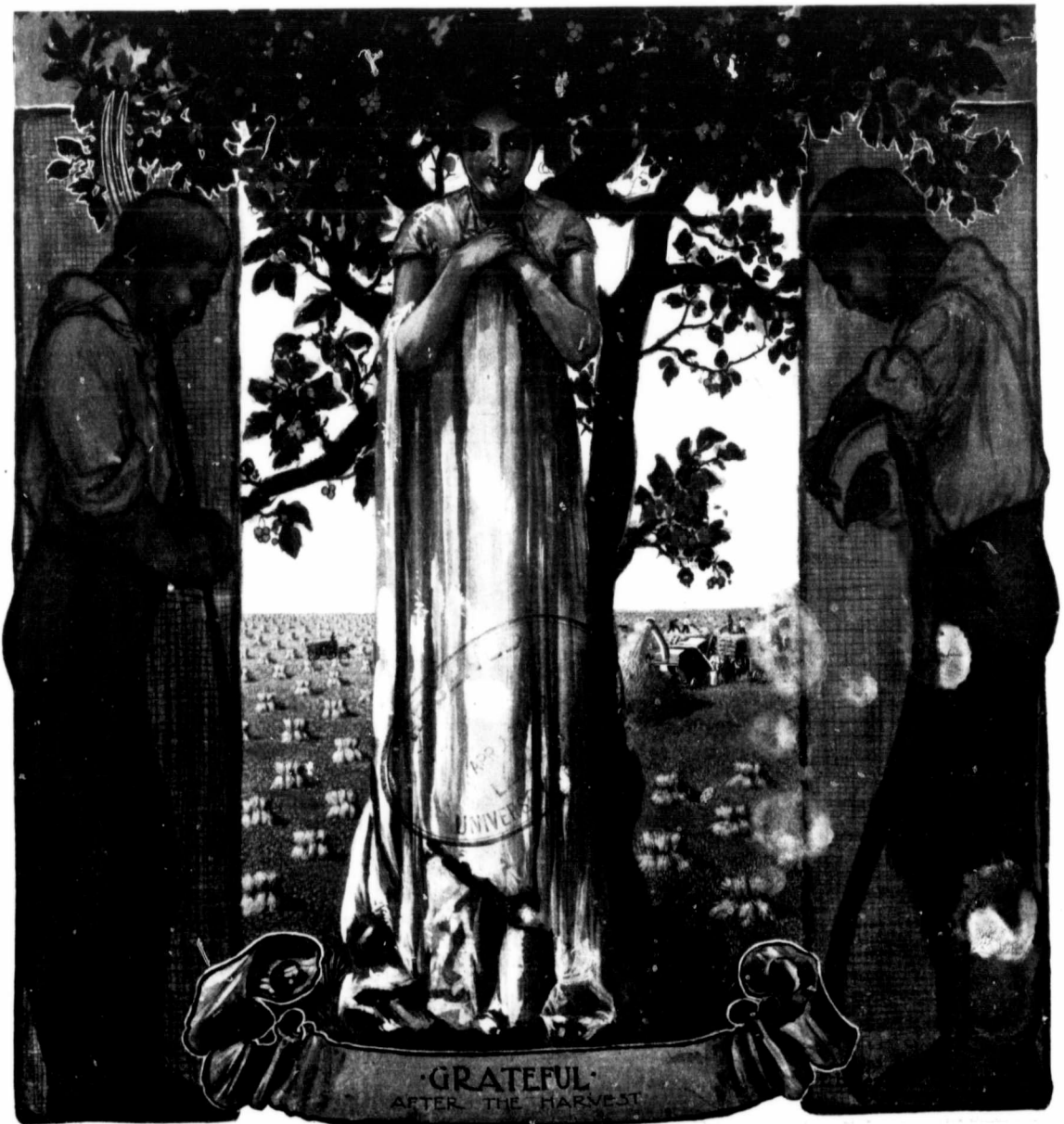


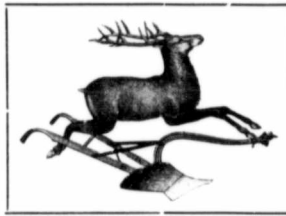
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Magazine

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



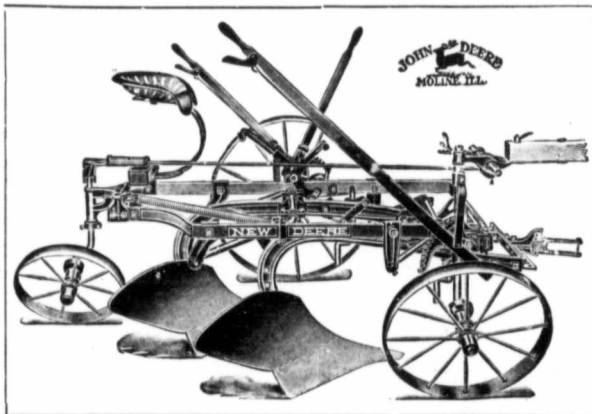
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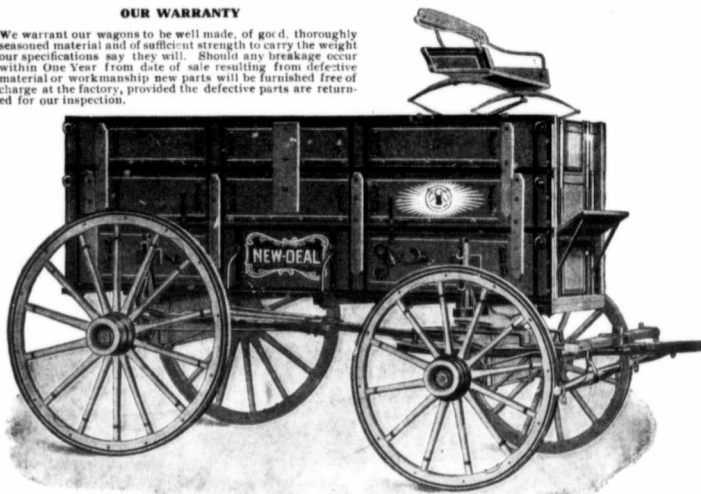
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The Dain Hay Press possesses many advantages by way of Construction, Ease of Operation, Low Cost of Maintenance.

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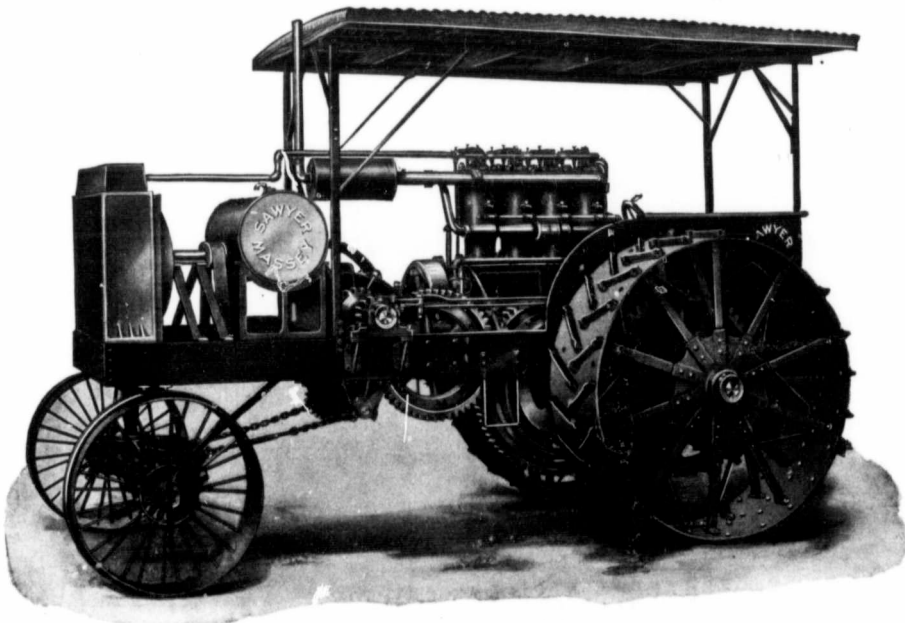
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A MAGAZINE
FOR

THE FARM
AND HOME



THE CANADIAN THRESHERMAN AND FARMER

Vol. XVII.

WINNIPEG, CANADA, SEPTEMBER, 1912.

No. 9.

The International Dry Farming Congress and Dry-Farmed Products Exposition

THE International Dry Farming Congress which will meet at Lethbridge, Alberta, Oct. 19th is an occasion which cannot fail to arouse every dormant instinct in those men especially who have devoted their lives to extensive agriculture.

Any one who has farmed by the "anyhow" method of stirring up the soil in a country where rain is always or occasionally uncertain, knows that he can never depend on crop results whatever the character of the seed sown. This fickleness of precipitation affects great tracts of land at various points on the North American Continent to such an extent that, in more than one notorious instance, the soil left to itself is utterly incapable of sustaining life.

Even where there is copious rainfall there is an "eternity of significance" in the prescriptions of what is popularly known as the system of dry-farming. They are not untried theories or the results of a few experiments but represent established facts that have been ascertained and proved again and again by invariable results from a wide field of practical experience in crop-raising.

While the scientific principles of Dry Farming more specifically apply to arid and semi-arid regions where the annual rainfall is less than 20 inches (evaporation deducted), it must not be assumed that the principles involved are only applicable to phenomenally dry lands. In arid or semi-arid countries they are imperative, but in more fortunate sections it is still of vital import to the cultivator that he follows the same lead, because there are times when a period of unlooked-for drought does swoop down on practically every country in the world.

"Dry" farming does not mean farming without moisture. It is simply a scientific and therefore common sense and practical

all. He has been more of a soil-robber—an agricultural burglar, who, year in and year out, has made predatory warfare upon



His Royal Highness, The Duke of Connaught, Governor-General of Canada, who it is anticipated will formally open the International Dry Farming Congress

method of storing up or conserving the moisture in the soil to the needs of the plant life as against wasteful evaporation.

Makes Real Farmers.

Generally speaking, the old-time farmer was and is no farmer at

virgin land of inexhaustible capacity for growing crop—if it is treated fairly, but which, by haphazard and bungling methods he has depleted almost beyond repair. He took big chances with nature but his day is done.

"Conserve the Moisture" is the slogan of dry-farming, and this must take first place on any programme of scientific and therefore successful agriculture. With it we have the rotation of crops and the practice of summer fallow with the object of securing a crop every season on one half of the land under cultivation. Up till now this has been found to be the only means whereby a farmer can safe-guard himself against recurring crop failures due to successive seasons of drought.

The practice of dry-farming has developed a new race of men in the field of agriculture, and we are now meeting in every market the splendid results of their intelligent work in cereals that command the highest prices. The milling and baking value of these grains are the best the world has yet produced, and the fruit products which have been raised by dry farming methods carry and keep better than anything else of the kind; and they are recognized by their outstanding quality when they reach their market.

It is a fact that the annual rainfall on nearly six-tenths of the earth's surface is less than 20 inches, and that if it can be successfully used for the purposes of agriculture, irrigation and the principles of dry farming must be employed. Scientific research has found that a perfected world's system of irrigation will convert about one tenth of this great area into an "incomparable fruit garden," leaving about one half of the earth's surface to be reclaimed, if it can be done at all, by the methods of dry farming.

Beginning of Irrigation.

From the beginning and until quite recently, the rules of what we understand by the name of "Modern Agriculture," were prescribed and conform almost entirely to the conditions of coun-



Hon. George Hedley vicars Bulyea, Lieutenant Governor of the Province of Alberta, who will be one of the representatives of Great Britain at the International Dry Farming Congress

tries that receive an abundant rainfall and where humidity to a greater or less degree prevails. "Irrigation" is a child of recent birth, and until but a few years ago, very little attention was given to it, while "Dry-Farming" with all it promised in increased rewards for intelligent labor was looked upon with stolid indifference or regarded as the play-thing of some feather-brained enthusiast.

It has been so with all new departures in the march of progress, but "every dog has its day," and the mongrel who yelped at the early apostles of dry-farming is no longer heard save in a long-drawn whine of chagrin at the sorry plight in which he now finds himself, leagues in the rear of everything that produces.

The early pioneers of irrigation (in Utah 1847) found that having regard to the cost of water, wheat grown on irrigated land did not pay a fair interest on the capital invested, and "must needs" drive them to the consideration of some other plan; to hunt for some knowledge that was not yet in their possession which would effectively meet the case. In due course the scientific principles of "Dry-Farming" became the gospel of these habitants of a thirsty land, and to-day the United States of America support 25 experimental farms, specialising on intensive agriculture by dry-farming methods.

Great Educational Centres.

These experimental centres are not only cultivating their own acres but are doing a big work in educating farmers by irresistible object lessons with the use of more effective tillage tools and methods of handling them, as well as in the selection of drought-resisting plants that give reasonable prospects of satisfactory results in an arid or semi-arid belt.

This great idea never occurs but there rises with it the personality of one man who, in his own sphere, has done magnificent if not unique work in the inculcating of dry-farming methods. We refer to Mr. Campbell, the great missionary of the new faith whose

records and published works are more in evidence in Canada today perhaps, than that of any other department pursuing the same lines, and of whom something will no doubt be heard in the forthcoming congress.

There is no lack of readable literature on dry-farming. No man need plead ignorance of what it all means or where he can obtain, readily understand and follow. The Departments of Agriculture both of the United States and Canada are prepared to send free advice and free literature to any man who will take the trouble to apply for it; and of course everything in sight in this way will be in the possession of the Secretary Treasurer of the Dry-Farming Congress at Lethbridge.



John T. Burns, Lethbridge, Alberta, Canada, Executive Secretary-Treasurer of the International Dry Farming Congress

One can hardly yet conceive what the steady pursuit of these principles will ultimately mean to the reclamation of desert lands which have so long been listed among the "incorrigibles." These arid plains receive rather less than 10 inches of rainfall the year round, and rarely as much as 20 inches. Occasionally the precipitation is confined to one season or part of a season, say in the winter months, and comes in the form of snow. To the ordinary farmer this is disastrous, but if he will follow the guiding spirit of dry-farming he will be able to store and retain this one season moisture in such a way that it will be found sufficient for all the purposes of his next crop, right up to the time of ripening. This "feat" has been accomplished again and again under the most perplexing circumstances, and so far, the method employed has been found the only means whereby that moisture can be saved.

A Golden Prospect.

As a fair appreciation of the immense possibilities which lie in the persevering practice of Dry-farming, Dr. John A. Widtsoe (another authority and leading apostle of the New Agriculture) says in a recent article:

"In the strength of youth we may have felt envious of the great ones of old; of Columbus, looking

upon the shadow of the greatest continent; of Balboa shouting greetings to the resting Pacific; of Father Escalante, pondering upon the mystery of the world, alone, near the shores of America's dead seas. We need harbor no envyings, for the conquest of the non-irrigated and non-irrigable desert are offered as fine opportunities as the world has known to the makers and shapers of empires. We stand before an undiscovered land; through the restless, ascending currents of heated desert air the vision comes and goes. With striving eyes the desert is seen covered with blossoming fields, with churches and homes and schools, and in the distance with the vision is heard the laughter of happy children. The desert will be conquered."

Brains Count.

The alleged dry-farming cranks have had it "put up" to them pretty severely during the past two crop seasons in the exceptionally low precipitation which took place, but they stood the test and were able to smile with satisfaction at every fresh instance of a good crop from a "dry and thirsty land" which had been farmed according to their method of procedure.

There never was a finer opportunity for the exercise of a little brain work as an off set to the prehistoric practice of simply turning over the clods, dropping in "any old" seed in any old way



Hon. W. R. Motherswell, Regina, Minister of Agriculture for Saskatchewan and Vice-president Saskatchewan, of International Dry Farming Congress

and practically covering it with another clod. The very foundation of this Dry-Farming is deep plowing, a surface mulch and harrowing of the growing crop. But as to the actual depth to plow, whether fine or coarse mulch, etc., these and other details (which depend on local conditions) are in the hands of the individual who is farming and on the wise or otherwise method of determining them his success will depend.

History of the Congress.

The following interesting details of the rise and progress of the Dry Farming Congress are from a bulletin issued by John T.

Burns, Executive Secretary-Treasurer:

"The International Dry-Farming Congress is an altruistic organization, and it has been one of the wonders of modern organization. It is devoid of politics or religion; it caters to all, for the good of all, and its mission has been carried out in a wide-open policy of advancing agriculture to the high plane it worthily deserves, elevating the farm home and increasing the crop yield through systematic, scientific tillage and conservation of the moisture.

Men and women pay its nominal dues of \$1 a year, leave their business and travel long distances, merely for the development of an idea, that a system of farming may result for the benefit of future generations. Nearly every other large organization that has attempted a world-wide campaign of any nature has had an underlying current of self-interest. The Dry-Farming Congress has always stood fast to an ideal and an idea, and it never wavered therefrom.

The growth of the Congress has been almost marvelous. Starting from the small beginning of a mere handful of men in Denver, Colo., in 1905, it has broadened out and grown to upwards of 15,000 members, with working branches in 16 countries of the world, and with individual members scattered throughout 50 nations. Its membership stretches from the far north to the far south, and from east to west on both hemispheres, and it is daily increasing.

Six Annual Sessions Held.

Six annual sessions have been held, respectively in Denver, Salt Lake City, Cheyenne, Billings, Spokane and Colorado Springs, each addressed by the most learned agricultural instructors and progressive men of advanced thoughts in the world, coming from as far south as Australia, from Algiers, Hungary, India, Russia, Turkey, France, Germany, Italy, Brazil, Peru, Mexico and other countries, while the



Dr. J. H. Worst, President North Dakota Agricultural College, Vice President and Chairman Foundation Fund of International Dry Farming Congress



Honorable Duncan Marshall, Minister of Agriculture of Alberta, Edmonton, Vice-President for Alberta of the International Dry Farming Congress.

educators of nearly every state in the United States and every province in Canada have participated in the deliberations of the Congress.

Its former presidents have been the late Fisher Harris of Salt Lake City; Ex-Gov. B. B. Brooks of Wyoming; Gov. Edwin L. Norris of Montana; Congressman Frank W. Mondell of Wyoming and Dr. John H. Worst, president of North Dakota Agricultural College.

Membership and Officers.

The members of the Congress are those who have paid the annual \$1 fee, and delegates who are appointed under a call issued each year by the officers. Heads of governments, departments of agriculture, agricultural schools, agricultural societies and civic bodies are permitted to name delegates. The organization is made up of a president, executive secretary-treasurer; honorary vice presidents, who are former presidents; three American Vice Presidents; international corresponding secretaries; a board of governors; an executive committee, and a local board of control selected by the state or province of the county in which the session is being held.

This year the congress is offered as follows: International president, Dr. John A. Widtsoe, president of Utah Agricultural

College, Logan, Utah; chairman foundation fund, Dr. J. H. Worst, Fargo, North Dakota; Executive Secretary-Treasurer, John T. Burns, Lethbridge, Alberta, Canada; Board of Governors, George Harcourt, Edmonton, Alberta, Canada, chairman; F. B. Linfield, Bozeman, Mont.; Daniel Morgan, Spokane, Washington; C. R. Root, Denver, Colorado; A. F. Mantle, Regina, Saskatchewan; Dr. John A. Widtsoe, Logan, Utah; John T. Burns, Lethbridge, Alberta, Canada; executive board of control, Fred W. Downer, Lethbridge, chairman; Mayor George M. Hatch, H. J. Goode, J. W. McNicol, A. V. Gibbons, E. A. Cunningham and G. R. Tinning, all of Lethbridge. In addition there are 125 representative men of the Dominion of Canada and of the four Western provinces of Canada who as honorary members of the Canadian Board of Control, of which the honorary president is Hon. Duncan Marshall, minister of agriculture of Alberta, and the honorary vice-president, Hon. W. R. Motherwell, minister of agriculture of Saskatchewan.

Pioneer Organizations.

The pioneer Dry-Farming organization was a scientific association, with headquarters in Denver, of which J. L. Donahue and C. C. Williams, the latter a former Denver newspaper man and then editor of the Scientific Farmer, were the moving spirits. This association gained several hun-

states west of the Missouri River. Governor McDonald shortly issued a call for a convention to be held at Denver in late February, 1907. The active work of preparation was placed in the hands of C. C. Williams and Arthur Williams, the latter then secretary of the Denver Chamber of Commerce.

Plans were made for a three days' convention and for not more than 200 delegates. Those who attended the first session in the convention hall of the Albany Hotel vividly recall the rise in the price of standing room. On the second day the congress moved to the First Baptist Church on Stout Street, with a seating capacity of 1,500 and the crowds filled that, the convention being length-



Hon. Geza Koppely, Agricultural Expert of Hungary, Budapest, and Vice-President for Hungary of International Dry Farming Congress.

Last year the Congress was held at Colorado Springs, Colo., upwards of 2,500 visitors thronging that city, and it was one of the most successful and educational gatherings ever held. The exhibition tents were two blocks long, and the exhibits of dry-farmed products were both interesting and instructive. Canada, and especially the province of Alberta, carried off most of the silverware and implement prizes.

At this Congress the farm women organized, and that auxiliary is proving one of the best features of the work, in that it is educating the housewife to conserve labor and strength, minimize the farm work while obtaining better results, improving the conditions at the home, and the education of the children—in fact, carrying out in detail that work which conduces to make farm life pleasanter and the farm home most cheerful, bringing health and happiness to all in rural communities."

Big List of Farm Machinery Premiums.

The premium list at this great world's event is one of the most attractive and interesting to every farmer that has been issued this year. It contains the classification of some 300 grains and grasses, covering fresh grains, sheaf grains, forage crops, vegetables, roots, seeds, fruits, jellies and jams, and a large number of special districts, individual, juvenile and farm women's classes, with a most attractive lot of machinery and implement premiums in the sweepstakes. It is one of the most valuable lot of for the farmers of the wide world, prizes and premiums ever hung up and the entries are being made so rapidly and from so many sections of the continent that the exposition committee, of which J. W. McNicol of Lethbridge is chairman, in a public statement, assures exhibitors that there will be the keenest competition. The committee states that there will be room for all exhibits, that three new buildings are being rushed to completion within the next

Continued on page 52



Prof. W.H. Fairfield, Director Canadian Experimental Station, Chief of Jury of Awards of Seventh International Dry Farming Congress.

ened from three to four days by popular vote of the delegates themselves.

The late Fisher Harris, then secretary of the Salt Lake City Commercial Club, was made president of the new organization. For some reason it languished, and the second session of Salt Lake was smaller and less important than the first at Denver. John T. Burns of Denver was made secretary at the second Congress and has continued since as the executive secretary.

An Auxilliary of Farm Women.

Then came the Cheyenne meeting in the winter of 1908-9, held in a blizzard, but attended by representatives of foreign governments and recognized by agricultural colleges and the United States department of agriculture. Here the name was changed to the International Dry-Farming Congress. Eight months later, at Billings, Mont., came the great gathering that fixed the standing of the congress as the largest convention held in the west each year.

At Spokane, Wash., in 1910, this standing was emphasized by the attendance of more than 2,000 delegates, a vast exposition of dry-farmed products and a program of scientific agricultural discussions that caught the attention of the thinking world.



S. McIntosh, Esq., Department of Agriculture Australia, Corresponding Secretary for Australia of The Seventh International Dry Farming Congress.

dred members in Colorado, Kansas, New Mexico and Wyoming in 1905 and 1906, and did considerable good. Its method of organization and its working plan were not popular, however, and its workers realized that a change was needed.

In the summer of 1906 a committee consisting of Jesse F. McDonald, then governor of Colorado, William, Donahue, Charles E. Waitland and W. E. R. Mills, met and formulated plans for a working body to be known as the Trans-Missouri Dry-Farming Congress, whose territory was to consist of the various dry-farming



Dr. John A. Widtsoe, President Utah State Agricultural College and International President of The Seventh International Dry Farming Congress.



Three Years on a Half Section

BY A. M. MACPHERSON.



NEVER, in the history of the world, was there ever so great a chance, for the young man, or immigrant, following the profession of agriculture, as there is in the Dominion of Canada today. Agriculture is the oldest of all industries, there is no more honorable calling, and, when the best scientific methods are employed, it is by far the most profitable.

Far too many people come into the Canadian West without the slightest idea of the conditions that prevail, and attempt to operate a farm. They soon lose both their money, and their faith in the country, and at the same time leave the land in a poor, run down condition.

It is my object, however, in this narrative to lay out a plan, for the operation of a half section of land for three years. My idea is to systematize the work, rather than explain scientific methods of farming.

The half section I propose to work is in the Assiniboine Valley, six and one half miles west of Brandon, Manitoba. The strip is one mile long, and half a mile wide. It is bordered, on the south by hills, and on the north by the Assiniboine river, a belt of timber, about one eighth of a mile wide, consisting of poplar, maple, ash, and scrub oak, runs along the entire length of the river bank. The land is low lying, is a little heavy, and contains a few spots of gumbo soil. There are two low lying spots which hold water in the early spring, but are useful for producing hay.

I have five thousand dollars cash on hand, I am paying twenty dollars per acre, or six thousand, four hundred dollars (\$6,400) in all for the farm. I pay one thousand dollars down, and eight hundred per annum until paid for.

There is twenty acres broken on this farm, which will yield enough the following year to supply me with both seed and feed oats, and also seed wheat. The seeding of this twenty acres I will hire done by a neighbouring farmer, as it will not be worth while to invest money in either a drill, or a binder the first year.

I intend going on to my farm on or about April the first. I have made arrangements with a man who is coming out from the old country in March, to work for me during the first year. He arrives about the middle of March and I intend hauling the lumber for my buildings soon after he arrives, in order to have everything in shape.

I have purchased a team of pure

Clydesdale mares, paying (\$1100) eleven hundred dollars cash for them. They are a fine looking team weighing thirty four hundred pounds, and I intend to use them as a foundation stock in raising pure bred horses. I will purchase a team of geldings also, in order that I may work a four horse outfit. I will also purchase a pony to use as a driver.

Below I give an itemized list of requirements for first year.

Breaking Plow, Sulky.....	\$60.00
Disc Harrow	60.00
Drag Harrow	24.00
Mower	55.00
Hay Rake	35.00
Gang Plow	80.00
Wagon	85.00
Buggy	50.00
Mares (Pure Bred)	
Team	1100.00



A Happy Worker.

Geldings, Team	400.00
2 Milch Cows	70.00
20 Chickens	10.00
Harness	80.00
Pony	60.00
Seed grain	33.00
Miscellaneous (shovels, forks, etc.)	50.00
Barn with hay loft 16x20	225.00
House 12x16	75.00
Granary 20x14	100.00
Implement shed adjoining barn 20x12	80.00
Total	\$2,732.00

I will finish the barn and the house before I put the team to work on the land. I have included the price of labor and other expenses in the building of these buildings and I have estimated the cost from experience.

The well is already dug on the place, thus solving one of the most difficult problems the

Western farmer has to deal with, namely, obtaining an abundant supply of pure water.

We are now ready to commence the work on the land. I will set the man breaking and will endeavour myself to get things in shape around the buildings. The land I have already described, the twenty acres is broken on the extreme east side of the farm, the strip runs the entire length of the field, of which the plowed furrow will be about seven eighths of a mile. I intend to put in eight acres of wheat and twelve acres of oats. The cost of seeding I have already specified, the wheat if the year is favourable will yield in the neighbourhood of thirty bushels per acre, the oats about sixty making a total of 240 bushels of wheat and 720 bushels of oats.

I intend breaking the land immediately adjoining the 20 acres,

sloughs I mentioned to feed my horses during the working period.

As soon as the grain is threshed the team will have to go to work in order to get all the work completed before freeze up. We will be able to commence plowing about September 10th and continue until November 14th or 15th thus giving about 150 days to complete the work in. A man and a four horse team with a 14 in. furrow gang plow will plow, at least four acres per day, so that the 80 acres which is to be backset, and the 20 acres of stubble will be finished in at least twenty five days.

The field will then be given a double stroke of the disc, cross harrowed, and packed with a surface packer. As soon as this work is completed, the implements must be put away, and things gotten into shape for winter, any spare time that may be left between the time that the work is finished on the land, and before winter sets in, should be employed in cutting firewood from the bush, and also to get a supply of fence posts on hand. This line of work may be followed up during the winter months, as there is not much else to do around the buildings except the chores.

Springs finds us with the work pretty well in hand. I will have to buy a seed drill this year, which will cost about \$140. I will then be able to use my own outfit for seeding.

We have now 100 acres of land ready to seed, twenty five acres of this will be put in oats, and the remaining seventy five acres in wheat, when the seeding is completed, which will take about five days. We are again ready to start in and break some more of the new land. As we are generally able to start seeding about April 20th this will leave ample time to turn over at least 80 acres more of the virgin soil. This will be treated the same as the breaking the previous year.

The crop this year will yield in all probabilities about 1500 bushels of oats and 2,250 bushels of wheat.

I will backset the eighty acres which I break in the spring, and fall plow only fifty acres of the previous broken land. The other fifty acres I will plow in the spring and sow down to oats and barley, as I have found by experience, that oats and barley do better on spring, rather than fall plowed land.

I will have to buy a binder this fall which will cost at least \$170 (one hundred and seventy dol-

which is already broken. We will be able to commence about May 1st and continue until about June 25th. A man and a four horse team will break on an average of 2 acres per day, thus by the end of June eighty acres will have been broken.

I will plow as shallow as possible, and endeavour to keep the land packed up behind the plow. I will then give it a stroke of the disc harrow and leave it until after harvest, when I will put the team on and backset, disc and harrow it.

I will hire a neighbour to cut my crop. This can be accomplished in a day and at a cost to me of only \$8.00. I will stack the grain close to the barn, and thresh the grain direct into the granary, so by following out this plan, I will have all the straw close to the buildings. I will be able to cut enough hay out of the two

lars). The grain will be stacked the same way the previous year. I will thresh the oats direct into the granary and will be able to obtain a sufficient quantity of bags from the elevator people to hold my wheat, and by threshing direct into the bags and then hauling it straight to market, I will save the expense of handling it so many times. Both my teams I could keep hauling direct from the machine to the elevator.

I will breed the mares this year, but will not have them served until the month of October, for the first two years at least. By having the colts born in the fall, they are able to suck the mares all winter, when they will not be working. Another advantage is that if the mares are compelled to be worked the weather is cooler. This is the best plan, I think, until one is able to give the mare six weeks in the pasture in the spring. The cows of course will be bred in June, having them drop their calves in April.

The fall of the second year finds us with the first crop marketed, and a statement as follows may be presented, containing the expenses throughout the year.

Payment on Farm ...	\$800.00
Interest on \$5,400 for 1 year at 5 per cent	270.00
Drill	140.00
Hired man's wages 1 year	250.00
Binder	160.00
Twine 300 lbs. at 11c.	33.00
Miscellaneous, oil, bolts, repairs, etc.	15.00
Threshing Expenses ..	162.00

Total Expense 1,830.50

Money made from sale of wheat would be 2,000 bushels at 90c. 1,800.00.

This crop would then just pay for my year's expense.

The following spring there will be more work to do as there will 130 acres to seed down in wheat first thing. The stubble land I will plow and keep packed up behind the plow, following as closely as possible. I will then sow twenty five acres of oats and twenty five acres of barley, putting the twenty acres that was broken first into barley. My object in doing this is to get the crop off early and give the field a top cultivation early in the fall, and summer fallow it the following spring.

As this will be considerable work for the spring, and with only one outfit to do it, sixty acres is all that may be reckoned on being broken. This will have to be broken deep, and disced up into shape, as I would be unable to get the wheat land in readiness, and also backset the breaking in the fall. The mares also come in in September which will hinder the fall work.

A fair estimate of the crops for this year would be.

Wheat 130 acres at 25 bushels.	3250 bushels
Oats, 25 acres at 60 bushels	1500 bushels
Barley, 25 acres at 40 bushels	1000 bushels

We have now covered the three years on the farm and below I show an inventory and estimate my worth.

Farm 320 acres at \$30 per acre	\$8640.00
Horses (two teams)	1500.00
Two Milch cows.	75.00
Two two year old cattle	40.00
Two yearlings	24.00
Two calves	16.00
Pair of colts from pure bred stock	300.00
Implements	650.00
Pony and Buggy	100.00
Harness	70.00
Chickens	15.00
Cash on hand.	2136.50
Total	\$13,636.50
Debt on farm \$4000.	

Then in totaling up, I started out with \$5,000 capital.

I expended \$7,862.50. I received from crops \$5,190. Therefore leaving a balance on hand of \$2136.50.

As shown in above inventory counting the value of land, stock, implements and cash on hand, I am worth at the end of the three years, nine thousand, six hundred dollars (\$9,600). Thus making in three years, four thousand, six hundred dollars.

Every man might not succeed so well as I have intimated in this narrative; but the average man, with a knowledge of how to run a farm will have no trouble in having things in such good shape at the end of three years.

Men, to make a success of farming in Western Canada, must be hustlers, the seasons are short, so that all the time must be made use of. So to break eighty acres, as I have stated, the teams will

us how Wilkie Collins, was wracked with excruciating pain, caused by rheumatic gout in the eyes. Collins once said to Winter: "My suffering was so great when I was writing 'The Moonstone,' that I could not control myself and keep quiet. My cries and groans so deeply distressed my amanuensis, to whom I was dictating, that he could not continue his work, and had to leave me. After that I employed several other men, with the same result; no one of them could endure the strain. At last I engaged a young woman, stipulating that she must utterly disregard my sufferings and attend solely to my words. This she declared she could and would do, and this, to my amazement (because the most afflicting of my attacks came upon me after her arrival), she indubitably and exactly did. I was blind with pain, and I lay on the couch writhing and groaning. In that condition and under those circumstances I dictated the greater part to 'The Moonstone.'"

It is almost impossible to conceive how anyone could concentrate his mind, employ a vocabulary, set his fancy to work, construct a plot, and develop it under such agonising conditions as that. But Mr. Winter assures us that "the essentially humorous part of that fascinating story was composed by its indomitable author when he was almost frenzied with physical torture. The art or the fabric, nevertheless, is perfect; the invention never flags; the playful, satirical humour, with its vein of veiled scorn for canting hypocrisy, meanness, and spite, flows on in a smooth, silver ripple of felicitous words, and the style is crystal clear."

That was a marvellous achievement. It proves what the heroic soul of a man can do in an emergency—how it can dominate and overcome every adverse state and prove itself master of the situation. Perhaps not many of us could have shown such tremendous will-power and mental concentration as Wilkie Collins exhibited, but his example ought to be an inspiration to us all, not to succumb too easily and weakly to our physical moods or disorders.

The Noble Life.

Some men fill the air with their strength and sweetness as orchards fill the air with the scent of ipe fruit.

Some women cling to their own house like the honeysuckle over the door, yet, like it, fill all the region with the subtle fragrance of their goodness. How great a bounty and a blessing is it so to hold one's gifts that they shall be music to all. It would be no unworthy thing to live to make the power which we have within us the breath of other men's joy, to fill the atmosphere which they must stand in with a brightness which they cannot create for themselves.



Splendid Knee Action.

This then would bring my worth at \$9,600. Eight thousand of this however, is tied up in the land.

An account of the third year would be as follows:

Man's wages one year	\$300.00
Threshing expenses.	232.50
Twine	52.50
Miscellaneous	100.00
Interest and payment on Farm	1030.00
Living expenses for three years for two persons	540.00
Stallion service	50.00

Total	\$2305.00
Proceeds from sale of grain is as follows for third year.	
3000 bushels wheat at 85c.	\$2850.00.
400 bushels oats at 35c.	\$140.00.
1000 bushels Barley at 40c.	\$400.00.
Total	\$3390.00.

have to be kept in the field at least ten hours per day. Thus we see all things must be done quickly and thoroughly. A good motto for a Western farmer to adopt, is found in the old proverb of, "Never put off until tomorrow what you can do today."

RIISING ABOVE BAD CONDITIONS.

It too often happens that we succumb rather easily to disabilities, and think we can do nothing unless every circumstance, physical and mental, is favourable. But Carlyle and Darwin could write while struggling all their days with dyspepsia, and Stevenson kept at his work amid the weakness of consumption.

One of the most remarkable instances of a man rising superior to his infirmities we met in volume, "Old Friends." He tells William Winter's charming



"Everything Begins and Ends with the Soil"

SEPT. 1912

THE CANADIAN THRESHERMAN AND FARMER

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Go to the Ant Thou War Dog!

THE SPIRIT OF THE HOUR seems to be that of a rough-riding militarism. Even in that most peaceful, free and enlightened of all civilized fraternities of interest—Canada, the war-dog has cut loose and his bark is heard at close range, far away from the harmless confines of his kennel. The fathers of the community are not scared, however. They have heard him so often they are apprehensive of no more serious consequence than the speedy "winding" of the brute, of the ultimate silencing of his voice by that happy process of extermination in which a noisy and disturbing influence perishes by its own suicide.

"HIS BARK IS WORSE THAN HIS BITE" say the easy minded fathers with their time-encrusted experience, but with a strong desire for the preservation of peace and the security of our possessions on honorable terms, we say—"for heaven's sake don't let him bark!" There are a few of us still living who know something of his "bite."

His fangs are still remembered by honorable scars in the flesh of many a fine fellow who is yet able to plow his fields in Canada. These are forgotten by the man who carries them because he was of the victors, but the memory of that warfare will never die in the persons of the vanquished or that of their progeny throughout every period of time.

THAT IS A QUALITY IN ALL STRIFE, in which prestige or property is given up to another, which the militants of all ages have never taken into account. The same thing marks the gambling iniquity. It is rare "sport" while the game lasts—to the man who is scooping in his winnings, but how goes it with the loser (weighted with responsibilities, domestic and otherwise) who finds his last dollar on earth gradually slipping through his fingers? It may be agony to the peaceful citizen to lose his all at one fell swoop in some sudden reverse in his commercial affairs, but to the wretch who deliberately stakes his possessions and loses them in a game of chance—it is hell indeed.

"**THE HORRORS OF WAR**" has been the subject of some of the greatest efforts of brush, pen and tongue that men's brains have ever engaged upon, and the market is now glutted with "dope" of that sort. We want no more of it. We want to see the day when men's brains and hands will be so interested and occupied in **PRODUCING** that they will have no idle thought or a single nerve itching with homicidal eagerness to get at the throat of any creature or to breed aught but "the unity of the spirit in the bonds of peace."

"**DEFENCE NOT DEFIANCE**" has been the slogan of our volunteer forces for many a day, and it describes the case admirably. It is a wholesome motto and may be appropriated by every individual and the smallest community having an "interest" of any kind to protect. We must take things as they are. We are not yet in the warm waters of the millenium. There is still the "foe behind, the deep before" in the circumstances of every lot, and the day of "universal disarmament" is but a hazy prospect. We must be prepared, they say, and whether in business, in love or in prospect of conflict, it is only the fool who is found

unprepared. But what is really the meaning of all this "preparation" demanded by the war-dog?

WE ARE NOT MILITARY EXPERTS, but we do know that the real soldier is not a man of blood. The real soldier is the last man to be found taking a delight in displaying his accoutrements to a gaping crowd; and if by choice or by force he has engaged in what is known as the profession of arms, he will work in any capacity like a galley slave to **SAVE** his country from the unspeakable atrocity of war.

Whatever he may deem necessary or expedient in the way of "preparations," or to fit himself for any emergency, his precautions will be carried out in such a manner that they will not become a constant source of irritation in the minds of the neighbors against whom he is "preparing."

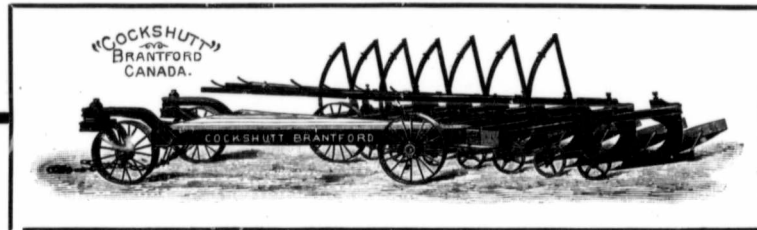
WHAT WOULD YOU THINK of a neighbor who made it his business every time he saw you coming around the place to rush his chickens into the coop, have sentinels posted on every barn door or grain loft, while he awaited you with that brute-like scowl which means either defiance or distrust? We need not answer our question, but we state without reserve that that is precisely the attitude taken in these days by certain sections of the press and by the mouthpiece of the war office both in the Dominion and in the high places of the Empire.

ALL THE PREPARATIONS ON EARTH in the shape of "Dreadnaughts," machine-guns, etc., will never stop two nations from going to war if the half-dozen fellows on either side who think they are "the nation" happen to be very foolish fellows—those bellicose chaps who seem to have been born to kill time and to a special share in that heritage of idleness in which the devil is the great employer. When two school boys lose their temper, what matters it to the little chap if his enemy is big enough to smother him? If his blood is up he will go for him regardless of consequences and without a single thought directed towards the bristling array of "preparations" the enemy had assembled for his reception.

LET US KEEP THE BLOOD DOWN—or at least from getting "up". We in Canada have a big work in hand. We have no time for rampaging months of the year on military parade grounds. That is a wholesome occupation in its place for disciplining the youngsters,—in teaching them the divine quality of self-control and what it means to be punctual and exact, but it is not its purpose to breed the blood-lust. If we are not so gifted in certain prescriptions of drawing-room etiquette as some of the more leisured peoples on the other side of the Atlantic, we would have it known that we are none the less a polite people, a hospitable race, with a heart and a hand for every man who comes along, be he Englishman, German or Hottentot—if he is willing to abide by our bill of fare which is invariable and includes the homely articles of honesty, sobriety, industry, and that "cleanliness which is next to Godliness."

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And the service the factory puts into it depends in turn on the material that is used in the making

Knowing that high-grade materials are of vital importance, we use

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COCKSHUTT ENGINE GANG

We are not shouting it from the house top, but we **ARE** insisting that the Cockshutt Engine Gang for years has been the undisputed **LEADER**—and nothing has ever marred its record.

You can prove for yourself that the Cockshutt has many decided and valuable points of superiority over all others. Ask **ANY** farmer now using the Cockshutt how he likes it, how it does its work, whether or not it is strong, practical, simple and dependable, and you will find that it satisfies the man who operates one for **PERFECT** work, **LIGHTNESS** of draft and **DURABILITY**.

Great Power—Accurate Plowing.
Easy Raising at land's ends.
Quick turning.
Individual adjustment to ground.
Exact adjustment of each share.
Regular furrow and clean work on rough ground.
Absolute turn-over of ground.

Single lever control permits raising and turning at ends of lands in the quickest time. Plows rise and pass over rocks, and set themselves automatically and independently. It permits of swift, clear plowing, without stops of Tractor. Extra heavy shares. No rising and winging in hard or extra soft land. Eccentric adjustment at hinge at head of plow and four wide steel wheels under platform keep draft

and action right on rough land or soft bottom.

The one-man Cockshutt Engine Gang has each Plow individually hinged by a straight heavy double beam which keeps each plow unit at furrow width and in draft line.

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LESSON XXII.

Mechanical Forms of Generators, Dynamos and Magnetos.

MECHANICAL forms of current producers have the advantage over primary and secondary batteries in that the energy required by them is derived directly from the engine they operate. Hence current will be produced as long as and only when desired. The other forms of

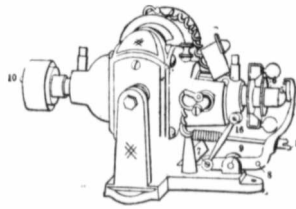


Fig. 1

generators depend upon sources of energy entirely extraneous to the engine plant, and the supply of current is therefore not in any sense automatic, which would be the ideal condition. The terms dynamo and magneto have been variously used. Some writers designate by "dynamo" any generator having electro-magnets serving to establish the magnetic field, and by "magneto" any machine employing permanent magnets for this service. Others define the difference as existing in the kind of current produced, a dynamo furnishing direct, i. e., continuous current, while a magneto produces alternating, i. e., pulsating current. Whatever definitions adhered to, it should be remembered that in either machine the current is produced by an electrical conductor cutting the magnetic field. The current is produced in exactly the same way, and for exactly the same reason, as that established in the secondary winding of a spark coil. In this case the conductor of electricity is wound upon a piece of metal, called an armature, which

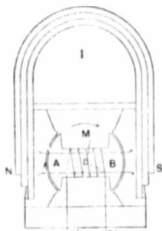


Fig. 2

is rapidly rotated in a magnetic field. It makes no difference whether this field is produced by

permanent magnets or by electro-magnets. If there are a number of such conductors upon the armature and the current induced in each is properly conducted by a so-called commutator upon the armature shaft so as to be practically continuous in its flow through the external circuit, we have what is generally called a dynamo. On the other hand, if the current in the external circuit rises to a maximum value and then dies out to give a maximum value next in the opposite direction, the machine is generally known as a magneto. While in all dynamos and most magnetos the armature constantly rotates in one direction, it should be stated that in all magnetos this is not at all necessary. Thus in the Simms Bosh magneto, the armatures is stationary, and only a sleeve surrounding the armature is rapidly oscillating in the magnetic field. It would be beyond the scope of this lesson, however, to discuss all the possible modifications and the reader is hence referred to the works upon this subject.

In general, the small dynamo used for ignition purposes is driven by means of a friction wheel from the fly wheel of the engine. There is then no current available from the dynamo when the engine is started, and it be-

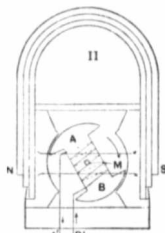


Fig. 3

comes necessary to use a battery of some kind for the first minute or two, switching in the dynamo when it is up to speed. This scheme has the disadvantage that the battery is sometimes left in circuit and the dynamos have been known to burn out under excessive engine speeds. A device called the Auto Sparker, Fig. 1, overcomes these difficulties. This little dynamo is fitted with a centrifugal governor which controls the position of the friction wheel on the fly wheel rim, so that even at starting the armature rotates rapidly enough to furnish starting current. This does away with an auxiliary battery. As the engine speeds up, the governor of the

dynamo acts to keep the armature speed constant, independent of the diameter of the fly wheel or the engine speed. By adjusting the governor tension spring, it is possible to control the speed of the dynamo to get any current between one and three amperes and any voltage between three and ten volts.

Regarding magnetos the following description of the action of a magneto, together with the explanation of the method of connecting it up, is taken from a catalogue of the Holley Bros. Company of Detroit. For clearness and simplicity this description can hardly be improved upon.

"A magneto, so far as its essential parts are concerned is a very

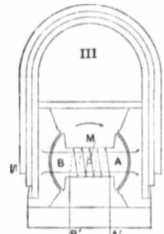


Fig. 4

simple thing. It consists of a U-shaped piece of special steel, which is permanently magnetized; in other words a common horseshoe magnet and a rotating armature. The armature consists of a soft iron core of approximate H cross-section as viewed along the shaft upon which it is supported, and on which it is designed to rotate. The magnet to the free ends of which are affixed soft iron arc-shaped pole pieces and the armature core with the sides of the H correspondingly are shaped, is shown in vertical section in Fig. 1. In the slot formed in the armature core by the sides of the H, wire is wound in turns lengthwise of the armature shaft. So much for the construction of the elementary magneto. In order to understand how it generates in its armature, when turned, an electric current, it is necessary to remember one law of physics, namely, whenever a wire is wound about a magnetized soft iron core and the magnetism of the core suddenly dies out, there will be a tendency for a current to be produced in the wire. A familiar example of the working of this last is found in the operation of the common jump-spark coil. Here we have a core made of soft iron wire and around it is wound a great many turns of fine wire, the

ends of which are connected to a spark plug. The core is also wound with a coil of wire which is

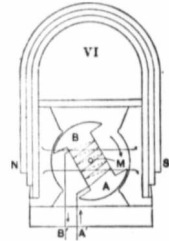


Fig. 5

supplied with current from a battery, and when this current is flowing the core is magnetized. When the current from the battery is interrupted the magnetism in the core suddenly dies out, and in accordance with the law above stated, a tendency is created for a current to flow in the fine wire coil which is connected to the spark plug and this 'induced' current jumps at the plug.

