. PEERLESS is guaranteed to give you satisfaction. Send for catalog. Agencies nearly everywhere. Agents wanted in open territory.

THE BASWELL-HOXIE WIRE FENCE CO. Ltd., Winnipeg, Man.—Hamilton, Ont.

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Have you Renewed Your Subscription ?

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3-BELL, BOBT., ENGINE & THRESHING CO., Winnipeg.
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5-BRITISH CANADIAN AGRICULTURAL TRACTORS, Saskatoon.
6-BUFFALO PITTS CO., Moose Jav.
7-BURRIDGE-COOPER CO., Winnipeg.
71-Canadian Armstrong Quam Co., Saskatoon.
72-CANADIAN CUSHMAN CO., Winnipeg.
8-CANADIAN FAIRBANKS CO., Winnipeg, Calgary, Saskatoon Vancouver.
9-CANADIAN HOLT CO., Calgary.
10-CANADIAN MOLINE FLOW CO., Winnipeg.
11-CANADIAN RUBBER CO., Winnipeg, Vancouver.
12-CANADIAN STOVER CO., Brandon.
13-CANADIAN SWENSONS CO., Winnipeg.
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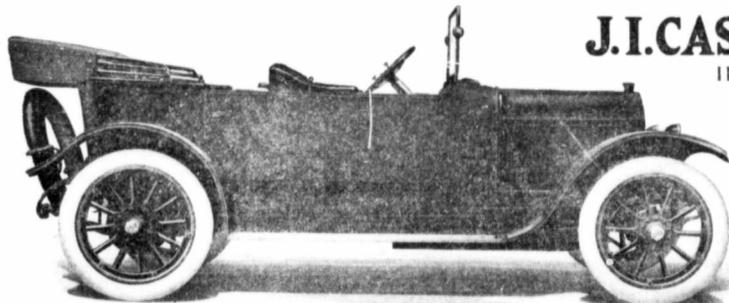
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