"In order to explain how the iron core of the magneto armature with its winding is magnetized and how the magnetism of the core is caused to suddenly die out, it is necessary to refer to four diagrams of Figs. 2-5, showing the armature in different positions of rotation with respect to the pole pieces. In diagram (1) the armature is represented with the two ears of its core in close proximity to the faces of the pole pieces. The space between the pole pieces is thus almost completely filled or bridged with iron, and magnetism passes from one pole piece to the other through the armature core, thoroughly magnetizing it. Next consider diagram (2). Here the armature is shown rotated into such a position that one edge of the armature core is just leaving the vicinity of one of the pole pieces. As soon as this position is passed, the space from pole piece to pole piece is no longer filled with iron, but with air which is not a conductor of electricity. Thus very little magnetism passes from one pole piece to the other and the core is no longer traversed by the magnetic influence and suddenly ceases to be magnetic. This is exactly the condition prescribed by the above quoted law for the production of a current, and, in fact, when the armature in its rotation leaves position (2) there is a sudden impulse of current produced in the wires of the armature which dies away after the armature rotates a little beyond this position. In position

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Plowed 20 per cent. more acres per hour, and plowed each acre at lower consumption of fuel, than next nearest competitor in either gasoline or kerosene class.
Delivered an average draw bar horse power while plowing with gasoline engine of 47.14 horse power--28 per cent. greater than any other engine entered, either in gasoline or kerosene class.

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(3) the conditions of armature magnetism existing in position (1) are reproduced, except that the armature has changed ends in respect to the pole pieces and the magnetic influence passes through it in the opposite sense, charging it oppositely, so that when the magnetism is discharged in position (4) the current will be in the opposite direction through the wire of the armature winding. As the armature is turned upon its shaft there are thus produced, in each complete rotation, two rather short impulses of current of opposite direction nearly corresponding with the instants at which the armature heads, so to speak, 'part company' with the pole pieces and are half a revolution apart. During the remainder of the rotation there is no current flowing. It may be readily seen that by connecting one end of the armature wire to the end of the armature core and by connecting the other to an insulated metallic contact segment, carried by the armature shaft, upon which bears a stationary insulated brush, the current impulses may be taken from the magneto for use.

"Now as to the practical use of such a magneto for ignition purposes. Since it is only during a small part of the armature rotation that current is being generated, it is necessary to rotate that armature shaft at such a speed that these electrical impulses shall be so timed as to correspond with the periods when ignition is required by some one cylinder of the engine. If this were not attended to, the ignition periods of the engine might occur during the parts of the armature revolution, when no current was being produced. In order to bring about this result, the magneto and the engine must at all times, run at a properly pro-

portioned ratio of speeds, and the positions of the engine, crank shaft, and the armature must be adjusted right in the first place. If the magneto shaft is geared to the engine at the right ratio, and the teeth of the two gears are correctly meshed, the desired result will be brought about. For instance if the engine be of the four-cylinder, four-cycle type, four sparks will be required for each two-crank rotations. Four sparks will be produced for each two revolutions of the magneto, as well and thus, if the magneto and the engine run at the same speed, the sparks will be numerically correct. If geared to the crank shaft, the crank shaft gear and the magneto gear would have the same number of teeth, and if driven from a two to one shaft, the number of the teeth in the two to one shaft gear would be twice as great as the teeth of the magneto gear. By changing the particular teeth of one gear which are in mesh with certain teeth of the other, the current impulses may be made to occur at the moments when the pistons are exactly in the firing positions."

In variable speed engines, as automobile machines for instance, the service required of the ignition outfit become more exacting as the speed increases, owing to greater compression and less available time. This in the case of mechanical current generators is met by a natural increase in speed which constitutes another advantage of this type of generator as compared with primary and secondary cells. Thus less hand manipulation of the spark is required, but all magneto systems should be provided with means of altering the armature position relative to the crank-shaft position, in order to alter the time of spark.

When Buying a Gasoline Engine

Decide on the maximum amount of power you must have. Remember if your engine is to be used on the farm that in addition to running the cream separator, churning, running washing machines, crusher, etc., you will often want to pump water, saw wood and do other work where one or two extra h. p. comes in handy.

Buy your engine through a reputable dealer whose place of business is near you. Such a man will take a personal interest in having your engine run well and you can, if necessary, get parts quickly.

It does not pay to buy your engines from a comparatively unknown concern a long dis-

tance from you. Such people as a rule make their customers pay for their experiments, repair parts cost high, and take a long time to get and they have no personal interest in whether or not you succeed in using the engine properly.

Gasoline as fuel gives the best service for a small engine, but kerosene and other heavy oils are rapidly coming into favor for the larger sizes. An experienced engine salesman will tell you which is the best fuel for your purpose and which will cost you the least.

If you want to drive machinery that takes 10 h. p. get a 12 or 15 horse engine. Don't load

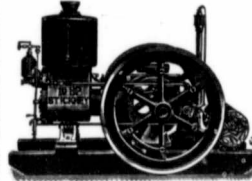
THE FLOUR CITY TRACTOR



still heads the list of Gold Medal Winners. It's the BEST Tractor made for driving Threshing Machinery. Get one to do your Threshing and Fall plowing. Write us for our SPECIAL SUMMER and FALL PRICES and TERMS. They will interest you immensely.

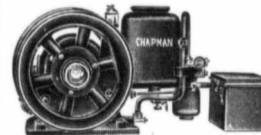
The Stickney Gasoline Engine

Stationary or Portable



For your Fall and Winter work, the famous STICKNEY GASOLINE ENGINE, made in sizes from 1 1/4 to 20 H.P. will give you the best results for the money invested. Thousands of satisfied and enthusiastic users ready to testify that the STICKNEY is the BEST all-round Engine for the farm.

The New Chapman 2 H.P. Gasoline Engine



The last word in Gasoline Engines. The best Engine of its size made—just what you need for driving your pump and other light work on the farm. The best value for the money ever offered. In some sections, SIX farms, side by side, are using a 2 H.P. Chapman for their pumping, the best evidence you want for their suitability for your work. They are having a tremendous sale, so be sure to get one.

Toronto Grain Grinders. Airmotor and Canadian Pole Saws. Feed Cutters, Aylmer, Standard, Truck and Pitless Scales.

Windmills, Pneumatic Pressure Tanks, Pumps, Tanks, Troughs, Pipe and Fitting, Everything in Water Supply for the farmer. Climax and Chapman Well Drilling and Boring Machinery, also Supplies.



Ontario Wind Engine and Pump Co. Limited

CALGARY WINNIPEG TORONTO MONTREAL

SIMPLE, RELIABLE

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

BARRIE ENGINES

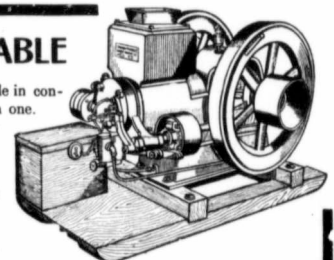
are staunchly built. Cold weather or long hours don't bother them. All ready to run. No skilled labor required to adjust them. 3 to 100 horse power. Stationary or portable. For gasoline, producer gas, natural gas, and distillate.

Write for catalog. Agents wanted.

The Canada Producer & Gas Engine Co. Limited

Barrie, Ontario, Canada.

Distributors: James Rae, Medicine Hat; Canada Machinery Agency, Montreal; McCusker Imp. Co., Regina; The Tudhope Anderson Co., Ltd., Winnipeg, Calgary, Edmonton, Lethbridge, Saskatoon and Regina.



Remember to renew your Subscription

your engine up to the limit and expect it to do good work.

Use good fuel and the very best oil obtainable. It really pays to use a good oil even if it costs twice as much as the cheaper kind. In the first place it will go further, and secondly, it keeps the engine from wearing out.

Insist on your engine having a built-in slow speed engine timed magneto with visible timing feature. This machine eliminates all batteries, coil, and switch, and furnishes the current for sparking the engine as long as the engine runs.

These slow speed alternating current magnetos are the same as used on automobiles, only the more simple and reliable make-and-break igniters are used on the engines instead of the spark plug as used on the automobile.

As the magnetos have no belt or friction wheel and require no speed governor, they should not be confused with the cheap little sparking dynamos used for this purpose.

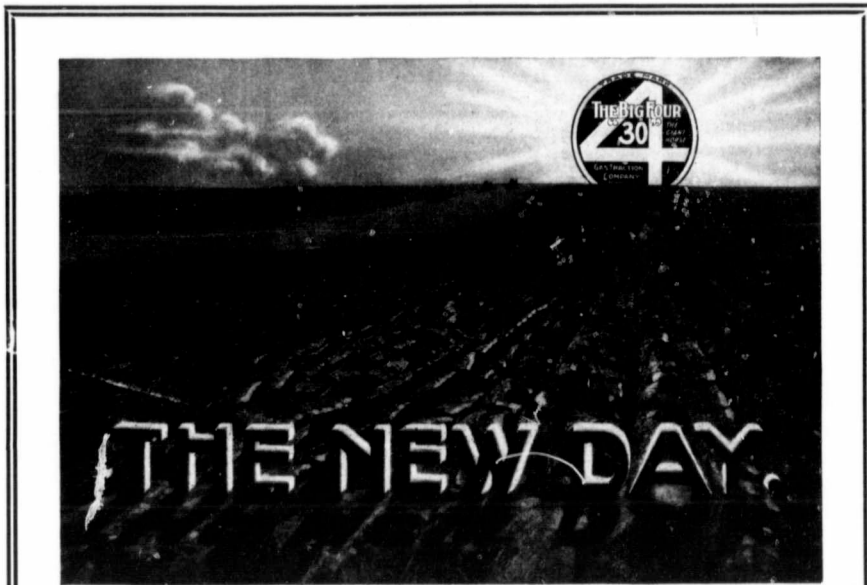
Ignition troubles are by far the largest proportion of troubles that beset the engine user. The built-in engine timed magneto eliminates these and really costs no more than a set of high grade closed circuit batteries with the necessary coil and switch.

After getting the engine, read the instruction book carefully before trying to operate same. Don't let some one who has another make of engine tell you how to start and run yours, as instructions for different kinds of engines differ. Here is where purchasing your engine from a local dealer pays, as the local dealer can personally instruct you in setting up and operating your engine.

Don't let so called experts monkey with your engine and especially if it has one of the high grade timed alternating current magnetos on it. If this has the visible timing feature, any one can tell whether the timing is correct or not by simply looking at it.

The troubles with engines are usually dirty igniter points, stopped up gasoline or water pipes, lack of oil, or the valves are out of adjustment. Any of these troubles are easily remedied by any one with common sense without having to take the engine apart. An imitation expert can always be told by pretending to know exactly what is the matter with the gas engine almost instantly and by the fact that he will immediately want to tear the entire engine apart.

On engines having a battery or the cheap friction driven ignition sparkers, such as many of



THE BIG FOUR "30" means the dawning of a new day for the farmer, a new era of efficiency, prosperity, success. It means freedom from the expense, trouble and limitations of horse traction and hired help. It means that he can do his work better, quicker and cheaper, and do it when soil and weather conditions are just right. The BIG FOUR "30" almost entirely eliminates the element of chance which until its advent made farming so uncertain. It places agriculture upon a scientific business basis.

To-day, all over the world, the BIG FOUR "30" is revolutionizing agriculture. Its success is built upon a solid foundation of results produced—of good, honest work in the field, well and faithfully done. The BIG FOUR "30" was the first four-cylinder farm tractor built, and it has been first ever since. It has a long record of results behind it, and records of results produced—cold, hard facts and figures—mean more to the farmer than theories of mechanical construction. The farmer is more interested in what other farmers have actually done with a tractor than he is in what anybody thinks it will do. The farmer who invests his money in the BIG FOUR "30" buys a certainty—not a probability.

For instance, reports sent in by fifty-eight enthusiastic BIG FOUR "30" owners, show that during the season of 1911 these fifty-eight BIG FOUR "30s" broke and plowed 82,155 acres—an average of over 1,441 acres for each engine—and disced and drilled 57,233 acres—over 2,201 acres for each engine. Exclusive of harvesting and threshing, these fifty-eight engines did 139,388 acres of farm work—an average of 2,403 acres for each engine. Were the lighter work of harvesting and threshing included, these figures would be practically doubled—and these are only fifty-eight out of the thousands of BIG FOUR "30s" at work all over the world.

Every farmer knows the secret of The Big Four "30s" wonderful success. It is found in The Big Four "30" itself. It is not built to fit a

price. It is made just as good as it is possible to make it, out of the very best materials which it is possible to buy and by the most skillful labor. It is designed and built throughout for the maximum efficiency and that is the secret of its success in North America and throughout the world. Its excellence of design and construction, the superiority of its materials and workmanship, its wonderful economy and efficiency with all fuels, its simplicity of construction and operation and its many valuable exclusive features, are instantly perceived by the farmer, who knows better than anyone else just what a tractor must be able to do for him.

Add to all this mechanical excellence and long records of good work done, the fact that The Big Four "30" is sold absolutely on approval, and you begin to understand why the largest four-cylinder farm tractor factories in the world, working night and day, cannot turn them out fast enough. The farmer does not pay a cent for The Big Four "30" until he has given it a thorough trial on his own farm and satisfied himself that it will do all that is claimed for it. Your signature on an order for The Big Four "30" is merely an expression of your willingness to give it a thorough trial on your farm.

If you are not already familiar with The Big Four "30", write NOW for The Big Four "30" Book—tells you all about it—free. Upon request we will send you a copy of an interesting booklet, which sets forth the reasons why The Big Four "30" did not enter the Winnipeg Motor Competition this year.

Emerson-Brantingham Co.

GAS TRACTION DIVISION

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

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the older engines are equipped with, ignition troubles were plentiful and these require an expert for their location and remedy, but with the more modern magneto equipped engines these troubles are eliminated, and, in fact, the only thing that can go wrong is the timing, as the magneto revolves in time with the engine unless a gear should slip in some way. Now a magneto should be selected in which provision is made for checking against this slipping, without the necessity of opening the magneto. The choice of an engine equipped with a magneto of this character will result in good reliable service.

If the engine is to be used in one place, bolt it down to a good foundation. Don't bolt it to a lot of loose timbers set on a dirt floor.

Get a good storage tank for the liquid fuel and put it pre-

ferably under ground. Read instructions sent with the engine and see that the tank isn't buried so deep that the engine fuel pump won't draw.

TRACES OF GOD'S MIND.

The Scotch philosopher, Beattie, took an interesting method for teaching his little boy his first lesson about God, at the age when the child's mind was ripe for the lesson. In a corner of the garden, he traced with his fingers, the initial letters of the child's name, planted some cresses in the furrows, and left them to grow, and for the boy to discover. Shortly afterwards the boy came running to his father to relate his discovery. His father affected unconcern, and made as if it were no matter of wonder. When he followed the boy to the place he said that it was just an accident.

The boy was thoughtful, and at last said: "That cannot be an accident. Someone must have sown those seeds. They would not make my name of themselves." The father then talked to him about the wonders of his body, with its wonderful adaptation of parts, and means to an end, and asked him if he thought that all this could have happened by chance. The boy was positive it could not, and was thus led into his first knowledge of that Great Being who was the Author of his life.

The argument from design has never lost its force, and is, indeed, strengthened by the more wonderful insights into the marvellous designs of nature which modern science has brought to us.

Wisdom is a special knowledge in excess of all that is known.

The Bucking Gasoline Engine

EVER since the gas engine has been known to farm power users, it has had the reputation, by some operators, as a bucking machine. One that occasionally gets stubborn like the "Bucking Bronco" of the western plains, the conquering of which, by sheer pluck and endurance as well as skilful riding, has made many a cowboy famous and earned for him the name of "Bronco Buster."

When the gas engine gets stubborn, it needs no "Rough Riding" to get it back into an easy gait again, although in many instances that is all that it gets until the gentle touch of some skilful hand sets it to going. We recall very well the remarks by a reputed southern engineer who read a paper before an association of southern engineers at Birmingham, Alabama, about ten years ago. On this point, the reader of the paper dwelt about as follows: "But there is one drawback to the gas or gasoline engine. It will take a 'bucking spell' about every so often, and one may turn the wheel until he is blue in the face and it will refuse to go. Then leave it for from fifteen minutes to one-half hour, go back to it, turn it over once and away it goes, apparently all right, and you or no one else can tell what you did to make it go."

The above may not be the exact quotation, but it covers the meaning and exactly expresses the conclusion of many another operator since the reading of the paper. We think we hear some readers exclaim, instead of "Amen!" — "Ain't that the truth!" Only yesterday while some friends with the writer and his family were sitting on our lawn, a great imposing seven passenger car came limping up the street and laboring hard to get its breath. Apparently flaunting that ominous symptom "Cheyne — Stokes respiration" well known to physicians, and indicating the early sniffing out of the spark of life of their patients. True to the omen, the great machine died with one lone and tremendous gasp and came to a standstill immediately in front of us. The chauffeur, an apparently knowing fellow, with great owley glasses over his eyes and wearing a tan leather cap and a brick-dust colored suit, got out and folded back the hood and began "doing" the motor. He pressed the carburettor tickler, switched the switch, jarred the valve springs, primed the primers, but mostly turned the crank, all to no purpose, un-

til pain and distress was plainly pictured on his countenance. At this time we were moved to offer our assistance, and at the instant we arose to go to the machine the defeated chauffeur was standing several feet away from the motor, with the hood, tools and fixtures scattered around over the brick pavement of the street looking completely baffled at it, when one of the ladies who was with the auto party and had gotten out, was fumbling with the current cables to the spark plugs. Suddenly and as surprisingly as a flash of lightning from a clear sky, the motor leaped into activity and appeared as ready as ever to do service. There was a wonderful expression of relief on the face of the operator, and one of extreme ecstasy on that of the lady's, although, in the language of the engineer she "could not for the life of her tell what she did to make it go." She was apparently willing, however, to be called a heroine and after gathering up their scattered tools and equipment, they were off on their journey like a shot from a cannon. We were not near enough to see what the lady did, but we surmise that she moved the cables free from some short circuit that was draining the current away from the spark plug.

This instance illustrates the truth of the statement in the case of the engineer above referred to. But intent or real meaning of the statement need not be taken seriously, because many an operator would have speedily located the cause of his trouble and would have as quickly corrected it and known just what he did to adjust it. No one with reasonable knowledge on the subject needs regard the gasoline engine or motor as a machine that takes "bucking spells" out of pure meanness or without any cause whatever other than a spiteful desire. Such may appear to be the case to a baffled and irritated operator, but we are satisfied if he will only "keep sweet" and control his own temper, he will be rewarded by finding a plausible and satisfactory reason for the engine's action.

Appearances to the mind are of four kinds. Things either are what they appear to be; or they neither are, nor appear to be; or they are, and do not appear to be; or they are not, and yet appear to be. Rightly to aim in all these cases is the wise man's task.—Epictetus (about 50 A.D.)



Pile five big men into a Ford and you have a fair load. But many a heavy car unloaded has more weight to carry—and no more power to carry it. The low priced Vanadium built Ford is minimally light and maximally powerful.

75,000 Ford cars already sold this season—one-third of America's product. Five passenger touring car \$850—three passenger roadster \$775—torpedo runabout \$775—delivery car \$875—town car \$1100—f.o.b. Walkerville, Ont., complete with all equipment. Get catalog from Ford Motor Company of Canada, Limited, Walkerville, Ontario.



**Barney
Oldfield
says of
White Rose
Gasoline:—**

Canadian Oil Cos., Ltd.,
Calgary, Alta.
King George Hotel,
Calgary, Alta., July 27th, 1912

Dear Sirs:—
Your White Rose Gasoline is an old friend of mine, hence the decision to use it in my record-breaking race today; and have no hesitation in giving it precedence over any of the other gasolines tested by me.
Cordially yours,
BARNEY OLDFIELD.

TRY WHITE ROSE JUST ONCE

Let us have your order today for a trial Barrel. If it is not the BEST you have ever used, return balance at our expense and receive credit.

WHITE ROSE IS THE POWER BEHIND THE MOTOR!

Canadian Oil Companies Limited

REGINA WINNIPEG SASKATOON

Largest Independent Producers and Refiners in America.

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

THE CHORE-BOY

That never kicks—is always at hand—always on time—never sick—has no lazy or "vicious" habits. Will cost less than "the common or garden" boy will cost you in a week's breakages and do the work of fifty boys—working every day all the year round without a holiday. Power in plenty for every job around the farm.

SPECIFICATIONS:

Weight 320 lbs. This is the heaviest 1½ H.P. Engine on the market.

FEED—Suction.

SPEED—450 revolutions per minute.

CYLINDERS—3¼ x 5. This is the largest bore of any 1½ H.P. engine in the world.

FLY WHEELS—Diameter 17 in. Weight 40 lbs. Engine thoroughly bushed at all points where there is a chance of friction.

IGNITION—Make and break. All other engines have cheap jump spark.

COOLING—Air Cooler (Fan).

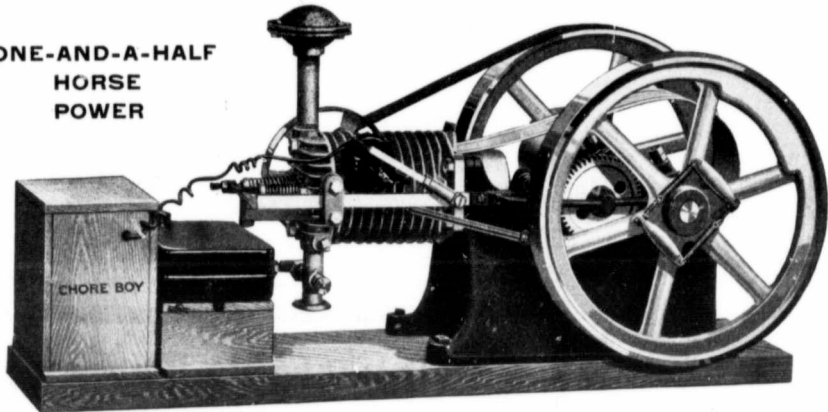
CYCLE—Four.

LUBRICATION—by means of sight feed oilers.

PULLEY—6 x ¼.

COLOR—Base, green; Fly Wheels, red; Cylinder, aluminum.

ONE-AND-A-HALF
HORSE
POWER



Write for Complete literature of our Full Line
of Farm Machinery

**PRICE MARKS A RECORD
IN GAS ENGINE VALUE.**

CRANE & ORDWAY Co., Winnipeg, Man.

Attaching Gasoline Engines to Cream Separators

A contributor to Hoard's Dairyman calls attention to the misleading statements often made by gas engine salesmen, no doubt often brought about by over-anxiety to obtain an order, but which at the same time cannot but work injury to the business. In the same article some splendid information is given relative to attaching the separator to a gasoline engine, which should be valuable to every farmer and dairyman operating a separator in his business. The article is as follows:

"In a recent issue a party asks about attaching a gasoline engine to the cream separator, and is advised to get detailed information from the agents. As selling agents are sometimes so desirous of making a sale that they will sometimes stretch a point, their advice is apt to be misleading. At least I know of one such instance where the farmer bought the engine on the strength of the agent's recommendation that it could be stationed in the small milk room in the barn where he did the separating. The party knew little about gasoline engines at the time and taking the agent's word, or-

dered the engine, thinking that it could be stationed in the small room in the barn. When the company's expert came to set the engine up, he soon ordered a different place, and the result was that it had to be set out-of-doors and a building erected over it. So one cannot always place strict reliance upon agent's claims and must accept their advice with a pinch of salt.

"A gasoline engine may be stationed in any milk room that is large enough, and it does not require a very large space. One should provide a solid foundation, preferably of concrete for both the engine and the separator. The engine cannot be connected direct to the separator, but must be operated through a line shaft. A belt from the driving pulley on the engine turns the line shaft, and the line shaft must have a proper sized pulley to connect with the separator. While there is no danger from fire with a gasoline engine in the barn, yet insurance companies have certain restrictions and charge extra insurance. Before buying it is a wise plan to consult the insurance com-

pany and make sure that the type of engine is an improved make. The supply tank, from which the gasoline is pumped by a pump on the engine, must be at least 50 feet away from any building.

"In getting the pulleys for the line shaft one must take into consideration the driving pulley on the engine and the pulley wheel on the separator. The speed of the engine is generally at a fixed number of revolutions per minute and the speed of the separator must be regulated entirely by the size of the two pulleys on the line shaft. One general rule to be kept in mind: If the diameter of the driving pulley (or the one on the engine) is the same as the driven pulley (the one on the line shaft), the revolutions of the driven pulley will be the same as the driving pulley. If the diameter of the driving pulley is less than the driven pulley, the revolutions of the driven pulley will be

decreased; and if the diameter of the driving pulley is greater than the driven pulley, the number of revolutions of the driven pulley will be increased. In other words, if the driving pulley on the engine is a 9-inch pulley making 360 revolutions per minute and connects with an 18-inch pulley on the line shaft, the speed of the shaft will be less than that of the engine, or 180 revolutions per minute as the speed varies in proportion to the diameter of the two pulleys. The same mathematics applies to the pulley on the shaft which connects with the one on the separator, except that instead of being the pulley driven it is the driving pulley.

"A simple rule for finding the number of revolutions of the line shaft per minute, is to multiply the diameter of the engine driving pulley by the number of revolutions the engine makes per minute, and divide the result by the



Capacity about 46 Imperial gal.

A THRESHING SPECIAL!

5 Steel Barrels for \$45.00

F.O.B. WINNIPEG

Regular price \$10 each. We have only a few of this style drum left. Made of 16 gauge steel, galvanized inside and out. Brass name-plates free of charge. No order accepted, unless this ad. accompanies the order

Steel Barrel Company of Canada

303 Enderton Building, Winnipeg, Man. Phone Main 7165
Remit by draft or money order

diameter of the driven pulley on the shaft. For example, if the engine pulley is a 9-inch making 360 revolutions per minute and the one on the shaft is an 18-inch: Nine (diameter of engine pulley) multiplied by 360 (revolutions per minute) divided by 18 (diameter of shaft pulley) equals 180 revolutions of shaft.

"The pulley on the shaft may be of any size, but it is desirable to reduce the speed at least half for separating, which is done by getting a pulley twice the diameter of the one on the engine.

"Now the separator must be turned at a certain number of revolutions per minute and the problem must be worked backwards. If the pulley on the separator is a 12-inch and must make 50 turns per minute, and the revolutions of the line shaft is 180 per minute, we must find what diameter of the line shaft pulley will run the separator at the required speed. A simple rule for finding this is to multiply the diameter of the separator pulley by the number of revolutions it must make per minute and divide the result by the revolutions the line shaft makes per minute. The answer will be the size pulley required. For example, the separating pulley is a 12-inch and must make 50 revolutions per minute, and it has been previously learned that the line shaft makes 180 revolutions per minute:

$$12 \times 50$$

————— = 3 1/3 size of pulley
180 required

"This pulley generally has to be made special as it is apt to be an odd size. One cannot substitute the next size to it, either larger or smaller, because it would change the speed of the separator which is never advisable if thorough work in separating is expected.

"The belt of the shaft to the separator should be loose so that the separator will be put under motion gradually. The engine starts out at full speed, but the belt connecting the separator being loose, slips and starts the separator as evenly and slowly as one can do it by hand, and when once started maintains the speed at a uniform unvarying motion.

"A gasoline engine is a wonderful help in separating, doing the work cheaper than one can hire it done or afford to take the time to do it himself. It is not a difficult task to attach it to a separator and may be done by anyone possessing ordinary mechanical ability. The main points are to have solid foundations for the engine and separator, a line shaft on which are the proper sized pulleys and a loose belt for separating. Other pulleys may be put on the shaft and these connected with the churn, pump, or mill machinery."

Gas Engine Ignition.

GAS engine "ignition" is the production at the proper instant within the engine cylinder, of an electric spark whereby the charge is ignited. Without good ignition the best engine will not run satisfactorily.

Batteries are commonly used for producing the spark. These wear out in time and require renewal. When the engine begins to miss, and there is plenty of fuel and oil, it is reasonable to suspect the ignition, and the batteries should be the first thing examined.

The latest types of engines have built-in engine timed magnetos, and batteries are unnecessary, the care and expense incidental to their upkeep is being eliminated, as the magneto is an actual part of the engine that furnishes current as long as the

engine runs. So the engine furnishes its own electricity, and the magneto wears as long as the engine.

As a comparison of the cost of doing work by mechanical and animal power, it is estimated that on the basis of one cent per kilowatt hour, and the use of 10 horse-power hours to plow one acre, the fuel cost for the mechanical power is under 20 cents, while the cost of the equivalent horse power would be \$1.

Magneto ignition instead of the troublesome battery has removed the last objection to the use of the gas engine on the farm.

Cheerfulness is the religion of the little. The low hills are a-smirk with flowers and greenery; the dominating peaks austere and desolate, holding a prophesy of doom.

Testing Gas Engine Batteries.

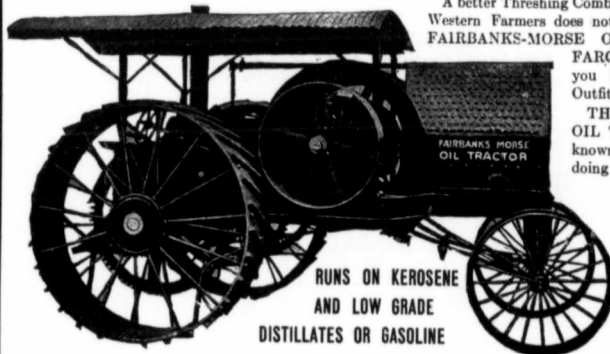
GAS engine users, having battery ignition outfits, should test the batteries once a week by loosening the wire from the engine igniter, and tapping it on the post where the wire from the battery or coil connects to the engine frame. This tapping should show a fat, bright spark; if not, proceed as follows:

See that all connections are clean and tight. Examine switch, if one is used, and see that the blades are free from grease and dirt, and make a good connection.

Remember the wire must be clean and bright. The insulation must be off of same where it is attached to a post. There must be no loose joints.

Examine the spark coil and see that the terminals or connec-

An Unbeatable Team for Threshing



A better Threshing Combination than the one we offer Western Farmers does not exist. Take our regular FAIRBANKS-MORSE OIL TRACTOR and the FARQUHAR SEPARATOR and you have an ideal Threshing Outfit

THE FAIRBANKS - MORSE OIL TRACTOR is already well known all over Canada, and is doing big work in the fields of Western Canada.

It remained to find a suitable Separator, one that would measure up in every way to the standard of the FAIRBANKS - MORSE OIL TRACTOR. This was important, even vital, for we must stand back of the Separator chosen.

Eventually, after many rigid tests, we chose the FARQUHAR SEPARATOR, and offer it in conjunction with the FAIRBANKS-MORSE OIL TRACTOR as a GREAT THRESHING OUTFIT.

IF YOU ARE LOOKING FOR A THRESHING OUTFIT THAT WILL GO THROUGH WITH HARD WORK AND STAND THE RACKET WITH A MINIMUM OF TROUBLE, GET THE

**Fairbanks-Morse Oil Tractor
:: and Farquhar Separator ::**

Both are covered by the FAIRBANKS-MORSE ABSOLUTE GUARANTEE, which ensures against defect in materials or workmanship. Let us send you Illustrated Booklets dealing with both machines. Just fill in and mail the coupon to our nearest office, and the Booklets will be sent by return mail.

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Fairbanks-Morse Oil Tractors, 15-30 and 30-60 H. P.
Gasoline Engines, all types, portable and stationary, 1 to 500 H. P.
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Please send me Tractor and Separator Booklets
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tions where the wire joins same, do not touch each other. If the coil is wet with oil or water it will not work.

Wet spark coils can sometimes be repaired by putting them in an oven and baking at a heat not exceeding boiling water, until thoroughly dried out. Be careful not to have heat great enough to melt the compound in which coil is immersed, or split the wooden heads.

Remember the zinc of one battery cell must connect to the carbon of the next. The zinc terminal is always the post on the outside can or shell on a dry battery and the carbon terminal the one on the black rod sticking up in the middle. If batteries are connected up any other way, they will not work properly.

To test the batteries to see if they are strong enough, take a very fine copper wire or a pin and hold it very firmly against the post on the zinc. Let the pin point just touch the black part of the carbon, but not the brass post. If a small puff of smoke is seen and a tiny spark, or the pin seems warm, it is an indication that the battery is all right. Don't hold the pin on the carbon except for a few seconds. If no sign of spark can be seen, batteries are probably exhausted and a new set should be procured.

It is always better to have an ammeter or measuring instrument for testing batteries, and they should be tested every week. Batteries showing less than 6 to 8 amperes will not give good service.

Read your engine instructions carefully and don't try to use more batteries in series than the makers recommend.

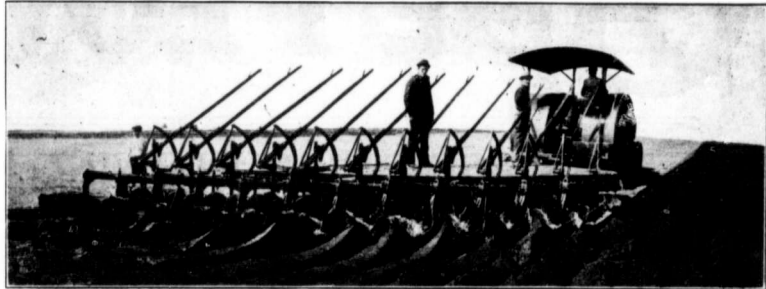
A slow speed engine-timed magneto, built into the engine, eliminates all battery, switch, and wiring troubles. It costs a little more than the batteries, but requires no attention nor renewal and is as much a part of the engine as the crank shaft. All leading makes of engines are furnished with "built-in" magnetos with simple external means for timing, if the purchaser specifies same. The magneto is a device whereby the engine makes its own current as long as it runs.

There are more gas engines made in Wisconsin in one year than there are steam engines in the entire world. Many of these are magneto equipped.

A Man—Not a Clothes Screen.

In Mr. Hodder Williams' description of the Coronation Service of King George V., there occurs the following paragraph: "Amid that fairly crowd one

The Owner of a Twin City "Forty" Has Daily Proof of its Superiority



AFTER ALL, the true test of a tractor is on the farm—under severe working conditions. The way it stands up day after day, week after week, season after season,—that's the only true basis by which to Judge its sterling qualities, its efficiency, its reliability.

Although we planned from the very first to build the finest tractor ever produced—sparing no expense to acquire all the improvements that the best engineering talent of the country could conceive—still the success of the Twin City "40" has gone beyond our own expectations.

The enthusiasm of Twin City owners is being expressed in letter after letter such as this from Johnson Bros. Co. Cavalier, N. D.

Gentlemen:—

"In regard to the TWIN CITY 'FORTY' Tractor purchased from you this spring, we can state that we have turned over just about one thousand acres of ground with this machine up to this date, and on over eight hundred acres we pulled a load consisting of a 10 bottom P. O. plow, Durham Soil Packer, harrow and a 24 shoe Monitor Double-disc drill, thus plowing, packing, harrowing and seeding in one operation a swath of ground nearly twelve feet wide.

We have seen no other tractor that will handle the load that the TWIN CITY can handle. We believe that we have done about twice the work with four machine this spring that any other one tractor in the country has accomplished, and as much as a half dozen tractors working round us have done altogether.

There is no question that the TWIN 'CITY FORTY' is the strongest built, most powerful, most accessible, and nicest working machine on the market today. In the hands of any man who will give it the attention and care that any kind of power machinery requires, one of those tractors can be made to pay for itself in a short time."

Does the Pride of Owning the Best Count With You?

The farmer who owns a Twin City "Forty" is in the same class with the man who owns a \$5000 automobile—he knows that he has the best. He has proof of it every day. He feels a justified pride, when his power plant pulls through where others in his neighborhood break down, when he gets his work done before his neighbors get fairly started.

We'll gladly tell you the names of Twin City owners. They're good men to counsel with before buying a tractor.

OUR NEW TRACTOR BOOK J goes into details—posts you on the many dominating features of the Twin City "40". It will pay you to read it before buying a tractor.

We have agents all over the Northwest and Southwest with the Twin City "40's" on hand. They will demonstrate to you all that we claim and show you some things that will open your eyes. Let us tell you the name of the Agent nearest you. Write today.

MINNEAPOLIS STEEL & MACHINERY Co. of Canada Ltd.
REGINA SASKATCHEWAN

there was who came in workaday morning dress. I marvelled that there was none to ask. 'Friend, how camest thou hither?' I should have liked to know his name, for he was a young man of singular audacity—or something else."

Here is answer to Mr. William's question, "Friend, how camest thou hither?"

That young man in morning dress could have been none other than the member of the Society of Friends selected by that body to represent them, as one most worthy. The "workaday clothes" marked the courage of the Quakers to appear before the king as they have done since the days of George Fox, with no outward adornment, reminding us that it is the man, not his clothes, that is worthy of respect, if he be a true man. Kings and queens have graciously permitted the Friends to appear before them in

their usual dress, and King George V. accorded us the same privilege.

We are glad the Quakers still hold to their right: in simple, calm dignity to protest against the worship of clothes, which, as Carlyle says, "are threatening to make clothes-screens of us." "Happy," again says Carlyle, "is he who can look through the clothes of a man into the man himself," which we should have thought anyone looking into the face of a Friend would be able to do.

The Law of American Life.

The law of American life—of course it is the law of life everywhere—the law of American life, peculiarly, must be the law of work; not the law of idleness; not the law of self-indulgence or pleasure, merely the law of work. That may seem like a trite saying. Most true sayings are trite.

It is a disgrace for any American not to do his duty, but is a double, a triple disgrace for a man of means or a man of education not to do his duty. The only work worth doing is done by those men, those women, who learn not to shrink from difficulties, but to face them and overcome them. So that Americanism means work, means effort, means the constant and unending strife with our conditions, which is not only the law of nature, if the race is to progress, but which is really the law of the highest happiness for ourselves.

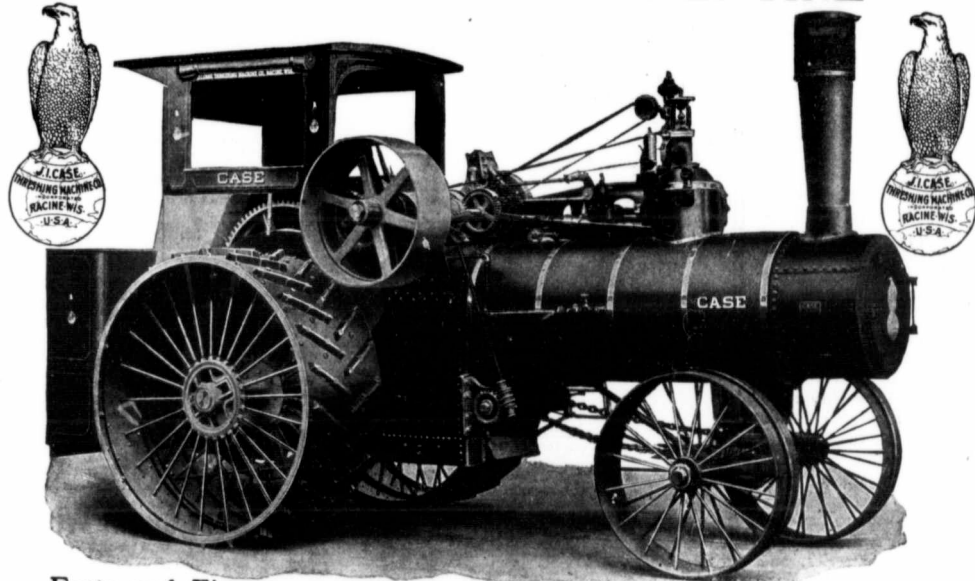
Theodore Roosevelt.

Carlyle on Woman.

My dear mother, with the trustfulness of a mother's heart, ministered to all my woes, outward and inward, and even against hope kept prophesying good.—Reminiscences.

CASE PLOWING-BIG HARVESTS

THE "CASE" STEAM PLOWING ENGINE



Facts and Figures speak louder than words and Facts and Figures prove that Steam plowing can be done best and cheapest with Case Steam Plowing Engines. The Fact that the Case Steam Plowing Engine has won every time it entered the Great Winnipeg Contest is sufficient evidence of Case Superiority to satisfy most Engine buyers. Those who want still more proof will find it in the figures of the last three Winnipeg Contests which we will gladly furnish upon request.

The Figures show that the closest competitor in the 1911 Winnipeg Contest used over 90% more coal to plow an acre than the Case 110 H. P. Steam Engine used this year. The closest competitor's figures this year (the only one who dared to enter against Case) show 60% more coal burned to plow an acre than the Case used. The big Case 110 H. P. Engine in this year's contest burned only 99.3 pounds of coal to plow an acre—the other entrant used 155.9 pounds.

A search of the Winnipeg Contest records for the past three years shows that no engine used under 120 pounds to an acre except the Case. The Case in 1910 used 99.2. By duplicating in 1912 (within 1-10 of the pound) the sensational Fuel Figures of 1910, the Case Engine has proved to the satisfaction of the most skeptical that the Case is far and away the most profitable engine for Steam Plowing. Case Steam Engines supplied in various sizes from 18 to 110 H. P. Every one a great power producer and money saver.

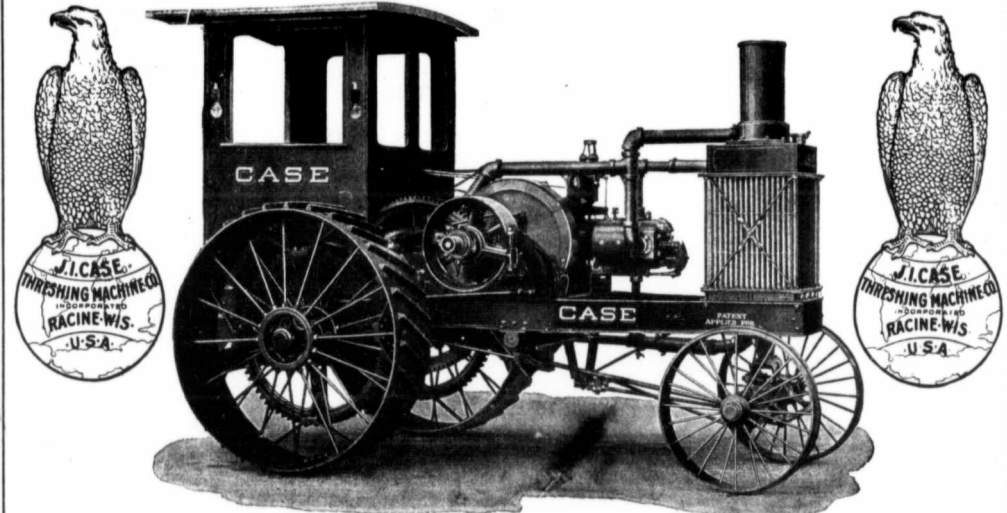
The More Economically You Can Plow the More Profitable Your Plowing Becomes. Why Waste 60% to 90% of Your Fuel With Nothing to Show For It? Buy a "Case" Engine, Put What You Save in Fuel in the Bank.

See Case-Sattley Engine Gang Plow on Last Cover Page

Now is the time to send for the Case Steam Plowing Catalog. It's full of Plowing Pointers of great interest to you. Write for it today.

J.I.CASE THRESHING MACHINE
CANADIAN BRANCHES, TORONTO,

THE "CASE" GAS TRACTOR



The remarkable performance of the Case 40 H. P. Gas Tractor in winning the Gold Medal in the 1912 Winnipeg Plowing Contest simply piles up the proof that Case machinery leads the world in Power Plowing.

In winning the Gold Medal the Case 40 H. P. Gas Tractor gave demonstration of Light Fuel Consumption, Ease of Operating and Handling, Power and Perfect Work under severe Field Conditions never equalled by any Gas Tractor.

We did all the experimenting on the Case Gas Tractor before we offered it for sale. Every part and every feature of its construction has been subjected to strains and conditions far more severe than will ever be encountered in actual every-day use. That's always been the Case Policy and the Case Way of Protecting buyers.

Every Farm Power User, especially those interested in Power Plowing, is vitally interested in the many improvements in the Development and Application of Power embodied in the Tractor that proved itself best by winning the Gold Medal at Winnipeg.

Visit our nearest branch House and have these interesting features explained to you in person, or if you cannot do that, write us at once, and we will mail you literature describing in detail the many Superior Features of Construction that make the Case 40 H. P. Gas Tractor the Most Economical to Operate, the Most Easily Handled, the Best Gas Tractor for Plowing Service.

See Case-Sattley Engine Gang Plow on last Cover Page

Co. INCORPORATED RACINE·WIS·U·S·A.
WINNIPEG, REGINA & CALGARY

TRACTION PLOWING

AS TOLD BY THE MEN WHO DO IT

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

The Only Way.

I have just received your letter in regard to traction plowing, will say that I do think it is the only way to break the sod in this Western Country as it is too hard to break with horses and oxen.

We have a 25 Horse Power J. I. Case Engine with which we do our breaking and have an 8 bottom Cockshutt Plow, which we think makes a good rig for breaking. We are new beginners in Traction farming but hope to be able to give you better ideas in the future, than at present as we haven't done anything but plowing with our engine so far, but will do other work this Spring.

We have had our outfit only one year and we are going to try and do seeding this spring, with it, which I am satisfied we can. You ask what make engine we have.

1. We have a 25 H.P. (J. I. Case Engine).
2. A Cockshutt Plow (8 bottoms).
3. We employ 3 to 4 men in plowing.
4. We employ 2 to 4 horses.
5. As to fuel we like the Crows Nest steam coal best and use about 3,000 lbs. in ten hours.
6. As to water we use 4 to 5 ten bbl. tanks per day.
7. I do think it harder on Engine to break prairie than to thresh.
8. As we run our own force and do not hire any help I have not figured the cost per acre.
9. We have not done much discing with our engine, but will this spring.

10. There are about as many steam as Oil Tractors in our neighbourhood at present. As to hitches we are not prepared to answer that question just now, and as to photograph of our rig we have none at present, but will have in the spring if nothing happens and then will send you one.

I have run a threshing machine for the last 20 years in the U.S.A. the state of Iowa, but never did any farm work with steam till last year so I am not prepared just yet to give you my full opinion on the different hitches just now, until spring opens up.

Yours truly,

J. H. Schlosser.
Kerröbert, Sask.

Has Done Lots of Work.

My experience in Traction plowing has been as follows. In the spring of 1909 I purchased a 110 H.P. engine J. I. Case, with which I have broken 5,800 acres and threshed 200,000 bushels of grain. I used Cockshutt plows, 10 bottoms. I can handle 12 bottoms all right, but don't think it pays to over load the engine. I work at 145 pounds of steam the boiler is in as good shape as when I bought it, as I carry the same amount of steam as the first year 145 L.B.S. and my flues have never leaked. I have the same flues today as come with the boiler. My gears are practically as good as new. I have had two new pinions but no new gears.

I use on an average about 100 pounds of coal per acre which cost me \$4.00 per ton F.O.B. Taber. I

being too much rain, and the ground was pretty slippery for engine to work.

I will tell you my experience in plowing a hundred acre field. The plow I used is an eight bottom Cockshutt Gang which I think is a hard plow to beat.

Two men run the outfit with one man and team to draw water and coal.

We used about fifteen hundred lbs. of the best steam coal each day.

This land was very tough to plow, consequently we used quite a lot more fuel, and water than we should have. It generally took about 1500 gallons of water each day plowing 25 acres.

My engine worked very good last summer. It is heavier on the engine plowing than threshing. The engine running at a slower

perience in that line with a Hart-Parr 22 x 45 engine and a John Deere plow. The season was very dry. I started April 1st, and plowed until the 24th of May when it became too dry to do any more. I plowed 1000 acres after October 15th. I disced 500 acres using eight discs, four out throws and four inthrows.

The expense for plowing was about \$1.00 per acre. In the spring of 1911 I started in with the Hart-Parr, pulling six single discs and 40 feet of harrow that did good work. I then bought a 20 h.p. International for seeding and it worked well. I used 3 Manitor drills and got good results. I seeded 700 acres of wheat and 200 acres of flax without any trouble and very little cost. I also plowed 300 acres. I used my 20 h.p. I.H. C. for harvesting. I pulled 3 eight foot binders. I cut 560 acres without any trouble and very little cost. I think it is the only way to harvest as you do not have to stop for heat as long as you do for horses.

This fall I started out to thresh with a Big Four "30" and a Nichols and Shepard Separator. I think threshing is easier than plowing. I haven't plowed much with the Big Four but it has given good satisfaction threshing, as we never lost a minute and did not pay out 5c. for repairs in 30 days work.

Yours respectfully

Thos. Burns,
Burdett, Alta.



The I.H.C. Tackling a Rough Job

think it pays to buy Steam Coal as it takes less than the domestic coal that we have here at Taber.

I do my own firing and run my own engine for I can look after the engine better than if I steered it myself. I have a man to steer for me which I pay 10c. an acre and I also have a tankman which I pay \$2.00 a day. I use 100 gallons of water per acre and the man that hauls the coal does the cooking. I pay him \$2.00 per day.

Yours truly,

C. L. Thorp.
Taber, Alta.

Oil Tractor Not Popular in this District.

The engine I run is a twenty-five H.P. J. I. Case.

Last season was not a very good season for plowing, there

speed when plowing, and the steady pull I think I can make my engine run more smoothly with the plow than when threshing.

I think it cost about 90c. an acre to plow the field mentioned.

I have never tried my engine on anything except plowing and threshing.

The steam engine seems to be the most common around this district, though there are quite a few oil tractors used, but they don't seem to run very good.

Thomas Askin,
Burnside, Man.

Likes It.

With regard to your letter of recent date I will try to tell you some of my experience with the traction plow. I started out in the spring of 1910 as my first ex-

A Power Farmer.

We bought a 22 x 45 Hart-Parr last spring but it did not arrive early enough. We bought a P. and O. eight furrow gang plow and used five and six plows in breaking. We plowed some very heavy gumbo and pulled five plows in breaking and six in clay loam plowing about five inches deep on an average. We had no experience before we bought our engine in any kind of engine work. We plowed about seven hundred acres and disced 500.

We did all our own work having one man on the engine and one on the plows and one to draw oil. We used two horses to draw water and oil and the driver looked after things. We used about 50 gallons of kerosene and 5 or 6 gallons of gasoline to start with and about a barrel of water per 12 hour day. We could plow

Farm Power

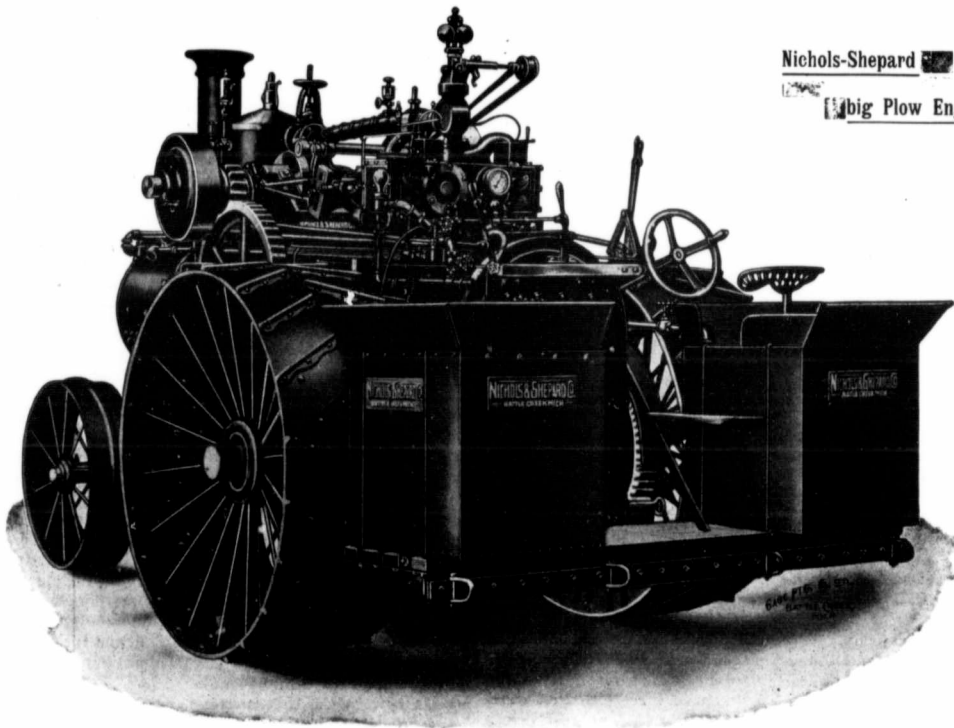
The Nichols-Shepard big strong Steam Traction Engine is the Farm Power that has proven to be practical.

It has strength and capacity to do big work.

It is not a fad, nor is it represented to do all the work of the farm.

It will plow, and will haul heavy loads and can be used to great advantage on the large farm.

It is the Engine for the Contractor.



Nichols-Shepard

big Plow Engine.

It has the strongest boiler used on Traction Engines.

It has the largest and strongest brackets and shafting. It has steel frame platform and draw-bar.

It has the strongest traction wheels with steel spokes and steel rims. It has shaking grates.

It has link reverse, with every wearing point provided with bushings and ample means for lubrication.

It is provided with large water tanks and for an ample fuel supply.

Every actuating part is within easy reach of the Engineer standing on his platform.

It is the engine for big work.

Write for full particulars - - -

Nichols & Shepard Company,
Battle Creek, Michigan

Sole Builders of the Red River Special Line of Red River Special Threshers, Nichols-Shepard Traction Engines, OIL-GAS Tractors, Universal Self Feeders, Stackers, Weighers and Supplies.

Branches: Regina, Sask. Winnipeg, Man. Calgary, Alta.

from 12 to 15 acres per day. I think except for the dust that traction plowing is no harder on the engine than threshing. I think \$2.00 per acre will cover all the expenses of plowing, wear and tear, depreciation and labor.

We pulled four 8 ft. discs behind the engine then 2 scrubbers behind the discs and drag harrows behind the scrubbers and the engine handled all right. The oil tractors are taking the place of steam engines in our neighbourhood on account of it being hard to get enough water for steam rigs. There were a good many oil tractors sold here last year. We threshed about six weeks with a 32-36 Sawyer-Massey Separator and the engine handled it fine. We used a 6ft. x 6ft. x 20ft. draw bar attached to the draw bar of the engine. The first left hand disc was fastened about $\frac{3}{4}$ way out on the tongue to the draw bar, then the next was right up close so that the first tongue could swing over the end of the second disc in turning. The third was hitched a little longer than the second and the fourth was out about at the end of the tongue. Then we ran logging chains from the draw bar back over the discs to the scrubbers and fastened the end of the scrubbers together and hitched the harrows to the scrubbers.

With the drills we hitched the two outside drills up close to the draw bar and the centre one behind the other or out to the end of the tongue and fastened the harrows or packers behind the drills.

Wishing the Canadian Thresherman and Farmer every success. I am

Yours truly,
Cable & Nelson,
Per (A. B. Cable)

Macklin, Sask.

What Do You Think of This?

On April 1st, 1910 I started to work with a new Hart-Parr 45 h.p., and seven bottoms on an eight frame Cockshutt plow, followed by a land packer and running two shifts.

I was given to understand that any man with any mechanical knowledge could run a gasoline tractor successfully. I had had no experience but I got a little very soon. For while I did not think very favorably of Traction Farming, as compared with horses, and I know that most of the time a poor man on the engine is the cause of dissatisfaction.

The better the engineer the cheaper the work will be done and the better satisfied is the owner. There are too many men passing for and hiring out as engineers who should have another year or two on the plows.

The nature and condition of the soil has so much to do with power



HACKNEY AUTO-PLOW
"THE ONE MAN MACHINE"

Great Labor-Saving Machine For The Farmer

THE bane of almost every farmer's life is being obliged to depend on "hired help." The loss of "man" or "two," at certain seasons of the year, is a very serious matter and often involves loss of crop. The HACKNEY AUTO-PLOW, the only "one man machine" on the market that can be used successfully for plowing, seeding, haying, harvesting, as a stationary engine for power purposes, and as a tractor for hauling loads, etc., makes the farmer INDEPENDENT and solves the vexatious labor problem. It eliminates drudgery and helps to keep the "boys" on the farm.

The Hackney Auto-Plow will do the work of 10 horses and 2 men plowing and plows from 10 to 12 acres per day. It is a tireless worker, day or night, and there is no cost for "keep" except when in operation. So simple in construction and easy to operate that it is really a pleasure to run it. The cost is less than the medium priced automobile.

The Hackney Auto-Plow is the only machine that WORKED EVERY DAY at the field trials at the Minnesota State Fair. Catalog, photographs and testimonial letters, from satisfied users, free on request.

HACKNEY MANUFACTURING COMPANY, 579 Prior Avenue, ST. PAUL, MINNESOTA

required in plowing that I do not think any fixed rule holds.

As to the amount of fuel required in breaking, it takes about four gallons of kerosene or about three gallons of gasoline per acre. Burning kerosene, seven plows seem to be about the same load as six on gasoline and it cost me between \$2.00 to \$2.50 per acre if there is a good man on the engine.

Early in May I put on three in-throw and three outthrow discs and two seeders, seeding flax. The rear discs were fastened by short poles direct to hooks in place of seat standards on forward disc which were fastened to a 18 ft. evener. Seeders were fastened to hooks on rear discs, with a pony truck supporting short poles. This outfit ran two shifts in our long days, and worked about 50 acres a day with an engineer and helper on each shift.

After harvest we put six discs, three heavy plank floats, and drag harrows behind engine. With this one good man covered about 60 acres a day.

In the spring of 1911 the land was in good shape and seeded it with horses. I have 1,150 acres under cultivation and feel I could do without neither engine nor horses. This fall it was late when our crops were ready to cut. I put an eight foot binder behind seven plows. The binder was hitched direct to plows with a pole, and a P. & O. subsoil packer put between the plows and binder. The bull wheel of binder ran just on the edge of the last furrow. The bundles were dropped on the plowed ground. It worked fine and an engineer and one helper

ran the outfit. Thus 350 acres were plowed that could not otherwise have been done this fall, and what is very important, it was done before the moisture could escape. Without horses I would have had to use the engine altogether for harvest. I also have my own teams for bundles, and hauling grain.

My separator is a 32 x 36 Aultman & Taylor with Hart-Brown wing feeders. The engine could handle a 36 x 56.

Threshing is much easier than plowing as the continual jar and rack of traction work is what tells on an engine, but with the new wheels now in use this is overcome in the Hart-Parr. Give them gas, oil and keep the bolts tight, and they can't be beat.

As for the separator, we threshed wheat so badly frozen it was little more than hulls, and cleaned it and SAVED it. The

machine is certainly all any man could ask for capacity and good work, and we certainly crowded it.

A man with an engine can follow his plows with a packer and discs or harrows or seeders and put his land in shape or in the spring put in his crops at one operation as it should be done for best results. Packing looses most of its value if not done immediately behind the plows.

Some horses are always in demand on any farm but in the rush of fall and spring work the engine. It has come to stay.

A. W. Smith,

Keoma, Alta.

Any good book, any book that is wiser than yourself, will teach you something—a great many things indirectly and directly, if your mind be open to learn.—Carlyle.

Are You Bothered with Hot Water?



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

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

Ask your dealer, or write us.

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

Emerson

Geiser

Reeves

The Big Four "30"

American Drills

Newton Wagons

Where in any company will you find a group of names as strong in the trade? Each stands for the highest quality in its line.

This group of Companies builds nearly Everything the farmer uses.

Implement dealers everywhere handle these great lines, all of which are now

manufactured by

Emerson-Brantingham Company
ROCKFORD, ILL., U.S.A.

Are you Short of Binder Twine?

The STEWART LOADER will pick up the
loose grain as well as flax and stooks
:: WE GUARANTEE THIS ::

Wire or Write

Stewart Sheaf Loader Co., Ltd., 804 TRUST AND LOAN BUILDING,
WINNIPEG :: :: :: ::

Indiana School of Tractioneer.

In the last few years power farming has witnessed a very rapid and widespread development. Consequently it has been a difficult matter for owners of gas traction engines to secure experienced operators. The tractioneer schools established by our Company has been an unqualified success, and the agricultural press of the Northwest and Canada has published from time to time glowing accounts of the schools held in that section of the country last winter.

Out of these schools started a year ago last winter by Mr. B. G. Baker of Regina, there has grown the Indiana School of Tractioneer. This a \$25,000 corporation organized and incorporated under the laws of the state of Indiana and is devoted entirely to the teaching of farm engineering.

When the gas tractor was new, men were not familiar with its operation, which was an additional handicap. The steam engine with more experienced operators and higher state of perfection almost discouraged the gas tractor men from going ahead, but gas tractors got better. More men learned to run them and presently the public was clamoring for them.

Then came the idea of a school for teaching a lot of men at once what a few had learned by experience. It started at Regina, spread to other Canadian centers, and last winter got down into the States with considerable force.

Teaching school and selling goods are two different things. Teaching school to a few hundred, who enter at the branch houses does not benefit the big majority who cannot come. As a result the teaching of tractioneer to such people as the Company may

wish will no longer be done by the Company but by a school of specialists.

Dr. E. A. Rumely, B. G. Baker, L. W. Ellis, J. A. Secor, John Wolf, W. H. Higgins, and others saw in the growth of power farming a chance to develop a more independent, impartial school.

John A. Secor has been elected president of the Indiana School of Tractioneer, and L. W. Ellis, secretary. Professor C. I. Guinness, who was for many years at the head of the agricultural engineering department of the North Dakota Agricultural College is to be the treasurer and general manager. These men together with Dr. E. A. Rumely and B. G. Baker constitute the five members of the board of directors.

The School will maintain three courses, a residence course, a correspondence course, and a travelling course. At the residence school a two months course in gas engines will be offered. This will consist of lectures and demonstrations together with practical work on engines. Arrangements have been made with the M. Rumely Company so that the students will have access to the shops. The aim is to train operators and not machinists. Consequently such work will be given in the school as will be of the greatest benefit to the students.

It is expected that the first term of the residence school will open September 16th at La Porte. Two terms of six weeks each will be held continuously.

In addition to the residence course a correspondence course will also be given on the gas engine, power farming, and agricultural engineering. This will be followed out along the same lines as have been followed by other correspondence schools. The

course in agricultural engineering will give instructions on the operation of all farm machines with special attention to the operation of power-driven machinery. Instructions in installing power, farm lighting, heating and ventilation systems will be a strong feature of the course. Other branches of agricultural engineering will also be considered, such as good roads, farm buildings, drainage, irrigation and the use of concrete on the farm.

The travelling schools, the same as the branch house schools, will be held in various agricultural centers throughout the country. These schools will also be held in connection with the correspondence work. The travelling school will visit the various branch houses of the Rumely Products Company and will give thorough instructions in engine operating. The aim of the travelling school is to give students who cannot attend the residence school, the actual work with engines which they cannot get in the correspondence course. It will also relieve the branch houses of this work which they formerly had to handle.

It is the aim of the Indiana School of Tractioneer to give a complete course in power-farming machines of all types and will not limit its instructions to any one particular type or make of machine. Arrangements will be made whereby experts of this and other companies will be allowed to make the residence courses.

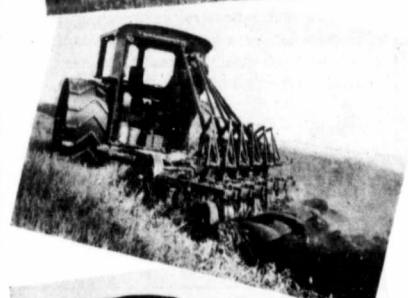
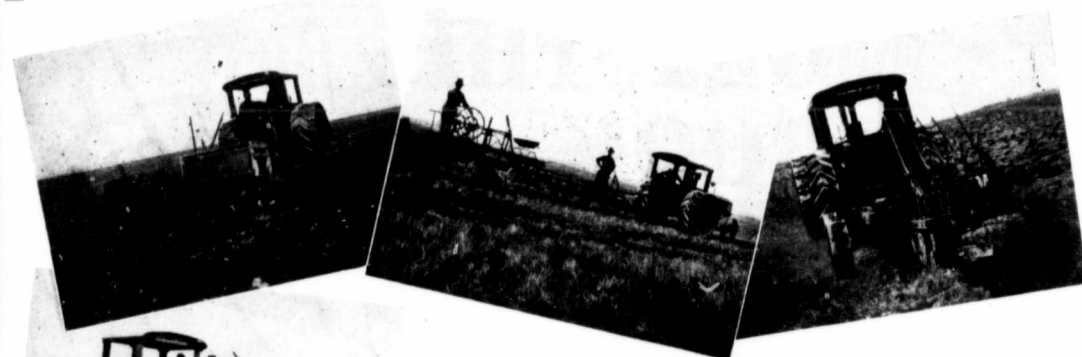
The fact that the school is co-operating with the M. Rumely Company does not mean that the training offered by the School will be with Rumely engines alone. All types will be considered and a broad and comprehensive training in the operation of gas engines will be offered.

Prof. Guinness will be assisted in the work of conducting this school by Don S. Wormly, a graduate in agricultural engineering of Iowa State College, Prof. F. E. Wilson, formerly in the engineering department at the Kansas State Agricultural College, and Frank Johnson, at present an expert for the M. Rumely Company. This faculty will be added to as the School grows.

Cost per 100 Acres.

In the spring of 1909, I purchased a Hart-Parr gas tractor, 45 h.p. and a John Deere 8 furrow engine gang. I turned over 500 acres that summer in very rough and stoney land at that, but it was new to us then and we stayed with it night and day.

In the fall I got an Advance separator, 32 by 52, complete with feeder and windstacker. The engine handled it with ease and I had 8 teams and ran a cook car. I threshed 35 days that fall, and made very well. There was a good crop here that year. So I have been in the ring ever since, but the last two falls have been poor in this part of the country, for we hailed out in 1910 and this fall we were frozen out. Any man that has been in the business knows that it is an up hill grade that far from town. Still there is lots of prairie out in the country to be broken up and the gas-engine is the best rig to do it with. But I would advise any man that is thinking of buying a rig of any kind to wait till he gets a town not farther than ten miles, because if a man has a break down it takes too long to get to town and back, and if you raise grain to any extent, it is too much expense to haul it so far. I think



RUMELY GAS PULL LA PORTE

A New Rumely Tractor Now Ready

The Gold-Medal-Winner in Next Year's Motor Competition

Here's the tractor you've been waiting for—the handiest one ever built. It is a medium sized tractor but it does a surprisingly big lot of work. It will do the work of from 6 to 16 horses at about one-half their expense. It will go wherever a wagon will go and has as many year-round uses.

Built to suit the size of the ordinary farm, it is just what you want for plowing or hauling—just the thing for all of your traction work.

Get a Rumely GasPull tractor and do your Fall plowing faster and with more satisfaction than it has ever before been done.

One man and 25 gallons of gasoline with the Rumely GasPull tractor can plow 15 acres of ordinary stubble in 10 hours. If pressed for time, another man can plow as much more at night.

Rumely GasPull tractor is a good engine for belt-work too,—it will drive a 30-inch separator up to its fullest capacity under ordinary grain condition. It is just what you want for an individual threshing outfit.

The all-around Rumely GasPull tractor furnishes the most satisfactory power for hulling, shredding, grinding and every other kind of farm belt-power work.

Every detail of design and construction in the Rumely GasPull tractor is time-tried—each has been tested by three years of work in the field.

It is a welcome addition to Rumely Power-Farming Machinery. It shares with all Rumely machines the merits of correct design, carefully selected materials and honest build. It applies gas power to farming in the most practical and economical way.

Rumely GasPull tractor is something new—something better!

Ask us or our nearest Branch!

Rumely Products Co.

(INCORPORATED)

La Porte, Indiana

Branches:

- Calgary, Alberta
- Edmonton, Alberta
- Regina, Sask.
- Saskatoon, Sask.
- Toronto, Ontario
- Winnipeg, Man.
- Yorkton, Sask.
- Brandon



Agents Everywhere



Agents Everywhere

the only way for a man to make good threshing and breaking rig is to break up his own land first and get all that is in it. If you do custom breaking, you are speculating for the other man's profit. I suppose there are lots of brother threshers that knew this long ago, but a good story is nothing the worse for being told twice. Well, there are lots of different kinds of engines on the market since I got mine, but I think that they will have to go some to beat the old Hart-Parr for power.

I guess they have got some of them that may be a little easier to handle but none that I have seen are any stronger. I can pull six 14-in. breakers in honey-comb and eight in plowing, and I think that is as good as any of them can do.

My experience for 100 acres are as follows:

Kerosene 400 gals. at 13c.	\$52.00
Gasoline 100 gals. at 18c.	18.00
Lub. oil 10 gals. at 70c.	7.00
Gear oil 10 gals. at 20c.	2.00
Hand oil for plows.	1.00
Engineer 6 days at \$300	
per day	18.00
Plow man 6 days at \$200	
per day	12.00
Total	\$110.00

That is my general expenses in the breaking season, as I always board at home and do my own blacksmith work.

Yours truly,
W. J. Martin.
Ratcliffe, Sask.

Engine the Only Thing.

I have to say I have purchased a Rumely Oil Pull last May (1911), and operated in breaking during the summer, and purchased a Rumely separator, 36-60.

The engine is a 30 horse power, and I pull eight plows and a packer. This machine does the work well and with ease. We have broken as high as 26 acres per day, but would average some 18 or 20 acres per day. It took two men to operate after the oil and necessary water was put on the ground. A tank of oil will run about a week, also it requires about that much water in warm weather.

My oil costs about 65c. to 70c. per acre for breaking, my engineer 40c. per hour, which, during the entire season, allowing for miving and keeping engine in repairs, etc., amounts to about 50c. per acre, a plowman at \$40 per month. Figuring everything, lay sharpening, grease, lubricating oil, board, etc., it will cost around two dollars per acre for breaking. Stubble plowing will be a little less.

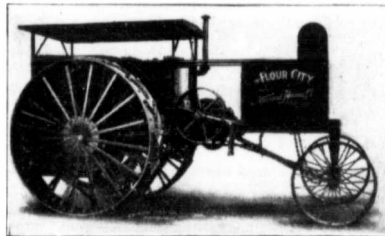
GET THIS BOOK

This little 24-page booklet, giving the actual, every day experience of a few of the many hundred owners of "FLOUR CITY" TRACTORS, will go further in demonstrating the superiority of our tractors, than all the theory and talk you could listen to in a week.

"FLOUR CITY" TRACTORS

back up every claim we make for them right in the field, as evidenced by the many letters we have received from enthusiastic users. The greater Power, Strength, Dependability and Economy of "FLOUR CITY" TRACTORS are fully brought out in these letters, which you should read before buying any other tractor.

Remember, the "FLOUR CITY" has won FOUR GOLD MEDALS IN FOUR YEARS at the World's Motor Contests at Winnipeg—more evidence of its superiority. But send for this book TO-DAY, and read for yourself the experiences of "FLOUR CITY" owners.



I have tried operating with horses and have 40 to 50 horses on my farm, but I find working with horses is a failure.

To show what an engine can accomplish on 400 acres, I broke, pulled seven plows, two discs and a packer. This represents the work of four horses to the plow, equals 28 horses; eight horses to the two discs, equals 8 horses; four horses to the packer, equals four horses; or a total of 40 horses.

It would take ten men to manage these horses and machinery.

Again, when we were doing this work, the machine was putting in 14 to 16 hours per day, which is four or six more than houses could stand per day.

Trusting this information may be of value to you, I am

Yours truly,
M. J. Conner.
Warner, Alta.



KINNARD-HAINES CO.
MINNEAPOLIS, MINN.

828 44th Ave., North

Poisoned by Too Many Flowers.

Flowers are delightful things, yet you may easily have them too thick and fast. In the south of France they grow acres of the sweetest and most glorious blooms. These blooms are bought up by the distillers, and it is a strange fact that when the fragrant things are gathered into mounds they occasion serious complaints in those who have to handle them; the scent produces an exasperating form of, hay-fever, the pollen of the flowers acting as a poison to the nervous system, and hardly a season passes without some orange-blossom picker succumbing to syncope. Flowers are delightful when sprinkled with a wise economy, their loveliness having plenty of background, their scent delicately haunting the air; but gather them into heaps, and they poison — you die in aromatic pain.

And so with the rich and splendid things of our civilization—they are precious and delightful if not overcrowded; they must have intervals, margins, interspaces — backgrounds of high thinking, noble work, social sympathy, humble duty, divine worship, loving sacrifice; the moral, humane, the spiritual must have full recognition, or the flowers of civilization will destroy us.

Dr. W. L. Watkinson.

In a world without vice nothing would be known as a virtue; without poverty and suffering there could be no benevolence nor sympathy; wisdom is known by contrasting it with folly; by shadow only we perceive that all visible objects are not flat. Yet philanthropos would abolish evil!

21

THRESHER COMPANIES

21

all doing a large business in Canada can and will supply you with

RUTH FEEDERS

These concerns have years of reputation and millions of dollars at stake and consequently could not afford to put their stamp of approval on anything but THE BEST



They all know that the Ruth Warranty is genuine

- Sawyer-Massey Co.
- International Harvester Co.
- Waterloo Manufacturing Co.
- Fairbanks-Morse Co.

American-Abell E. & T. Co.

Haug Bros. & Nellerhoe Co.

Gaar, Scott & Co.

Burrage Cooper Co.

Buffalo Pitts Co.

Canadian Port Huron Co.

That Is Why They Can And Will Supply You With RUTH FEEDERS

WARRANTY

The Ruth Feeder is warranted to feed any make or size of Separator to its full capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stackburned, wet or dry without slugging the separator cylinder or loosening a spike, and to do a faster, cleaner and better job of feeding and to wear longer and to cost less for repairs than any feeder manufactured by any other Company in the World. THE MAYTAG CO.

They all know that the Ruth Warranty is genuine

John Goodison Thresher Co.

Aultman & Taylor Machinery Co.

Minneapolis Threshing Machine Co.

W. S. Cooper Co.

Geo. White, Sons & Co.

Nichols & Shepard Co.

Reeves & Co.

J. I. Case Threshing Mach. Co.

The Rumely Co.

Robt. Bell E. & T. Co.

C. Smith & Sons

That Is Why They Can And Will Supply You With RUTH FEEDERS

WARRANTY

The Ruth Feeder is warranted to feed any make or size of Separator to its full capacity, with any kind of grain in any condition whatsoever, bound, loose, straight, tangled, stackburned, wet or dry without slugging the separator cylinder or loosening a spike, and to do a faster, cleaner and better job of feeding and to wear longer and to cost less for repairs than any feeder manufactured by any other Company in the world. THE MAYTAG CO.

THE RUTH Solves the Labor Problem

You, as a Thresherman, know better than we can tell you that every minute your Separator is idle means dollars out of pocket to you. THE RUTH not only keeps going itself but it keeps the Separator going as well. That is why the thresher companies do not hesitate to use it. They know that it will help the Separator

You, as a Farmer, know that a gang of idle men won't put your grain in the elevator. That is why you should insist on having a

RUTH FEEDER

to handle your grain

RUTH SERVICE is a satisfactory service. It is a money-making service. It is a profit-sharing service between both farmer and thresherman

Wheat, Oats, Barley, Flax—they are all the same to the RUTH

Read the Warranty. It tells the Whole Story.

WHILE OUR HEAD LINE IS THE

RUTH FEEDER

We sell practically all else that a thresherman wants. If you need any of the following drop us a line and you will have an immediate reply with prices and complete information

- Acetylene Gas Headlight. Headlight Attachment to change oil burning headlight into a gas light. Gas Tail Light for rear of engine. Oil Pumps. Spark Arresters. Tooth Straighteners. Belt Guides. Cylinder Wrenches. Canvas or Rubber Drive Belts. Leather Belting. Carbide. Tank Pumps. Suction and Discharge Hose.
- We handle NO SECOND GRADES. Everything the best, and prices are right.

The MAYTAG CO., Ltd., WINNIPEG

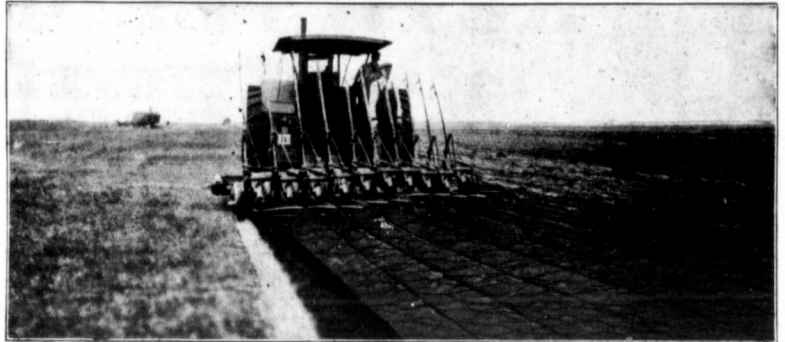
Tractors of Sound Value

WHEN the day comes that you realize fully the amount of work and time you can save and the money you can make by using a tractor for plowing, disking, harrowing, seeding, harvesting, threshing, hauling, road grading, shredding, well-drilling, pumping and for the many other uses you can turn it to, that day you will begin to make arrangements to buy one.

Then you will learn why I H C kerosene-gasoline tractors are so successful—why they do such good work and so much of it—why they last so long—why their owners make money.

I H C KEROSENE-GASOLINE TRACTORS

are built to give service. The men who designed them knew what a tractor had to do to make good. They knew the conditions under which it had to work. They built I H C tractors to meet those conditions and to do that work. No tractor is perfect, but I H C tractors are built so well that each and every one more than pays for itself if properly used.



The reason behind the success of I H C tractors are many. They can only be suggested here, but they can all be summed up in one sentence. I H C tractors are machines of sound value, built to give the best and longest service to their owners and users.

If you wish you can begin to-day to learn the interesting facts about I H C tractors. The I H C local agent can tell you much that you will want to know. You can get catalogues and other literature from him or by writing

WESTERN CANADIAN BRANCHES INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

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

New Hart-Parr Financing.

The Hart-Parr Company, Charles City, Iowa, has completed a reorganization and has re-incorporated as Hart-Parr Company. The capital stock of Hart-Parr Company is \$2,500,000 divided into \$1,000,000 of common stock, all of which has been taken and paid for in cash pro rate, by the old shareholders. There is \$1,500,000 of 7 per cent. preferred stock, sale for which has been arranged through Eastman, Dillon & Co., of New York, and King, Farnum & Co., of Chicago.

This move on the part of the Hart-Parr Co. is simply for the continuation of that progress which the company has made during the past eleven years. The new capital will be used for expanding the business along substantially the same lines as heretofore followed. In taking this step Hart-Parr Co. have not tied or compromised themselves in any manner, and in arranging their finances the way has been carefully mapped and guarded for future financial, as well as other features of enlargement. The management is retained in exactly the same hands as heretofore, and the same officers continue.

With the acquiring of all real estate necessary for a fifty-fold expansion, with the completion of a railway trackage system

adequate for many years' enlargement, with the perfect working and the complete success of their own open-hearth steel plant, with the recent opening of their magnificent gray-iron foundry, and with splendid organization and system throughout, they now feel that the foundation and skeleton of a great business has been completed. It remains now merely to fill in and expand to form a well rounded and gigantic enterprise. Their individual methods have made them appear provincial in some matters, but the knowledge of how to do things right rests with them, instead of in the hands of a lot of promoters, financiers and hired help.

The Hart-Parr Co. is not hampered in any way by combinations, mergers and new ventures. Their business is on a solid foundation. They will pursue the same progressive, hustling, sure policies of the past. For the present, they will hold to the simple line of producing nothing but general purpose farm tractors, instead of going into a combination with other implement concerns.

Winnipeg Welcomes a New Manufacturing Concern.

It is with pleasure that we welcome to our midst the Gregg Manufacturing Company, Ltd., who have established a factory

for the manufacture of sleighs, harrows, grain tanks, etc., also a line of wagon hardware, as well as a line of specialties for the hardware and implement trade.

While they will build a regular Canadian sleigh, they expect to specialize in the G.M.K. sleigh, which they claim is the best sleigh on the market.

The G.M.K. sleigh has been made by these people at Minneapolis for the last twenty years, under the name of the McLaren sleigh. These sleighs will be manufactured in all sizes from the regular farm size to the heavy logging sleigh.

Mr. H. S. Gregg, the president of the company, is also manager of the Park Manufacturing Company, who have been building the same line of goods for many years. Mr. A. L. Weltan will be manager of the company here.

A \$5,000 Prize for the World's Best Sample of Wheat.

At Minneapolis, Minnesota, from November 12th to the 23rd, 1912, there will be held in connection with the North Western Products Exposition a \$5,000.00 Prize Contest for the best sample of wheat from the American Northwest.

It is needless to say that this contest is exceptionally interesting, and doubly so from the fact that the prize is a Big 4 "30"

ARE YOU AFRAID OF COMPETITION?

"Competition has no terrors for the man who can do his stunt better than anyone else."

Your stunt is threshing. And you can move about faster and accomplish a lot more work if you own one or more "Barth" Jacks.

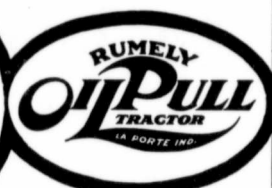


Ask your dealer for the JACK. Ask us for the CATALOGUE.

BARTH MFG. CO.

150 L STREET
MILWAUKEE WISCONSIN

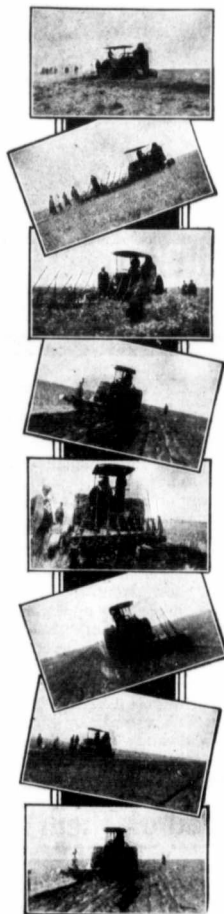
RUMELY GOLD MEDAL AND SWEEPSTAKES TRACTOR



GOLD MEDAL

SILVER MEDAL

THE PRIZE WINNING **RUMELY OIL PULL TRACTOR**



WHAT the Official Scores Show—*Oil Pull* Tractors will go Farther, Last Longer and Do Cheaper and Better Work Than Other Kind



Tractor plowed the acre—plowed at lowest fuel-cost by any engine in the Motor Contest, plowing at fuel-cost of 33.7 cents.

Oil Pull Tractors finished every test in perfect condition—they showed their ability to duplicate, every day, the work they did in the motor contest and to keep up this work indefinitely.

Oil Pull Tractors burned kerosene before they went into each test—burned kerosene all the time (not 94% of it) while in each test, and turned kerosene after they had finished each test.

Oil Pull Tractors are the only ones that successfully burn kerosene or distillate at all loads—all altitudes—under all conditions.

WHY OIL PULL TRACTOR WON SWEEPSTAKES PRIZE

Oil Pull Tractor Scored Highest in:—

- ECONOMY BRAKE TEST
- MAXIMUM BRAKE TEST
- PLOWING TEST
- TOTAL POINTS
- FUEL ECONOMY
- And Many Other Features

How Oil Pull Tractor Compared With Others

	RUMELY OIL PULL TRACTORS	NEAREST COMPETITOR IN CLASS	NEAREST COMPETITOR IN ANY CLASS
Economy Brake Test	175.8	172.1	175.3
Maximum Brake Test	58.5	47.5	58.
Plowing Contest	203.45	174.6	199.15
Total Points	449.75	415.45	447.7
Fuel Cost per Acre Actual Winnipeg Prices	33.7 cents	39.5 cents	39.5 cents

Oil Pull Tractor Was Also Given Highest Score For—Quality of Plowing; Possible Distance Travelled Without Replenishing Fuel.

Oil Pull Tractor Was Given Perfect Score For—Brake H.P. Hours Per Unit Of Fuel; Draw Bar H.P. Hours Per Unit Of Fuel.

Oil Pull Tractor Finished Every Test In Perfect Condition.

Rumely Engine Gang Plows scored highest for quality of plowing in the engine plowing contest. They were awarded two medals in the plow test. More convincing proof of their superiority is furnished only by putting them to the test of real farm plowing.

Ask the man who owns a Rumely Engine Gang Plow in your locality.

CATALOGS:

OUR 1912 Catalogs are [chuck-full of valuable information and they are free for the asking. A pencil note on a penny postal brings any of them

Rumely Products Co. Inc.
General Offices: LaPORTE, INDIANA

BRANCHES:

- Calgary, Alberta
- Brandon, Manitoba
- Edmonton, Alberta
- Winnipeg, Manitoba
- Regina, Saskatchewan
- Yorkton, Saskatchewan
- Saskatoon, Saskatchewan
- Toronto, Ontario



"FOR EVERY FARMER"

An Individual Threshing Machine

The time to buy an Individual Threshing Machine is now. A Moody Machine can be shipped at once from Winnipeg, Saskatoon, Swift Current, Calgary and Edmonton. We fill late orders in a hurry. Buy now.

The Matthew Moody & Sons Co.,

Nanton Building - - Winnipeg, Manitoba

farm tractor, together with a set of Emerson Brantingham Engine Gangs, the whole outfit to be delivered free of cost to the winner.

The fact that such a prize was selected is the best evidence we know of factor power in the rearing of wheat.

Below will be found the rules in full.

This contest for a \$5,000 prize will be held in Minneapolis, Minn., in connection with the Northwestern Products Exposition, November 12-23, 1912.

Any farmer, farm owner, corporation organized for conducting general farming or ranching within the AMERICAN Northwest may become a competitor.

The AMERICAN NORTHWEST consists of Minnesota, South Dakota, North Dakota, Montana, Idaho, Washington and Oregon.

Samples of wheat must consist of five bushels of threshed grain and from five to ten sheaves from the same field averaging from six to ten inches in diameter.

Wheat must be placed in good tight sacks, plainly labelled with name and address of the exhibitor. Bundles should be carefully wrapped and boxed with name and address of exhibitor outside and inside.

All samples must be sent prepaid by express or freight to Will A. Campbell, manager Northwestern Products Exposition, Minneapolis, Minn.

(Note: By taking the matter up with your railroad agent or the secretary of a commercial club near your farm or ranch, it is possible that arrangements can be made to have the wheat samples brought to Minneapolis from any point in the Northwest FREE OF COST.)

No entry fee of any kind will be charged. All samples of wheat, threshed or in the sheaf, become the property of the Northwest Development League when entered.

Entrymen will not be provided with free tickets to the Northwestern Products Exposition.

Notice must be given at as early a date as possible of intention to enter this competition. The sooner this notice is given the better, and you will at once be assigned to a bin in the exposition building where your wheat will be placed and sealed on its arrival in Minneapolis. If this notice can be given between September 1 and October 15, so much the better.

Each entryman may submit two samples if desired, but no more.

All wheat must be in Minneapolis by November 1, and entry blank mailed to the office of the secretary, accompanied by the proper affidavits as to yield and size of field from which samples are taken.

Judging will begin about November 4.

Wheat will be judged in three ways:

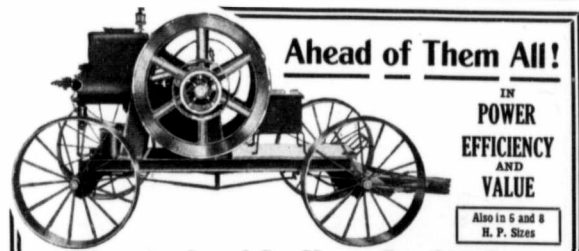
- (1) According to the accepted seed score.....100 points
- (2) By the milling and baking test.....100 points
- (3) Yield per acre.....100 points

Thus the grower who furnishes a five bushel sample from not less than a fifty acre field, yielding higher than any other field from which a sample is exhibited, will be given 100 points on yield. This wheat will then be scored by the card and suppose it is given 86 points by the judges, it will then be milled, and bread made from the flour on which it is possible to secure 100 points if perfect, but suppose it is given 90 points—the wheat scores then on the three tests 92 points.

Each exhibitor will be required to furnish an affidavit from the

county surveyor as to the size of his field and from the thresher and some reliable person (county official or banker) as to the yield machine measure.

Wheat will be passed by the best judges in the United States. The best samples selected by these judges by appearance, test weight per bushel, etc., will then be subjected to a practical milling, baking and analytical test to determine their value as milling wheats for bread making. This test will be made by the Howard Wheat and Flour Testing La-



Ahead of Them All!

IN
**POWER
EFFICIENCY
AND
VALUE**

Also in 5 and 8 H. P. Sizes

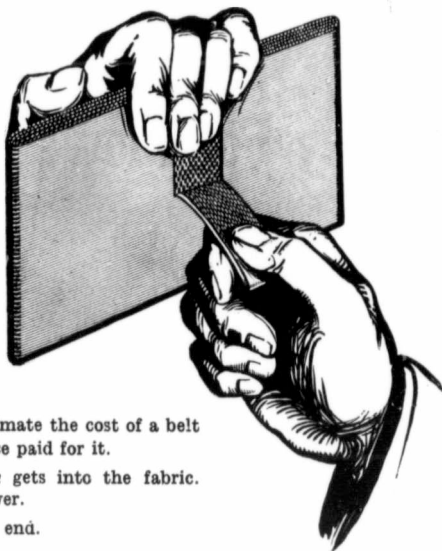
The Gilson 60 Speed Six-Horse Gasoline Engine

SETS AN ENTIRELY NEW STANDARD IN FARM POWER MACHINERY IN ITS SIMPLICITY, POWER, EFFICIENCY AND PRICE.

This wonderful engine, mounted on truck as illustrated, is of same dimensions as other well known 8 horse power makes. It develops 9 horse power and the price is less or no more than other makes of 4 and 5 horse mounted on skids only. A new Automatic Governor saves one third the fuel necessary in other makes. Positively the best and cheapest engine made. Write for complete illustrated particulars.

Renfrew Machinery Co. Ltd., General Agents, Winnipeg, Man.

- GET -
Wear and Service —
Lower the Cost!!



THE cost of a belt is not just what you pay for it. If a belt slips off the pulleys it ties up your whole working force. A big loss of time.

If It Stretches It Wastes Power

You should add these losses to the cost of your belts. When you estimate the cost of a belt compare the service it gives and the length of time it wears with the price paid for it.

Some belts split and spread apart and then rot because moisture gets into the fabric. Some belts wear out quickly because they have not enough pulling power.

A belt that gives satisfactory service and that wears is cheapest in the end.

Goodyear Thresher Belting

Black Diamond
Will Not Slip

Red Cross
Will Not Split

The cover of Goodyear Thresher Belting is thick and tough—the first indication of strength and wear. It has a hard surface yet it is quite pliable. It bends without breaking. The seam is invisible, it is practically a one-piece cover. Moisture cannot get into the belt. Note how the edges are covered.

The cover is finished with a rough surface to make it grip the pulleys.

Try to remove the cover. Almost impossible, is it not? That is because the cover is vulcanized on.

Now look beneath the cover.

Try to separate the layers of duck. That black substance that holds them so tightly together is called "friction". The friction adds to the strength of the duck—makes it wear longer—prevents the duck splitting—protects it from moisture—prevents rotting.

All the duck used in Goodyear Belting is tested for weight and pulling power. The friction-compound is tested for its power to hold together.

The duck and friction are put together under heavy hydraulic pressure. Vulcanizing the cover on makes the cover and friction practically one. And every belt is thoroughly cured and stretched.

Having proven the strength, we subject all materials to careful laboratory tests to satisfy ourselves that the quality is up to the Goodyear standard. And each belt is tested at different stages of the making. And the records of the tests made on every belt are kept on file at the Factory.

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

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



Goodyear Tire & Rubber Co.

OF CANADA, LIMITED

HEAD OFFICE, TORONTO. FACTORY, BOWMANVILLE, ONT.
 BRANCHES IN WESTERN CANADA.

Winnipeg, Man.—41 Princess Street.
 Calgary, Alta.—1012 Second Street East.

Regina, Sask.—2317-2319 South Railway Street.
 Vancouver, B.C.—1213 Granville Street.
 Victoria, B.C.—855 Fort Street.

Not one Thresher Belt returned in 1911

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

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

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

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

Not one Thresher Belt was returned to us in 1911.

Why Spend So Much Money For Plows?

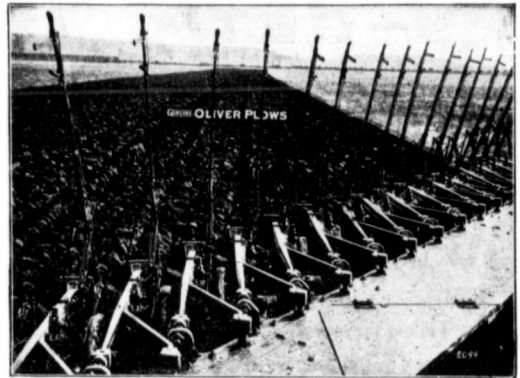
YOUR experience has proved to you that there is no money in buying cheap goods. Would you buy cattle or horses, or seed for your planting just because it was cheap? No.—you would get the best your money would buy, because in that policy lies the greatest profit.

An Oliver plow costs little more than an ordinary plow and will outlast two or more of them; besides that it will do better work as long as it lasts; furthermore an Oliver plow is easier on horses than any other plow made.

Look up the records of plowing done in any given time, an hour, a day, and you will find Oliver plows ahead. Why? Because they run easier and the horses can draw them through so much more ground.

For just one instance of Oliver plows superiority, study the centre hitch feature of Oliver gang plows. Find out what that means in saving labor for your horses.

There is profit in the purchase of an Oliver plow. It lasts so long that it is the most economical plow to buy. It does good plowing as long as it lasts, insuring a well turned seed bed. It does more work than others because it is easier on horses. For the same reason it adds years to the useful life of the horses.



The I H C local agent will show you the details of Oliver plows that make them profitable to use. He will give you catalogues and full information, or you can get same by writing the nearest branch house.

Western Canadian Branches

International Harvester Company of America

(Incorporated)

At Brandon, Manitoba; Calgary, Alberta; Edmonton, Alberta; Lethbridge, Alberta; North Battleford, Saskatchewan; Regina, Saskatchewan; Saskatoon, Saskatchewan; Weyburn, Saskatchewan; Winnipeg, Manitoba; Yorkton, Saskatchewan

laboratory of Minneapolis, an institution well known to the milling trade for the past twenty-six years. The best wheats will be scored by the results obtained from the following tests: The wheat which scores the highest in these practical tests will thus increase its average score, as follows:—

	Name of Test.	Score.
On the Grain	Moisture.....	5 points.
	Cleaning loss (weed seeds, dirt, etc.).....	5 points.
	Flour yield.....	15 points.
	Soundness (acidity, odor and flavor).....	15 points.
On the Flour	Color and appearance.....	10 points.
	Volume of loaf.....	28 points.
	Absorption and bread yielding ability (weight of finished loaf).....	12 points.
	Amount and quality of gluten.....	10 points.
Total.....	100 points.	

The following is the wheat score card recognized by judges as giving a good idea of what is required of wheat as far as outward appearance is concerned. It is used by the University of Minnesota Agricultural School farm and many other institutions of similar high character:—

Salient Points.	Intrinsic Points.	Standard Score
YIELD..... 30 points	Weight, per bushel..... 25 points.	
VARIETY CHARACTERS..... 15 points.	Uniformity..... 5 points.	
	Color..... 3 points.	
	Purity..... 10 points.	
	Kernel shape..... 2 points.	
VITALITY..... 30 points.	Luster..... 5 points.	
	Plumpness..... 15 points.	
	Germ..... 3 points.	
	Odor..... 7 points.	
MARKET CONDITION..... 25 Points	Weed seed..... 10 points.	
	Dirt and dust..... 3 points.	
	Injured kernels..... 2 points.	
	Smut, etc..... 5 points.	
	Conditions of bran..... 5 points.	
Total..... 100 points.	Total..... 100 points.	

EXPLANATION OF POINTS IN THE SCORE CARD

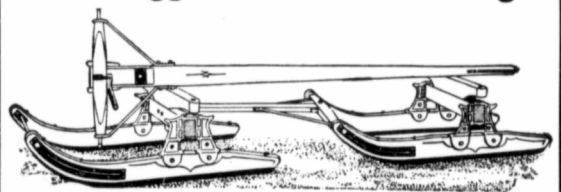
- YIELD, 30 POINTS.**
- (1) WEIGHT PER BUSHEL (Standard 60 pounds)—Determine with chondrometer. Heavy weight seed is recognized as best.
 - (2) UNIFORMITY—The sample should be even in size, shape and color.
- VARIETY CHARACTERS, 15 POINTS.**
- (1) COLOR—Should be uniform, rich and true to breed represented.
 - (2) PURITY—All kernels should be true types of the breed represented. Admixtures of other varieties of grain are objectionable.
 - (3) KERNEL SHAPE—(varies with the variety) should be distinct and true to breed represented.

- VITALITY, 30 POINTS.**
- (1) LUSTER—The grain should be clean and bright. A dull, dead color is objectionable.
 - (2) PLUMPNESS—All kernels should be well filled, well rounded and have no sharp angles. The crease should be well closed.
 - (3) GERM—Should be large and well filled. When cut open it should look bright and clean.
 - (4) ODOR—The sample should be sweet and free from all foul smell, as mould, mustiness, bin-burned, etc.

- MARKET CONDITIONS, 25 POINTS.**
- (1) WEED SEED—The sample should be free from weed seed, especially wild oats, darnel, quack grass, cheat and mustard.
 - (2) DIRT AND DUST—No dirt, sticks, chaff, etc., or dust should be present.
 - (3) INJURED KERNELS—All broken, blighted and scabby kernels are objectionable.
 - (4) SMUT—The presence of smut is objectionable.
 - (5) CONDITION OF BRAN—The bran or seed coat should be smooth, bright and free from dirt and weathering.

- RULES FOR JUDGING.**
- (1) WEIGHT PER BUSHEL (Standard 60 pounds)—Cut one point for each pound less than the standard.
 - (2) WEED SEED—Count out one hundred seeds just as they run. Cut the score in proportion to the weed seeds found.
 - (3) UNIFORMITY—Color, purity, kernel, shape, luster, plumpness, germ, odor, dirt, dust, smut and condition of bran are all a matter of judgment. Consider carefully the desirable features in these regards; then cut the score to each case accordingly.

The Gregg Malleable Knee Sleigh

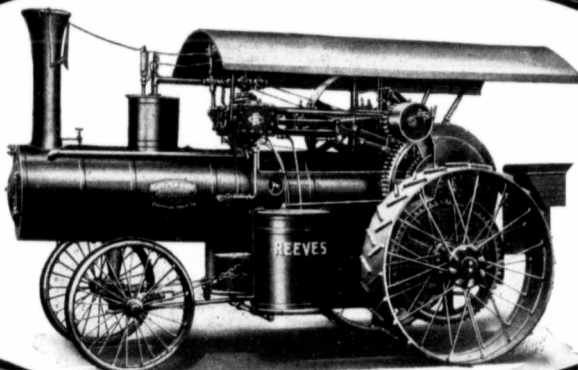


Made from best of hardwood, they are guaranteed not to break out, they are the strongest, best oscillating, easy running sleigh made. Look at the cut, note the flange of the knee extending down over the side of the runner. No holes bored in runner. The flange on our knee strengthens the runner. Write for descriptive matter to:

Gregg Manufacturing Co., Ltd., Winnipeg, Man.

REEVES

CANADIAN
BRANCH:



REGINA,
SASK.

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

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

Reeves & Co., Columbus, Ind.

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

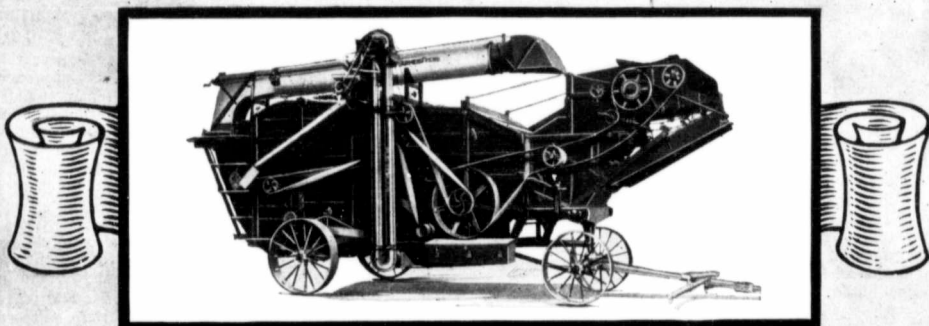
Dear Sirs:—Have you on hand lower pan for 40x60 separator No. 1052 bought in 1900? If you have, let me know and send price. This is the first repairs I have had to buy in eleven falls. I run this separator six falls in Illinois and five falls in Dakota, and it is still in first-class shape excepting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

Respectfully,

Myron McKeague, Fullerton, North Dakota.

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

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



Our catalogs are free — ask for them

EMERSON-BRANTINGHAM COMPANY

REEVES DIVISION, COLUMBUS, IND.

REEVES

Conducted by
Professor
P. S. Ross

Practical Talks to Threshermen

Talk No.
LXI.

In our last lesson we described the Ruth feeder and the original Parsons feeder. Two or three years after the first Parsons feeder was placed on the market, patents were taken out on a machine which is used more widely than the original. Instead of using a variable speed friction device actuated by a Pickering governor, a new style of governor was invented which will be described presently. In the new machine, a rotary band cutter was adopted and a set of feeding forks was placed just in front of the threshing cylinder. These forks were made adjustable in order that they might be placed close to the cylinder or further away as desired. These are illustrated in figure 122 and an inspection of the drawing will show that they are actuated by means of a multiple shaft driven from the threshing cylinder. On

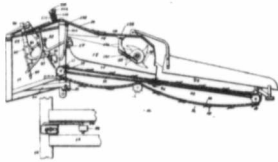


Fig. 122

the right hand end of this crank shaft (see Fig. 123) there is mounted a sprocket wheel, 69, which drives sprockets 99 and 62. By referring to Fig. 124, we find wheel 71 mounted on a stub shaft on the side of the machine. The main feeder belt from the threshing cylinder passes around this wheel and sets the feeder in operation through sprocket wheel 69, which is mounted on the shaft which actuates the feeder forks.

The train of mechanism by which the feeder is operated is as follows:

The feeder belt from the threshing cylinder drives pulley 71, which is mounted loosely on stub shaft 72. When this pulley comes up to the proper speed, the governor weights overcome the tension of springs 85 in this wheel and clamp the wheel to a sprocket wheel mounted on the

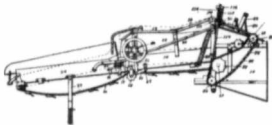


Fig. 123

same shaft, the details of which are shown in Fig. 125. Motion is transmitted from this sprocket wheel to shaft 69, which drives the feeder forks. On the opposite side of the machine (see Fig. 123) the sprocket chain 98 passes around sprocket wheel 69, 99 and

62. Wheel 99 drives the bundle carrier and is mounted loosely on its shaft. It also is equipped with a governing device which operates only when the speed has reached a certain predetermined amount. The details of this device are shown in Fig. 126 and will be presently described.

The main governing device is disc is attached to wheel 71. The illustrated in Fig. 125. It consists of three discs. The inner disc is secured by means of a set screw to sleeve 73. The outside disc nearest the frame of the machine is held loosely in place.

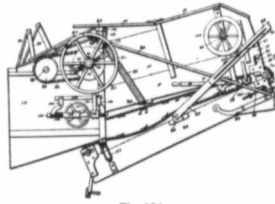


Fig. 124

When the speed of wheel 71 reaches a certain velocity, the weights fly outward against the tension of the spring and clamp the three discs together. The frictional contact is sufficient to hold the discs together as one wheel and thus wheel 71 is made to drive the sleeve 73, and with it the sprocket wheel 93, which starts the feeder forks in operation. This governor acts on the same principle as the well known multiple disc clutch used in automobiles.

The governor which drives the retarders is shown in detail in Fig. 126. Sprocket wheel 99 runs loosely on shaft 11 and is equipped with an inner rim 100. Hub 101 is keyed to shaft 11. Extension springs 105 force the

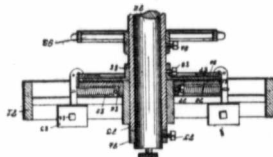


Fig. 125

brake shoes 104 against the rim and cause the sprocket wheel and hub to revolve as one piece and thus drive the bundle carrier. On the same shaft between it and the frame of the machine there is mounted another wheel, 106, which carries two sets of pins, 108, which straddle the links 103. This wheel is mounted loosely on the shaft and is circled by a metal band, one end of which is fastened to a bracket on the side of the machine and the other end to a rod which passes up to the top of the feeder. By referring now to figure 122 it

will be observed that there are retarder fingers, 110, to prevent too large a mass of straw from passing into the machine. These retarder fingers are attached to the rod which actuates the metal band just described. When so operated, this band acts as a

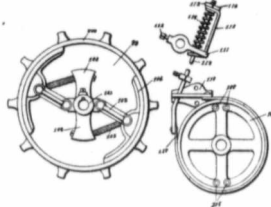


Fig. 126

brake, and in so doing stops wheel 106, and by so doing withdraws the brake shoes from the rim of sprocket wheel 99 and thus stops the bundle carrier. In this style of feeder, therefore, we have the main governor attached to the feeder forks and the auxiliary governor or volume governor attached to the bundle carrier. The band cutters are driven from the same belt which drives the feeder forks.

Another inventor who has contributed largely to the development of the self feeder is Mr. J. B. Bartholomew, who first filed application for patent in 1898. The feeder which he has developed contains a number of

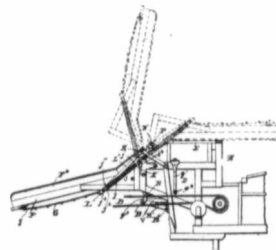


Fig. 127

meritorious features, among which may be mentioned the method of attaching to the machine, the folding feature and the governor. In most feeders the bundle carrier table folds under, but in Bartholomew's machine it folds over, as shown in Fig. 127, and rests, when not in use, on the top of the machine. The band cutters, as shown in Fig. 128, are operated by means of a multiple crank, and are of the reciprocating type. The rear knives travel in the path of a flat ellipse, while the forward sections describe almost true circles. This is due to the method of supporting the rear ends of the knife bars by means of a cank. The governor is of the centrifugal type and is very

simple. It has been copied quite largely by a number of other builders and inventors. It is mounted loosely on the band cut-

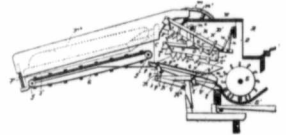


Fig. 128

ter shaft and is driven by the feeder knives in operation. The and adjacent thereto is the wheel W, Fig. 127, which is attached to the shaft. When the governor pulley reaches the required speed the weights, W4, fly outward and in doing so force the brake shoes against the rim of this wheel and thus start the feeder knives in operation. The same operation starts the bundle carrier. Consequently in this machine both the band cutter knives and the raddle stop at the same time.

We have described most of the leading devices used on self feeders and in our next lesson will endeavor to give a brief account of the development of the wind stacker.

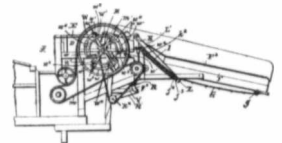


Fig. 129

A Scotch Philanthropist.

An earnest slum missionary in Glasgow says that not long ago she was approached by an old gentleman (a native) who has the reputation of being something of a philanthropist, with the request that he be permitted to accompany her on one of her rounds of visits. Much pleased the worker consented. The destitute condition in which many families were found elicited expressions of deep sympathy from the old gentleman, but to his companion's surprise and regret nothing more material. Presently they came upon a small girl weeping bitterly.

"What is it, my dear?" the old gentleman inquired.

The child raised a tear-stained face and pointed in a dark alleyway. "Ma mither sent me to buy some bread, an' I've lost the babees in there an' I'll git licked awful!" she sobbed.

"Poor dear!" he remarked, in a tender voice, at the same time putting his hand into his vest pocket. "Dinna greet. Here is a match; mebbe you will be able to find it!"

Important!

To All Persons Buying and Using Wind Stackers



This Trade-Mark is for your protection as well as ours. See that it is on the Wind Stacker you buy, and then no one can cause you trouble.

The Indiana Manufacturing Company

Indianapolis, Indiana, U.S.A.

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The Thresherman's Question Drawer

Answers to Correspondents

Q. C. B. I wish to attach a feed water heater to the exhaust of my 30-horse power under-mounted double cylinder engine. The exhaust is now piped to the smoke box due to separate pipes, and a separate nozzle is used for each cylinder. Will it affect the working of the engine adversely if I pipe the exhaust from both cylinder into an exhaust feed water heater and from there to the smoke box and use only one exhaust nozzle?

A. The plan which you suggest seems to us practical. There are quite a good many stationary engines equipped in a similar manner. It will require some experimenting to determine the proper size of exhaust pipe to run from the heater to the smoke box. The heating of the water will condense a certain amount of the steam and reduce the pressure of all of it a certain amount. The common pipe leading from the heater will not, therefore, have to be as large as the two pipes in the heater although it would do no harm if it were. It would be best to make your exhaust nozzle with several bushings that you may adjust the opening as you find necessary.

Q. B.F. Will you please publish a remedy for cleaning sediment or rust out of a water pipe? My supply main, which is about one third of a mile long, is four inches in diameter at the upper end and is reduced to one inch at the lower. The fall is approximately thirty feet. It is slowly closing up with rust which collects on the inside of the pipe.

A. The only sure remedy we can suggest for the trouble you are having is to take the pipe apart and clean it. In my opinion the pipe is filling with mud and scale instead of rust. You might, if the expense is not too great, close the valve at the lower end and fill the pipe with kerosene and let it stand for twenty-four hours and then turn on the water. The kerosene might soften the mud and scale sufficiently to allow it to be washed out.

Q. C.B. (1) How many horse power will a 10-12 cylinder engine develop at 170 r.p.m. steam pressure one hundred five pounds?

(2) How do you figure the area of a circle? Can you illustrate it with an example?

A. (1) In estimating the horse power of a steam engine we usually assume that the average effective pressure on the piston is equal to half of the gauge pres-

sure. In this case we will assume the mean pressure at fifty-three pounds, which we will use in the well known formula for indicated horse power which is as follows:

$$2 \times P \times L \times A \times N$$

33,000

In this formula aP represents the average pressure on the piston in pounds, L is the length of the stroke in feet, A is the area of the piston in square inches and N is the number of revolutions per minute. Inserting the figures in place of the symbols we have

$$2 \times 53 \times 1 \times 78.54 \times 170$$

42.8

33,000

(2) The area of a circle may be found by squaring the diameter, that is, multiply the diameter by itself and product by .7854. For example, in the case of the ten inch cylinder above, we obtain the area thus:

$$10 \times 10 \times .7854 = 78.54 \text{ square inches.}$$

The circumference of a circle is found by multiplying the diameter by 3.1416.

Q. A.Y. (1) Do you think that my boiler will fire better by putting a deep plate about eight inches wide at the front end of the fire box next to the tube sheet? I burn pine wood.

(2) How would a compound engine work if the piston were taken out of the high pressure cylinder?

(3) Could I get more draft by taking lid off spark pipe and letting the sparks drop into a bucket of water? My engine is a Case.

(4) I notice that same recommend giving a boiler twice the pressure that you want to carry, in testing. Would not this be liable to strain it?

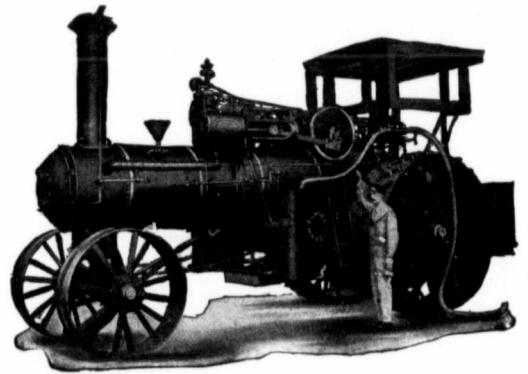
(5) Which is the easiest to handle on the road a simple or a tandem compound engine?

(6) Will not rubber hose be preserved better by submerging in water when not in use than in storing in a dry place?

A. (1) It is customary, we believe, to place the dead sheet next to the fire door in direct flue boilers. It is doubtful if a dead plate do any good in a wood burner boiler. In our opinion it would not, although we are frank to say that we have never tried it with anything but coal.

(2) Your engine would run but it would not have nearly as much power and a great deal less economy. It would not be a sensible thing to do.

(3) None of the draft goes through the cinder pipe on the



Plowing & Threshing Power for Immediate Delivery.

Canadians have succeeded in turning out the POWER WONDER OF THE WEST, a stronger, better built, and more economical engine than has been heretofore manufactured. A great, massive, powerful steam tractor, designed and built at our Canadian Factory for pull—both in the belt and at the draw bar.

There is no scrimping in any of the generous dimensions of this 35 h.p. MAGNIFICENT PRAIRIE MARVEL. Wing sheet construction rear mounting, easily controlled, and easily fired.

This style of engine also put out in 22, 25, 27, 30, and 32 h.p. sizes.

Sawyer-Massey Co., Ltd.

Canadian Factories: Hamilton, Ont.

Western Branches: Regina, Sask., Winnipeg, Man.



More Power From Same Engine

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

PICKERING
"THE GOVERNOR WITHOUT JOINTS"

We fit every build of engine and give our guarantee.

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

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Be Sure to Renew Your Subscription Before it is Too Late



Good Goods Win

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



Lion Rubber Endless Thresher Belts

—and—

Maple Leaf Endless Thresher Belts

Go Hand in Hand as Pre-eminently the Best. Ask the fellow that has one

The Winnipeg Rubber Company Limited

Winnipeg

NOT IN ANY TRUST OR COMBINE

Calgary

side of the smoke stack and consequently its presence or non-presence would have no effect whatever on the draft.

(4) In recommending fifty per cent higher cold water test than the steam pressure that is to be carried we are merely following the recommendations of the best engineers of this country. It is a rule they have devised for the testing of the boilers. The cold water test at best is a make shift and does not give any indication of what the strength of the boiler really is. All you know when you get through is that it either did or did not give away. You may argue from that fact that it is safe, for a pressure which is much lower. We would not advise extending the pressure more than fifty per cent above the steam pressure that is intended to carry

(5) We do not know that there is any particular difference in the ease of handling one type of engine over the other. Some people find it easier to handle a double engine than a single, but that is largely a matter of practice.

(6) We would not recommend storing rubber hose in water.

Q. O.G.B. (1) How can I tell whether or not the governor of my engine is giving the cylinder sufficient steam to produce the necessary horse power?

(2) What kind of lagging on the drive pulleys of the separator do you think the most serviceable?

A. (1) About the only way you can tell if you are getting the required horse power is to make a brake test of your engine. If it does not come up to its rating, you should change the adjustment of the governor to give the engine more steam.

(2) Leather lagging riveted to the rim of the wheel is more satisfactory than anything else we have seen. Some separator owners use rope lagging but it requires considerable skill to put it on so that it will stay and after it is not any better than leather.

Q. S.H. How are flues caulked? When sheet copper is used in putting in new flues is it wound around the flues? Is it cut wider than the flue sheet and if so, how much wider? What material is used for new flues? How far should the ends of the flues project beyond the flue sheet?

A. Flues are caulked by being first expanded with either a roller or a spring expander. After this a beading tool is used which turns the bead on the end of the flue. When sheet copper is used it is cut a trifle wider than the thickness of the flue sheet and in length equal to the circumfer-

ence of the flue. It is then bent into circular form and slipped over the end of the tube and expanded in the usual way. It is not good policy to use sheet copper. Better success will be obtained with copper tubing which should be cut off to the proper length for the ferrules. It is necessary, of course, that the hole in the tube sheet be made larger than the flue to permit of the ferrules being put in place. New flues are either made of steel or wrought iron. The Shelby steel tubing is used a great deal. Some engineers, however, prefer to use a charcoal iron tube which is a high grade tube of wrought iron. The ends of the tube should project beyond the flue sheet about an eighth of an inch at the end.

Q. A. S. (1) Would it be feasible on a farm where there is just the required amount of help, without hiring, to bale the straw used in firing a straw burning plowing engine so that a half day's supply could be carried without using so much space? It is understood, of course, that the straw will have to be shaken out before being fired. Would it pay if a man had his own baler and could do the baling at odd times?

(3) Is there any danger that the water leg of a Russell straw burning boiler will burn out and give away on account of the intense

heat in that part of the fire box.

(4) What is the substance that is washed out of the boiler in cleaning. It is from the boiler plate or is it scale of some kind? The water I am using is soft artesian water that is not supposed to form scale.

(5) Explain the hydrostatic tests for boilers. Is it as good as the hammer test?

(6) Do you think a good straw burning boiler as economical as a gas tractor for plowing purposes, located as we are eight miles from a coal or oil station?

(7) Is a compound engine the best for burning straw? I think that it is.

A. (1) This is a question that involves a number of local conditions that we are not familiar with and we fear that we cannot give you a very satisfactory answer. Straw is not the most satisfactory fuel to fire with, especially in plowing, since it requires the undivided attention of one man in firing and another man and team to get straw to the outfit. If you are going to use straw at all, baling is about the only way you could make a success of it. A ton of straw is only equal to one-third of a ton of coal in heating value. Consequently where you would burn one and a half tons of coal in a day you would require more than six tons of straw. The best

way to find out a thing like this is to try it, say for a day or two and see how it works out. We fear the difficulty of keeping the engine supplied with straw and the heavier work of firing would offset any saving you might make in your fuel bill.

(3) There is no danger that the water leg of a Russell engine will burn out unless it becomes covered with mud or scale. If it does so get covered it will, of course, burn out in a short time. Good care will prevent any such accident as this, however.

(4) The substance washed out of a boiler is mostly red iron rust together with whatever dirt or sediment there may be in the water. There is no artesian water so pure that it does not contain some mineral impurities which may be precipitated when the boiler is steamed up.

(5) The hydrostatic test for boilers is very simple. A force pump is attached at some convenient place and water is pumped in. Care must be taken to see that the boiler is filled clear to the top of the dome with water and than an accurate steam gage is attached to determine the pressure. During the time that the pressure is being applied, close watch must be given to every part of the boiler and to the gage to note any evidence of the breaking of a stray bolt or brace. If the gage should suddenly drop in pressure it is taken as evidence that a stay has given away somewhere. In case no such accident happens, the pressure is run up about fifty per cent higher than the steam pressure it is purposed to carry. For example, if you intend to carry one hundred pounds of steam pressure you should test with cold water to one hundred and fifty pounds. It is superior to the hammer test.

(6) The relative economy of a gas tractor and of a steam tractor depends on a number of things aside for the mere price of fuel. If the water used for boiler purposes is of good quality and you have very little trouble with the leaking of boiler tubes, and if fuel does not cost much more for steam for a gas tractor, we believe you will find steam a little more economical. It is generally conceded that the deterioration of a steam engine is less than it is for gas.

This is an item that requires the most careful consideration when making a choice between the two kinds of power. It may more than offset the gain in being able to start up quickly in the morning.

(7) We do not believe there is much difference in the steaming

qualities of simple or compound steam traction engines. The steaming qualities are not dependent upon the engine but upon the boiler. It may be true that the compound engine under favorable conditions requires less steam to do a given amount of work than a simple engine and in that case your opinion would be correct. We have heard the claim made that compound engines do use much less steam than a simple engine, but in the absence of unbiased tests, we can not decide this point.

Q. C. R. M. Why does steam from clean water produce more power than dirty water, when the steam gage is the same pressure in both boilers? Would it be practical to increase the steam power to one hundred and fifty pounds pressure by increasing the strength of boiler and engine in the same proportion as a traction engine?

A. We are not aware that a pound of steam from clear water will produce any more power than the same quantity of steam from dirty water. We do not know that it is easier to make steam from clean water and that the boiler and engine will both give more satisfaction.

The use of dirty water always leads to priming or the drawing over of water into the cylinder and this, of course, reduces the power of the engine. Aside from that, the steam from another, both, of course, being at the same pressure of the same degree of dryness.

There are many boilers built in which pressure of one hundred and fifty pounds and upwards are carried. Some of the traction engine boilers carry pressures as high as one hundred and eighty pounds. This in itself is evidence that where the boilers are properly constructed you can carry any pressure you care to.

We do not advise carrying such high pressure in the ordinary traction engine boilers. In all cases the pressure should not be higher than that recommended by the builders.

Q. E. H. E. (1) I have an Advance 22 horse power engine which has a stay bolt leaking in the fire box. Shall I take it out and put in a new one?

(2) Do you think this engine can pull eight-fourteen-inch plows? The soil is not very heavy and the ground is level. I use one hundred and twenty-five pounds steam pressure and the drive wheels are wide.

A. (1) We suggest instead of trying to take out the old stay

'DREADNOUGHT' SEWN-CANVAS THRESHER BELT



Manufactured in England from the Highest Grade Cotton Duck to specifications called for by the Western Canadian market. Perfect satisfaction guaranteed. We are the sole importers and carry a large stock. All our belts are seasoned with non-freezing oil and therefore will not harden in cold weather.

THRESHERMEN write at once for samples. If your dealer does not handle our belt, ask him to procure it for you.
DEALERS WANTED IN EVERY LOCALITY

GENERAL SUPPLY Co. of CANADA Ltd.

Woods Western Bldg., Market Street East

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For Farming Purposes

Hillcrest Steam Coal

Is the Most Economical

Because "Hillcrest" "the best coal in the Rocky Mountains," contains less slate, rock and other foreign substances. It will plow more land per ton than any other Coal.

Order some now and try it

HILLCREST COLLIERIES, LTD.

Hillcrest, Alta.

WRITE TO

The Garlock Packing Co.

117 Market St. E., Winnipeg.

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

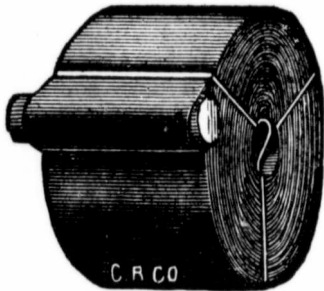
The Garlock Packing Co.

TORONTO

HAMILTON

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There are Several Kinds of Thresher Belts



Belts that break, belts that slip, belts that get hard and crack in cold weather, belts that stretch so that they cannot be kept tight, etc., and belts that work under any and all conditions, giving a maximum of power between engine and separator. We handle only the latter kind, therefore in ordering be on the SAFE SIDE. ASK ALWAYS for the

“Lumber King” or “Star”

Any Thresher Company Will Supply You if You Insist

Did You Ever Swear at a Leaky Suction Hose?

There is an excuse for all profanity from any such cause, but why should you carry the cause? It takes the BEST that can be made to withstand the grilling of a threshing outfit. We have made a life-long study of SUCTION and INJECTOR HOSE and can say that we've mastered it. Ask for

“Canadian,” “Dominion,” “Western” or “J. C.”

and you've got the best that money and skill can make.

CANADIAN CONSOLIDATED RUBBER COMPANY Ltd.

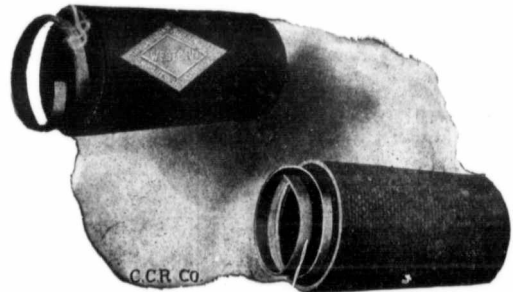
WINNIPEG

Calgary

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Regina



bolt that you try riveting it over. If the bolt is simply a little loose all it needs is riveting. It is quite a difficult matter to take a stay bolt out. If you take the stay bolt out it will be necessary to cut off the portion that is riveted over the cold chisel and then drill the rivit out with as large drill as you can use without mutilating the threads. Before tilting the threads. Before putting in a new bolt you will proba-ly a size larger in order to get the good threads. This will make it necessary to use a larger stay bolt.

(2) Eight fourteen-inch plows are not a very heavy load for your engine in light soil. If the engine was not designed for plowing we doubt if you will find the gearing heavy enough to stand the heavy strain. It requires especially designed engines to do such work as plowing or heavy hauling. While you would be able to get along for a few days or even weeks with a light engine it would soon begin to give you trouble and you would find it very expensive.

Q. J. P. (1) Will it make any material difference in the distribution of the steam in a Woolf reverse engine if the position of the main shaft is slightly altered in the boxes, provided it is in correct alignment? What is meant

by the term guide pivot as applied to Woolf reverse engines?

(2) Why do some engines require heavier fly wheels than others of the same size? Do not single cylinder engines require heavier wheels than double cylinder engines?

(3) Why do not all traction engine builders put inch injectors and fittings on their boilers? Are not the three-quarter inch pipes harder to keep from clogging with scale than the larger size, where the pipes enter the boiler?

(4) I have been troubled with grain going over the shaker in a 42 x 64 separator. The speed of the cylinder is 1,100 r.p.h. in dry grain and 1,200 in damp grain. We put in a new cylinder teeth every second year and feed the machine as easily as possible with either three or four men pitching. Can you suggest a remedy?

A. (1) The Woolf reverse gear is very sensitive to any changes in the relative positions of the different parts, such as the position of the different parts, such as the position of the main shafts, the center of the guide block, the center of the guide block, and length of the eccentric rod. If you have altered the position of the main shaft even one-sixteenth of an inch from the position it was designed to occupy, it will make considerable difference in the steam distribution.

The mere fact that you have the shaft lined up properly with the center of the cylinder is not sufficient; it must be placed right relatively to the guide block pivot or pivot about which the guide block rotates.

(2) The weight of the fly wheel of an engine depends on the general design of the whole machine. If the engine has two cylinders it will require a lighter fly wheel than if there is only one. Traction engines fly wheels are made as light as possible and still retain fairly close regulation in speed. You will understand that heavy fly wheels conduce to steady running while light fly wheels cause the motion of the engine to be somewhat jerky. On the other hand, the heavy fly wheel when in rapid rotation strains the shaft enormously if the engine is suddenly reversed. For this reason the fly wheel is made as light as possible without sacrificing too much in the matter of close governing.

(3) This is a question you will have to put up to the manufacturers. Doubtless the reason they use the smaller size is largely a matter of economy—and besides there has been trouble experienced except in certain sections of the country, with the filling of the feed pipe with scale.

(4) We suggest you change the angle of the blast or drop

the front wheels an inch or two lower than the rear ones. These means are often resorted to, to overcome the trouble you are experiencing.

Use Your Minutes.

We all have the same sixty minutes, the same twenty-four hours, to work with, and the man who achieves the greatest success is the man who knows how to work with this period best, and get the most out of it. Time-economizing is more important than money-economizing, for the right use of time is the price of every earthly accomplishment and reward.

To the scientist, time is literally the measure of achievement. His treasury of years has a limit; his work, unfinished, will pass on to another, who will receive the reward.

To the business man, time is capital. He can borrow a million in money—he cannot borrow, beg, steal or create a minute.

Money, art, comfort, inventions that save hours for thousands, discoveries that lengthen lives by decades—all depend upon time. Use the minutes.

The power of fortune is confessed only by the miserable, for the happy impute all their success to prudence or merit.

RUMELY LA PORTE GOLD MEDAL

We Are Gratified

when Rumely Machines win prizes in public Contests. This proves our claims as to the merits of our lines, but we are better pleased by the records our machines are making in the fields. Our machines are winning contests in Canadian fields every day.

Select Your Threshing Outfit Now

from our well known lines and we will deliver it whenever and wherever you please.

Our machines have been built by the acre and by the train load and now they are ready at a Branch House near you—they can be delivered to you without delay.

Our lines provide an outfit of the kind and size you want—small individual outfits as well as capacity outfits for custom threshing.



AT MANILA

Gaar-Scott Line of Rumely Power-Farming Machinery was awarded Gold Medal and Diploma.



Another proof of the worth of Gaar-Scott machinery and of the high regard that the Gaar-Scott Line has earned for itself.



Branches:
CALGARY, Alberta REGINA, Saskatchewan
EDMONTON, Alberta SASKATOON, Sask.

RUMELY LA PORTE THRESHING MACHINERY

Separators

The Gaar-Scott, Canadian Advance, the Rumely and American-Abell Separators have made friends in Canada by their ability to do rapid, thorough work in any kind of grain. All of our separators are handy machines, easily moved on the road, easily set and easily operated.

Threshing Engines

Gaar-Scott, Rumely and American-Abell Steam Threshing Engines furnish the kind of power you require to get full profit-capacity out of your separator every day. These threshing engines are the easy-steaming kind. They are economical in the use of fuel, durable in construction and easy to operate—they are the kind you like.

Gaar-Scott, Rumely and American-Abell Steam Threshing Engines comply fully with every requirement of the Canadian Boiler Laws and are rated accordingly.

We shall be glad to furnish a machine from either line, or a catalog of any machine without delay. Ask us or our nearest branch.



AT WINNIPEG

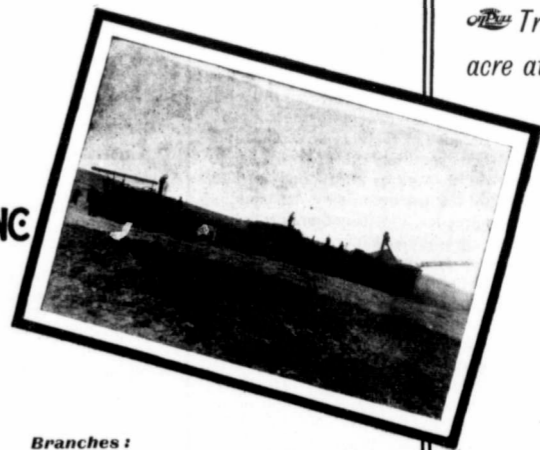
Oil Pull Tractors were first in every test.

They won Gold and Silver Medals and Sweepstakes Prize.

Oil Pull Tractor scored highest in :-

*Economy Brake Test
Maximum Brake Test
Plowing Contest*

Oil Pull Tractor plowed an acre at a fuel cost of 33.7 cents, the cheapest acre plowed, and finished every test in perfect condition.



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GENERAL OFFICES

LA PORTE IND. U.S.A.





The Importance of the Farm Machine on the Farm.

I
By Geo. H. Jones.

The past twenty years is remembered and noted for the great improvement made in machinery. Of which the greatest is without doubt that made in farm implements. We enjoy in recent years the benefits of the improved farm motor and the telephone together with many other inventions, including one that will be in great demand in the near future, namely, the manure spreader.

The popularity of the manure spreader is of modern growth, and there has been much said for and against its use. In its earliest days its purchase was regarded as a waste of money and its use conceded to be most wasteful. As the people became more researchful and studied the conditions their soil was demanding they began to realize the necessity and usefulness of this valuable implement. To-day we find it a popular implement among both the Grain Growers and Mixed Farmers of Western Canada.

Canada in its younger state with its large areas of fertile soil made farming a life of simple work calling for the most part only for physical labor. In the last few years there is a noticeable loss of fertility in our soil yet by advanced principals it will be shown that it has not as yet yielded up its best crops. The old saying "the willing horse get the heavy load" holds true in farming as our land has always been too ready to yield a good crop and not getting any food in return. Our land loves to eat as well as we do and therefore should be liberally fed.

There are on the market for sale at present a number of different styles of manure spreaders all of which seem to do favorable work. There are two distinct types, one which can be attached and detached to an ordinary farm wagon, and in the other the spreader is attached permanently to a set of trucks. Which is the better type is decided by each individual, according to conditions, both having advantages and disadvantages. I will not in this article attempt to describe or advocate any particular type but deal in a general way with the

importance of such an implement on the farm.

We may for illustration compare the advantages of the manure spreader with those of the ordinary fork as the latter use was the only method of spreading manure before the intrusive march of the spreader. It is a custom practiced by many of the farmers to spread manure on the land every morning. They proceed to the field on cold mornings, throw off the load in a great hurry leaving the manure in piles distributed irregularly over the land and consequently the seed bed the following year is in an uneven condition. As an outcome the following growth is not only uneven but an uneven ripening is also evidenced. As a comparison, if spread by a manure spreader, it is distributed evenly in thickness over the entire field thus covering twice the area and on the following year the yield is always better in quantity and quality from an even crop.

Another system which is quite commonly practiced is to select a damp spot on the farm and pile the manure there until it has rotted, then spread it on the land. This spreading is generally done during the hot days of the summer and is at least a most unenjoyable employment unless the spreader is used. In many cases farmers have burned their manure not because they were unintelligent enough to know that it would be a great benefit to the soil but because of the very strenuous and disagreeable work of spreading it on the land by a fork, but this has all been overcome by the manure spreader. It is not only a labor saver but a manure saver, thus a money saver, and a time saver. It has also been shown by continued experiments that eight loads of manure to the acre will give the maximum results and that twice that many have no advantage. It is impossible to spread the manure so thin with a fork and more often 24 loads per acre than eight are applied. When spread with a spreader the manure is thoroughly pulverized and not spread in large bunches, which become fire fanged and of little value as a fertilizer. Since a light distribution may be secured, it can be applied as a top dressing to growing crops, such as hay and pasture,

THE ONLY WAY TO FIND THE GOLD IN THE BUTTER FAT

is by using the Clean Skimming

"MAGNET" Separator

And this is the most pleasant, most satisfactory because most certain process of "Gold Washing" the world over.



No Dairy Farmer who has used this machine would ever care to employ any other in preference to it. He could not handle it after using the "MAGNET." Every dairyman who has one is an advertising agent for its makers simply because he cannot help talking about it.

A child can operate it because it is SO EASY. The same child can clean its SMALL NUMBER OF WORKING PARTS in a few moments. Neither the ravages of time nor the roughest of usage can injure it because it is SO STRONG. A wild bull couldn't toss it out of gear, because the SQUARE GEAR is mechanically accurate and cannot be upset. And because it is constructed and finished throughout by practical dairy men of long experience. IT TAKES THE LAST POSSIBLE ATOM OF BUTTER FAT FROM THE MILK.

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.

Load Your Own Cars and Fill Your Granary with a

New Taggart

PORTABLE ELEVATOR

Entirely Strengthened and Remodelled

Will Save its Cost in One Season

It is a back saver, time saver, money saver.

It will save three men's time and two teams at least.



CONSTRUCTION

The "Taggart" Portable Grain Elevator is built with 18 or 21 ft. leg. Grain is elevated by cups and conveyed by worm screw. Mounted on skids or farm truck. Hopper swings back out of the way for wagon and will slide along conveyor so that it fits between the wheels of wagon and does away with the spilling of grain. Leg swings down when moving and rests on front end of frame. Spout may be swung in any direction either up and down or side ways.

Our Prices Are Right

For loading cars and filling granaries — operated by gasoline engine which sits on front end of skids. We can supply engine, if wanted, or fit elevators to be run by your own engine by giving us speed and size of pulley. Will elevate from 500 to 1,000 bushels of wheat per hour according to power. We also have a Horse Power outfit complete, called our Junior Star. Only a few of them left. Our 1912 Model has improved Gearing and Frame and is as near to perfection as an elevator can be made for convenience and capacity. Write for descriptive circular. Agents Wanted.

THE HARMER IMPLEMENT CO. WINNIPEG

This cut shows Elevator mounted on truck, with leg up and Hopper swung back to let team drive up alongside of Elevator.

without smothering the crop. As a time saver it has been proven by many experiments that with manure spreader can be spread five times the amount in a day as by a man and wagon.

The objection may arise that the manure spreader can not be used in the winter but many farmers have used them the entire winter by providing it with some kind of shed, to keep the manure from freezing the teeth of the beater. It is often said that they are not worth the price so I shall endeavour to prove that they will pay for themselves in a very short time.

It has been estimated by experts of the United States Department of Agriculture that the value of the fertilizing constituents of the manure produced yearly by a horse is \$2,700, by each head of cattle \$19.00, by each hog \$12.00. Now taking the average farmer having a half section of land he must have 10 horses, 10 cows and probably 10 pigs, we will average the value of the manure produced yearly.

10 horses at \$27.00	\$270.00
10 cows at \$19.00	190.00
10 pigs at \$12.00	120.00

or a total \$580.00

As already stated it has been shown by experiments that eight loads of manure per acre is as good as sixteen. It is impossible to spread with a fork, covering all the ground with any less than sixteen loads per acre. We see by this that the manure will cover twice the area still doing the maximum amount of good. We may say then that it will be of twice the value. Take this case we have already outlined. If this \$580 worth of manure was spread by hand its value would be one half as much or \$290, we see by this that a manure spreader costing \$130 would be doubling its value in one year. Not considering any thing of the labor or time saved. Just think what the increase would be on a large farm, where there are probably two or three times the amount of stock. The value of manure as a fertilizer does not depend solely upon the fact that it adds plant food to the soil but its action renders many of the materials in the soil available and improves the physical condition of the soil.

II

The Importance of the Farm Machine on the Farm.
By J. P. Scott.

We cannot help but see at first glance, that, to deprive the farmer of any one machine that he utilizes upon the farm in this age of prosperity, would inconvenience him to a very great extent, in fact it would be almost impossible for him to get along without

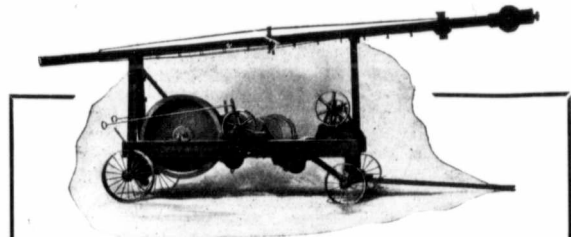
any individual specimen of the machinery used upon the farm, in order to sustain the life of the increasing population of the world who are depending almost entirely upon the farmer for their daily bread.

First let us determine what ones of the necessary implements in use on the farm could be classed as machines for there are a great many articles which are used by the farmer, such as the plow, harrow, cultivator, spade, hoe, etc., which could not be called a machine. A definition for a machine might be worded as follows, "A machine may be a construction, more or less complex, consisting of a combination of moving parts, or simple mechanical elements, as wheels, levers, cams, etc., with their supports and connecting framework."

Let us now discuss and show the importance of the different machines, in order as they are used upon the farm during the season. About the only machine, according to the above definition, bed, and sowing of the seed is the used in the preparation of the seed drill, this may be called a machine, and we can easily realize how essential it is in the proper sowing of the seed in order to get it down to the moisture and get it all covered to get the best results in the crop. If the farmer had to depend upon the old broadcast style of seeding, it is plain to be seen that he could not get as good results, for the seed would not all be down far enough to reach the moisture if the season happened to be a dry one, and besides he would have to sow more grain to the acre to allow for the loss in germination. Thus you see he saves probably one quarter to one third in seed grain which means considerable, for seed is generally high priced, as well as having his chances greatly increased for a larger yield, better conditions being produced through the use of the drill.

The next in order of use as the season passes would be the hay making machines, here according to the above definition, the mower would be the only true machine. But let us imagine the farmer trying to put up sufficient hay to feed his stock over the long winters of our country, with the available labor, the kind of hay he has to rely upon, and the limited time he has, using an old fashioned scythe or sickle, "Why such a thing would be absurd."

Then with the approaching harvest the farmer gets out his binder, which is a combined cutting and binding machine, invented in rather recent years, and has proven to be a wonderful friend to him. Owing to the high price and scarcity of labor in Canada as well as the increased acre-



\$1800 to \$6000 per Year

has been and is being made by Well Drillers all over the country. The New Chapman Well Drills are the very latest, simplest and best Machines in the market, built to drill Wells in ANY formation from 250 to 1000 feet, doing their work rapidly and noiselessly. Can be operated by any kind of power.

DEMPSTER AND HOWELL WELL AUGERS

bore Wells from 12 to 36 inches in diameter, and from 100 to 150 feet deep. Write for our illustrated Booklets and our special proposition so as to get in to this money-making business quick. The demand for first class Wells in all parts of the West is now very great, and steadily increasing. Write us to-day

ONTARIO WIND ENGINE & PUMP COMPANY, LIMITED

WINNIPEG

TORONTO CALGARY MONTREAL



One Roofing Used Twice

After fighting smoke, burning cinders and storm for seven years, the roofing shown above on the old Wells Street Station of the C. & N.W. R. R. in Chicago, was rolled up and used to re-roof several suburban stations.

NEPONSET PAROID ROOFING

This hard wear has not taken a bit of the life out of the roofing, and it is now giving perfect service in its new locations. A good life insurance risk is the man who lives beyond the average time—longer than he is expected to live. A good roofing is one that lasts longer than is necessary. That's what NEPONSET Paroid does. An ideal roofing for factories, storehouses and farm buildings.

Blue Print Barn Plans—FREE

They are the kind of plans that appeal to every Canadian farmer. NEPONSET Roofings are made in Canada. F. W. BIRD & SON, 425 Heintzman Bldg., Hamilton, Ontario. Established 1785. St. John, N. B. Vancouver, B. C.



Patronize those who Patronize this Magazine.

age under cultivation. They also have now in connection with the binder a number of stooking machines on the market, which will when a little further perfected, and adopted by the farmer, be one of the most important among farm machinery from the labor saving standpoint.

Now with the process of cutting, binding and stooking all rapidly and successfully completed the farmer is all ready for the threshing operations, which is done with a threshing machine and engine, which again, in their state of improvement, displaces a vast number of men thus allowing the farmer to handle his increased acreage under a reduction of time and expense.

In speaking of the engine in itself it is probably becoming one of the most important among the farm machinery, owing to its energy, transmitting abilities, it is not only used for the purpose of operating the threshing machine and crusher, etc. as was the case a few years back but is fast coming into use as a motor power, for plowing, discing, seeding, and in some cases drawing the binder and also for transporting the grain to market in many instances, thus displacing horses to a very great extent, the claim being made by many that it reduces the cost of these operations in comparison to the use of horses, in that it can be done with less run, and the fuel does not cost any more than the feed would, for the number of horses that it would take to do the same work in the same time. One other advantage in favor of the engine is that it does not cost anything for its keep when idle, while the horse has to be fed almost as much during the idle season as when he is at hard work.

Now let us devote some space to the effect that the use of all this machinery had had in raising the farmer, from an uneducated, unenvied man to a broad minded, thoughtful, and esteemed citizen. At one time the farmer was looked upon as an uneducated man, who so long as he had plenty of muscle was a good farmer, it was not necessary for him to have any business abilities to make, what they termed, a good farmer. But through the use of machinery he has been relieved of many of his laborious tasks, and is called upon to use his head, rather than his muscles, in planning for the best methods of utilizing his soil, and not to perform the hard labor, which is now practically all done by machinery, this relief from the hard labor also gives him more opportunity to think.

We also have the development of much more desirable homes upon the farm through the use of machinery, by relieving the fair sex from the duties of the field, for we know that when the labor

upon the farm had to be done by human hands, that the women were called upon to do their share, this taking them from their duties in the house and rendering the home much less attractive than it is in the present day when their services are no more required in the fields owing to the use of machinery.

III

The Importance of Farm Machinery.

By K. W. Gordon.

Farming has advanced during the past half century by leaps and bounds; from being a mere toil it has become a science and the agriculturist, who formerly was a simple laborer, has now developed into a practical mechanic and has to be such if he wishes to succeed in his profession.

The onward rush in the tide of progress has not left the farmer in any way-side eddy but has carried him forward on its crest and he has now to fight and battle with the waves of progress and competition even as our other citizens have found it necessary to do.

We must not be deceived however and be satisfied with a superficial inspection or history of our national calling. Has the farmer always been in the forefront in seeking what might be found to further his profession? By no means; the contrary is rather the case, he has been backward and conservative allowing other industries to come into creation which having always their own ends in view yet assisted agriculture to rise to her but recently acquired position. Agriculture is today the noblest and grandest profession, the truest and deepest science, it brings man nearer to nature and the nearer to nature's God. Not till the farmers as a class cast aside reticence, adopted up-to-date methods of cultivation and employed modern machinery for handling their crops did their profession break away from her moorings, breast and overcome all difficulties, and predominate wherever men's minds had not already been poisoned by the absurd idea that life in the country, working alongside nature, was a drudgery.

Out of the single furrow plow and team of horses or oxen has grown the engine gang and steam or gas power tractor. From the cradle and the scythe has sprung the modern self binder and the old fashioned flail (Which, sad to relate, can still be heard on a quiet winter day in some parts of this dominion, which have been asleep, while the country as a whole, was striving with progress in the world's great race) the flail, has developed into the modern threshing mill which can to-day pour

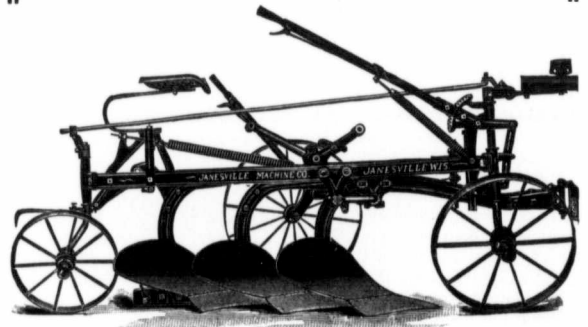
IF YOU DO IT WITH A JANESVILLE Northwestern Gang Plow

Your plowing will become as pleasant as a pastime. This great implement has been designed and constructed with the single purpose of overcoming all the difficulty and worry of handling the heavy gumbo soil peculiar to Western Canada. No ordinary plowshare or combination of plowshares will make headway against these conditions and do satisfactory work. After years of study and racking experience we have successfully met the case with the **JANESVILLE GANG**

ITS CHARACTER

Among other exclusive features, the "JANESVILLE FOOT TRIP" horse lift on this plow gives it an advantage over every other plow made of priceless value to the plowman. You simply trip the lift with the foot while riding or throw the hand wheel lever while walking and the horses will pull the plow bottoms into the ground at the start and out of the furrow at the end.

Made of the very best material in every detail, its **EXTRA HEAVY** beam especially guarantees a strength and resistance quality that will not break under the most grilling test any plowing job is likely to give it.



ITS BUSINESS

Its business is to successfully deal with and overcome the unyielding tenacity of the worst prairie and scrub lands instead of skipping it or breaking at the first real obstacle. In entering the ground, the heel of the plow bottom is held up so that the point **MUST** go down first. In leaving the ground the heel of the bottom is held down so that the point must come out of the ground first. The plow works almost automatically and so easy is it both on the draft horses and the man, the work is done with half the sweat of an ordinary plow in ordinary soil.

DON'T FRET ANY LONGER WITH BACK-ACHING AND HEART-BREAKING PLOWS. WRITE US FOR THE COMPLETE HISTORY OF THE "JANESVILLE NORTHWESTERN GANG" AND WE WILL PUT YOU ON THE FAIR-WAY TO THE PLOWING THAT PAYS

MANUFACTURED BY

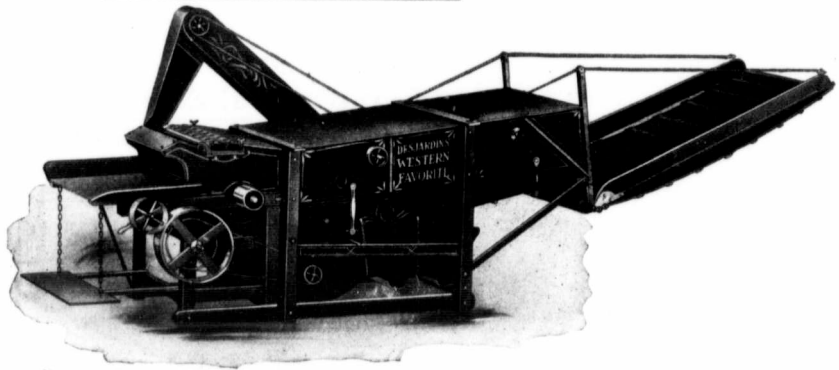
The Janesville Machine Co.

The American Seeding Machine Co.

KING and JAMES STREETS, WINNIPEG
CANADIAN SALES AGENTS

TO PROSPECTIVE CUSTOMERS!

In introducing these little threshing machines in Saskatchewan and Alberta last year, it was apparent very quickly that they had filled a long felt want, and although not in any way pretending to be a large machine in the usual sense of the meaning, the customers were more surprised every day at their capabilities. This machine, called No. 3 outfit, is mounted either on skids or low truck. The cylinder is 30 inch wide and the guaranteed capacity with a 12 h.p. gasoline engine is 1500 bushels of oats per 10 hours work.



The machine is fitted with an elevator for the chaff, a grain elevator, and a straw carrier, 10 feet long. Everyone in need of a machine for himself will be welcome in asking for testimonials and names of farmers having used this machine last season—this or smaller machine. We are keeping large stocks in North Battleford, Saskatchewan, and Camrose, Alberta. Write us; or, if you like better, write direct to our general representatives:—

A. Stanley Jones, North Battleford, Saskatchewan; or Francoeur Bros., Camrose, Alberta

EVERY INQUIRY WILL BE ANSWERED PROMPTLY.

**LA COMPAGNIE DESJARDINS, St. Andre de Kamouraska
P. QUEBEC.**

forth its two thousand bushels of golden grain, in the short space of time, which it takes the sun to travel across our autumn sky.

In what other line has such improvement been wrought in so short a time or where can we find an industry more dependant on machinery for its development and success than farming.

To say that any one machine was more important than the others would be false, for all are necessary; and yet there are some implements, among the many on every farm, which duplicate themselves to a certain extent. But certain there are, which if they were lacking or in disrepair when required, would cause the individual possessing or managing the farm considerable inconvenience and loss.

I intend in this article to show the reader the supreme importance of the essential implements on the farm to the agricultural profession and since this is the case to remind every owner of machinery the necessity of keeping such always in perfect repair. We must however always bear in mind that the nature of the soil limits to a certain extent the usefulness and importance of certain otherwise excellent implements.

Let us first briefly consider the plow for it is the foundation of all farming operations and the most ancient tool employed in agricul-

ture. The evolution of the plow has kept pace with the progressive strides in agriculture (or vice versa for none can tell which set the pace) and that implement stands as a monument for all those who have given their lives to help in its development. The care exercised in its design and the time spent in bringing it to its present state of perfection (if it is in man's power to perfect anything) speak eloquently for its importance to the farmer. It is the first implement used by the homesteader and when he becomes a mighty wheat king he relies on the plow still to aid him to amass further fortune.

"Oh thou who dost upturn the sod

"Leaving destruction in thy train

"Chideth not the idle soil

"To help thee in thy toil

"And bring forth Golden Grain"

Western Canada, with its somewhat scant rainfall and its ever widening weed areas, requires effective tillage machinery.

Efforts and moisture are the two greatest problems facing the prairie farmers and to effectively combat with them, harrows, cultivators, weeders, land packers, etc. have been placed on the market and their great importance is only superceded by the magnitude of the problem for whose solution they were invented.

The great saving in grain and time which the modern seed drill has established proves the value of this recent addition to the list of farm implements. Concerning the selfbinder and thresher little need be said for their necessity to the grain grower is self evident and we cannot begin to imagine the farmer of today without these, the greatest aids to his business and his best friends.

"Phoebes his rays sends forth with joy

"and heaven gives the refreshing rain

"The sleeping seed awakes

"Out into new life breaks

"And brings forth Golden Grain."

The introduction of machinery on to the farm has not only raised the farming profession as a whole to an enviable position but has made life in the country to those employed in agriculture a source of continual joy.

If we are to keep it thus we must properly care for that which has made a position on the farm not to be despised but cherished; we must look after our machinery in a manner fitting its importance.

The importance of the farm machines cannot well be over estimated; they are the whole life of the farming profession and without them farming would again

shrink into significance and at last become a nonentity. The various implements which assist the agriculturist in his operations can be likened unto the different organs and limbs of the body and just as each organ is dependant on its neighbour for its existence and would be useless alone so each piece of machinery is only present because the others exist.

Take for instance the plow, considered by some to be the most important of a farmer's implements, it is only necessary because the operator knows he has a smoothing harrow to follow it. The harrow is only used because it is essential to have the land smooth and in good condition before the seed drill can be properly employed. Again of what benefit would it be to have wide acres ripening in the summer sun if the binder did not exist or if no one had ever heard of the Modern Thresher. It is impossible for any one implement to claim the honour of being the most important for each one has to wait its turn and while being used hold supreme sway for a longer or shorter period. The great importance of each ones work and the greater importance of the co-operative work of them all is clearly seen and felt by every modern agriculturist.

Waterloo Lion Brand

of Farm Machinery has never yet been surpassed by anything in Agricultural Engineering for Quality, Durability, Efficiency and Value. Plowing and Threshing Engines (Steam or Gasoline) ranging from 14 to 30 H. P. are unsurpassed by anything of their size. Wind Stackers, Feeders, Baggers and Drive belts a specialty.

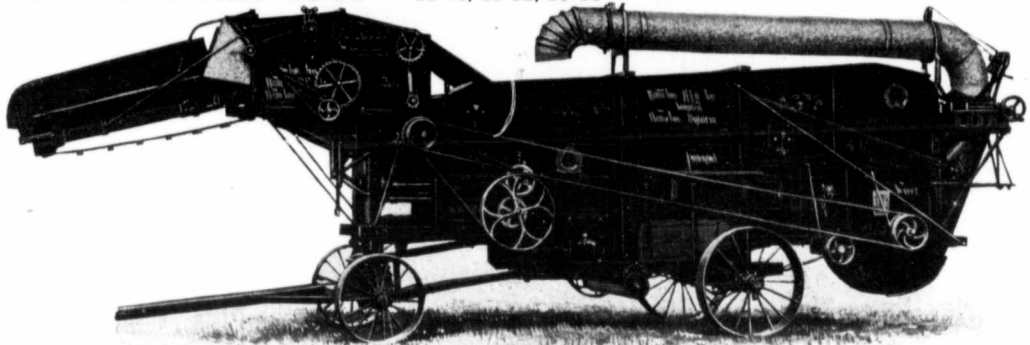
Waterloo Separators, 28-42 to 36-56

Are the Greatest Grain Savers in the Market

THE "CHAMPION"

Made in three sizes,
28-42, 33-52, 36-56

Write for CATALOGUE OF COMPLETE LINE



WATERLOO MANUFACTURING CO., Limited, PORTAGE LA PRAIRIE

IV

The Importance of the Farm Machine upon the Farm.

By C. H. McGorman.

We are now living in a scientific age, when farmers must have the very best machinery that can be obtained in order to make a success of growing grain. Also good horses and men. In selecting such implements, I would advise a man not to depend too much on what the machine agent has to say concerning his line of implements for sale. I would say use your own judgement, along with some successful farmer's advice and you will not go far astray. Most farmers think they have the best machinery going, and this is all right, for it would hardly do for all to want the same make.

Then in breaking I would say use the breaker that will make the best possible job, with the least exertion to man and beast. Therefore it is important to select a good breaker, and keep the share and coulter always sharp, so that it will do a better job, be easier to hold, and less of a strain on it in going through roots. A fourteen inch breaker is much better than a twelve, where it is not too heavy on the horses, as the furrow is wider and will lie down better, this is especially so where the land is scrubby. In breaking it is a good plan to always carry

an axe on the side of the beam, that is if there is any scrub at all. It is necessary to do this sometimes in order to get out of a root handy without making too big a miss.

The next in rotation and of great importance is the disc harrow, which cuts the sods and levels them down to a certain extent. It is best to disc on an angle of the field from both sides, because when going lengthwise there are some of the discs that will be running between the furrows, and not cutting anything. In discing crosswise the sods are cut into short pieces which turn over and over ahead of the harrows or drill, besides being often very short turns. The disc harrow is also good for summer fallow in covering weeds during the second growth. It is used considerable, and is good for discing the stubble land to start the weeds to grow. The essential things in driving discs are to keep them well oiled and the nuts tight.

The harrow is the second in importance of all the farm machinery. It is by far the most important in the eradication of weeds. After the summer fallow is plowed the harrow can be used once a week, with a tremendous effect. See that the teeth are sharp and keep the nuts tight. Do not let the horses tramp on the end in turning as it may result in

bending or upsetting them. The harrow is used for smoothing the ground, tearing it up, making a surface mulch, killing weeds, and packing to a certain extent, and is therefore called the poor man's packer. As a general thing there are not many that harrow too much. The harrow of today is far ahead of a bunch of bushes that some of our forefathers used in smoothing down the land. Do not allow roots or weeds to drag, for the sake of a little energy to lift the harrow and remove it. It is nice to have a harrow cart if you can afford it. The tilling harrow is also good because in weeds it can be set slanting forward and will take great hold, or it can be set straight up or slanting back as the operator sees fit.

One of the most importance, but not as much so as the plow, harrow, or binder, and that is the drill. The need of this implement is in the spring, where there is a large crop to be put in and the season should happen to be late. The drill is far ahead of sowing by hand, because it puts the seed down to the moisture, and distributes the seed so evenly. In operating the drill see that all nuts are kept tight, and that it is well oiled. See that the drill is putting the seed the right depth. And that both sides are sowing the same, this can be done by putting so much into the drill taking

notice to see how much it sows. See that all the drag chains are on so that all the grain will be covered. If a disc drill is used it is well to keep a good watch, that no little stones get wedged in any way, so as to keep the disc from turning, as this will greatly increase the draft. Or the boxings may get filled with fine dirt, and therefore stop it revolving. Avoid running over large stones as there is danger of breaking the boot, etc.

The packer can be used before or after sowing, and is of great importance in firming the soil so that it will hold moisture and produce the capillary action, and still leaves so that it will not evaporate by leaving the surface rather rough and loose. A soil that is packed hard right to the top will evaporate far more than one that is packed, and left loose on top two or three inches. The packer or subsoiler makes the ground easier for the other implement such as binder and wagons hauling the grain off. The packer should be well oiled and not run over stones. One will some times pay for its self in one or two crops.

The next and great important by increasing the yield that much machine is the binder, which will run better if handled by an experienced man. But any man almost who has good judgement can operate any of the farm ma-

chines. It is very important that a man has a good binder, one that will work without giving any trouble. If a binder refuses to work when there is a lot of grain ready to cut, and should there happen to come a heavy wind there would be a tremendous loss. It will not pay any man to be tinkering away with an old binder, when his grain is ready. Always keep the binder in good repair, and well oiled because oil after all is cheaper than iron. If this is followed the binder will most likely run a good long time.

After the grain is harvested plowing begins and it is wise to use a gang plow because the single plow is too slow. Besides a man may as well drive four horses as two. The plow is really the most important of all farm machinery, because what could be grown if the land was not plowed. The gang plow is also much used now for breaking in the west and gives good satisfaction.

The breaking mould boards man be attached, which makes a smoother job. In olden times the plow and harrow was about all the machinery a farmer had. And they are still the most important by far. It is well to keep the plow in good shape. Never get into a root and let the horses dra wtoo heavy, as they are apt to spring the beam or frame. See that the plow is kept well oiled or greased, and not allowed to work loose. Adjust it so that it will run as near straight as possible, so there will be less friction. Set it with a little dip on the nose of the shore. And to run so that the hand can be slipped down between the landside of the plow and the edge of the furrow. Have the coulters sharp and set to cut about a half inch wider than the edge of the mould board. If the coulters are sharp there will be no trouble in plowing under manure. Keep the shares sharp also. Always grease or oil the mould boards if left standing for a while, so that they will not rust. Hitch the horses tandem or abreast with one tramping the plowing, as it is the only way a plow will draw straight. Many put three on the land and one in the furrow, but the plow can't help but run more or less sideways; therefore, drawing heavier and being easier shoved to one side when it hits a root or stone. Use long or short mould boards as you think best; there is less friction in a long board. But in light land the short boards throw the furrow over better, and cover the weeds under more thoroughly. It gives better satisfaction in plowing summer fallow to use the chains to drag the weeds under, than the weed rods, because summer fallowing is in most cases practised to kill the weeds. It is not

You may be paid \$50 in Cash for improving your walk like this

108 Canadian farmers will receive cash prizes (twelve in each Province) in our big

1912 FARMERS' PRIZE CONTEST

WE held a contest last year in which 36 prizes were offered. This year there will be three times as many prizes (108) and therefore three times as many chances for you to win one of them. You do not have to use a large quantity of cement to win a prize. Many of last year's prize-winners used comparatively little cement.

THE contest is divided into three classes and in only one of these (Class "A") does the amount of cement used count in deciding prize winners. Class "B" is for doing the best concrete work (the size makes no difference). Class "C" is for sending in the best and clearest description of how any piece of concrete work was done.

THERE will be four prizes (First, \$50; Second, \$25; Third, \$15; Fourth, \$10) in each class in each Province. Thus you have only to compete with other farmers in your own Province, and not with those in all parts of Canada. This gives you the best possible chance to win a \$50 prize.

IT COSTS NOTHING TO ENTER—There are absolutely no "strings" to this offer. There is no entry fee or red tape to bother with. You cannot lose, because the improvements you make of concrete in competing for the prizes will be more than worth their cost. We have a book, "What the Farmer Can Do With Concrete," that will give you all the information about the use of concrete you can need. It will be sent to you free when you ask us for complete particulars of the Prize Contest. Ask for particulars to-day. Just say "Send me, free, your book and full particulars of the 1912 Prize Contest," on a post card and mail it to-day. Address Publicity Manager.

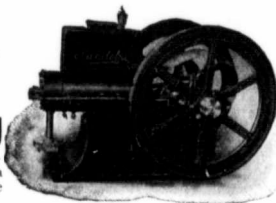


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Threshing is hard on any engine. Out of one hundred engine owners, one hundred will confirm that statement. The man who buys a threshing engine, must buy an engine that will stand the racket, the wear and tear of steady hard work. This brings you to the



25 H.P. Manitoba Portable Threshing Engine

The only Threshing Engine on the Market that has a Mechanically Operated Inlet Valve.

Cooling is accomplished by means of a screen cooling tank, with centrifugal circulating pump. Valves are extra large. Inlet valve is set in a special patented valve cage. Automatic battery cut-out, sight feed oilers, cut steel, case-hardened time gears, crank-shaft and connecting rod are of genuine steam-hammered nickel steel, phosphor bronze bearings, 68 inch fly wheels, weighing 2,480 lbs., auto muffler. Furnished with jump spark or make and break ignition. Mounted on all-steel truck. Send for our Catalogue No. 10. Full of pointers to engine buyers, and packed with information from cover to cover. Manitoba Engines are

"Made in the West for Western needs." WE MANUFACTURE Gasoline Engines, 1 1/2 to 25 h.p. Wood and Iron Pumps Pumping and Power Windmills, 8 to 14 feet. Grain Grinders, 6 to 12 inch Wood Saws, all sizes

MANITOBA ENGINES LIMITED

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best to plow too deep in one season, but to gradually get a little deeper year by year, to prevent the forming of a hard pan at the bottom of the furrow, that the roots and moisture cannot well go through.

The mower is the only thing that will cut hay to an advantage, and without hay the stock would be badly off—would not do well. Where the principal feed is oat sheaves, the mower will not be used so much, but

comparatively few do that. It will not take long to cut a hundred tons of hay, providing the meadow is good and you have a good walking team. It is also good to cut the weeds around the

Farmer Up-to-Date - Farmer Good Intention

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

FARMER UP-TO-DATE

SEPTEMBER
1912

FARMER GOOD INTENTION

HENRY—I've just been reading a very fine thing in this month's "Thresherman" on a "Three Years' Programme for a New Settler in Canada." I think that's the best thing we can send to Willie Watson. Willie says he is getting "fed up" with the amount of money he has to pay up every six months for his lease, and that if he can save what he does in farming in the Carse of Gowrie, with ordinary luck in Canada he ought to save three times as much if the land were his own. That article is written by a chap who knows what he is talking about and it just fits Willie's case to a "T." I believe he has something like \$5000 on deposit in Perth, and no doubt when he sold up that would be quite doubled. He is a cautious chap like "Andy McGregor" and I don't think we incur any risk in advising a fellow like him to come out. He has got a splendid wife, and if it were only for the sake of his two boys, he couldn't do better. They could get as fine schooling as they get at home, too.

FATHER—Funny thing, Harry, I was just thinking the same thing when I read that article. It is as clear a statement of a bit of practical experience as we could send him, and I think we couldn't do better than write for an extra copy (I hate to cut the "Thresherman") and send it first mail we can to Willie. They print some very good stuff from the actual experience of the traction men, but I wish they could dig up and print some more like that "Three Years' Programme" on the general conduct and business end of a farm. I've a good mind to send them some dope myself, and I'd tell them just as much about my mistakes as about the lucky hits. There's no school in the world like the school of experience and men will never be taught anywhere else. There's a whole library of text books that any fellow can get for a song, but it will never take the place of the story of a man who has actually worked out the problem for himself and honestly relates his failures as well as his successes.

MOTHER—I think I am to have the biggest crop of tomatoes this fall that has ever been grown in this neighborhood. You laughed at me when I said I intended to plant six rows of vines this year instead of the little patch we had by the fence last season. You said I would never be able to keep them in trim, and that I would let them run to foliage. Well, now, did you ever see me stick half way at any job I took in hand? I admit I've put in a lot of time on the tomatoes and that it has been a back-aching job at times, but the exercise has done me good and now just look at the crop! It's a nice employment for a woman who can spare an hour now and again and who would make a nice little bit of pin money. I spoke to John Inkster, who knows the folks at the Royal Alexandra, and he said he felt sure they would take all I cared to send them and would be glad to pay a good price for really fine fresh home grown tomatoes such as mine would be.

JOHN—When I was in Winnipeg three weeks ago I slipped into a "Million for Manitoba" missionary meeting in the Industrial Hall. There were representatives there from all over the Province, and a lot of sensible things were said. There were some suggestions, however, that I think took first place, and one of these was a talk on "Good Roads" by an old timer. "What's the use of bringing in crowds of settlers," said he, "if we haven't at least decent roads that will enable them to haul their product down to the shipping points?" This man described the rotten condition of his own district and took his own share of the blame, and I thought while I listened to him we weren't much better off ourselves. I don't think we give the thought to this that we ought to give it and I think, father, if nobody else will get a move on we ought to start the ball rolling. Part of the road is excellent but there are long stretches where it is impassable after a day's rain. I'm game for a week's work myself if you'll lend me the team.

FATHER—Jack Watkins was at me this morning about the state we had allowed the roads to drift into about this district. He wasn't blaming me any more than his own people, but I had a suspicion that he thought we were the greatest sinners. There's no doubt our mile stretch is in very bad shape but I intend at the very first opportunity to put in a few days' work with a scraper and see if I can't fill up a few of the worst of the holes. Old Scroggins was holding forth on the condition of the roads in this municipality at the blacksmith's last Saturday. Said they were a disgrace to the community and that there were none worse in Western Canada. He quoted some American figures to show that the average haulage cost per ton a mile over poor roads is 25c, as against 12 over good roads. But that's all bosh, I think. It's all very well for him to preach now that he has retired, but if he had still to pick his dinner out of our conditions he would select a different text I can tell you.

CHARLES—That's just where you are all out of it father. You haven't been in to town with a load for months or you would know that Scroggins isn't one line wide of the truth. The road from our door for nearly two miles is a poor show at any time but after a night's rain it is one solid puddle with a hole here and there that would take our wheels up to the axle if we drove straight on. There's no good talking and "intending" about it. We've got to get to work at once and pay up or work out our share of the improvements. Scroggins did his share all right while he was on the farm, and when he sold it there wasn't a finer stretch of road than the bit that ran alongside his land. He kept it like a garden walk. There's some excuse for a new settled district, but in a neighborhood like ours where practically every quarter section is under cultivation, it is a crime to have the highway in anything but the pink of condition. It is a simple job and it is up to us to do it.

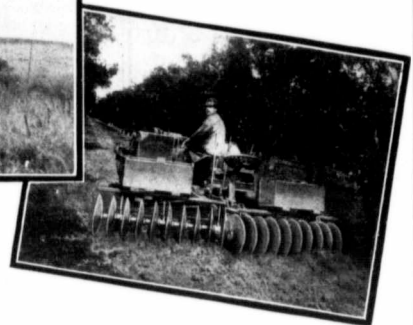
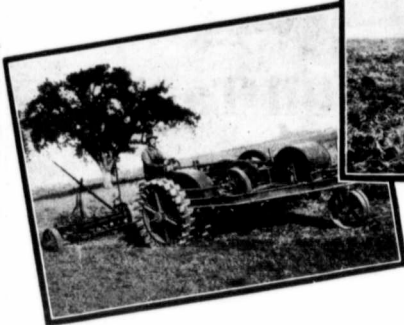
MOTHER—Now what would you say father if you came into your meals and found the kitchen in no better state than the hog-pen? It is my duty, if I have any responsible position on this farm, to keep the house in good order and it is as much a part of your obligation to do your part with our neighbors in maintaining the roads. But I fear if it is left to you and some of the rest of the folks around here to do your own little bit here and there as the mood strikes you, we will never have good roads. With the bit of scraper or even a such as you would use with the team, it would only be a make-believe of a road. The best scheme must be one concerted plan for the whole municipality. Let the council get together and made to see that the thing has got to be done, and let every man who owns a farm be made to understand that he must pay up in cash or in some proper equivalent what is his share of the cost.

BOB (Home from his vacation)—You're right there, Mother. It was by a special act of Providence that I got here without a serious mishap on Saturday night. When Charlie came down with old "Bess" to meet me, she seemed to recognize my mug at once and I insisted on driving her home. Well I thought I knew the road to our door as well as any one living; but, by jingo, when we got to the last mile stretch I made up my mind that a recent earthquake or a waterspout had so altered the "even tenor of our way" that it would be necessary either to find a home elsewhere or construct an entirely new means of getting to the old one. Dad you'll really have to wake up. Charlie has got the lay of the land all right, but he can't do much with all his enthusiasm if you keep blocking the wheels at every fresh start. All over the country the cry is for "better roads." The good road problem is the simplest one Canada has to solve. Let it be a heavy fine for any man who neglects to do his part within a given date.

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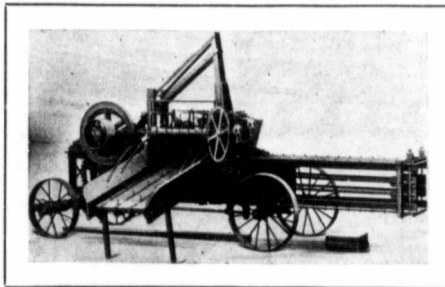


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New Rumely Money-Makers.

The latest additions to Rumely Power-Farming Machinery, have new exclusive features that give them big advantages over all machines in their respective lines.



Rumely Automatic Baling Press.

THE press that makes \$15.00 a day over all presses of the same capacity. The Rumely Automatic Baling Press has a real self-feed. The material is placed on a carrier the same as the grain is placed on the carrier of a self-feeder in threshing. The self-feed on the Rumely Automatic Baling Press saves one man's wages and board, and increases the capacity of the press enough to pay not only for itself but for the entire press within a short time.

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BALING Increases the market value as well as the food value of the crop. Baling reduces the bulk and saves a big percentage of store room. Baling puts your hay or straw into the most convenient shape for feeding or for marketing.

What Rumely Automatic Baler Does.

CUTS out the man at the feed table. Bales ten or more tons a day. Makes square, evenly packed, easily handled bales in any material.

The Rumely ToeHold Cultivating Tractor

A LIGHT, low down, three-wheeled tractor, unequalled for orchard or vineyard work, and a thoroughly satisfactory tractor for every farm traction purpose.

The drive wheels on the Rumely ToeHold Cultivating Tractor are patterned after Nature's most efficient surface-gripping tool, the toe of a horse. That is why we call it "ToeHold."

As the horse is supreme among animals for speed and for drawing loads, so the Rumely ToeHold Cultivating Tractor is supreme among tractors.

Get a catalogue of our baling press and of the Rumely Cultivating Tractor. They are really full of valuable news for you. Ask us or our nearest branch.

THE improved drive wheel is only one of the Rumely ToeHold Cultivating Tractor's excellent features. Everything that will add to the durability and adaptability of the machine—everything that will add to the convenience of the operator has been perfected in its design. It weighs only 8500 pounds—turns in its own length—can't slip—is the simplest tractor you ever saw.

While we are now offering the Rumely ToeHold Cultivating Tractor to our customers for the first time, it has been thoroughly tried and has proven its worth in actual field tests.

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The International Dry Farming Congress

Continued from page 7

three weeks, and that if more demands are made upon them for space they are prepared to still further increase the housing facilities.

Products From all the Globe.

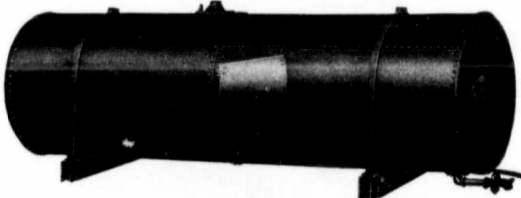
No quarter of the earth has been omitted in providing for exhibits of products of various countries. There are premiums of every kind of grain, grass seed, vegetable and fruit grown, and provision is made for any novelties, at that. Upwards of 900 International Exposition ribbons will be required for the individual prize winners, it is anticipated, while the districts and exceptional displays, federal, state, county, province, individual, women and juvenile will require a very large number of special prizes, which have been provided.

The special classes include an individual farmer's exhibit, to be arranged like a district display, and for which a Fairbanks-Morse gasoline engine and pumping outfit is donated by the Canadian Fairbanks-Morse Co.'s Calgary agency; districts exhibits of grasses and forage crops, vegetables and roots, fruits in green and in glass, sheaf grain, threshed grain, and cotton, for each of which the Lethbridge Board of Control trophy, a handsome and valuable silver prize will be given to the best; similar classes for individual and juvenile exhibits, with a trophy for the best in each, and an individual farmer's exhibit of garden and field seeds, open to the world, the winner to receive a valuable silver trophy cup, donated by the Mt. Carmel Land Co., of Bonner's Ferry, Idaho.

Many General Display Prizes.

There will be awarded a special premium for the best general exhibit by any agricultural college, experiment station or demonstration farm, for the best state of provincial display, the largest apple, largest potato, largest watermelon, for the latter the premium being a silver trophy cup donated by the Taber Board of Trade of Taber, Alta.; the largest delegation attending the Dry-Farming Congress, for which the Lethbridge Board of Trade has donated a \$150 silver trophy; the best district display from any Alberta district, with three silver trophies donated by Hon. Duncan Marshall, minister of agriculture; the best district display from Saskatchewan, with a silver trophy to first and a cash prize to second, donated by Hon. W. R. Motherwell, minister of agriculture; a \$100 silver cup for a students' grain judging contest, open to any agricultural college in the world, with a medal to the student scoring highest number of points; a valuable premium for the best display of noxious weeds, the most complete and practical display of monthly reports of

**No
Better
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Western Wagon Oil Tanks

This tank is exceedingly well made. All seams are riveted on a special machine designed for this purpose and with proper care will last a lifetime, and stand hard service. It is almost indispensable as a part of the equipment for any internal combustion engine, and is a most economical means of handling liquid fuel. It will pay for itself in a short time by its saving of oil as compared with other methods of handling.

We make these tanks in 400 and 500 gallon capacity and are prepared to furnish them in one, two and three compartments so that different kinds of oil can be handled in same tank.

All size tanks are furnished with wagon bolsters same as shown above and one-inch drawoff faucet and pipe for each compartment.

The Bros drawoff faucet is made from best quality brass, heavy in weight, ample in capacity, will not leak and is specially constructed so that it can be locked.

The Western Steel and Iron Co. Limited
Engineers and Iron Founders
WINNIPEG, CANADA

"IDEAL" Portable Threshing Engine

Identical with the engine in our "IDEAL" Tractor which won the silver medal in its class at the Winnipeg trials and gained highest points for design and construction. Has two opposed cylinders, set horizontally on cast bed pieces. Pistons are operated by a two-throw crank shaft placed in heavy bearings between the cylinders. This ensures perfect balance to the engine and gives greatest power at least cost.

Governed on the throttling principle and fitted with jump-spark ignition. With the vibrating Bosch system of ignition, no batteries are required and dependable ignition is furnished regardless of weather conditions.

Cooling system same as in high-priced automobiles. Water jackets of cylinders are so constructed that only a small percentage of water is heated at each explosion. Perfect cooling is obtained with only slight evaporation of water.

The "IDEAL" is all that a threshing engine should be and will stand up under heavy work, giving fine results year after year. Read what users say. Let us send you our illustrated booklet, FREE.



20, 35 and 45 H.P.

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Manufacturers of
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"Maple Leaf" Grain Grinders, Windmills and Pumps of every description,
Wood Sawing Outfits, etc., etc.

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WINNIPEG.

CALGARY.

farm operations; an Acme harrow for the best Swede turnip, this premium being donated by the John Deere Plow Co.; a gold and silver medal, given by the Farmer's Advocate of Winnipeg, for the best sheaf of fodder corn grown in Western Canada; a handsome silver trophy cup for the best display of 90-day corn, donated by the Gem State Rural and Livestock Journal of Caldwell, Idaho; \$100 worth of implements for the best display of alfalfa grown in Western Canada, given by the Loudon Hardware Specialty Co. of Winnipeg; and two split-log drags, donated by the Northwest Harvester Co. of Spokane, Wash.; for the best articles of not exceeding 500

words each on "Why it Pays the Farmer to Build Good Roads, and Which is Best for Good Roads—a Road Tax Worked out or a Road Tax Paid in Cash?"

In the classes for farm women there is offered a Perfection blue-flame oil cooking stove, donated by the Imperial Oil Co., for the best general exhibit of garden products, and a second premium will be provided later; a Wear-Ever roadster and steam cooker, donated by the Aluminum Cooking Utensil Co. of New Kensington, Pa., for the best individual exhibit of jellies and fruits in glass; and premiums of labor-saving devices for best photographs of a women's homestead and a number of other similar classes

showing the work of the farm women in and about the farm home.

Sweepstakes Headed by a Tractor.

The sweepstakes, open to the world with two exceptions—the best bushel of oats grown in Canada and the best peck of potatoes in Southern Alberta—are as follows:

Best bushel of hard wheat—Rumely Oil-Pull Traction Engine type F., value \$2,500, donated by the M. Rumely Co., La Porte, Ind.; delivery free to winner in Canada or the United States. Best bushel of Marquis wheat—Automatic Seed Grain Picker, donated by Dominion Specialty

Works, Winnipeg, Man.; delivery free to winner in Canada or the United States.

Best bushel oats—Silver cup, value \$100, donated by the Continental Oil Co., Lethbridge agency.

Best bushel of oats grown in Canada—Oliver Gang Plow, value \$500, donated by the Oliver Chilled Plow Works, Hamilton, Ont.; delivery free to winner at nearest distributing agency of the International Harvester Co. of America.

Best peck of barley—Magnificent trophy cup, value \$100, donated by the Calgary Malting Co., Calgary, Alta.

Best peck of flax—International Corrugated 22-Wheel Packer, donated by the International Harvester Co. of America; delivery free to winner in Canada or the United States.

Best ten ears of corn—Silver trophy cup, value \$250, donated by F. C. Lowes & Co., real estate operators, Calgary and Lethbridge.

Best ten ears of Yellow Dent Corn—Silver trophy cup, value \$35, donated by Taber Board of Trade, Taber, Alta.

Best peck of Milo maize—Silver trophy cup, value \$35, donated by Taber Board of Trade, Taber, Alta.

Best peck of Kaffir corn—Parlin and Orendorff 24-Wheel Sub-Surface Packer, donated by Parlin and Orendorff Co., Canton, Ill.; delivery free to winner in Canada or the United States.

Best Sheaf of hard wheat—Stewart Sheaf Loader, value \$500 donated by the Stewart Sheaf Loader Co., Ltd., Winnipeg, Man. delivery free to winner in Canada or the United States.

Best sheaf of oats—Deering or McCormick Grain Binder, donated by the International Harvester Co. of America; delivery free to winner in Canada or the United States.

Best sheaf of barley—John Deere 8-Foot Harvester and Binder, donated by the John Deere Plow Co., Moline, Ill.; delivery free to winner at company's nearest distributing agency.

Best sheaf of flax—Van Brunt 20-Double Disc Drill, donated by the John Deere Plow Co., Moline, Ill.; delivery free to winner at company's nearest distributing agency.

Best six stalks of Yellow Dent corn—Silver trophy cup, value \$35, donated by Taber Board of Trade, Taber, Alta.

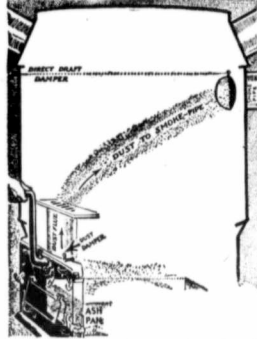
Best sheaf Western rye grass—Walker Hay Buncher, donated by Walker Manufacturing Co., Council Bluffs, It.; delivery free to winner in Canada or the United States.

Best sheaf of alfalfa—Silver trophy cup, value \$100, donated

More Facts About McClary's "Sunshine" Furnace

—The Understudy of the Sun—

There's no dust nuisance about the "Sunshine"—when you rock down the ashes the dust is drawn up dust-flue then directly across to smoke-pipe where it belongs. Look at the illustration and remember to open both "Dust" and "Direct Draft" dampers—these simple devices make the "Sunshine" the cleanest furnace for the home.



See the famous "cup joints" here—the frame of the ash pit—the two sections of the fire-pot and the dome all jointed together by our "cup joint."

There's a layer of asbestos cement in each joint—this unites all sections in a permanent way, yet leaves room for the expansion and contraction of the metal.

No wonder that this "Understudy of the Sun" is called the "Sunshine" furnace—Since it diffuses pure warm June air throughout the house.

You don't have to wear overalls when attending to the "Sunshine" furnace—It has a big roomy ash-pan. All the ashes are guided directly into the pan by ash-chutes. A minute or two performs the job. Yes, the "Sunshine" is the clean furnace.



The "Sunshine" Furnace burns either wood or coal. Coke, too, if you prefer it. The "Sunshine" distributes a greater percentage of heat units—the Baffle plates (a new McClary device) decidedly increase the heating efficiency of the furnace.

But—see the McClary agent of your locality. Ask him to show you all the features and exclusive devices which make the "Sunshine" Furnace worthy of the name—The Understudy of the Sun.


If you do not know the McClary Agent, write us at our nearest address and we'll forward you a letter of introduction by return.

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TORONTO
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"The Liquid Lifter"



LIFTS 22 TO 25 FEET. ELEVATES 25 TO 100 FEET. 30 TO 100 LBS. PRESSURE

Traction Engine Ejectors

Owing to High Steam pressure carried by these engines considerable trouble has been experienced with the Injector handling the heated water as delivered to engine tanks by steam syphons. We have a special XL-96 Ejector which delivers water to these tanks at 30 degrees less temperature than that of other ejectors, which decrease of temperature overcomes all trouble with the Injector. We cannot too strongly recommend that this Ejector be used on threshing engines, road rollers and engines of such type. Specify the PENBERTHY Ejector for your traction engine. Stocked by all leading jobbers and retail hardware stores throughout the country.

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Penberthy Injector Company, Limited.
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WINDSOR DAIRY SALT

Is The Cheapest You Can Use

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

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

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

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

70D

SAVE-THE-HORSE SPAVIN REMEDY
(Trade-Mark Registered)



Whether on spavin, Puff, Tendon, or any kind of lameness a permanent cure is guaranteed. **KANSASVILLE, Oes., Dec. 11, 1911.**—*Tray Chemical Co., Binghamton, N. Y.*—Dear Sirs: Last June I purchased a bottle of Save-The-Horse for a leg spavin and thoroughpin, which I drew on while standing with a stone machine; after a cure was effected I had one-third of the bottle left. I went West this fall, two days after the fall while playing in a rough pasture. The Veterinary hindered and loosened her saddle I came home two months ago, and she was still unable to put her foot under her. The Veterinary said it was a rupture in the coffin joint, as near the toe as it was possible to get. When I came home I discarded his treatment and used the remainder of Save-The-Horse and she is nearly sound. This mare is a dapple gray percheron, 3 years old, and weighs 1500 lbs. Please send me your opinion and another bottle of your new, C. O. D., at once from your Canadian office.

10 Years a Success
\$5. And every bottle sold with a non-elad contract to cure or refund money. This contract has \$50,000 paid-up capital back of it to secure and make its promise good. Send for copy, also latest book and testimonials from breeders and business men the world over on every kind of case.

TROY CHEMICAL CO., TORONTO, ONT
Druggists everywhere sell Save-The-Horse with a signed contract to cure or refund money.



Mendets all leaks instantly without the use of Heat, Solder, Cement or Rivet, in Graniteware, Aluminum, Hot Water Bags, Tin, Copper, Sheet Iron, all Cooking Utensils and Rubber Goods. Any one can use them; fit any surface. Assorted sizes in each package. Full size box, 25 cents. **AGENTS WANTED. FREEBORN SPECIALTY CO., Dept. C, Winnipeg.**

You Can't Cut Out A BOG SPAVIN, PUFF or THOROUGHPIN, but
ABSORBINE

will clean them off permanently, and you won't be born again. Does not blister or remove the hair. \$2.00 per bottle, delivered. **Book & E. free.**
ABSORBINE—A. H. Liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Gout, Wens, Cysts, Allays pain quickly. Free E. and B. and a bottle free at druggists or delivered. Will tell you more if you write.
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 **Merrill & Wayne Co., Winnipeg**, **The National Drug and Chemical Co., Winnipeg and Calgary**, **and Henderson Bros. Co., Ltd., Vancouver.**

by the Calgary Board of Trade, Calgary, Alta.

Best peck of potatoes—Spalding Deep Tilling Machine, donated by the Spalding Plow Co., Cleveland, O.; delivery free to winner in Canada or the United States.

Best peck of potatoes grown in Southern Alberta—Silver trophy cup, value \$75, donated by R. A. Darker, manager for Southern Alberta of the Canadian Life Assurance Co., Calgary, Alta.

Best sheaf of Timothy—Three-Wheel Farmer's Truck Scale, donated by Ontario Wind, Engine and Pump Co., Calgary Alta., agency.

Prize for Timothy Hay.

Timothy hay is one of the most valuable crops grown on dry lands in any section of the country and to show the excellence of this product is the ambition of many farmers. The Dry-Farmed Products Exposition at Lethbridge next October is preparing for a very keen competition in Timothy hay and has offered as a sweepstake prize for the best sheaf exhibited a three-wheel farmer's truck scale, which sells at \$45, and which is donated by L. P. Winslow, manager of the Calgary branch of the Ontario Wind Engine and Pump Co., Ltd., of Toronto, Ont.

More than six carloads of these trucks have been sold in the past two years, according to Mr. Winslow, who reports it of great value to every farmer. If a farmer is to know what he has in the way of grain he must weigh it, and the same applies to livestock, vegetables and every product of the dry-farm, and one of these scales is of great value at all times. It has a capacity of one ton. A load can be hauled about the granary or barn on these scales.

Growers of Timothy are urged to make their entries early in this class. Entry blank will be sent them upon request to J. W. McNicol, Chairman Exposition Committee, Lethbridge, Alta.

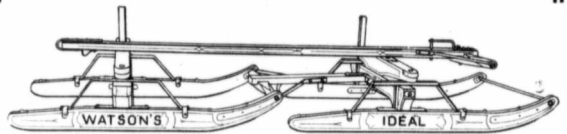
Importance of Farm Machinery on the Farm

Continued from page 49

head lands of the field to prevent them going to seed. This is what all farmers should do—it would only take a short time and be of good value to keep them down. In cutting keep it well oiled and knives sharp.

Then follows the hay rake. As it will take a long time to rake up one hundred tons of hay with a hand rake, and the most of it would be spoiled before it could be done. The rake can be used for bunching hay, which saves a lot of work. Or raking up brush cut with the mower or scythe. It is also used for raking the wheat field after the crop is removed, and it often

WATSON'S Farm and Bush Sleighs

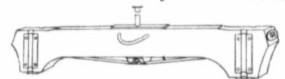


Our "IDEAL" sleighs run light and keep the road. Made of seasoned hardwood, strongly ironed. We use more steel and heavier steel than other makers. Our cast shoes, made in our own special patent design, are much superior to those on other sleighs.

Runners are constructed so that the point of contact is directly under the bench. Trussed bench—an exclusive feature—will neither sag nor break. The heavy strains and loads to

We Sell

- Channel Steel
- Harrow
- Boss Wood Harrows
- Steel Boss Harrows
- Harrow Carts
- Pulverizers
- Lawn Goods
- Turnip Seed Sowers
- Warehouse Trucks
- Double Trees and Neck Yokes
- Pole and Cordwood Saws
- Wheel Barrows
- Root Pulpers
- Grain Grinders
- Horse Powers
- Straw Cutters
- etc., etc.



which a farm sleigh is subjected, make it best policy to buy a WATSON "IDEAL" SLEIGH.

John Watson Mfg. Co.
WINNIPEG

BUCKBEE MEARS CO OF CANADA



ENGRAVERS WINNIPEG

The Buckbee-Mears Co. of Canada
Designers, Engravers and Creators of Catalogs

Call or write us for information.
Samples sent on application.
Telephone Main Six-Five-One

819 - 821 SOMERSET BLDG., WINNIPEG

pays well too, especially if the crop is short.

The manure spreader is another very important implement. It is one of the greatest time-saving and economical machines that we have, because it can be so adjusted to spread from five to ten tons of manure to the acre. It spreads long or short, coarse or fine, all the same, and it does it so much more even and faster than a man. This is the implement that every large farmer should have, as with most of farms they need to put all their manure on the land. As the best land in time will begin to fail, and it is easier to keep land up, than to get it into proper condition after it has run down. It is good too, as it will spread so thin and even that it can be put on the land after it is sown or even the grain up.

The cultivator comes as one of the best implements for the eradication of weeds. In getting rid of weeds, plow the summer fallow early, harrow down, and every time the weeds get up three or four inches high run the cultivator over it, and there will not be many weeds left to grow next spring. The cultivator can be bought in three or four horse sizes, and should be used crosswise of the land, as it will help to fill up the furrows. The teeth should always be set to run level, or they will let the weeds slip past without being cut. The wide teeth ought always to be used in summer fallow, but in working up land in the spring, use the narrow teeth. It is also good for pulling out couch or sweet grass. The one horse cultivator is important for cultivating between the rows of potatoes, corn, trees and in general for keeping the weeds down around the garden.

A farmer should have one or two good wagons and keep the one that he is using least under a shed and it will last much longer. In place of having two wagons, it is handy to have a set of farm trucks, as they are much nicer to haul stones off the field, haul water, or to haul grain to the field in the spring to sow. It is very handy to haul out manure on, and in general is about as handy a rig as a man can have. In selecting a low wagon or truck, get one with wooden wheels instead of cast, because in the cast wheels there are two hollows in the wheels that don't have any bearing on the axle, and, therefore, it is not good to hold grease, besides wears the axle into grooves; these hollows are where the spokes are in.

There are a good many more machines used on the farm that are useful. I have tried to deal slightly with the ones most used and most in demand. And in summing up, I would say, every

The Stewart Sheaf Loader

WILL HANDLE GRAIN STOOKS, FLAX and HAY CHEAPER AND BETTER THAN MEN

The Harvest Help Shortage Does Not Alarm the Thresher who has a Stewart Loader.

GUARANTEED ABSOLUTELY



Hundreds of Farmers and Threshermen have been Investigating this Machine at the Big Summer Fairs. Other Hundreds will see it at Saskatoon Fair and Lethbridge Dry Farming Congress. IT WILL STAND INSPECTION. Read what Threshers who have used it have to say:

- David Whyte, Hamlota, Man.**—Greatest labor-saving machine on the market. Saves me four pitchers and two teams.
- W. Setter, Russel, Man;**—Works perfectly, saves me at least \$20 a day. I can recommend it to all threshers.
- Staffin Bros., Strassburg, Sask.**—Enclosed find check for \$300, balance due on Loader. More than satisfied with it. Has saved us money outside of paying for itself.
- R. Moir, Sedley, Sask.**—To say that I am pleased with your Loader is putting it mildly. It solves the threshing problem, as I am saving six bundle teams and six pitchers.
- J. H. Francis, Indian Head, Sask.**—We are very much pleased with your Loader and consider it a great success.
- G. W. Stewart, Sedley, Sask.**—The Stewart Sheaf Loader does all you claim for it. Saves \$33 a day, in wages alone, not counting horses' feed and board for men.
- Jno. Boyd, Indian Head, Sask.**—It has given me entire satisfaction and I am satisfied that the Loader is a great success.

Orders For Loaders For this Harvest Must Be Received Early Or Delivery Can Not Be Guaranteed

For Further Information Write

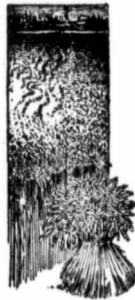
The Stewart Sheaf Loader Co.

LIMITED

804 Trust and Loan Building

WINNIPEG

MANITOBA



farmer should have an implement shed where he can store the machinery from the sun and rain when not in use. But in putting away be sure to grease the share and mould board of the plow. And always put things away as soon as you are through with them. It always seems easier to put a thing away as soon as through using it, than it does after waiting a while, besides it is off your mind.

I think every farmer should have a shop where he can repair at least the smaller breakages in the farm machinery. The shop may not be right up to date, but it will nevertheless help. Have an anvil, forge, vice, a drill hammer and a couple of pairs of tongs. This, I think, with a set of tap and dies, will make a complete outfit; and in the hands of an ordinary farmer will soon pay for themselves. The same shop



Don't Drive a Spavined Horse!

Drive the spavin away instead with

Dr. Clark's Spavin Cure

For curing spavin without blistering, it is the quickest and most powerful remedy you can use. In spavin cases of long standing, use Dr. Clark's Fire Blister together with Dr. Clark's Spavin Cure, and free your horse from this troublesome, unsightly growth.

DR. CLARK'S FAMOUS AND RELIABLE VET. REMEDIES

ARE SOLD BY ALL DEALERS

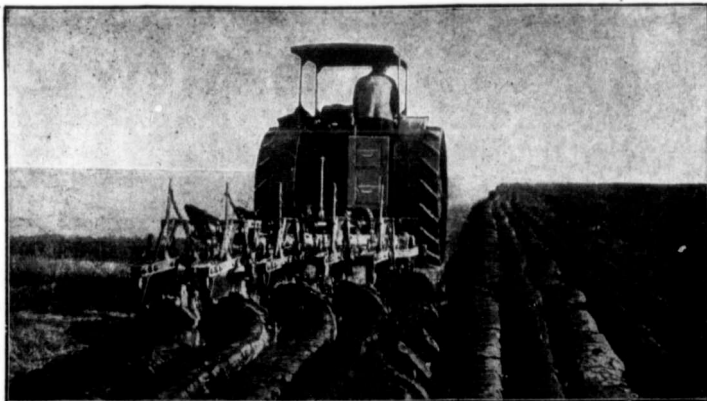
The Martin, Bole & Wynne Co., Winnipeg, Can.

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

will do for both wood and blacksmith work. With a couple of saws, a plane, a brace, a set of bits, a level, square, and claw hammer, any farmer might well be proud of. Then he will be

prepared to fix anything that may happen to break about the machinery. A great and good thing is to have a place for everything, and keep everything in its place.

IF any further evidence was needed to prove absolutely beyond question that the Avery No-Man Automatic "Self-lift" Engine Gang is the **Greatest Engine Plow on Earth**, it certainly can be found in the Results of of the Winnipeg Plow and Motor Contests.



Avery 5-Furrow No-Man "Self-lift" Plow pulled by an Avery Tractor

Look at the Table below giving the Draft per plow in the **Motor Contest**.

Then look at this Table giving the Draft per plow in the **Plow Contest**.

Class	NAME OF PLOW	DRAFT per 14-in. Plow
B	Cockshutt	752
	AVERY	660
	Case-Sattley	890
	Cockshutt	920
	Oliver	722
C	Deere	977
	P. & O.	684
	Oliver	804
	Cockshutt	874
	Deere	787
	Case-Sattley	770
	Deere	735
D	Rumely	880
	P. & O.	863
	AVERY	725
E	P. & O.	828
	Deere	817
	Rumely	834
	Case-Sattley	819
F	Case-Sattley	843
G	Case-Sattley	805
H	Case-Sattley	812
	Deere	790

Just think WHAT this all means!

Avery "Self-lift" Plows pulled the Lightest Draft of any Plow in **Every** Class in which they were entered—pulled the Lightest Draft in the **entire** Motor Contest against the six most widely advertised makes of Plows on this Continent—and pulled the lightest Draft of any Engine Gang in the Plow Contest.

And to cap it all and do the whole job up right, Avery "Self-lift" Plows also Won First Place and the **Gold Medals** in Both Large and Small Sizes in the Plow Contest.

[This plow was originated and designed by the Avery Company and is fully covered by patents Nos. 819,223; 900,919; 933,858; 936,767. We have numerous other applications for patents pending, also Canadian Patents and patents pending in Canada, and it is our intention to protect and guard our rights under these patents.

No licenses have been granted. Plows with the Avery No-Man, Automatic "Power Lift-Self Drop" device are sold only by the Avery Company, our branch houses and agents.]

Class	NAME OF PLOW	DRAFT per 14-in. Plow
A	AVERY	556
	J. I. Case Plow Co.	1160
	Rumely	763
B	AVERY	820
	J. I. Case Plow Co.	875
	Rumely	875

And that isn't all!

You will see the importance of this more clearly when you realize that **no credit was given the Avery Plow for the BIGGEST FEATURE** about it—the fact that it saves the wages and board of a man on the plow.

This feature wasn't taken into consideration at all in the judging. And it's no wonder it wasn't considered—for if it had been there couldn't have been any real contest at all—for the Automatic "Power Lift-Self Drop" Device on the Avery Plow is so far ahead of any Hand Lever Plow that there's simply no comparison possible.

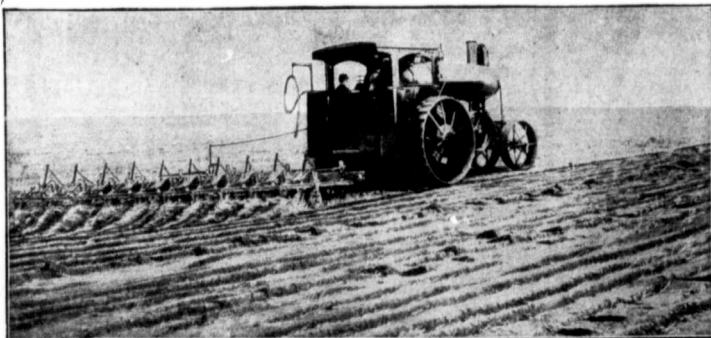
The fact, however, that this feature was not considered in the contest, is all the more credit for the Avery Plow for when it can win over the others in draft and other points and in addition to this has the "Power Lift-Self Drop" Device, it is **surely proven definitely and finally that the Avery No-Man Automatic "Self-lift" Engine Gang is in a Class entirely above and far superior to any other plow in the world.**

Think what an Avery No-Man "Self-lift" Plow really means to you: No expense for a plowman—No hard, back-breaking work raising or lowering each plow at the end of each furrow—No stopping or slacking up and losing time turning around at the ends—The lightest draft of any plow. How could you imagine any greater combination of advantages. It's no wonder W. J. Hewitt says "You couldn't give me a Hand-lift Plow" after he had bought and used an Avery No-Man "Self lift."

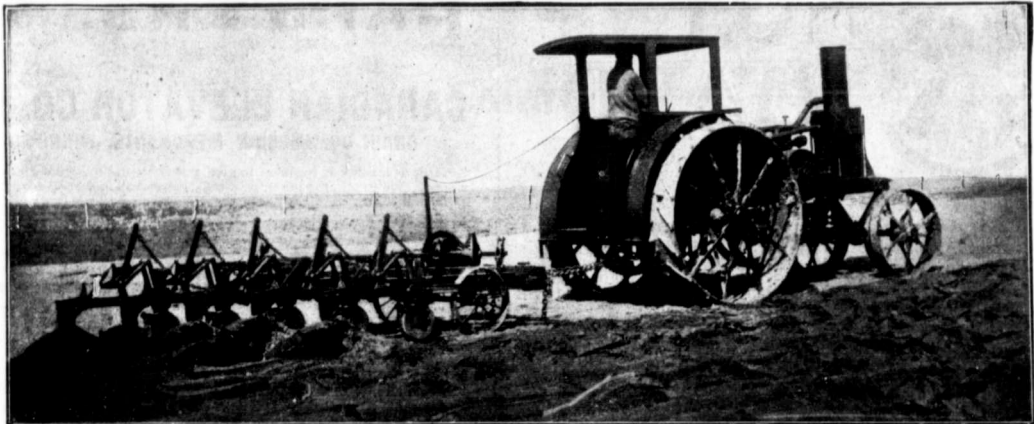
Right Now's the time to call at our Branch House or Factory or write, telephone or telegraph us for an Avery No-Man "Self-lift" Engine Gang. The Best Thing to do would be to mail your order right in to make sure you'll get one of these plows for the demand will tax our capacity to the limit. The price will be right. We assure you of that, even if you don't get it in advance—but anyhow the price doesn't make any real difference for an Avery No-Man "Self-lift" Plow pays for itself and then makes you a profit every day you use it by saving you the expense of a plowman.

AVERY COMPANY,
675 IOWA STREET, PEORIA, ILLINOIS,

HAUG BROS. & NELLERMOE CO.
Winnipeg Regina Calgary Western Canadian Distributors



Avery 10-Furrow No-Man "Self-lift" Plow pulled by an Avery Double Undermounted Steam Engine



Everything Considered—

The Winnipeg Motor Contest proves Conclusively that the Avery Tractor and No-Man "Self-lift" Plow (the One-Man Outfit) plows cheaper per acre than any other Outfit of its size built to-day.

Figure it all out from the Judges' Report. Look at the Plowing Chart in the Motor Test.

The Avery Tractor was entered in both the small Gasoline and Kerosene classes. Find the column giving the cost per acre for fuel in both classes.

Then note this fact closely—that **Every Outfit except the Avery should be charged with the wages and board of a plowman.**

Now figure it out.

Consider \$2.00 per day as the wages of a plowman and 50¢ for his board (which you know is a low figure) and you have a total expense per day of \$2.50.

Divide \$2.50 by the number of acres which each outfit would have plowed in 10 hours and get the average expense per acre for a plowman.

Now add this amount to the cost of fuel per acre for **Every Outfit except the Avery** and see what you get.

Here it is:

	NAME OF TRACTOR	Rate of Plowing, per 10-hr. day	Cost of Fuel per acre	Expense for Plowman per acre	Total Expense for Fuel and Plowman per acre	Cost per Acre More than the Avery One-Man Outfit	Per cent. of Expense per Acre More than the Avery One-Man Outfit
Gasoline Class	Canadian Heer	9.6	\$.576	\$.26	\$.836	\$.368	78%
	AVERY	13.4	.468	Nothing	.468		
	Case	14.1	.468	.177	.635	.167	35%
	Goold, Shapley, Muir	12.6	.478	.19	.668	.20	42%
	Intern'l Harvester Co.	14.9	.526	.167	.693	.225	48%
Kerosene Class	Rumely	13.2	.552	.189	.741	.157	26%
	Intern'l Harvester Co.	10.6	.444	.235	.679	.095	16%
	AVERY	11.8	.584	Nothing	.584		

These figures are all taken from the Judges' Report of the motor Contest. You can figure it out for yourself.

They show positively that the total expense per acre for fuel and a plowman was from .167 to .368 cents or 35 to 78 per cent. **more** for All the Other Outfits than for the Avery One-Man

Outfit in the Gasoline Class, and from .095 to .157 cents or 16 to 26 per cent. **More** in the Kerosene Class.

Surely no further evidence is needed to Prove that with an Avery One-Man Outfit you can plow Cheaper per Acre than with any other outfit of its size built.

And there are a Lot More Advantages in the Avery Light-weight Tractor and No-Man. "Self-lift" Plow. Call at our Branch House or Home Office, or write, telephone, or telegraph us for quick action in getting all the facts in your hands. Right now is the time to get your order in for Fall Plowing

AVERY COMPANY, 675 IOWA STREET, PEORIA, ILLINOIS,

HAUG BROS. & NELLERMOE CO., WINNIPEG, REGINA, CALGARY, WESTERN CANADIAN DISTRIBUTORS



NO. 1 HARD

August 31, 1912.

GLANCING by way of retrospect over the market of the month of August, the last of the 1911 crop year, one has to note the comparative steadiness in high grades, although in the last few days of the month No. 3 Northern in particular lost ground after it had become so scarce that shipments could no longer be readily got together. With a fine flour demand, it has been a good steady market on which to sell cars of high grade held over. Any farmer having old grain in store should remember that usually premiums for old crop disappear September 30th, and very likely will cease earlier this year, as the September movement of new crop should be heavy, and space at terminals cannot be held unduly for trifling quantities of old crop.

Commercial grades steadily improved in price throughout the month, especially feed, a very gratifying feature to many Western farmers, though probably due largely to the failure of feed stuffs in Great Britain and parts of the Continent, where rainfall has been excessive.

The situation as regards tough grain at terminals is slowly improving, though vexatious breakdowns in machinery have occurred. Some off grades have had to be sold at very low prices, as the grain had greatly deteriorated.

One lesson the Western farmer can take from the 1911 crop; dry, hard wheat can usually be advantageously kept over at home till July or August, while wheat showing the slightest tendency to moisture should be out of his hands before April.

Following the break early in the month, the October option took a waiting attitude for three weeks, till the new crop was "made." But recently crop damage in Great Britain and bad weather here, have forced the prices up about a cent; while the declines in the American speculative markets have forestalled any marked advance with us. Fine weather proved a bear factor the closing day of August.

American winter wheat crop turned out considerably above expectations, and movement was heavy to catch good prices prevailing before American spring wheat could be harvested. The United States August crop estimate gave a probable yield of both kinds of wheat, as 680,000,

000 bushels, about ten per cent. over the threshing returns of their 1911 crops.

Le Count, an American expert, has just estimated our crop at 200,000,000 bushels, of a considerably higher average grade than last year's. Recent showery weather may yet retard the ripening of some and the safe harvesting and threshing of a considerable portion of it.

Small world stocks of wheat, and the need of ready cash by farmers of the American spring wheat states should mean a ready marketing of their crops, while ours will move as rapidly to the world's markets as transportation facilities permit. A car shortage is inevitable, as well as lack of space at terminals unless much old wheat is moved out quickly, and farmers should see their names are on the Car Order Book in good time.

Countries of Western Europe are harvesting damaged crops, which must be consumed quickly, giving us the fair inference that they will be heavy buyers in the later months of our crop year. Russia has a medium crop. Altogether prospects are good for fair prices this fall, with a gradual upward trend after the autumn rush, unless early next year the Argentine has a very big crop.

Cash demand for oats and barley has improved, and October oats seem low enough, although the American oat and hay crops are both very large. But until transportation facilities improve in this country, farmers at many points will almost require to ship when they can get cars.

Flax has recently held remarkably steady, and should do better unless fine weather comes immediately, as much flax will otherwise be damaged, and October shipments will be small.

Reading.

It was a saying of Cicero's that reading softened the manners and kept us from becoming savages; but to work that effect one must read the right kind of books and follow their teaching.

There is reading that tendeth to self-indulgence, to exclusiveness, to narrowness of sympathy; and such reading has no power to soften manners, but only to harden the heart and to refine without abating the cruelty of our savagery.

FARMERS! SHIP YOUR GRAIN

TO THE

CANADIAN ELEVATOR CO. LTD. GRAIN COMMISSION MERCHANTS, WINNIPEG

It is as much our business to give satisfaction as to secure grain shipments. We watch the grading of each car and allow liberal advances on all bills of lading.

Ship your Grain to Us!

Take advantage of our experience. We never sacrifice grain that farmers ship us. We know How and When to sell on bulges, and we avoid selling on declines. Our business has been built up on our motto:

"Good Returns to Farmers"

WE HAVE BEEN ESTABLISHED FOR TWENTY-EIGHT YEARS—DON'T YOU BELIEVE OUR EXPERIENCE COULD BE MADE VALUABLE TO YOU? Our commission is ONE CENT per bushel—too small to pay anything to agents. We have no agents; you get THE FULL NET PRICE at which your grain is sold, less our 1c per bushel commission.

If your car is loaded and you cannot wait for shipping instructions, and if you are on the C.P.R. or G.T.F. Ry., ship to "McBean Bros., Fort William." If on the C.N.R. ship to "McBean Bros., Fort Arthur."

If at all possible we strongly advise loading direct from your wagon into the car, thus preserving the identity

you get paid for every bushel you put into the car. Send us a six or eight ounce sample of your grain and we will advise you its real value. Even the poorest qualities can be made to draw a good price if properly handled. We understand this business thoroughly, and those are the points that count. Write us for market prospects; you need the BEST; it means MONEY to you. We are not looking for very low prices this coming season. We are licensed and bonded.

NOTE:—A large yield of Grain this fall does not mean low prices. Europe needs every bushel of our Grain, and will be willing to pay good prices for it. Should prices get below fair legitimate value, don't sacrifice. Write us for advice.

McBEAN BROS.

ESTABLISHED SINCE 1884—AND STILL AT IT.
GRAIN EXCHANGE WINNIPEG, MAN.
REFERENCES: BANK OF HAMILTON, WINNIPEG, MAN.

Donald Morrison & Co.

ESTABLISHED 1904

GRAIN COMMISSION

711 T Grain Exchange
WINNIPEG

WE handle Wheat, Oats, Flax and Barley on commission, obtaining best possible grades and prices. Our work is prompt, accurate and reliable. Let us handle YOUR shipments this season. Daily or weekly market letter on application.

REFERENCES: Bank of Toronto, Northern Crown Bank and Commercial Agencies.

NOTE.—We have no connection with any employment agency of similar name.

HARVESTING AND THRESHER HELP

We supply Engineers', Separatormen, Firemen, Tankmen, Cooks, and all other help required for Harvesting and Threshing on short notice. Wire or write stating wages and length of season.

Hall's Red River Employment Bureau, 188 Logan Avenue

JOSEPH HALL, Proprietor

**Don't Fail to Renew Your Subscription
Before it is Too Late.**

New Grain Commission Firm

TO WESTERN FARMERS!

WE beg to announce to you the new Firm of Commission Merchants and Trackbuyers, **BLACKBURN & MILLS**, recently established by Messrs. Alex. M. Blackburn and David K. Mills. ¶ We are no strangers to many of you in our former connection, as Managers of The Grain Growers' Grain Company, Limited, and the same aggressiveness, coupled with wide experience, will assure to patrons of the new Firm a first class service in checking your grade and selling your grain to very best advantage. These are years of disappointing grades and wide spreads, and individual attention to each shipment is of extreme importance. Shippers should bear this always in mind. ¶ A liberal advance, if requested, will be sent you on receipt of shipping bill. Early shipments of new crop will bring good premiums, as high grades of old wheat are scarce. If you wish to sell on track, wire or phone us for a bid; it will pay you well to do so. ¶ Many new settlers will this year market their first cars. Write us for full particulars about shipping. It is your privilege to ship your grain to the secondary markets and so obtain, as a rule, a much higher price than by selling it on street in wagon lots. ¶ Mark your bills our advice. We are here to be of service to you. * * * * *

BLACKBURN & MILLS

Phone Main 46.

531 Grain Exchange, Winnipeg, Man.

That Winnipeg is as cosmopolitan in its industries as it is in its people is evidenced by the success that is attending practically every line of industry or business that has been properly pushed. Not least among these is the Winnipeg Rubber Co. This concern eight or nine years ago was a small one, and did a corresponding business. Today it is ranked among Winnipeg's chief industries, and while good goods and efficient service have contributed in no small manner to its growth, yet the men who have had it in charge can be looked to as the helmsmen who guided the ship into the harbor of success.

The late A. A. Andrews, whose death occurred just recently, spent the best years of his life in

An Industry That Reflects Management

building up this business. He brought it up from a mere office proposition to the wholesale rubber concern that is second to

business to that of the Winnipeg Rubber Co. His position here was that of sales manager, although to his energy and busi-



H. D. Mewhirter, Acting Manager Winnipeg Rubber Co.

none on earth. He was a man who in everything was public spirited, and anything where the growth of Winnipeg was concerned, Mr. Andrews always obeyed the call to help.

About six years ago there became associated with Mr. Andrews as sales manager, Mr. H. D. Mewhirter. Mr. Mewhirter, before coming, was with the W. S. Nott Co., of Minneapolis, who were engaged in a similar line of

ness ability is due, in no small degree, the success of the Winnipeg Rubber Co.

Mr. Mewhirter has recently been appointed acting manager, succeeding Mr. Andrews, deceased. Mr. Mewhirter brings to the business a valuable fund of experience in the rubber trade. He has handled the business from every standpoint, and there are few large purchasers of rub-

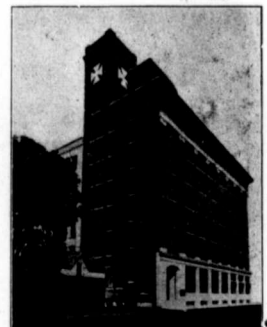
ber goods in the West who are not familiar with Mr. Mewhirter.

He is a business man in every sense of the word, and combined with his business acumen is a personality that makes a meeting with him a pleasure.

The Winnipeg Rubber Co. occupies a most magnificent building on the corner of McDermott and King streets, Winnipeg. It is 50 x 126, seven stories and basement. The first story is devoted to office and show rooms. These show rooms contain samples of practically everything in the rubber line from the largest article to the smallest. The remaining stories are used for storage purposes, where a stock of rubber goods of all lines is kept.



Offices and Warerooms, Winnipeg Rubber Co. Front View



Offices and Warerooms, Winnipeg Rubber Co. Rear View

HALF A MILLION DOLLARS IN THREE MONTHS

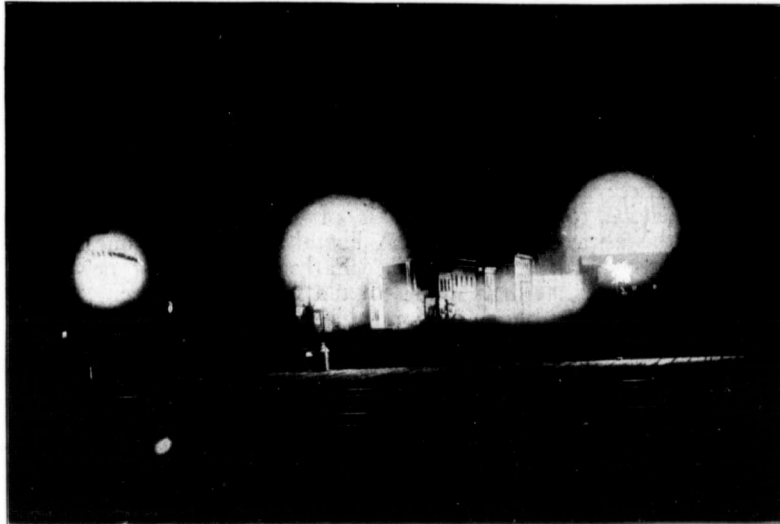
has been made this Year on Real Estate in

TOFIELD, THE NEW NATURAL GAS CITY

Every person who purchased a lot in Tofield from us in 1911 has made at least 100 per cent. on his investment—many of them have made 200 to 400 per cent. Those who buy Tofield property from us this year will, we believe, do fully as well. Our properties are all CLOSE IN—inside the Original Town Limits, and the lots are all extra large—33 and 50 feet frontage. We have the closest in and most desirable lots that can be purchased from the original owners at the original prices.

BIG DEVELOPMENTS AT TOFIELD

The Big Natural Gas Well at Tofield is attracting many important manufacturing concerns to the town. These concerns will give employment to hundreds of people. This means a rapid growth in population and a rapid increase in property values. Two more Gas Wells are now being sunk by the Town Authorities. Drilling for Oil will be started soon. Should Oil be found—and the indications are as good for Oil as they were for Gas—property values will immediately advance at least 100 per cent. Those persons who buy Tofield property from us now will get the full benefit of all future developments in the increase in value of the property.



Main Street, Tofield, Alta., Lighted by Natural Gas. Photo taken at Midnight.

TOFIELD'S MANY RESOURCES

Tofield has good transportation—two railroad lines and two more in prospect. It has NATURAL GAS, COAL—20,000 acres of it—CLAYS, the best in Western Canada for the manufacture of all kinds of Clay Products—GLASS SAND for the manufacture of Glass, and abundance of GOOD WATER, and is surrounded by one of the BEST MIXED FARMING DISTRICTS in the West. Situated near the town is BEAVER HILLS LAKE, 12 by 18 miles, one of the finest bodies of fresh water in Western Canada, which will be one of the most popular Summer Resorts in that section.

LOW PRICES—EASY TERMS—NO INTEREST—NO TAXES
Prices of lots range from \$150 to \$250. Terms: One-tenth of the purchase price in cash, and the remainder in nine equal monthly payments, without interest. No taxes to pay for 1912.

FULL PARTICULARS AND PICTURE POSTCARD FREE
Full particulars regarding Tofield, Illustrated Circulars, Plans and Price-lists of lots and Picture Postcard showing Tofield at night lighted by Natural Gas, sent FREE on application. Use the following coupon.

CANADA WEST TOWNSITE CO., LTD., 615-617 Somerset Block, Winnipeg, Man.

CANADA WEST TOWNSITE Co., Ltd.,
615-617 Somerset Block, Winnipeg, Man.

Gentlemen:—
Please send me full particulars regarding Tofield, and Picture Postcard as advertised in the Canadian Thresherman.

Name
Address

We have pleasure in introducing Messrs. A. M. Blackburn and D. K. Mills to those of our readers who may not be familiar with these gentlemen, who are nevertheless well known to a large circle of Western farmers from their long connection with the grain business in Winnipeg, etc.

They are Canadians—sons of the soil, both of them. Mr. Blackburn was born in Bruce co., Ontario, and came West with his



Mr. A. M. Blackburn

A New Grain Commission Firm

parents to Pilot Mound in 1879. In 1898 he was attracted to Wolseley, Sask., where he engaged in a general grain and mercantile business until 1903, in which year he moved to Winnipeg, joining Mr. T. C. Bulloch, under the style of Bulloch and Blackburn, grain merchants. In 1906 this partnership was dissolved, when Mr. Blackburn became first manager of the Grain Growers' Grain Company.

Mr. Mills is a native of Perth co., Ontario, where he spent his youth until 1899, when he migrated to Sault Ste. Marie., Ont., to identify himself with the Clergue Companies. He came thence to Winnipeg in 1907, joining the staff of the Grain Growers' Grain Co., and for five years held the position of secretary-treasurer and assistant manager of the company. In 1911 he became sales manager, and quite recently relinquished that position to join his old colleague in the business which is formally

announced elsewhere in this issue. Mr. Mills leaves the company to enter the new field with the best wishes of all his old associates. Both gentlemen command the kindly interest of a wide circle of friends, and with ordinary luck on the part of the great and prolific country from which they expect to win their bread and butter, their success is assured.

It is within our knowledge, and that of all who have followed the career of our friends, since they came to Winnipeg, that a very large share of the wonderful financial success which has attended the operations of the Grain Growers' Grain Company must be credited to the herculean and intelligent work both of Mr. Blackburn and Mr. Mills. That they will carry the same conscientious and indomitable effort into the new sphere may be taken for granted as also the fact that it will not fail to secure the

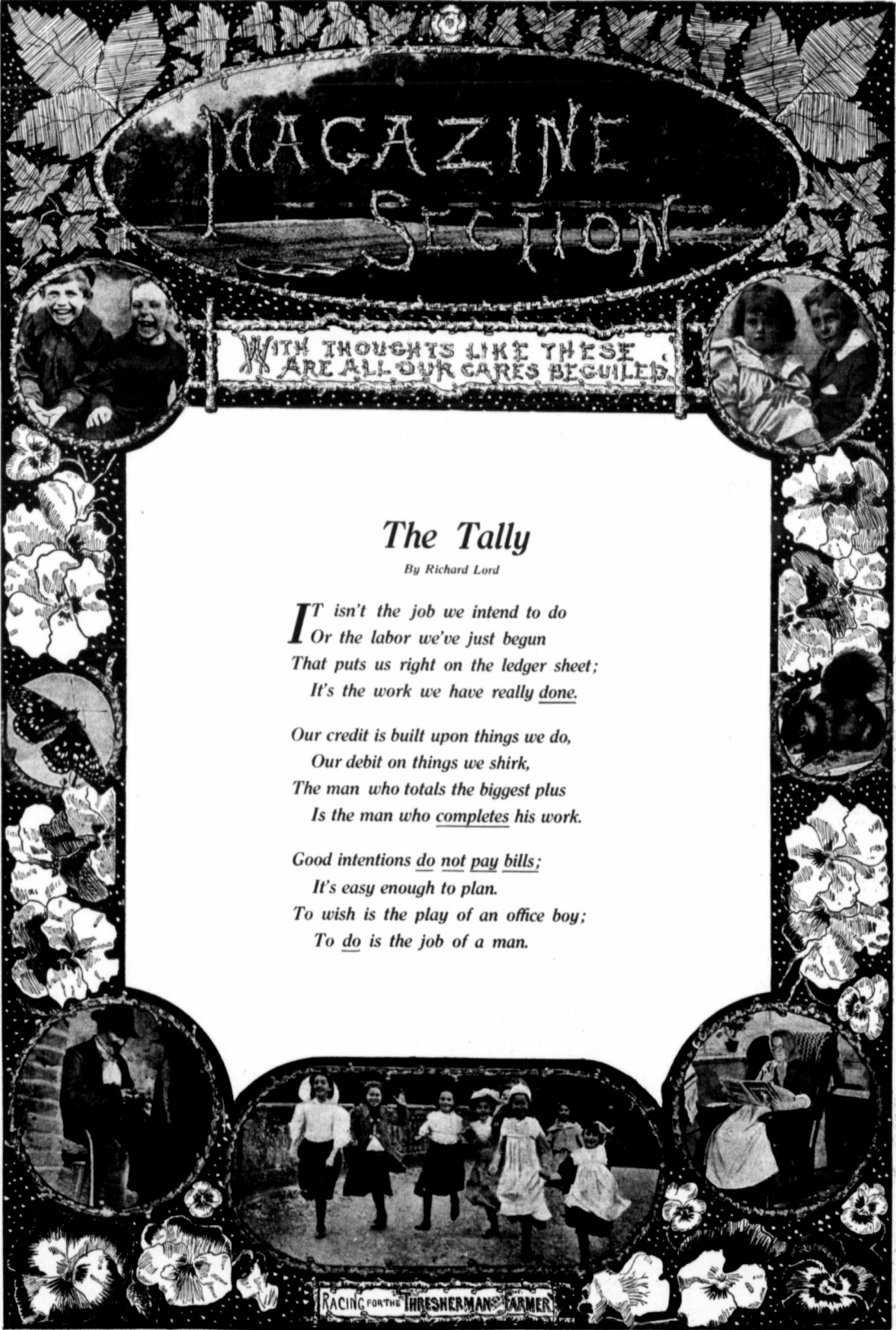
substantial reward that belongs to all well-directed labor.

Look up and not down, look out and not in, look before and not behind, and lend a hand.—Edward Everett Hale.

Almost anybody can be thrifty when he earns less than he needs. It's the unusual man who can be thrifty when he earns more than he needs.—B. J. Greenhut.



Mr. D. K. Mills



MAGAZINE SECTION

WITH THOUGHTS LIKE THESE ARE ALL OUR CARES BEGUILED

The Tally

By Richard Lord

I isn't the job we intend to do
 Or the labor we've just begun
 That puts us right on the ledger sheet;
 It's the work we have really done.

Our credit is built upon things we do,
 Our debit on things we shirk,
 The man who totals the biggest plus
 Is the man who completes his work.

Good intentions do not pay bills;
 It's easy enough to plan.
 To wish is the play of an office boy;
 To do is the job of a man.

RACING FOR THE THRESHERMAN-FARMER



The Girls' Cozy Corner

LISTEN

By Lucy E. Church.

You ask for a song, little Alice—
A song of the bees and flowers,
A song of the happy little folks
In this glad green world of ours.

Shall it be of the little goldfinch
That came to the porch one day
And plucked at the thistles' downy
seeds,
Then flew, singing "sweet sweet,"
away?

Or, come to the wood, little Alice,
Margaret, Mabel, and all,
And list to the voice of the wood-
thrush—
Its liquid silvery call.

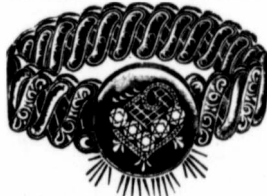
In the hedge the catbird is singing,
A wonderful singer is he;
And the bobolink's bubbling laughter
Floats over the meadows free.

Through sunshine and rain sings the
sparrow,
The swallow darts to and fro,
The phoebe calls and the robin sings,
And cheerily caws the crow.

Then listen, my dear little girls,
For the fields and meadows ring
With a thousand songs more beautiful
Than any that I can sing.

My dear Cozy Corner Girls:—So many private letters come to me from girls asking my advice that I think I shall answer some of them in a letter to all. I am always pleased to find your letters in my mail because I do love girls. Some girls feel that their parents are too strict with them and wonder why they are not allowed to go with young people that request their company. Now, my dear girls, your parents know

EXTENSION BRACELET FREE



This beautiful EXTENSION BRACELET HEAVILY GOLD-PLATED with best quality ROLL PLATE and with SIGNET SET WITH 5 WHITE-STONE BRILLIANTS, can be adjusted to fit any size wrist, GIVEN POSITIVELY FREE for selling only \$3.00 worth of fast selling POSTCARDS to sell at 6 for 10 cents all beautifully embossed in gold and colors. Write now for cards, when sold send us the money and we will send BRACELET exactly like picture by return mail POST FREE. THE POSTCARD PREMIUM CO. Dept. WINNIPEG, CANADA.

best. Until you are past twenty it is not safe for you to go with young people whom your parents dislike. They have worked hard for you and have loved you all through your childhood and they are anxious for the very best future possible for you. Now, I have known many girls who opposed their parents, and every one who did not obey her parents had a very sad life. Every time you entertain evil desires there is a black stain left in your mind. You know there are people who have thought evil things so much that they seem to poison the air for people who breathe about them. One girl tells me that a friend of hers tells her stories that she would not want her mother to hear, and she always feels mean after being with her yet she cannot stay away from her. My dear girl do not go with her no matter how much she will ridicule you. She is not a friend. Can any girl in our Cozy Corner tell me how she can tell whether a person is a friend or not?

I will tell you, girls. A friend is a person who inspires you when you are with her. When you leave her your mind feels cleaner and better and you are ambitious to be a nobler and more useful woman.

A person who does not inspire you is not your friend. Such people have little minds and they see things in a little way and the least little thing you may do will offend them. Good friends have big minds and will not allow trifles to disturb them. I want to tell you about some things that poison your minds. First—trashy reading. I see many girls read mushy stories in poor fine print and I think what a waste of time and what poison their poor minds are absorbing. A girl who reads good clean helpful reading will command a better salary than one who does not read good reading matter. I am going to tell you an experience I had when I was thirteen years old. I talked so much and so fast and I presume so senseless one time at the tea table that my father said: "If you will not say another word till you go to bed I will give you a dollar." Now he never meant that but I immediately took him at his word. You see he really was tired of my talk and wanted me to be quiet. But I immediately closed my mouth, ate no more supper and did not say another word until I went to bed. The next morning he gave me the dollar. That was the first dollar I ever earned. Now how do you think I spent it? I saw in a magazine ten dime novels for sale for a dollar. For a long time I had studied these titles and how I had longed to read them! Their titles suggested all kinds of silly love stories. At any rate I sent for them and when they came I was delighted with the light-minded stuff. I do hope my Cozy Corner girls will never be so foolish. But, girls, what do you think happened? Just as I was half way through one of the prized books, they all disappeared. My mother, of course, had made use of them in kindling the fire, I presume. I never saw them again and I am glad now that I did not, for if my time had been spent thus, I never would have been as happy as I am to-day. If a girl tells me what she reads, I know what she is. I hope my Cozy Corner girls read good books. Shall I write to you next month and tell you more of the problems girls ask me about? Trusting you are all useful and happy, I am, sincerely, Cousin Doris.

Langbank, Sask.
Dear Cousin Doris,—I have not written to your paper before, but have read the letters in the Children's page, and enjoyed them very much. I am going to tell you about our Fridays at school. Directly after the last recess, we all vote for a chairman, who takes the teacher's chair, and calls out the program for a concert. We generally have five or six recitations and a dialogue or two. When that is over we have either a spelling bee, riddle match, arithmetic match or a game called "My ship came home from China." I will tell you how to play it. There are two sides chosen and one letter picked out to play with. The captain of one side says to the other: "My ship came home from China and what was it laden with?" The one that is asked has to say something that begins with the letter that has been chosen, for example, if the letter was "B" they could say "biscuits" or anything beginning with that letter.

We close our concert by singing a verse of "God Save Our King" or "The Maple Leaf Forever" and I think that is a very good way to spend a Friday afternoon in schools where something different is held on that day. Now I must close, wishing your Club every success. Your loving Cousin, Grace Lawrence (age 14).

Bedford, Man.
Dear Cousin Doris,—I should like very much to become a member of your interesting Club. I am a little eleven-year-old English girl, and I have been out in this new land for one year and four months. I like the beautiful winters we have here, but not the sweltering summers. When we first came to Canada we went for two months to a farm in Morris and there we saw many very interesting things. The farmer with whom we stayed had ten horses, to one of which my little brother took a special liking. It was a little mare called Belle, who was very gentle and easy to manage. After two months we came to Winnipeg for the summer and then came down here, as my father had employment as foreman of wood loaders. So you see he is neither a thresherman or a farmer, though he takes that paper and likes it very much indeed. We live in a little log house, which at first had only one room, but mother hung curtains right across and made it into two. I saw the letter from Vera Coles, and think it very nice. I, too, spent a very enjoyable time at Herne Bay in one of my summer holidays. I have some pretty pets, two cats and a dog. The cats are Sandy and Beauty, the dog is Frisky. I remain, your cousin, Netta White.

Fleming, Sask.
My Dear Cousin Doris,—This is my second letter to your charming club. Well, I am enjoying myself this week. We have got some friends here, and we go sleighing every day in winter. We have a dandy time. I guess you would like to join us. I gained a nice correspondent since I last wrote. Her name is Aimee Love. At Fleming a while ago we had a fancy dressed skating carnival, but I did not go. I went last year as a Dutch Girl. My friend, Annie R., went as Red Riding Hood. I have not been going to school lately, but I hope to go soon. I would very much like to see the photograph of you and your

little girl if it is possible to produce it. Dear Cousin Doris, as we are only supposed to write on one side of the paper, I must conclude. With love to all the cousins. I remain, yours truly,—Bertha Pierson.

Shoal Lake, Man.
Dear Cousin Doris, — I was very much interested in the Girls' Cozy Corner, so I thought I would write to you. I wanted to write so as to make the club the largest in Manitoba, or at least around here. At present the Prairie Chicken Club is trying to get up higher than ever, but there are not so many now; they seem to be dropping off once in a while. Well, I will now close. Hoping I shall see my letter in print. Wishing the club every success. From—C. May Brockwell.
Yes, let us make ours the largest club in Manitoba.—C. D.

BOY'S COWBOY SUIT FREE

THIS WILD-WEST COSTUME, made of Khaki drill, has shirt with turned down collar and red necktie, fringed trousers and large Khaki Cow-boy Engraved. We have all sizes from 2 to 14 years. Any boy can earn one very easily selling only \$1.00 WORTH of our high grade postcards at 6 FOR one cent. Our cards are all fast sellers and all sizes included. For girls we have a COWGIRL SUIT all ages from 2 to 14 years. Write now for cards, sell them, return the money and we will send the suit by return. THE POSTCARD PREMIUM CO., Dept. WINNIPEG, CANADA.

WATCH RING AND CHAIN FREE

We positively give Free a Stem Wind, Stem Set. Beautifully Engraved. Watch equal in appearance to any Watch sold, and a beautiful gold-plated Ring, for selling only \$4.50 worth of our high grade postcards at 6 for 10c. Order the pictures and when sold send us the money and we will positively send the Watch, Ring and Chain.
THE POSTCARD PREMIUM CO., DEPT. C.T. WINNIPEG, CANADA.

DAINTY DRESSED DOLL

GIVEN FREE FOR SELLING XMAS BOOKLETS
This large and beautiful doll is about two feet in height, and is dressed in the very latest style direct from Paris. Her costume is made of fine silk trimmed with Irish lace, and she has a very stylish hat. We believe it is one of the prettiest dolls ever shown. Given absolutely free for selling only \$3.00 worth of our high grade embossed and colored postcards at 6 for 10c, including Thanksgiving, Halloween, Birthdays, Comics, Views Christmas and New Years. All our cards are quick sellers. Write now for postcards and when sold send us the money and we will send the Doll by return.
THE JONES MFG. CO., DEPT. C.T. WINNIPEG, CANADA.



The Canadian Boys' Camp

WHIP-POOR-WILL.

By Alice Annette Larkin.
Do you ever stop and listen
To the music of the birds?
Why, sometimes I almost peep on
I can understand their words.
Robin Redbreast makes me jolly,
But sometimes when all is still,
There's a bird that makes me angry
When he warbles, "Whip-poor-Will!"

Now I pity that poor fellow—
Who he is I do not know—
'Spect he's been most awful naughty
For that bird to treat him so.
I can't see why other fellows,
Ted or Jack or Tom or Phil
Shouldn't get their share of scoldings,
But it's always, "Whip-poor-Will!"

Maybe he won't mind his mother
When she sends him to the store;
Maybe once the teacher caught him
Throwing spit-balls on the floor.
Pr'aps that bird peeks in the window,
And that's why in accents shrill,
You can hear him if you listen,
Always saying, "Whip-poor-Will!"

I have asked my pa to tell me
Who that naughty boy can be,
But he only answers shortly
That he hopes it isn't me;
Just as if my name was William,
Why, it isn't even Bill!
Hope he won't forget it's Robert
When that bird says, "Whip-poor-Will!"

Billy Jones says he ain't naughty,
He can prove it by his ma;
She believes in moral suasion,
Says it does more good by far.
I should think that it would scare him
When that cry comes sharp and shrill,
And that bird, the same as ever,
Keeps a-saying, "Whip-poor-Will!"

Billy Jones ain't scared of nothing,
And he says he doesn't care
Who that bird means when it's calling,
For there's Williams everywhere.
Just the same I'll always wonder
When that cry comes sharp and shrill,
Who's the boy that's been so naughty
That a bird says, "Whip-poor-Will!"

Dear Campers:—May I visit you to-day? I like boys' camps because there is so much sunshine in them. Boys are usually happy, you know. Sometimes I think they are happier than girls. (Do not tell them I said this.) This summer I have seen all kinds of boys. Most of them were manly and kind and energetic. Two fine little fellows that I know were courageous little men. Near them lived a boy who swore and did all kinds of cowardly acts. He would run away as soon as he saw the owner come near something of the boy had destroyed. Just the kind of a boy who would do a mean thing and then run from it. He was the only boy in his home, and he had two younger sisters. Now do you think he will be a helpful considerate brother?

Now the two boys who lived next door heard him swear and saw him destroy things but they never attempted to use bad language, or injure other children's property. This boy could not influence them to be bad. Now who will be the best and strongest men?

Thank you for listening to me. How cosy you are in the camp! Now do you want me to tell you a true Indian story told by the daughter of an Indian chief? It is about the Duke of Connaught our noble Governor General of Canada—a man whom we all admire and respect. I am going to quote the story as it came from the pen of the daughter of the Indian chief:

A Royal Mohawk Chief.

How many Canadians are aware that the Duke of Connaught, and only surviving son of Queen Victoria who has been appointed to represent King George V. in Canada, they undoubtedly have what many wish for—one bearing an ancient Canadian title as Governor-General of all the Dominion? It would be difficult to find a man more Canadian than anyone of the fifty chiefs who

compose the parliament of the ancient Iroquois nations, that loyal race of redskins that has fought for the British flag through the wars against both the French and the colonists.

Arthur Duke of Connaught is the only living white man who today has an undisputed right to the title of "Chief of the Six Nations of Indians" (known collectively as the Iroquois). He possesses the privilege of sitting in their councils, of casting his vote on all matters relative to the governing of the tribes, the disposal of reservation lands, the appropriation of both the interest and principal of the more than half a million dollars these tribes hold in government bonds at Ottawa, accumulated from the sales of their lands. In short, where every drop of blood in his royal veins red, instead of blue, he could not be more fully qualified as an Indian chief than he now is, not even were his title one of the fifty hereditary ones whose illustrious names composed the Iroquois confederacy before the pale face ever set foot in America.

It was on the occasion of his first visit to Canada in 1869, when he was little more than a boy, that Prince Arthur as he was then called, received upon his arrival at Quebec, an address of welcome from his royal mother's Indian children on the Grand River Reserve, in Brant county, Ontario. In addition to the welcome they had a request to make of him: would he accept the title of chief and visit their reserve to give them the opportunity of conferring it?

One of the great secrets of England's success with savage races has been her consideration, her almost reverence of native customs, ceremonies, and potentates. She wishes her own customs and Kings to be honored, so she freely accords like honor to her subjects, it matters not whether they be white, black or red.

Young Arthur was delighted—royal lads are pretty much like other boys; the unique ceremony would be a break in the needless round of state receptions, banquets and addresses. So he accepted the Red Indians' compliment, knowing well that it was the loftiest honor those people could confer upon a white man.

It was the morning of October first, when the royal train steamed into the little city of Brantford, where carriages awaited to take the Prince and his suite to the old Mohawk church in the vicinity of which the ceremony was to take place. As the Prince's special escort, Onowanysyoh, head chief of the Mohawks, rode on a jet-black pony beside the carriage. The chief was garmented in full native costume—a buckskin suit, beaded moccasins, headband of owl's and eagle's feathers, and ornaments hammered from coin silver that literally covered his coat and leggings. About his shoulders was flung a scarlet blanket, consisting of the identical broadcloth from which the British Army tunics are made; this he hunched with his shoulders from time to time in true Indian fashion. As they drove along the Prince chatted boyishly with his school boys. On reaching the church, Arthur leaped lightly to the green sward. For a moment he stood, rigid, gazing before him at his future brother chiefs. His escort had given him a faint idea of what he was to see, but he certainly never expected to be completely surrounded by three hundred full-blooded Iroquois braves and warriors, such as now encircled him on every side. Every Indian was in war paint and feathers, some stripped to the waist, their copper-colored skins brilliant with paint, dyes and patterns; all carried tomahawks, scalping-knives and bows and arrows. Every red throat gave a tremendous war-whoop as he alighted which was repeated again and again, as for that

half moment he stood silent, a slim boyish figure, clad in light grey tweeds—a singular contrast to the stalwarts in gorgeous costumes who crowded about him.

His young face paled to ashy white-ness, then with true British grit he extended his right hand and raised his black 'billy-cock' hat with his left. At the same time he took one step forward. Then the war cries broke forth anew, deafening, savage, terrible cries, as one by one the three hundred filed past, the Prince shaking hands with each one, and removing his glove to do so. This strange reception over, Onowanysyoh rode up, and, flinging his scarlet blanket on the grass, dismounted, and asked the Prince to stand on it. Then stepped forward an ancient chief, father of Onowanysyoh and speaker of the Council. He was old in inherited and personal loyalty to the British crown. He had fought under Sir Isaac Brock at Queenston Heights in 1812, while yet a mere boy, and upon him was laid the honor of making his Queen's son a chief. Taking Arthur by the hand this venerable warrior walked slowly to and fro across the blanket, chanting as he went the strange formula of induction. From time to time he was interrupted by loud expressions of approval and assent from the vast throng encircling braves, but apart from this no sound was heard but the low, weird monotone of a ritual older than the white man's foot prints in North America.

It is necessary that a chief of each of the three 'clans' of the Mohawks shall assist in this ceremony. The veteran chief, who sang the formula, was of the Bear clan. His son, Onowanysyoh, was of the Wolf (the clanship descends through the mother's side of the family). Then one other chief, of the turtle clan, and in whose veins coursed the blood of the historic Brant, now stepped to the edge of the scarlet blanket. The chant ended these two young chiefs received the Prince into the Mohawk tribe, conferring upon him the name of 'Kavakonde', which means the sun flying from East to West under the guidance of the great spirit. Onowanysyoh then took from his waist a brilliant deep red sash, embroidered with beads, porcupine quills and dyed moose hair, placing it over the Prince's left shoulder and knotting it beneath his right arm. The ceremony was ended. The constitution that Hiawatha had founded centuries ago, a constitution where in fifty chiefs, no more, no less, should favour the parliament of the 'Six Nations' had been shattered and broken, because this race of loyal red men desired to do honor to a slender young boy-prince who now bears the fifty-first title of the Iroquois. Many white men have received from these same people honorary titles, but none has been bestowed through the ancient ritual, with the imperative members of the three clans assisting, save that borne by Arthur of Connaught. After the ceremony the Prince entered the church to autograph his name in the ancient bible which, with a silver holy communion service, a bell, two tablets inscribed with the ten commandments, and a bronze British coat-of-arms, had been presented to the Mohawks by Queen Anne. He inscribed 'Arthur' just below the 'Albert Edward', which, as Prince of Wales, the late King wrote when he visited Canada in 1860. When he returned to England, chief Kavakonde sent his portrait, together with one of Queen Victoria and the Prince Consort, to be placed in the Council House of the 'Six Nations' where they decorate the walls today.

As I write, I glance up to see, in a corner of my room, a draping scarlet blanket, made of British army broadcloth, for the chief who rode the jet-black pony so long ago was the writer's father. He was not here to wear it when Arthur of Connaught again set foot on Canadian shores. Many of these facts I have culled from a paper that lies on my desk; it is yellowing with age, and bears the date, "Toronto, October 2, 1869" and on the margin is written in a clear, half-boyish hand, 'Onowanysyoh, with kind regards from your brother chief, Arthur.'

E. Pauline Johnson (Tekahionwake).

Now boys this is a true story and is a genuine chapter in Canadian history. I want to tell you something about E. Pauline Johnson, whose Indian name is Tekahionwake and who is the daughter of Onowanysyoh, the Indian chief who was the principal one in making the Duke of Connaught a chief.

She is a woman of fine literary ability and has written beautiful Indian legends that have never before been related outside the Indian language. They are valuable to Canadian history. When Pauline Johnson was young she was a brilliant and magnetic reader and charmed audiences throughout Canada and in England. Like the true Indian, she never became wealthy thinking that in her old age she would write for her support. But after settling in Vancouver she was stricken with a malady that will end her days in a short time. She is now in Bute Street Hospital, Vancouver. She has no means of support save the proceeds of her book of Indian Legends which her nurse sends for two dollars to anyone who writes to her for it.

Pauline Johnson and her ancestors have figured importantly in Canadian history, and does it not seem a pity that she should suffer from poverty during her old age? When I read about the scarlet blanket and that it still in her possession, I thought what a fine idea it would be to start a movement among Canadian boys to collect a fund for the purchase of the blanket to present to the Duke of Connaught—that is if it could be bought for this purpose. The fund would do much to aid Pauline Johnson financially. This is just a hint; but the book can be purchased by writing for it and that will help her. I have read the legends and I think they are splendid just what boys like.

Well, boys, I have taken up all the space this month in this visit. Shall I visit you again? Now I shall look for a letter to our camp from every boy who reads our department.

Wishing you all success, I am sincerely,

Cousin Doris.

STEAM FREE ENGINE
This Stationary Steam Engine has brass lacquered boiler with safety valve, whistle and stack, steel fire box with spirit burner, fly wheel with speed regulator on metal pedestal, entire engine on wood base. We give it to you free for a few hours work selling our beautiful lithographed postcards, including Thanksgiving, Christmas, Halloween, New Year's, Birthdays and others. Write for \$4.00 worth of postcards, and when sold send us the money and we will forward Engine by return.

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Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



A SONG OF SUMMER.

(From Woman's Companion.)

The ship glides in at the harbor's mouth;
And the ships sail out to sea;
And the wind that sweeps from the
sunny south,
It is sweet as sweet can be.
There's a world of toil and a world of
pain;
There's a world of trouble and care;
But oh, in a world where our Father
reigns
There is gladness everywhere!

The harvest waves in the breezy morn,
And the men go forth to reap;
The fulness comes to the tasseled corn,
Whether we wake or sleep;
And far on the hills by feet untrod
There are blossoms that scent the air,
For oh, in this world of our Father, God,
There is beauty everywhere!

The babe lies soft on the mother's breast,
And the tide of joy flows in.
He giveth, He taketh, He knoweth best,
The Lord to whose honor we win.
And oh, when the soul is with trials
tossed,
There is help in the lifted prayer!
For never a soul that He loves is lost.
And our Father is everywhere.

The ships sail over the harbor bar,
Away and away to sea.
For the ships sail in with the evening
star,
To the port where no tempests be.
The harvest wave on the summer hills,
And the hands go forth to reap;
And all is right, as our Father wills,
Whether we wake or sleep.

PAULINE JOHNSON.

A woman who has rendered important services to Canada is now very ill at Bute Street hospital, Vancouver. She cannot recover and will not be with us long, and Canadian women have an opportunity to make her last days comfortable.

Her friends are sending her messages of good will from different parts of the Dominion as well as the Old Country, and these words of cheer are a tonic to her that lifts her beyond her physical suffering.

This woman is Pauline Johnson, (Tekahionwake). She is the daughter of Onawanonyshou, who was Head Chief of the Six Nations Indians. Her mother was Emily S. Howells—a woman of English parentage. She is related to William Dean Howells. Her father was one of the renowned Algonquin tribe that was one of the fifty noble families which composed the Iroquois. For their loyalty to the British Crown they were granted the magnificent lands bordering the Grand River in the Country of Brant, Ontario, on which the tribe still lives. The loyalty of her ancestors breaths in her prose and poetic writings.

Her writings have been published in most of the high-grade magazines.

After her writings brought her into notice, she appeared on the public platform as a reader of her own poems. She had natural talent and marked ability combined with personal magnetism, and was exceeding popular with her audiences from the Atlantic to the Pacific. In England she gave many recitals in fashionable drawing rooms and appeared under the patronage of Lord Strachcona.

Her books of poems are entitled "The

White Wampum" and "Canadian Born."

After sixteen years of travelling, she decided to give up her public work and devote herself to literary work. But the exposures and hardships she had endured were too much for her and she suffered physical breakdown. She has been an invalid for more than a year and could not write. She has no funds and true to her race is too proud to accept charitable gifts; some of the leading citizens of her adopted city, Vancouver, anxious to provide for her needs, therefore collected and published her beautiful Indian Legends and a series of boy's stories. These legends were told her personally by her friend, an Indian chief whom she met in London in 1906 when he was received at Buckingham Palace by their Majesties King Edward VII and Queen Alexandra.

When she returned to the Pacific Coast, he told her these legends from time to time and he frequently remarked that they had never been revealed to any English speaking person save himself.

The legends are beautiful and one cannot read them without longing to be cleaner and kinder and better. Her writings are valuable to Canadian history.

I give here a few quotations from her legends. From the legend of Siwash Rock:

"For a time we paddled slowly; the rock detached itself from its background of forest and shore, and it stood forth like a sentinel—erect, enduring, eternal. "Do you think it stands straight—like a man?" he asked.

"Yes, like some noble-spirited, upright warrior," I replied.

"It is a man," he said, "and a warrior man, too; a man who fought for everything that was noble and upright." "What do you regard as everything that is noble and upright, Chief?" I asked, curiously as to his ideas. I shall not forget the reply: it was but two words—astounding, amazing words. He said simply: "Clean fatherhood."

Through my mind raced tumultuous recollections of numberless articles in yet numberless magazines, all dealing with the recent "fad" of motherhood, but I had to hear from the lips of a Siwash Indian Chief the only treatise on the nobility of 'clean fatherhood' that I had yet unearthed. And this treatise has been an Indian legend for centuries; and lest they forget how all important those two little words must ever be, Siwash Rock stands to remind them, set there by the Deity as a monument to one who kept his own life clean, that cleanliness might be the heritage of the generations to come."

Again in the same legend:

"The young chief had proved himself to be an excellent warrior, a fearless hunter, and an upright, courageous man among men. His tribe loved him, his enemies respected him, and the base and mean and cowardly feared him.

He fought his tribal enemies like the savage that he was. He sang his war songs, danced his war dances, slew his foes, but the little girl wife from the north he treated with the deference that he gave his own mother, for was she not to be the mother of his warrior son?"

"There is an ancient custom amongst the Coast tribes that when our daughters step from childhood into the great world of womanhood the occasion must be one of the extreme rejoicing. The being who possesses the possibility of some day mothering a man child, a

warrior, a brave receives much consideration in most nations, but to the Sunset Tribes, she is honored above all people."

In another legend an old Indian grand mother says in speaking of her new born grand daughter:

"Very pleased, very good luck. Very good sign first grandchild to be a girl. I tell you why: girlchild maybe some time mother herself; very grand thing to be a mother."

Again from the lips of a chief:

"Long time ago, this strange thing happened. (It is a tribute to motherhood.) Women are the future mothers of the tribe, and we the Pacific hold such in high regard, in great reverence. The women who are mothers—they are the important ones we say. Warriors, fighters, brave men, fearless daughters, owe their qualities to their mothers—is it not so?"

Pauline Johnson's references to nature make the reader feel that he stands in a holy atmosphere. I wish I might have space to quote more.

She says: "These legends must have originated in some mighty mind and better than that, they all tell of the Indian's faith in the survival of the best impulses of the human heart, and the ultimate extinction of the worst—The Coast Indian's considered quality the first qualification in man.

Almost without exception their legends deal with rewards for tenderness and self abnegation, personal and mental cleanliness.

Pauline Johnson's legends of the Coast will be sent for Two Dollars to anyone who writes to her at Bute Hospital, Vancouver. Her nurse will see to sending the book. I make this appeal to Canadian women who would like to help a Canadian woman who is leaving a valuable historical contribution to her country and who has not enough money to make her last days comfortable. She is suffering from a malady that cannot be cured. Her legends are a valuable contribution to any library.

Rose Hawthorne Lathrop, a daughter of Nathaniel Hawthorne, has retired from the world to become a nun and a Servant of Relief in St. Rose's Free Home for Incurable Cancer, founded by herself. Soon after embracing the catholic faith some years ago, she learned of the horrors of cancer, and determined to devote her life to the relief of sufferers from cancer.

St. Petersburg has now its woman chauffeur, its woman professor of anatomy, and its first Duma Bill allowing women to become lawyers. Russian feminism is winning all along the line. Other parts of Russia are acclaiming women merchants, and a Black Sea port has produced a woman ship-designer who has got an order to design a Caspian Sea steamer for the "Kavkaz and Mercury" Line. Six enthusiastic male feminists recently held a dinner at Cubat's restaurant to celebrate these triumphs, and across their tables was a sugar model of the new Ocha—St. Petersburg bridge—on which three women engineers were lately at work.

"Practice makes perfect" in all the arts and handicrafts, it would seem, barring that of penmanship. In that, apparently, the more one practises the more imperfect becomes the result produced, and your real man of the pen writes—in seven cases out of ten—a hand that would reflect discredit on his own housemaid.

HOME ECONOMICS.

The Sec. of a Home Economics Club in Saskatchewan writes me that she enjoys this department because she likes to know what the Manitoba clubs are doing. Now the Manitoba women want to know what the Saskatchewan clubs are doing. Will the Saskatchewan women kindly write and tell us? P.R.H.

Swan Lake.

The postponed July meeting of the Home Economics was held on Saturday afternoon, August 3rd, on the lawn in front of Mrs. Gardner's house.

The opening of the meeting was deferred until 3:30 on account of the tardy arrival of many of the members and after the President, Mrs. G. B. Gordon, had explained the reasons for the postponement of the July meeting, the usual business was proceeded with by the Secretary, Mrs. Hartwell, reading the minutes of the last meeting, which were adopted as read.

The President then asked whether it would meet the convenience of the members if the opening hour during the summer months, were changed to 4 o'clock, but the majority being in favor of 3 that time was retained.

The President also read a letter from Mrs. McCharles, President of the H. E. Societies of Manitoba, giving an account of the International Congress of Women's Work which is to be held at Lethbridge, Alta, in October, and asking for a donation to help maintain an exhibit there; after discussion the Corresponding Secretary was asked to forward \$5. on behalf of the Swan Lake H. E. S. with best wishes for the success of the Congress.

The programme which was 'Cool Drinks and Desserts,' was very interesting though only Cool Drinks were discussed. Three recipes which were new to the club are given below, and Mesdames Gordon (President) W. H. Couch and Herbert discussed the various ways of making Raspberry Vinegar and Mrs. A. T. Downey proved that Choke Cherry Vinegar made on the same lines is a pleasant summer drink.

Mrs. Downey also gave a valuable contribution in the suggestion that a pinch of salicylic acid added to each pan full of fruit, pickle or catsup would act as a splendid preservative and prevent souring and fermentation.

The next meeting will be held on Saturday, August 31st and the programme will be 'School Lunches' a paper provided by the President and read by Mrs. A. E. Downey, and 'Preserving Fruits' by Mrs. Shirley and Miss Ashdown.

Headingly.

The regular meeting of the Headingly H. E. S. was held at the home of Mrs. L. Francis on July 3rd.

Owing to inclemency of the weather and the absence of several of the officers no meetings have been held since April.

Since our last meeting we are sorry to say that we have lost our very able President who has gone to Victoria to live. In losing Miss Crowley from our midst we lose not only a friend but also, one who has taken a very keen interest in our society and her place will be very hard to fill.

After the general business of the meeting had been dwelt with, a very lively discussion then followed as to what work the society could take up that would be of some special benefit

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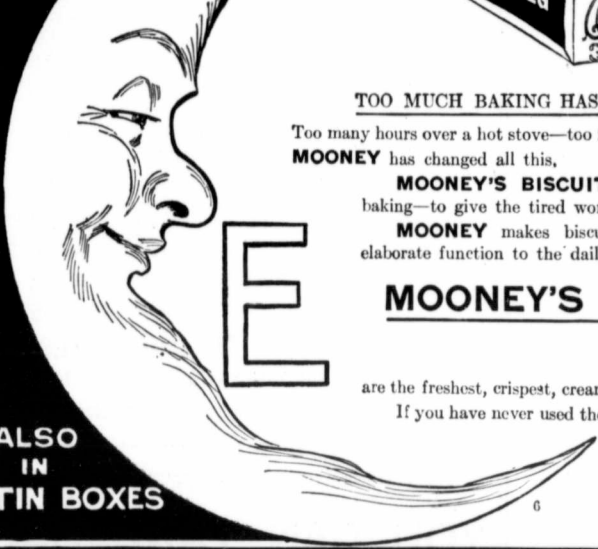
are the freshest, crispest, creamiest, biscuits ever made.

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They sell in dainty packages or tin boxes
—in either case free from every adulteration

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ALSO
IN
TIN BOXES



to the community. It was finally decided that we undertake the work of keeping the cemetery in order and to beautify it as much as possible. Owing to the lateness of the season very little could be done this year, but it was thought we could prepare for next year by holding garden parties throughout the remainder of the summer, and concerts in the winter, to raise funds to pay for any labor that may be required. Our first garden party is to be held on July 24th. Admission 10 cents.

The rest of the afternoon was spent in distributing the books of the Traveling Library which had just arrived. Miss Buchanan then favored us with a recitation and Mrs Francis afterwards served tea.

Manitou, Man.

Our July meeting of the Manitou Home Economics meeting was held on Saturday July 20, at the home of Mr. and Mrs Hamilton, which proved to be an excellent place for such an occasion; a beautiful lawn, shade trees, and flower beds seemed to be just what one can enjoy most at this time of the season. I think all present seemed to enjoy the afternoon. Quite a number of visitors were present and several passed in their names, wishing to become members of the Society. Mrs. R. R. McTavish gave a demonstration on preserving fruit without either sugar or water. The members took a lively interest in the discussion, and I think quite a number were impressed with the idea of trying the preserving in this way. She said she prepared the fruit clean and dry, then cooked it by putting the sealers in water. Next we had a reading on the report of the Ontario Woman's Institutes by Mrs. G. Armstrong. The President brought several pages of the "Womens Page" taken from the Farmers Tribune, which she had saved for some time back, and distributed them among the members. I have read mine and found very useful information in the page. She also suggested that each member should try to send to at least one person in the far west, who are not so fortunate in receiving literature as we are. Anyone wishing to, can find out such person or persons by writing to

the Aberdeen Department of the Industrial Bureau, Winnipeg. After the regular business was disposed of all were invited to the lawn where tea and ice cream were served. Long tables were beautifully arranged under the shade trees, and all appeared to enjoy that part of the social quite as well as the other. Before the close of the social several musical selections were enjoyed, and also a hearty vote of thanks were tendered Mr. and Mrs. Hamilton and family.

Mrs. T. A. Pybus, Correspondent.

Minnedosa.

The July meeting of the Minnedosa Home Economics, was held at the pretty country home of Mrs. Cooper, the President.

There was a good attendance and a very pleasant afternoon was spent, though rather unsettled weather prevented the ladies having their tea in the garden as had been intended. There was a good deal of discussion about the show which had been held the week before, some improvements were suggested for next year. Mrs. Sprague gave a very interesting talk on the canning of fruits and vegetables. After carefully explaining the general method to follow in canning, Mrs. Sprague showed sealers of canned fruit and vegetables which looked exceedingly tempting; a sealer of pears had been canned several years ago but looked as fresh as if done the day before. Mrs. Sprague used a special kind of sealer, obtained only in the United States, and never has any trouble with fermented fruits or vegetables. These sealers act on the vacuum principle and require new caps each year, this means but a small outlay and is well worth while as the results are so good.

Mrs. Cooper gave a short address on preserved fruits and showed sealers of the wild and cultivated fruits, explaining her method of canning and preserving with ordinary sealers. The singing of "God Save the King" closed a very pleasant meeting.

E. M. Ewens, Sec Treas.

I, too, have used the sealers mentioned above with great success. One year I moved canned fruit about a thousand

miles and the fruit in these sealers kept when it fermented in the other kind. These sealers can be purchased in Canada.

P. R. H.

Birtle.

The following is the report of the Birtle H. E. Society for July.

The H. E. Society met in the Town Hall Saturday, July 6 with a large number of ladies in attendance. After the usual opening exercises and roll call we were favored with an instrumental by Mrs. Cartwright. Then followed an address by our prominent lawyer Mr. L. H. G. Stubbs on "Manitoba Laws in Regard to Women," Mr. Stubbs said that women now were beginning to hold the position in the world that was their right. Until very recent years woman was considered a mere chattel of man but she was now considered his equal in every respect, and as such should enjoy the rights and privileges accorded man. There should not be one law for woman and one for man but a common law for both, and he thought it time women were asserting themselves to gain their ends even though they had to resort to such violence as smashing windows, destroying property etc. He said no reforms had ever been granted men without resorting to extreme measures and women might expect to do the same to gain their rights. The interesting instructive address was listened to with great interest, questions were asked and discussion entered into by many. A hearty vote of thanks was tendered Mr. Stubbs at the close of his address.

The meeting closed by singing the National Anthem.

Miss Ema Yeandle, Sec. Treas.

Opportunities are very sensitive things; if you slight them on their first visit, you seldom see them again.

To enjoy today, don't worry about tomorrow.

We always may be what might have been.

Necessity is the brave man's hope, not the coward's excuse.]

Mother's Corner

THE SOUL IN HER EYES.

By George Lawrence Andrews.

The lyric joy of Spring was in the air,
And filled the fields below and skies above,
When in her eyes of dusk, so large and fair,
I saw through mists of joy the Soul of Love.

But when another Spring was golden bright,
She held a tender form with joy benign;
Then in her eyes that glowed with wondrous light
I saw the Soul of God and Things Divine.

Letters come to me every day asking for the booklet entitled "Helps for Expectant Mothers" which we send free to any mother who writes for it. It is a pity that the Immigration department urges every inducement to attract people to our great new country, and then neglects to provide safe medical aid for the wives who settle in places isolated from nurse or doctor. Letters come to my desk from women who recite horrible results that occur because they had no nurse. The neighbors of the present day do not want to assume the responsibility of a life in danger. Public sympathy should be aroused until the conscience of the government be prompted to station nurses in isolated places to save the lives of mothers and children. This is the most serious problem concerning Western Canada today. Let us strive in every possible way to arouse sympathy for these brave courageous heroic mothers. Letters containing accounts of the need of nurses will help more than any thing else. I hope to hear from my readers on this very important need.

P.R.H.

God bless the children and help us to be more like the kingdom of Heaven ourselves. May we not be too childish to become childish. Give us larger patience with the youngsters who fail to act like old people. Help us to understand the timid hunger after truth, the fearing struggle for self-expression.—Geo. A. Miller, in some Outdoor Prayers.

John Ruskin must have had a wise father and mother whose method of rearing him no doubt developed him into the forceful man that he was. In his own account of his childhood Ruskin has written: "I obeyed word or lifted finger of father or mother simply, not only without resistance, but receiving the direction as a part of my own life and force, a helpful law, as necessary to me in every moral action as the law of gravity in leaping. Nothing was ever promised me that was not given; nothing ever threatened me that was not inflicted; and nothing ever told me that was not true."

SNUFFLES AND SLIGHT COLDS.

Children are pretty certain to get the snuffles and slight throat troubles with the early change of temperature.

If the proper care is given the inflamed membranes, these early colds make very little trouble. But if they are neglected the foundations are laid for one cold after another, as long as the weather is cold.

Liquid vaseline sprayed into nostrils and throat will quickly reduce the inflammation. A little vaseline, crowded into the nostrils, if one does not have a good spraying apparatus, will give relief.

If vaseline is used now and then, when the child has no cold, it will aid in keeping the membranes in a healthy condition. A little care will prevent many serious illnesses.

SORE PATCHES IN THE THROAT

Sore mouth should have immediate attention. The following solution, dissolved in two ounces of distilled water, makes an excellent wash for this trouble:

- Solution of borax 2 drachms
- Honey 10 drachms
- Benzoin 1 drachm

Shake well before using. A disinfected camel's hair brush is just the thing to dip in this liquid and touch the infected patches in the mouth.

The mixture should be applied several times a day.

FOOD FOR BOTTLE-FED BABIES.

Extracts from article by Roger H. Dennett, M.D.

The best bottles for a bottle baby are those that are round and cylindrical and have a narrow neck for the attachment of the nipple. The one important requirement is that they have no corners on the inside, being rounded both at the bottom and at the top where the neck begins. This shape enables it to be cleaned thoroughly.

CARE OF THE BOTTLES.

As soon as the baby has taken his feeding, wash out the bottle with soap or washing-powder, using the long-handled bottle-brush. Then rinse the soap out with hot water, and put into the bottle a heaping teaspoonful of borax, with some warm water, and allow it to stand full of this strong borax solution.

For the little baby, see that the nipple is not too large nor too long. Often a long nipple will gag him and cause him to vomit up the whole feeding. If the baby gets the food too fast, it often causes colic, or indigestion, or vomiting. Select a nipple with one hole in it which will be small enough so that the feeding cannot be taken in less than twenty minutes. It is well to have two or three on hand. When new, they should be boiled once. As soon as the feeding is taken, the nipple should be washed in borax and water.

WHY SUGAR AND WATER ARE ADDED.

The days of complicated formulas for babies food are over. Plain whole

cows' milk mixed with water and sugar answers all the requirements of good food until seven or eight months of age, when barley or oatmeal gruels may be used instead of water.

Plain milk mixed with water is easier to digest than cream or top milks, and nourishes the baby as well. Water is added so that the food will not be too concentrated for the digestion, to give the proper amount of bulk, and to furnish the required quantity of liquids that the child needs in twenty-four hours. The sugar is added solely for its nutritional value, and for its laxative action. One ounce of sugar supplies as much nourishment as six ounces of milk.

THREE THINGS TO CONSIDER.

The important of considerations, then, in deciding upon a well baby's food are threefold: the amount of milk, the amount of water to be added to make up the proper bulk and concentration. The amount of milk to make a proper gain in weight is twice the number of ounces of milk that he weighs in pounds, provided he can digest one and one-half ounces of sugar in his total daily quantity of food.

If he cannot digest this amount of sugar, six more ounces of milk must be added for every ounce of sugar taken away. The lack of sugar should not be continued for any length of time, however. Enough water is added to make the proper amount of food in twenty-four hours. To illustrate: A child who weighs seven pounds should receive and digest fourteen ounces of cows' milk in twenty-four hours. To this must be added the proper amount of water to make up the bulk, and one and one-half ounces of sugar. Therefore, if this baby were able to take three ounces of food every two hours, ten feedings in twenty-four hours he would receive thirty ounces of food in twenty-four hours, fourteen ounces of which is milk, sixteen ounces of water, and one and one-half ounces of sugar. If a baby does not gain in this amount of milk and sugar, two to four ounces more of milk may be added.

TO DETERMINE THE AMOUNT OF FOOD.

The total quantity in twenty-four hours is determined by the age and, to a certain extent, by the size. The amount of milk and sugar is determined by the weight. After deciding upon the amount of milk and sugar, look into the table for the total quantity in twenty-four hours, and add enough water to make the amount.

Age	Total quantity in 24 hrs.	Amount at each feeding	Intervals between feedings	No. of feedings 24 hrs.
1st wk. 10-15 oz.	1-1 1/2 oz.	2 hrs.	10	
2d "	20 "	"	2 "	10
3d "	25 "	2 1/2 "	"	10
4d "	25 "	2 1/2 "	"	10
5d "	30 "	3 "	"	10
6th "	40 "	5 "	2 1/2 "	8
7th "	42 "	7 "	3 "	7
8th "	48 "	8 "	3 "	6

Two level tablespoonfuls of cane sugar makes an ounce. Two heaping tablespoonfuls of malt sugar make an ounce. In starting baby's food, make it weak at first and work up a little each day, until, by the middle or end of the second week, the food is strong enough to make him gain. The new-born baby who must be bottle-fed should have the food made in the following manner: On the second or third day give him three ounces of milk and twelve of water, no sugar. The next day give him four ounces of milk, eleven of water, one teaspoonful of sugar. Each day increase the food until, by the tenth or fourteenth day, he is getting food of the proper strength. I would emphasize the fact that these rules do not apply to sick babies.

Cowardice is not always synonymous with prudence; it often happens that the better part of discretion is valor.

The great advantage that we gain from history is the enthusiasm that it begets.

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- Roman Hyacinths, White, Pink or Blue, 3 for.....10c
- Chinese Lilies, 3 for.....25c
- Easter Lilies, each.....15c
- Freesias, mammoth size, per doz.....30c
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Recipes

CUCUMBER CATSUP.
 This is made without cooking, and it retains perfectly the taste of fresh cucumbers. Pare very thin six large and fresh cucumbers, and chop fine; add a small tablespoonful of salt, let drain in a colander about an hour; add two small or one large onion, chopped fine, one teaspoonful white pepper, and one pint of vinegar. Stir it all well together, put into wide-mouthed bottles and seal airtight and let stand at least a month before using. Any one who is fond of cucumbers will like this. If airtight it will keep for years.

PEPPER MANGOES.
 Select medium-sized red peppers, and green peppers of a similar size and shape. Cut off the stem end, remove the seeds and veins and pin with a bit of broom straw each cut-off portion to its own pepper. Throw the peppers into a weak brine made in the proportions of one cup of salt to one gallon of water and let them remain in it two days, then drain them thoroughly and fill with a mixture prepared as follows: Chop very fine one head of red cabbage, sprinkle it with a "pinch" of cloves, a teaspoonful of celery seed, two tablespoonfuls of white mustard seed and one tablespoonful each of salt and nasturtium seeds. Have at hand the small-sized cucumbers obtainable (in some markets they are known as gherkins) and tiny silver-skinned onions. Half fill the peppers with the chopped cabbage, tuck in two or three gherkins and the same number of onions and finish filling with the cabbage. Moisten the filling with vinegar that has been scalded and cooled, pin on the tops with bits of broom splints and drop the peppers in wide-mouthed glass jars, fill them to overflowing with the scalded vinegar. Seal up and put away in a dark, cool place.

RED CABBAGE CHOW-CHOW.
 If the directions are followed for making this toothsome relish it will be found quite as good as the imported English article. The ingredients are one large head of red or purple cabbage, one large cauliflower, two quarts each of young and tender string beans, gherkins, and silver-skinned onions. Cut the cabbage in quarters, remove the cores and with a sharp knife or a slaw cutter shave in very thin slices, the thinner the better, break the cauliflower in flowerets and leave the other ingredients whole, stringing the beans if they are not the stringless kind. Put the ingredients into a large jar, sprinkle them with a pint of salt, mix it thoroughly through them and let them stand twenty-four hours. At the end of that time drain them and rinse well in cold water, put over the fire in a preserving pan and sprinkle with a coffee cup of sugar, one ounce of turmeric, one ounce of celery seed and two ounces of white mustard seed. Mix two-thirds of a cupful of ground mustard to a cream with cold water and add that to the mixture. Cover with cold vinegar, bring to the boiling point, then remove to a cool part of the range and simmer slowly for thirty minutes, stirring often. Put in bottles or glass jars.

BEET CHOP-UP.
 Cook and cool a quart of beets and then chop them up. Chop a quart of raw white cabbage. Mix the two and add a cupful of grated horseradish, a cupful of sugar, a little salt and pepper. Mix thoroughly together and pour over the mixture enough cold vinegar to cover it. Put in preserving jars and set away for several days. It will then be a deep red color.

SPICED ROLLS.
 Take a piece of bread dough or baking powder biscuit dough and roll it one-half of an inch thick; brush the top with melted butter and cover thickly with cinnamon and fine white sugar. Roll as a jelly cake, then cut it in pieces an inch thick and lay in a pan as biscuits and let rise. Bake twenty minutes. If baking powder dough is used, bake immediately.



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UNFERMENTED GRAPE WINE.

Mrs. Walter Blair.

Cover 20 lbs of grapes with 6 quarts water and simmer for half a day; add 8 lbs of sugar to every gallon of liquid and to the whole amount 1 dessert-spoonful of salicylic acid dissolved in a little warm water. Bottle and cork.

DANDELION WINE.

Mrs. Gardner.

To one peck of flowers add 3 gals water and boil 20 minutes; strain through a sieve and to every gallon of juice add 3 lbs sugar, the rinds of 2 oranges and 2 lemons. Return to stove and boil 20 minutes. When nearly cold put a piece of toasted bread covered with yeast on the juice in crock and let stand for a week to ferment. Bottle and leave uncorked 6 or 8 weeks.

Note.—The Rhubarb Wine Recipe has unfortunately been mislaid, we hope to be able to give it in an early issue.

YELLOW CUCUMBER PICKLE.

This is a delicious high-flavored condiment made of ripe cucumbers. It takes several months before it is fit for the table, but the deliciousness compensates for its slowness in arriving at maturity. Choose full-grown, fully ripe cucumbers, peel them, quarter them, remove the seeds, sprinkle with salt (allow half a teaspoon to twenty cucumbers) and let them stand twenty-four hours. Then rinse them in cold water, drain them and place on platters which are to be set in the sun, there to remain until the cucumbers are quite dry. Then place them in layers in a jar, alternating them with a layer of chopped onion, grated horse-radish, mustard seed, and a suspension of garlic if the flavor is liked; the other ingredients can be proportioned at discretion. Scald one quart of vinegar, one ounce of ginger root, a half ounce of peppercorns, and half an ounce of turmeric. When cool pour this over the cucumbers, tie up tightly and set away to ripen.

CORN PONE.

One part of white corn meal, one and one-half teaspoonfuls of salt, one teaspoonful of melted lard; add enough scalded milk and boiling water (equal parts) to make a mixture that can be molded with the hands. After working well, shape into cakes about six inches long, three inches wide, and one inch thick, making them thin at the edges and ends. Place the cakes on a greased tin sheet, brush them over with melted butter or milk and bake for twenty-five minutes in a hot oven. When done, split each one, butter and lay a slice of crisp bacon on each. They must be served immediately.

TO SERVE CUCUMBER SALAD.

Peel the cucumbers, cut them in thin slices without cutting the slices off, thus giving the appearance of a whole cucumber. Insert in each opening thin slices of radishes with the peel on, sliced to the exact size of the cucumber. The combinations of colors will be found very effective. Chill thoroughly and serve with French dressing.

A pretty idea for a colored cake is to make a batter of two or three colors as desired; if three colors are used the cake should be baked in three layers, or if but two colors are used, two layers will suffice.

A pink, a white, and a chocolate batter make a pretty combination. Put in the tins by placing one color round the outer part of the tin for a third of the distance to the centre, then another color for another third, and fill the centre with the remaining color. Make each layer different; the first tin should contain white at the outside, pink next, and chocolate in centre; second tin should have chocolate, white and pink; third tin should have pink, chocolate, and white. When these layers are iced and placed together, each slice of cake will show nine little squares of color that prove very mystifying to the uninitiated. If only two colors are used when the top and the bottom layer are identical in arrangement, the effect will be like a checker board. The effect is striking as no one can guess how it is made.

PEACH JELLY.

Peaches never make a firm jelly that will retain its shape when turned from a mold, but no jelly is more delicious for cake fillings.

For jelly select peaches not quite ripe enough for eating. Rub off the down with a rough cloth and cut in pieces, saving pits. Cover with water and cook slowly, closely covered, until the fruit is perfectly soft. Turn into a jelly-bag and hang to drip. When the juice is all extracted, measure, and allow to every point of juice a pound of sugar and the juice of a lemon. Set the sugar in the oven to heat, and place the liquid uncovered over the fire. Cook steadily twenty minutes, add the heated sugar, stir until dissolved, cook five minutes, then strain through a cheese-cloth into glasses.

PEACH MARMALADE

Peach marmalade may be made from the whole fruit or from the parings and soft unshapely pieces left from canning the fruit. If the latter, put into the preserving kettle with just a little water, enough to prevent sticking. Cook until soft, then press through a puree sieve. Boil again twenty minutes, add half the weight in sugar and cook until thick, stirring frequently.

When the whole fruit is used, wash, pare and quarter the fruit, leaving some of the pits in for flavor. Put into the preserving kettle (which should have a quarter cupful of water in the bottom) in layers alternating with sugar, allowing a pint of sugar to each quart of fruit. Heat slowly to the boiling-point, stirring frequently. After it reaches that point, watch closely, for marmalade has an unpleasant habit of sticking to the kettle. Stir, breaking up the fruit as much as possible, cook until thick, which will be about two hours, then put into small sterilized jars.

CANNING PEACHES.

For canning peaches allow to every eight quarts two pounds sugar and three quarts water. Make a sirup, stirring until the sugar is dissolved. As soon as it boils skim carefully. Meanwhile, having peeled the peaches, pack in sterilized glass jars, making sure before you begin that your rubbers are new and the tops of the jars perfect.

Settle the fruit as much as possible as you pack by shaking the jar. Fill the hot jars with boiling sirup. It will require about a pint to each quart jar. Adjust the glass top half-way over the jar, but do not put on the rubber.

Set the jars in the oven in shallow pans half filled with boiling water. Close the oven door (and the oven should be only moderately warm) and cook the fruit fifteen minutes. Take from the oven, having adjusted the rubbers, fill each jar in turn with the boiling sirup, which should have been kept on the back of the stove. Fill so full that the scalding liquid runs over, then put on the top and wipe and seal. Set the jars on a board of thickly folded paper out of a draft until cooled, when you can probably tighten the top still more.

This sirup does not make the fruit very sweet. If you prefer to have it sweeter, increase the proportion of sugar. Peaches put up this way in the jars look better than where they are cooked in a kettle, then dipped into the jar. When the peaches are large they must be cut in halves, but leave some of the pits for flavor.

Prize Essay

The following essay won the prize in the Canadian Thresherman and Farmer prize contest. The contestants were the girls in the Domestic Science course of the Manitoba Agricultural College. The prize essay published last month was written by Miss M. McCuaig.

THE WELL-BALANCED MEAL.

The subject of foods and dietetics is a most interesting and helpful one, and is perhaps the most difficult of all the physical problems that present themselves in the household, because it is so important for the welfare of the family.



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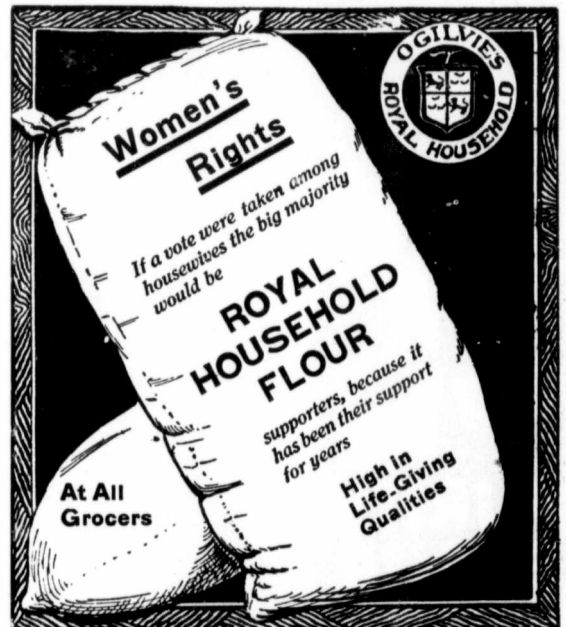
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Patronize those who patronize this Magazine

But too few people spend as much time on it as they should. Every economical and ambitious woman should know some facts about this subject. The most of the deaths that occur to-day are caused by eating too much of some class or classes of food. A good meal should be reasonably nutritious and expensive.

The food question used to mean the providing of something palatable and wholesome at a cost within one's reach or means. To-day it implies a knowledge not only of the cost and nutritive value of food materials, their composition and digestibility, but of the balanced rations and the proportion of different food principles necessary for perfect nutrition, and of the way in which this proportion should be varied to suit the needs of a child or of the aged, of the laborer or of the student. We should eat to live and not live to eat. Wholesome and palatable food is the first step in good morals.

The aim of the diet should be (to quote the words of John Milton) "to preserve the body's health and hardness, to render lightsome, clear, and not lumpy obedience to the mind, to the cause of religion and our country's liberty; when it shall require from hearts too strong and sound bodies to stand and cover their stations."

There are five great classes of foods: The Protien or tissue building food; fat or the food which gives heat; the carbohydrates which give heat and energy; mineral matter which aids digestion and purifies the blood; and water which carries off the waste matters, carries food to tissues and equalizes the temperature of the body. The well balanced meal requires something of every one of these classes. Tissue building food is absolutely essential. The amount of food required daily depends on the age, your personal peculiarities, climatic conditions, occupation and sex, and condition of your system.

Mineral matter purifies the blood. Vegetables should be essential in the diet. Turnips and cabbage, although strong odored vegetables, contain a large amount of woody fibre or cellulose. This helps to aid the work of the intestines. Fish is more easily digested than meat; it is called by some people a brain food, but many do not agree with this. It is a good food though for the man or woman who studies or works in offices. It is one of the most natural substitutes for meat that there is to be had. The nutriment value is something smaller to but it contains a somewhat similar proportion of proteid. The cost of fish is generally less than that of meat.

The most important of all our vegetable foods are without doubt cereals. Not only do they contain a large amount of nutriment, chiefly, but by no means wholly, in the form of carbohydrates, but their adaptation to different climates and conditions is unusually great. Of them all wheat is undoubtedly the most important. Rice comes next in importance and both have won a good place in the world in connection with dietetics.

Only twenty-five per cent. of the average income should be allowed for food. Therefore it is not necessary to buy high priced foods in order for them to yield high nutriment value. Very often people make the mistake by paying high prices for foods which they think are nutritious but are not. This, of course, is done by people who have not a knowledge of the study of food and food values. Take, for instance, oysters, most of people think they are very nutritious. This is partly correct but it takes four hundred oysters to equal one pound of beef in nutritive value. Many high priced foods merely give variety to the diet.

Very often too, food with a high amount of protien or nutriment value is hard of digestion. Take for example cheese, this contains a high percentage of protien but is very hard to digest. People doing hard and rugged work and those with good digestive organs should eat beans. But when using beans care should be taken not to use too much meat, because they do exactly the same work in the body.

Do not neglect to use vegetables because they contain rather a large amount of mineral matter and as I said before Fruit is the covering of seed and resembles the vegetables very much.

The Economics of Piano Selling

**Here Are a Few Points Worthy of Consideration
by Every Prospective Purchaser of a Piano.**

The firm which makes the Piano that it sells--and which makes these pianos almost exclusively for its own trade--must of necessity make only the best that capital and skill can evolve.

Although such a firm may handle a few pianos by other makers, it must stand or fall by the reputation of its own instruments, as they form the bulk of its trade.

Handling nearly the whole of its own output means that middlemen's profits are saved and put into workmanship of the piano. MASON & RISCH PIANOS are so made and so handled.

Under our "FACTORY TO HOME" selling plan we DO save the buyer from \$75 to \$100.

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From a dietetic standpoint the most important function is that of furnishing mineral salts and acids to the body. In the lemon we find citric acid; in the grapes tartaric acid, in tomatoes oxalic acid and in the apples malic acid. Some fruits, like the pineapple, contains ferments that are said to be acids of digestion.

The heaviest meal should be postponed until the day's work is done; it is then that social home joys give the requisite repose to the mind and body.—Madeleine C. Nicholson, Kelwood, Man.

There are hermit souls who dwell apart in the place of their self-content. There are souls like the stars that dwell apart in a fellowless firmament.

There are pioneer souls that blaze their path where highways never ran, But let me live by the side of the road and be a friend to man.

Let me live in a house by the side of the road where the race of man go by, The men who are good and the men who are bad as good and as bad as I; I would not sit in the scornor's seat or hurt the cynic's ban, Let me sit in a house by the side of the road and be a friend to man.

I see from my house by the side of the road, by the side of the highway of life,

The men who press with ardor and the men who are faint with the strife, But I turn not away from their smiles nor their tears, both parts of an infinite plan,

Let me live in my house by the side of the road and be a friend to man.

I know there are brook-gladdened meadows ahead and mountains of wondrous weight,

That the road passes on through the long afternoon and stretches away to the night.

But still I rejoice when the travellers rejoice and weep with the strangers that moan,

Nor live in my house by the side of the road like a man who lives alone.

Let me live in a house by the side of the road, where the race of men go by, They are good, they are bad, they are weak, they are strong, wise, foolish, so am I,

Then why should I sit in the scornor's seat or hurt the cynic's ban?

Let me live in my house by the side of the road and be a friend to man.

If the noble sentiment expressed in this poem were the guiding influence in each life, then forever would the tongue of scandal be silenced. Then would come to pass that golden age depicted by Burns:

"When man to man the world o'er,
Would brithers be and a' that."

HOLDING HIS TONGUE.

The man who speaks a dozen tongues, when all is said and done,

Don't hold a match to him who knows how to keep still in one;

The talker cops some good things here, things much to be desired;

The silent man cops these and more, and doesn't make folks tired.

Oh, you can have life's good things brought right to you if you will;

Throw out your chest, put on a frown and just keep still.

The man who's known as "silver-tongued" may fool folk for a spell;

Some few make take him at his word, believe all he may tell

About himself for just a while; but soon he'll make a slip,

And he'll be nicely put away, knocked out by his own lip;

Oh, you'll get money in the bank and dollars in your till

If you'll put on a thoughtful look and just keep still.

Full many men are dead and gone who died for want of breath.

And many who while still on earth have talked themselves to death;

More sharper than a serpent's tooth is man's own reckless tongue

When hung inside an open face and all too loosely swung.

Close up your face and ope your ears and drink in to your fill

This sage advice: Throw out your chest and just keep still.

In public life's few lower rounds are some who chew the rag,

And some from dewy morn till night sail in and punch the bag,

Because they like the sound of it; but list a while, you'll find

The louder is the noise it makes the more it's filled with wind.

Be good and hush and you will get a great reward, you will;

Throw out your chest and smile, or frown—but just keep still.

In every scheme involving human action, there are three elements always to be taken into account: time, place, and agency.—Lew Wallace.

Some of the wisest of the race have been men who have scarcely been beyond home, read little, felt and thought much.

The Ages of Animals.

Undoubtedly the longest lived animal on earth is the whale, its span of existence being estimated by Cuvier at 1000 years. The next largest animal, the elephant, will, under favorable conditions, live 400 years. When Alexander the Great conquered Porus, king of India, he took a great elephant that had fought gallantly for the defeated king, named him Ajax, dedicated him to the sun, placed upon him a metal band with the inscription, "Alexander, the son of Jupiter, dedicated Ajax to the sun." The elephant was found, alive, three hundred and fifty years later.

The average age of cats is 15 years; of squirrels seven or eight years; of rabbits, seven; a bear rarely exceeds 20 years; a wolf, 20; a fox 14 to 16. Lions are comparatively long-lived, instances having been recorded where they reached the age of seventy years. Pigs have been known to live to the age of 20 years, and horses to 60, but the average age of the horse is 25 to 30. Camels sometimes live to the age of 100, and stags are very long-lived, one having been taken by Charles VI. in the forest of Senlis which bore about its neck a collar on which was engraved, "Caesar hoc mihi donavit." Whether or not this stag had actually lived since the days of one of the Caesars it is impossible to say, but the evidence seems good.

Eagles occasionally, and ravens frequently, reach the age of 100 years, and swans have been known to live 300 years. A tortoise has been known to live 107 years.

Efforts have been made to connect the rapidity of the pulse-beat with longevity, but no logical conclusion can be reached, as will be seen from the fact that the pulse of a lion beats forty times a minute; that of a tiger, ninety-six times; of a horse, forty times; of a wolf, forty-five times; of a fox, forty-three times; of a bear, thirty-three times; and of an eagle, one hundred and sixty times. It has been impossible to count the beats of an elephant's pulse, but that of a butterfly beats sixty times to the minute.

Where Rain Never Falls.

Peru has hundreds of square miles along its coast of rainless country. In this tract rain is never known to fall from one century's end to another. Yet the region is not entirely barren of vegetation. Some parts of it, indeed, are comparatively fertile.

This is due to the extraordinary fogs, known as "garuas." They prevail ever night from May to October after a summer that is sultry and extend up to a level of 1,200 feet above the sea. About 1,200 feet rain falls.

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KENDRICK'S REASON



"Right—we're here!"
He heard the voice as if from an infinite distance; it startled him; he staggered!"

KENDRICK'S mouth worked; his muscles were not entirely under control; and his knotted fingers moved twitchingly around the brim of his shabby hat. He presented an incongruous figure in the big handsome room; his unpolished boots, heavy and broken here and there; his stained trousers, the faded muffler round his neck, were inharmonious, like a chunk of coal amidst first-water diamonds. There were deeply scored patches on the polished floor, for he had entered hastily,

driven by his own imminent need.

"That doctor said that you was the only man who could save her," he said thickly. He groped at the neck-wrap that had suddenly grown chokingly tight; a queer mist spread before his eyes, objects were blurred and indistinct, his palate was parched. "I'll work myself to a skeleton to pay you, sir."

The famous surgeon placed finger-tip to finger-tip with precise deliberation, allowing what

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was almost pained surprise to show in his clear-cut face. "It is unfortunate, I'll admit; but—"

The indrawn breath of Kendrick was like the rasping of a file; he leaned forward, his head thrown out.

"Don't say you'll refuse. She'll die unless you do it, sir."

"It is unfortunate—most unfortunate. No; it is not so much a question of means, as you seem to think. To be sure, I make it a rule never to perform an operation of any kind without first receiving my fee—"

Kendricks burst in upon the precise mouthing of words; he could hardly restrain himself from seizing the man and dragging him to his own mean home. He knew Dr. Sigurdson held the gift of healing; it was common humanity demanding his services.

"But, perhaps under the conditions, it might have been possible to waive that. An exceptional case, such as this is—"

He had a habit of seldom finishing his sentences; he left them to the will of his hearer; it saved trouble, and no one could ever accuse him of a pronouncement that might sound inhuman.

"I haven't a stiver saved—honest; but look at them." He held out stubby fingers, covered with black hair to the knuckles; the digits of a mighty man. Sigurdson studied them closely, wondering what fear of consequences it was that held those same fingers back from his throat. For he knew that the necessary operation would never be performed by himself. "I'll work them to the bone; I'll be your slave; you can use me for what you like; but—but—save her, sir; for God's sake, save her."

Sigurdson shook his head. It was well shaped, with hair greying at the swelling temples; but there was that in the slow, sideways movement that gripped icy fingers round Kendrick's heart. He would not give up the contest; he was a born fighter to the last. He made another appeal.

"Sailors can't save; I was a sailor before I—I married and took on this job at the docks. But I'll sell myself to the devil if nothing else will serve."

"I'm sorry; but it is impossible. Don't you know, I sail by the 'Mercantius,' and she leaves in less than an hour."

"There's a score of boats sailing inside the next ten days, sir; what does a day matter? Save her; she's only a tiny mite, five years old—not a day more; and that cunning—why!"—he drew his hand across his forehead and looked vacantly at the dripping

fingers—"why, she's wrapped herself round my heart; her fingers have taken hold of me here." He clutched at his breast. Normally an unemotional man, his dire need made him a magnificent actor, and Sigurdson noted at the back of his receptive brain the fact that real emotion was the finest teacher of gesticulation in the world.

"She pulled me up out o' hell, she did; a little thing like her. It's her life that's going, and you can save it. He said you'd do it—that young doctor I got to her."

He broke off, looking imploringly at the eminent surgeon through eyes that were suspiciously swollen. He was a big man, his strength was monstrous; Sigurdson knew a moment's fear. If this man cut loose from his restraint and hurled himself upon him, the consequences might be disastrous.

"And it's to be done at once, if at all," said Kendrick. "Will you do it, sir?"

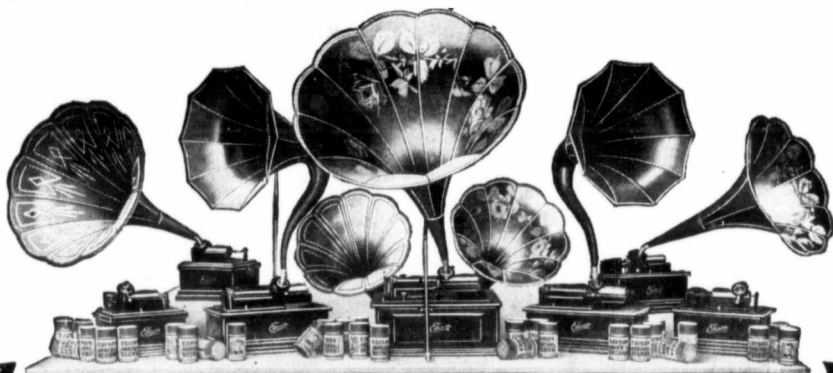
"I've told you—it's impossible. I sail in an hour—really," he

looked at the solemn-ticking clock. "I shall have to leave you now."

"Then you're going to let my Lucy die? That's what it is—she's dying fast. God above, you don't mean it, sir—you can't. What's a trip by the Mercantius compared to a child's life? She's dying."

"She will probably be spared a deal of trouble my man. This world is pretty full of troubles at the best."

"And it's the like of you that create the most of them." A tiny fleck of foam had appeared upon



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the man's lip. He was fast losing hold of himself; like an untamed beast driven into a corner, he was ready to fight with tooth and nail for the life of his only child. Sigurdson made an impatient movement.

"No insolence," he said sharply. "This is no place for you. You will go at once; I have told you several times that I cannot help you. If I miss the steamer—do you wish me to ask someone to remove you?"

It was all spoken precisely, and the colorless mask of his face revealed nothing of the tremors that beset his soul. He started back with a swift shiver as the big man lurched forward; but Kendricks had no intention of resorting to violence. He dropped on his knees, and clawed at the well-manicured hand.

"I'm desperate; it's life or death—my child, my little Lucy. For God's sake, think it over. You can save her!"

Sigurdson rang the bell, and his man appeared. The surgeon waved his hand towards the almost distracted father.

"Show this—er—person out, Bayne."

Kendricks went out, seeing nothing. Something within his head seemed to burst; a red mist swam before his eyes. In such moods men have committed atrocious murders and not known their deeds. He stumbled into the street, turned to look up at the house, saw nothing. His heart was colder and heavier than all the lead in the world.

He reached the shabby street where he made his home, and climbed the stair; it creaked beneath his weight. He stepped with curious lightness as he softly pushed open a door and entered the room. There was no welcoming cry to greet him today; there had been none for many a day. Previously there had been a scurry of feet, a high, piping treble voice; thin arms flung round his neck. Now—He gulped. Only a curious, low moan from the bed in the corner of the darkened apartment; a rustling, a warning hush from the neighbor who watched. Lucy was in pain; her eyes were wide and glazed, her brow flushed, constantly covered with sweat-beads.

"Is he coming?"

"No, curse him!" he said gratingly. "No; he'll let her die. He's off on a steamer, with a crowd of swell friends and comforts all about him—that—oh, Lucy!" His convulsive sobs shook the pallet. The neighbor felt herself powerless in the presence of this grief; she withdrew with a muttered word that did not reach his ears.

"God, teach him!" groaned Kendricks. "Teach him what it

is to lose his child—let him see her die before his eyes. God—if there's a God—do it!"

He did not pray for Lucy's life. The local doctor had told him that it was sped, save for Sigurdson's assistance. His soul was filled with bitterness against the man who possessed the power to save and who had withheld that power.

"Another day—it wouldn't have any difference to him; but he must be gone. He was afraid he wouldn't get his cursed money. Lucy dropped into an uneasy sleep. Not for long; she aroused at the soft opening of the door. The young medical stood there.

"Well?" Kendricks held the hand he grasped a little tighter; Lucy moaned afresh.

"He wouldn't come; he was going away—couldn't stop to help. That's all."

"Well, I'm—" The doctor bit off the oath. "Did he make that his excuse? He's away for his holiday?"

"Let's see what we can do," he said; and examined the tiny patient with that tender affection most medicals show to a child. He knew the case was hopeless now; he had asked an eminent surgeon at one of the hospitals to perform the operation, to take the risk on the remote chance of saving a life; but the man he had asked declined; he dared not run the risk.

Kendricks had not slept for several nights. Food was almost a stranger to him; he thought nothing of his lack. The child of his heart was dying—dying. He tried to collect his thoughts, imagining what the coming days would be without the sunshiny presence of his girl; but he could only remember past days, the days of his degradation, when Lucy had dragged his drunk self out of the mire of disgrace and helped him to paths of decency and comparative prosperity.

He changed the tenour of his prayers now; he forgot his ravings against Sigurdson; his entire being was merged in one desire. "God let her die—let her die," he implored. Strong man as he was, one who had looked on death unafraid a score of times, one who had seen well-loved comrades dashed to pieces at his feet, he could not endure the feeble battling. Every pang that shook the tiny body was duplicated in his own; he tasted the torments of the damned a thousand times, and still she would not die.

Stay; the breath was coming with more ease—or—was it? He stooped, he cried aloud; the figure was stiffening. He had prayed for this, but its coming unmanned him. Lucy opened

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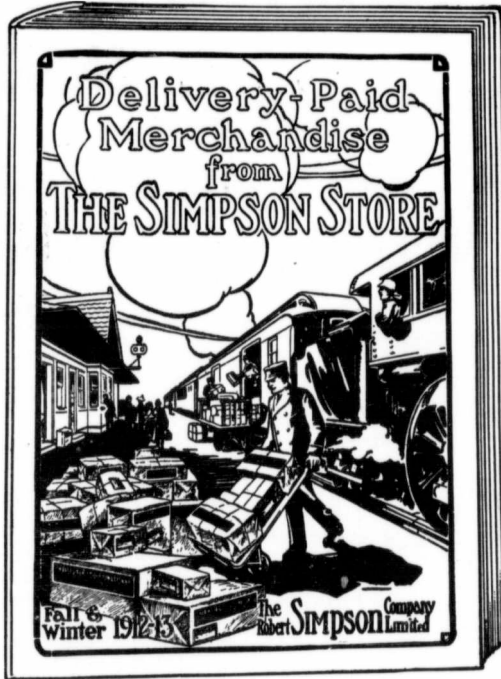
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her eyes, smiled wearily. Another pang shook her, and in the midst of her agony she passed on.

He stood there stupefied. His world had ceased to revolve; he was unconscious of any clear thought. There was a dull sense of resentment at his heart; but whether it was against God, fate, or Dr. Sigurdson he did not trouble to analyze. It was sufficient for him that his child was dead, and his heart was empty.

At about the same hour Dr. Sigurdson arranged his hand of

cards, and blew out a whiff of excellent cigar-smoke.

"There's nothing I like better than a quiet game in a liner's smoking room," he said genially. "It—er—it makes a man feel at peace with all the world. No trumps."

He had forgotten his visitor of that afternoon; the rush and thrill of departure had wiped his mind clear of all such unpleasant memories. He looked forward confidently to an enjoyable holiday; there were kindred spirits aboard the Mercantus.

Kendricks drew aside to the pavement as the crowd surged against him. There was a strident clanging of bells; a motor fire engine sped past at lightning speed. Followed by a perspiring, racing crowd.

"Fire! Fire!" It drew the stragglers on. Men fogged their staidness and joined the gathering procession. Kendricks was jostled this way and that; finally he decided that it would be swifter to join the crowd and go with the tide; a glance at the

fire would satisfy him; then—he might go about his lawful occupation unmolested.

It was more than a year since Lucy had died. He wondered as he ran in the wake of the engine why he had kept aloof from the old temptations so religiously; but he had stalked past them all, remembering the days of Lucy's life, when she had drawn him to a haven of self respect. Now she was gone, but he would be true to her memory—no hoggish drinking for him.

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Thomas — "You're right there, Andrew. Once you smoke "Meerschaum" you'll always smoke it."



flames was red against the growing darkness. The crowds were increasing, the engines had stopped; already the hoses were uncoiled like throbbing snakes along the pavement; fierce jets of water shot from the nozzles. On the outskirts of the throng Kendricks watched with great interest; but because he was at heart a fighter, because his sympathy was with the men who fought the fire, he found himself worming a resolute way to the inner rim of people. He loved to see an unruly element met on common ground and overmastered; when a sailor, nothing had pleased him better than a hand-to-hand bout with death aloft on swaying, jerking yards, with the biting sleet of a north-easter blinding him and the crashing horror of wind-hounded surges below.

So he came by slow degrees to the danger-zone, and saw there a tall house, a corner house, gripped fast by the devouring fire-demon. The lower floors were ablaze and going swiftly; the windows had fallen in, flames leapt outwards, curling angry tongues everywhere. The water-tower had been brought into use, but the terrific heat kept those who would have mounted it at bay.

It was a wonderful sight; thousands of upturned faces, lit up by a sinister sheen, drank in the grim details. A valuable house, undoubtedly; it stood in a fashionable quarter.

The heat was terrific. The foremost of the crowd breathed heavily. Kendricks decided that nothing could save the house. Already the lower floors were gutted clean; the fire was leaping

upwards, the windows of another floor cracked and vanished, fresh flames roared.

Into the fire-zone, stumbling over the palpitating hoses, hatless, coatless, grimy stains showing on his shirt-front, a man flew. He had forced a way somehow. None might tell how; but there he was running along like a frightened dog, his neck uncouthly bent the while he stared upwards at the house.

The chief of the fire brigade turned to an imperious clutch on his arm, a curt order on his lips; but his expression changed as he saw his accoster.

"You, sir? You'd be better out of the way—there's no chance."

Kendricks heard the colloquy, but haste and fear had clothed the newcomer with a complete disguise.

"Is everybody clear? I heard—I was dining in town—I came as fast as I could—good God!" His eyes had been roving over the lit face of the building as he spoke; now he stopped short, his figure convulsed; an arm shot out, pointing: "There, on the fifth floor—at the window; my God!"

"Steady! get hold of yourself; we'll do our best." The fire-chief spoke firmly, but his face expressed no hope. Kendricks, following that pointing finger, saw a small figure standing at a window on the fifth floor. It was a human figure. There was no doubting the evidence of his sea-stained eyes. A girl's figure; she was framed in the window, a small mite in a white night-robe; to the ordinary watcher she was little more than a blur. But Kendricks saw and understood.

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"Get busy, men!" pealed the fire-chief's voice. "Run the escape forward. There's someone on the fifth floor." How she got there none troubled to ask; that she was there was sufficient.

She must have fled from floor to floor, aroused by the imminence of her peril. Now she could go no higher. Someone had forgotten her. Some shrieking, hysterical servant, intent only on saving her own life, had ignored the claims of her charge, or had died in a futile endeavor to save her. There the child was, and the roaring death leaped up greedily as if anxious to possess itself of this trivial atom of living prey.

The escapes were run in towards the house. A ladder shot high; flames licked out, wood charred. The ladder was a line of fire. Men, starting to mount, fell back dismayed. The water-tower went on. A dozen nozzles were concentrated on those windows beneath that which held the little figure. The flames ebbed for a moment. Another escape went forward. It shared the fate of the first. There was no chance of reaching the fifth-floor window; it was unapproachable, partly by reason of the shaping of the house.

"Oh, for God's sake, save her! She's my child—my only child!" Kendrick stared at the face of the speaker, and slowly comprehension came to his mind. He had heard the voice before; then it was cool and unexcited, now it was the voice of a distracted man. He searched the soot-blackened features. No; there was no mistake—it was Dr. Sigurdson!

He smiled brimly. The unfaltering justice of the thing amused him. A year ago, and he, distracted, had pleaded for the life for his child. Now—it was the man who might have saved Lucy whose voice was raised in agonizing entreaty.

If it had been anyone else's child he would have volunteered his aid; but now—he looked at the distorted face of the man within hand's reach of him, and hardened his heart. This man had robbed him of the only being he loved in life. Let him taste the same bitter pangs. He should know now what it was to lose his child. It was an answer to his prayers. Many a night had he writhed sleeplessly upon his bed and prayed to some dimly understood Deity to teach Dr. Sigurdson the bitterness of loss.

"Get back, men; there's no chance!" A sob rose from the watching crowd as the saving appliances were dragged back. Human endeavor had failed. A life must be lost. Chained by the fascination of horror, the crowd waited on to see the end. Si-

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gurdens reeled back. He struck Kendricks. He gathered himself together and flung his hands to his face to shut out the awful horror of what must come. Kendricks felt hungry with a desire to snatch at the distracted man's shoulder, to rave out scathing words, to show how the relentless justice of God was working fairly, robbing the robber, slaying the slayer—but words would not come. His eyes chained themselves to that one solitary possibility of life.

A fireman, more daring than the rest, made an attempt. It was hailed with a cheer. He ran an escape to the side of the house and mounted; but fresh flames darted out. The ladder creaked beneath him and dissolved into ashes. He made a superhuman spring and gripped a window-ledge, where he hung, flames licking at him. A sheet was spread; he was bidden to leap in a voice of thunder, and obeyed. They picked him up unconscious and bore him away. Kendricks bit his lip till the blood came. He had always admired heroism in others; the plucky fireman was deserving of a better fate than this.

"Oh, can nothing be done?" Dr. Sigurdson, almost demented, was clawing at Kendricks' arms, peering into his face. "Are there no men here—can nothing be done?" Now was the time to reveal himself, now was the time to recall the memory of a year ago—to show how, possessing the means, he had himself refused to use them. Now was the time to gloat over a man's sufferings, and to talk glibly about the immutable justice of God. But Kendricks' eyes were fixed on that clinging figure at the window; he was hardly conscious of the man clinging to him, as he had clung a year ago, imploringly.

"Got a rope?" It burst from his lips without his own volition. Men stared at him curiously. He was surely mad. He, a civilian, when tried and trained fire-fighters had proved the impossibility of rescue. He was peeling off his coat, and beneath his shirt those near by could see the monster muscles swell and knot. On a Hercules could do what was to be done, but there was a man with the strength of three. "Got a rope? Look alive—there's no time to stare. Got a rope?" The fire-chief looked at him, thinking the heat and horror had driven the man mad.

"What could you do with a rope?" he demanded.
"Make a try—there's a chance. Give me a rope?" He broke away from Sigurdson, spurning him aside so that he rolled at length in the filthy street, and joined the men at work in the cleared

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space. Two words told them of his brotherhood—they, too, were sailors once; they understood. A rope was forthcoming; a strong light line, the exact thing he needed. He slung the coil round his neck, and took command of the situation without necessary waste of breath.

"Run that escape along there." He pointed, and there was that in his voice which compelled the men to obey. The fire-chief, fascinated, attempted no counter order; he allowed the volunteer to have his way.

"That man's as strong as a gorilla," he said. "If any man can do anything, he can."

It was the longest ladder he had selected at a glance; it was run to the side of the building, so far away from the fire that even the hottest flames could not sear it. Up that extended ladder darted Kendrick's, his heart filled with only one idea. He saw nothing of the crowds beneath him, heeded nothing of the flames that curled to his left. Far higher than the fifth floor now, he looked a speck there in the fire glow—insignificant, like a fly on a wall. But suddenly the fire-chief began to understand his motive.

"Good man!" he cried. "Good man! I never thought—no he can't; a man couldn't do it."

Around the house, below the windows of the seventh storey, ran a narrow coping, barely a foot in width. Kendrick's keen eyes had discovered that, and his active mind had grasped its possibilities. But the ladder was too short. No; there was still a chance. A fireman had mounted behind him; the man drew level. In some remarkable fashion Kendrick's balanced himself, and his assistant reached the top-most rung. Standing there, his extended finger-tip just touched the coping—no more.

"Hold on hard!" said Kendrick, and mounted over his back to his shoulders, where he stood poised for an instant. A roaring thunder burst from those below who had watched the feat, a full-throated cheer, that seemed a solid defiance flung in the teeth of the devouring fire.

"Steady, now," he was up, balancing himself on twelve inches of stone, with a yawning chasm on the one hand and the sheer wall on the other. A moment's uncertainty, the slightest giddiness, and he must crash down to the street below, the mangled remnants of a man. But he crept along without a falter, his eyes never seeking the black-floored cannon beneath.

He tried to look down, to judge his distance, but he drew upright again, with fear clawing at him. He had done all that he could; no man might do more; the venture was hopeless. But

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—having come so far, it were the act of a poltroon to turn back—he knew that there was a last ounce of effort still in him; and until that was exhausted he must persevere. The smoke eddied up, burning fragments struck him painfully; he must hasten or it would be too late.

There was a drain pipe fixed to the wall of the house close at hand, just room to pass one end of the rope between it and the stone. His fingers were rubbed clear of flesh as he worked; but in a moment the thing was done, the rope was knotted securely. A fireman—the same who had followed him up the ladder—saw what he would be at, and started to lend a hand, but drew back as he balanced on the parapet. His head swam; he dared not venture a step along that knife-like edge. Kendricks must do what was to be done alone.

Working coolly, he wound up a small coil of the rope and knotted it fast; then he lowered slowly. A chorus of voices from beneath told him that the weighted end was hanging level with the window; he lowered a little more and made fresh hitches around the pipe. The heat was growing almost overpowering, but he did not heed it. He was a one-idea man; he had set himself a task, and until that task was completed one way or the other his brain would find no room for outside thoughts. Methodically he wetted the palms of his hands, took a secure grasp of the rope, and began to lower himself down.

No sound of cheering now from those who watched; they held their breath. A man was throwing his life away; the flames were dancing upwards; it seemed as though their tongues must fasten on the rope and devour it—but they fell back. Down he slipped, the rope scorching his work-hardened hands; down and down, the heat below growing more and more intense. A spark fell on his clothing; it burned through to his flesh agonisingly; he grunted and persevered. Here was the window before him, the figure standing there, transfixed, unable to move. He had calculated aright; his goal was at hand; he felt consumed by a desire to laugh—it was his fighting spirit in the ascendant.

He forced himself out from the wall; clinging to the rope with one hand, his legs wreathed round it; he swung back, and as he came he lifted his foot, to send the glass crashing. The spare hand worked feverishly now, wrenching out the broken glass, heedless of the gashes in his flesh. The child awakened to consciousness; she held out appealing hands, and Kendricks, blinking his eyes clear of smoke,

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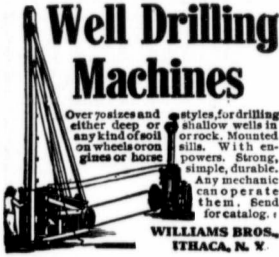


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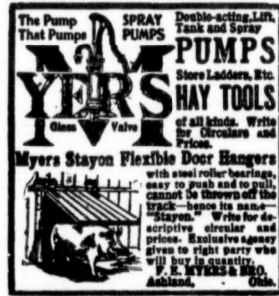
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saw flames lash up behind her. It had been his intention to reach her and then explore the upper storeys; there would be a way to reach the roof, he said; not knowing that the elevator shaft was an incandescent pit; but now that hope was destroyed. There was only one way; he must return as he had come. "Take hold," he said gruffly. "Listen to me, missy—take hold of my neck, and don't let go. Understand?"

He was kneeling on the window-ledge now, holding on by one hand to the sash; but there was a moment to spare before the flames reached them. He dashed into the room, as the child seemed too paralyzed with fear to understand the meaning, and found a litter of bed clothing—a maid had used this room not long before. He took a sheet and tore it into strips; it was a race, with the fire first favorite. But he contrived to secure the child to his back, passing swathe after swathe of the tough material round her body and his own; and then, this done, he approached the window once more. The flames seemed to beat in upon him; he saw long vicious tongues darting from a swirling pall of smoke; he drew back. It seemed to him that death could be his only gerdoun—he had tried and failed. Impossible not to swarm up that thin line, doubly weighted as he was; the rope would tear through his lacerated hands, and—and—

The thought that had sent him to the rescue blazed into his brain afresh, a more furious blaze than that from the burning house.

"I'll do it yet," he swore; and steadied himself on the sill. The hanging rope was already charring; the coil was alight. If the flames ran upwards they must lick him from his holding; he would fall back into death. No; a rush of water sped over him; he emerged gasping; the rope was slippery, but he clung to it tenaciously. The fire-chief had ordered his men to run in the water-tower as close as was humanly possible, and the elevated nozzles had saved him for the time.

To climb a thin rope alone, unburdened, is enough to tax any man's strength to the uttermost; burdened, it seemed an impossibility. But it was now that Kendricks' monstrous powers came into play; his mighty muscles were true to the stress. He swarmed upwards a little way, saving himself, for the latter half of the climb would be the worst. His head swam; the weight on his back seemed terrific; he faced a blank wall, wreathed his legs round the rope, and hauled himself up another foot. So, spasmodically, he mounted, the



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people below drawing painful
 breaths, watching the flames lick
 up the rope by which he had de-
 scended, until—until—

They said he was gone, that
 the fire had overmastered him;
 but they spoke too soon. A
 welling torrent of smoke poured
 upwards; he vanished from sight;
 the smoke beat down again after
 seemingly interminable seconds,
 and he was there on the ledge,
 steadying himself—he had won.

But the worst was not yet
 over; the precarious walk along
 that narrow footway was ten
 times more precarious now than
 before. The child, who had
 swooned from fear, stirred un-
 easily; the motion unsteadied
 him. But he clenched his teeth,
 and did not know that the great
 oaths of the deeper seas were
 pouring from his lips in a stream
 blacker than the welling smoke.

"Right—we're here!" He
 heard the voice from an infinite
 distance; it startled him; he
 staggered, dropped forward, and
 —they had him, gripping him
 fast.

"In here," said the fire-chief
 thickly; "in here. Get out of the
 way of the crowd; they'll pull
 him to pieces." He hurried them
 into a building, a doctor some-
 where produced stimulant s;
 Kendricks lifted himself up to his
 feet. He was a terrible spectacle;
 his lothes were charred from
 him; his face was blackened, the
 skin scorched from it. A bab-
 bling, white-faced man moved
 about him, hesitating to ap-
 proach; a crying child sat near
 by.

"What can I do? I can never
 hope to repay you. It was won-
 derful! Tell me what I can do,
 sir, to show my gratitude."

Kendricks squared himself up
 with something that was almost
 a snarl.

"Gratitude! I want none of
 your gratitude. Look at me. Do
 you know me? You don't? Re-
 member the man who came to
 you a year back, and pleaded
 with you to save his child? You
 couldn't put off a holiday; a
 week's enjoyment was more to
 you than a child's life—that was
 nothing—there are too many of
 them; they're only born into
 trouble. I'm that man—see?
 Me; I knew it was your child."
 "I am grateful. This is—very
 —" Sigurdson could not find
 the words.

"I tell you, I want none of
 your gratitude. Think I was
 wanting to heap coals of fire on
 your head? You ain't worth it.
 No; but I watched my little girl
 die—slowly—I saw her agony;
 she died hard. And—there was
 a girl there; I couldn't think of
 her dying the same way. It
 seemed to me I heard her cries.
 Here; let me out of this."

He swung away, leaving Dr.
 Sigurdson helpless.

RUMELY AUTOMATIC HAY PRESS

Feeds Itself



HERE is the new Rumely Automatic Hay Press, with self feeder that saves one man's wages and board, does away with the dirty work of feeding and makes the press a paying proposition from the word "go."

Our self feeder is patented, it can't be used on any other press; it is an exclusive Rumely feature.

EXCLUSIVE FEATURES

The Rumely Automatic Hay Press has a number of other exclusive features—features that give it the greatest capacity and make it the easiest-to-operate press you ever saw or heard of—features that insure a square, smooth, evenly packed bale composed of any kind of material that can be baled and a bale that will bring top prices for quality.

Get a Rumely Automatic Hay Press and a Rumely OIL-TURN Motor mounted together on a serviceable steel truck; it is the outfit you want for custom baling; the one that will bring you the business.

Ask for the Rumely Hay Press Book—today

Rumely Products Co., Inc.
 General Offices, La Porte, Ind.

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Winnipeg LIMITED Canada

MANUFACTURERS OF
 Boilers and Engines, Elevator and Milling Machinery,
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Head Office: WAWANESA, MAN.

A. NAISMITH, President R. M. MATHESON, Vice-President
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Subscribed Capital \$500,000.00
 Security to Policy-holders 640,817.29

Full Deposit with Dominion Government
Agents wanted in unrepresented districts

Alex. Naismith, Pres. Wm. Paterson, Vice-Pres. C. D. Kerr, Treasurer

The WAWANESA MUTUAL INSURANCE COMPANY

HEAD OFFICE: WAWANESA, MAN.
 A. F. KEMPTON, Secretary-Manager

Amount of Insurance in force Dec. 31st, 1911 \$31,243,598 00
 Assets over Liabilities 522,944.15

THE NUMBER OF FARMERS INSURED 21,543

The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts



Conducted for the benefit of Dealers, Threshermen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

ENGINEER-MACHINIST-Wants position in Manitoba for threshing season. Can do own repairing and capable of keeping engine in first class shape. State wages, wire or write J. T. H. c/o the Canadian Thresherman and Farmer, Winnipeg.

BUYERS ATTENTION.

THE GEORGE WHITE & SONS COMPANY, LIMITED BRANDON, MAN.

ENGINES

- 15 H.P. White tractors thoroughly rebuilt and in good shape, each... \$1600.00
16 H.P. American Advance tractor... \$700.00
18 H.P. Minneapolis tractor... \$600.00
20 H.P. Hoisington Cornet, Portable... \$400.00
20 H.P. White tractor... \$1200.00

SEPARATORS-Second Hand

- Altman & Taylor 25x50, all attachments... \$400.00
40x62 Waterloo separator, all attachments... \$400.00
30x60 Goddison separator, all attachments... \$300.00
30x60 American Abell, all attachments... \$325.00
30x60 Felbie separator, all attachments... \$300.00
2-32x50 Great West Separator; all attachments... \$200.00
30x30 Great West Separator, all attachments... \$200.00
White Challenge separator, thoroughly rebuilt, all attachments, each... \$200.00

GAS ENGINEER wants position on Hart-Par or Rumely Oil Pull. Thoroughly experienced. Not corresponding through puller J. H. Nugent, Gravelbourg, Sask.

STEAM ENGINEER wants position plowing season 1912, Saskatchewan Provinces. Strictly temperate. References, State make and size engine. Wages. Chas. L. Simpson, Box 834, Regina.

FOR SALE-20 portable steam engines, 12 and 15 H.P., also two separators, 30 Bell City and 18 Sawyer Massey, all in good shape, \$150 each. Must be sold. G. T. Grant, Inuita, Sask.

LICENSED ENGINEER MACHINIST (not a throttle puller) would like a plowing or threshing engine this season. State wages. Apply Box C. K. care of the Canadian Thresherman and Farmer, Winnipeg.

25 H. P. FAIRBANKS-MORSE Gasoline-Kerosene Engine. Worked only 12 days. Suitable for plowing. Also 32-50 Goddison Separator with Feeder, Rigger and Blower. Price for all (including 8 barrel gasoline tank) \$3500. Terms to suit. Wm. Paterson, Wewasana, Man.

FOR SALE-One 26 H. P. S. M. Traction Engine, in first class shape. Box 76, Tuxford, Sask.

CHOPPING OUTFIT FOR SALE. A 15 H. P. Stationary International Gasoline Engine 12 inch plate chopper, elevators, belts, pulleys and scales. Apply Box 137, Camrose, Alta.

FOR SALE-40 H. P. Flour City engine and 10 plow John Deere gas. Price and terms on application to Lock box 127, Elbow, Sask.

EXPERIENCED ENGINEER wishes job on steam plowing outfit for coming season and will also run during threshing season. Apply stating wages, to D. McDonald, Red Jacket, Sask.

WANTED Position on steam plowing outfit for the season of 1912 as engineer and oblige Yours truly, R. H. Hargest, McLean, Sask.

HOW TO START YOUR GAS ENGINE in the coldest weather first clip. No hot water, (save time). Formula 50c. For your information, this formula is a liquid, very high explosive, will vaporize in coldest weather. I use it myself at all times in cold weather. J. W. Barone 2111 Louise, Brandon.

WANTED-Position as engineer on steam tractor, breaking or plowing, in industrial or responsible, fifteen years experience on traction engines. Emergency repairing performed, satisfaction guaranteed, references furnished. C. T. O. Seidl, Sheyenne, North Dakota.

FIREMAN wants position on Steam Plowing or Threshing engine, preferably in Sask. In reply please state wages and probable length of run. Geo. Meike, Blanche P. O., Que.

FARMS WANTED. We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property. Free. American Investment Association, 15 Palace Building, Minneapolis, Minn.

WANTED-Position as engineer on Hart-Parr considerable experience, state wages. Apply J. H. Nugent, Caron, Sask.

FOR SALE OR EXCHANGE FOR AUTOMOBILE OR HORSES

One 18 H. P. John Abell Simple Traction Engine McDonald and McDonald, Glen Ewen, Sask.

FOR SALE-One J. I. Case, 20 H.P. Traction Engine, only used a short time in good shape, one 32-54 J. I. Case steel separator in good shape, will sell out for \$1800.00. Will take stock in part payment of said trade it on a gasolene tractor. Apply Box 10, Lander, Man.

BE AN ENGINEER-The Heath School of Traction Engineering (by correspondence) offers you a thoroughly practical course in Traction and Stationary Steam Engineering for spare time home study. Send for prospectus and full information to E. H. Heath Co., Limited, Winnipeg.

FOR SALE-One Good Balance valve for 22 or 25 H. P. Gas-Scott engine. J. Reynolds, Yellow Grass, Sask.

FOR SALE-30 H. P. Flour City gasolene traction engine, price \$2400.00, plowed 400 acres. As good as new. For terms, etc., write to Glenzie & Lodge, Morden, Man.

FOR SALE-Hawkeye Band Cutter and Self Feeder used one season. Size 36 inch. First fifty dollars takes it. G. W. Vincent, Cor. Arlington and Elliot, Winnipeg.

WANTED-Engine gas six or eight bottoms must be in good repair. Box 70, Morse, Sask.

FOR SALE-Case 25 H. P. engine, fitted with contractor's tank and coal bunkers. Engine was refitted this fall and a new cylinder and steam chest put on. Is in first class running order. Also case separator, 44 x 66, in good repair. \$1750.00 lays this outfit, or will sell separately. This is a bargain. Apply J. T. Taylor, 772 Corydon Ave., Winnipeg.

FOR SALE-One 33-inch Waterloo Feeder, used 24 days. Cor. Heinrichs, Box 13, Lower Farm, Man.

FOR SALE-Lots in 34 and 35 St. James, close to several large manufacturing industries. Price \$250.00 each. Easy terms. Box 3079, Winnipeg.

FOR SALE-We have a few lots left in Transcona Gateway, the best buying in the district. Prices \$5.00 to \$10.00 per foot. Hurry if interested. Box 3079, Winnipeg.

FOR SALE-Five acre improved fruit ranch on the Okanogan Lake, B.C. For sale or exchange. Wm. Paterson, Box 3079, Winnipeg.

WANTED-Position as Engineer on a steam traction outfit, fully experienced. Can furnish references. Address J. E. Peatch, Clava, Man.

WANTED-Gasoline Tractor engineer for "Flour City 40." Must have had traction experience. References required. Good pay. Also want woman cook for cottage; also man for garden and dairy. W. H. Pawson, Jr., Coaldale, Alta.

TWENTY HORSE GAS ENGINE, Separator, five furrow plow, stubble and breaker bottoms, twenty-five shares. First class running order. Three thousand takes lot. Apply "Thresherman" Care Can. Thresherman and Farmer, Winnipeg.

TWO MECHANICS, experienced in Gasoline Tractors, desire positions running Rumely, International, etc. Both have worked with Rumely & International Companies. Communicate thoroughly the construction & maintenance of tractors. Communicate with Geo. Hart, 707 S. Seventh Ave., Oak Park, Ill.

"A SNAP"-FOR SALE-John Deere engine gas, 8 breaker bottoms, 1910 make, in first class condition, broke 300 acres. Apply to Neil Wright, Box 185, Wellwood, Man.

FOR SALE OR TRADE FOR GOOD LAND-One 35 H.P. Double Cylinder Steam Engine with 10 Bottom Cockshutt Plow. All in first class shape. Elias Gjerson, Warren, Man.

WANTED-Position on steam plowing outfit, firing preferred, experienced. Frank Campbell, Marquette, Man.

FOR SALE-Imported English Bull Dog "Lucky Bearge," big winner, Winnipeg Winter Show 1911-Champ. M. Cochran, Imperial Bk. Winnipeg.

WANTED-Position as Engineer on steam traction outfit for threshing or would like both ends. Can do own repairing. Nine years experience. Best of references and certificate for Sask. Am. temperate. Address E. F. Sharpe, Maple View Ont.

WANTED-Gasoline Tractor, Separator, and Plow, one or all. Write giving Make, Size, Age, Price and terms to Box 81, Dayland, Alta.

LIVE IN A MILD, WARM CLIMATE. The Fraser Valley of British Columbia near the big city of Vancouver. Grass keeps green all winter; line class of farmers. Residents have running water, bathrooms and telephones in their homes, splendid high schools and churches. Fast electric train service into Vancouver. Railroad station only a quarter of a mile from the city. Farmers with 5 acres make from \$1,500 to \$3,000 a year clear profit on berries, poultry and small fruits. I can sell you a 5 acre farm for from \$30 to \$250 and the balance \$10 to \$20 a month. If you want to know just how they make big money then write me. W. J. Kerr, Ltd. 1711 Columbia Street, West Westminster, B. C.

FOR SALE-Threshing machine, also engine gas plow. For particulars apply to W. L. Barker, Box 1714, Calgary.

WANTED-Catalogues of Steam and Gasolene Threshing and Plowing Outfits. Address G. H. Lewis, Coxy Nook, Sask.

FOR SALE-Massey-Harris warehouse in good town near Saskatoon. Agency guaranteed to first-class man. Apply care of Canadian Thresherman and Farmer.

WANTED TO BUY Steam Traction Engine about 20 H. P. Address W. W. Kennedy, Magyar, Sask.

GAS ENGINEER desires position with reliable firm, April to November; operating engine. Box 171, Lonsdale, Sask.

ENGINEER WANTS POSITION on ploughing outfit, for coming season. Hold this class certificate, four seasons' experience. Strictly temperate. Apply to R. McGhie, Caron, Sask.

WANTED-Position on plowing engine for summer or winter. An holder of diploma from Heath School of Engineering, by correspondence, and could run engine if necessary. Would prefer to work in Saskatchewan. Apply stating wages to H. E. McMahon, Box 11, Kinley, Sask.

FOR SALE-Avery 1911 model 30 h.p. Alberta special under-mounted engine, equipped for plowing, horse portable, engine, bottom. Both run 8 days. Also new 36 x 60 Avery separator, with feeder and blower. All 3 for \$3,900.00. No trade considered. Davy C. Purfoot, St. Paul, Minnesota.

160 ACRE FARM FOR SALE OR TRADE-For Traction Plowing outfit, Land is quarter mile from town of Ladsymith, Man. Address Dewa. Hanlan, Man.

FOR SALE-Small separator complete with all attachments. \$400 cash. Box 13, Welby, Sask.

WANTED-Gasoline-Kerosene Tractor. Write giving make, size, age, price and terms. Box 24, Colonsay, Sask.

FOR SALE

- No. 15 Horse Case Simple Portable Engine... 20540
15 Horse Case Simple Portable Engine... 15833
15 Horse Compound Portable Engine... 13426
18 Horse Simple Traction Waterloo... 323
18 Horse Simple Traction Waterloo... 8299
20 Horse Portable Sawyer-Massey... 1419
20 Horse Simple Traction Sawyer-Massey... 1118
20 Horse Compound Traction Engine, Case... 7626
20 Horse Simple Traction Engine... 17721
20 Horse Simple Traction Engine... 16612
32 Horse Simple Traction Engine... 19019

J. I. CASE, THRESHING MACHINE COMPANY, Winnipeg, Canada

EXPERIENCED Licensed Engineer and Traction Plowman wants position for the coming season. Eight years practical experience in steam traction work. Will consider position in Man., Sask., or Alta. Charles Rondeau, Saint Leon, Man.

WANTED-By holder of second class certificate position as engineer; have also good knowledge of gasolene engines. Address care of Box 148 Oxbow, Sask.

FOR SALE

- SECOND-HAND AND REBUILT MACHINERY.
Two 25 H. P. Simple J. I. Case engines.
One Simple J. I. Case engine.
One 15 H. P. Compound J. I. Case engine.
One 15 H. P. Compound J. I. Case engine.
One 25x50 steel Case separator, with wind stack, self feeder and weigher.

J. I. CASE THRESHING MACHINE CO., Calgary, Alberta.

FOR SALE

We have on hand at present a very full line of Rebuilt and Second-hand Engines and Separators which we are offering at attractive prices. Write us fully what you are thinking of buying, when we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully repainted and look exactly like new. If you write us at once we are sure to have the size you most want.

We also have a thoroughly Rebuilt 25 H. P. Saw Mill Engine. Can hardly be distinguished from new goods. Will be sold at a bargain. SAWYER-MASSEY COMPANY, LIMITED Winnipeg, Man.

BARGAINS

- 32 H.P. Port Huron engine, r-built and in first class shape.
1-American-Abell 20 H. P. engine, rebuilt.
1-Minneapolis Separator 44x72, rebuilt. With all connections.
1-32x54 Avery Separator complete, just rebuilt.
1-36x60 Avery Separator to be rebuilt complete.
2-Avery 30 H. P. double undermounted engine.
1-30 H. P. Northwest engine, not rebuilt, cheap.
1-Case steel, 42x60 separator complete with all attachments.
1-42x70 Avery separator, will be rebuilt in time for next fall work.
If you are interested in second hand goods, are making deals almost every day, and feel sure that we can fix you out with almost anything you want, either in new or second hand goods.

HAUG BROS. & NEIL ERMOLCO Co. Ltd. WINNIPEG.

FOR SALE

30-60 H. P. Gasoline - Kerosene Engine, New, secured on a trade. Also equipped with Cockshutt plow, slightly used - a bargain. Address Caswell Manufacturing Co., Box 3679, Winnipeg, Canada.

FOR SALE- Second hand repairs for Garrett Separator, size 30x60. Will sell for less than half price. Fred Crump, Two Creeks, Manitoba.

FOR SALE-Hart-Par plowing engine, John Deere and furrow plow, all complete and 6-inch Ideal Duplex Feed Grinder. Full particulars apply to H. J. Wilbur, Morris, Man.

For Sale-One 20 H.P. double cylinder Nichols & Shepard traction engine, all complete and 32 x 52 Red River Separator complete, feeder, weigher, blower, etc.; run five seasons; in good running order. Box 155 Russell, Manitoba.

For Sale at sacrifice price-Good second hand steam plowing and threshing outfit located 32 miles south Winnipeg, Manitoba. Address Owner, Box 184 Mapleton, Blue Earth County, Minn.

For Sale-Hart-Par engine, seven bottom Cockshutt breaker; also stubble plows, three discs, three line cars, waga, harness, two buggies, blacksmith tools. Plowed but 2000 acres, now at New Dayton, Alberta. Guaranteed in good workable condition or no sale. Cost \$5000; now offered for \$3300 on good terms. Am no farmer. Dr. Heck, Clarkfield, Minnesota.

FOR SALE-A BARGAIN-Hawkeye Self-Feeder, 36 inches. Run only one season. In good condition. 555 Burnell Street, Winnipeg.

FOR SALE-32 H. P. Reeves Steam Engine only plowed 320 acres. Cheap for quick sale. Will consider a trade. Apply to L. M. Armstrong 314 Donohoe Blvd., Ltd. 1484, Regina, Sask.

A SNAP-FOR SALE-One Double Cylinder 35 hp. Geiser Steam Traction Engine, specially built for plowing and threshing, complete, in first class condition. Apply Burridge-Cooper Co., Ltd., Winnipeg.

GASOLINE TRACTOR FOR SALE-I have a first class 30 H.P. Gasoline Tractor for sale. This Tractor is manufactured by Kinnard-Haines, Minneapolis, whose Gas Tractors have carried off many Diplomas and first class prizes at Agricultural Fairs than any other Tractor sold in Western Canada. Having disposed of my farm, I will sell this Tractor right. Buy now, so as to have use of it for threshing season. Write for particulars, Address W. D. Weedy, Brandon, Manitoba.

SALESMAN WANTED-Threshermen or engineers to sell oils, belting, rollers, lacina, paints, etc. First-class opportunity for first-class men. O. L. Doty, Cleveland, Ohio.

FOR SALE-AT A BARGAIN-Seven Furrow Cockshutt Gasolene Separator, 30 inch feed bottoms, has plowed less than 600 acres. Address Box 31 Dominion City, Man.

Wanted now for Western trade, good men only. To sell our well known lines of specialties in fruit and ornamental trees, shrubs, seed potatoes, etc. Outfit free, exclusive territory, pay weekly; nursery or part time engagement. Write Pelham Nursery Company, Toronto, Ont.

WANTED-Experienced and Licensed Engineer wishes position on Gasoline Tractor for season with reliable party, industrious and sober. Address George Merking, Leofold, Sask.

ENGINEER WANTS POSITION on plowing engine in Sask. or Alberta. Had 4 years experience. Can do own repairing. Graduate of the Heath School of Engineering. State wages. Chas. B. McMain, Summerberry, Sask.

WANTED-Excellent opportunity for energetic salesman; highest salary paid to right men to represent an old established company and demonstrate and sell their Cream Separator. Reply in writing, stating salary, age, experience and references, to P. O. Box 258, Regina.

GAS ENGINEER would like position on plowing outfit, thoroughly experienced. Emergency repairing performed. Best references. State make and size of engine. Wages. J. B. Hishop, Felly, Sask.

FOR SALE

- 30 H.P. Bell Traction Engine.
20 H.P. Bell Traction Engine.
22 H.P. Bell Traction Engine.
15 H.P. Sawyer & Massey Traction Engine.
18 H.P. Battle Creek Advance Traction Engine.
10 H.P. Case Compound Traction Engine.
20 H.P. Giant Traction Engine.
15 H.P. Case Portable Engine.
36 x 60 Imperial Separator, Stacker and Ruth Feeder.
32 x 60 Imperial Separator, Stacker and Ruth Feeder.
36 x 60 Avery "Yellow Fellow" Separator, Russell Stacker and Ruth Feeder.
28 x 44 Goddison Separator, stacker and feeder.
32 x 50 Daisy Separator, Stacker and Lindsay Feeder.
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30 H.P. Gasoline Engine.
10 H.P. Stationary Gasoline Engine.
1 Parsons Hawkley 36 inch Self Feeder.
3 Perfect Weighers and Loaders.
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Address ROBT. BELL ENGINE & THRESHER CO. WINNIPEG.

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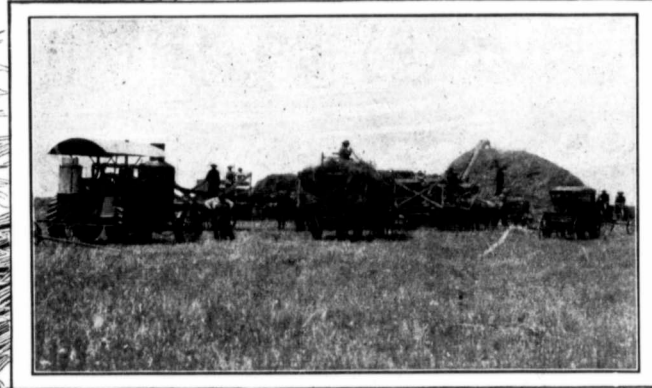
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Don't Gamble With The Weather

If you do, you are bound to lose. You have spent weeks and months of hard work and barrels of your good money raising a big crop. Then why risk everything at threshing time on poor equipment and lack of power! Many Northwest Canadian farmers did this last year. Of course they lost their entire year's crop. It was a plain case of power poverty. With everyone crying for power, winter came. Snow fell and stayed, with thousands of acres of grain still in the stook. Most of it rotted where it stood. What little was threshed the following spring graded low and sold low.

Are you taking these same chances this year? Don't do it! Make sure of your profits! Buy a

Hart-Parr Oil Tractor

and buy it now. Then you are power insured against loss. Drive your separator with this steady, reliable tractor. Get the fullest yield of clean, high-grade grain and get it this fall. Grain threshed the Hart-Parr way brings the highest market prices. And it means bigger profits for you because it costs less in time and labor to thresh it. A Hart-Parr Tractor is a general purpose, **One Man Outfit**. It uses the cheapest kerosene for fuel.

CAN'T FREEZE IN COLDEST WEATHER.

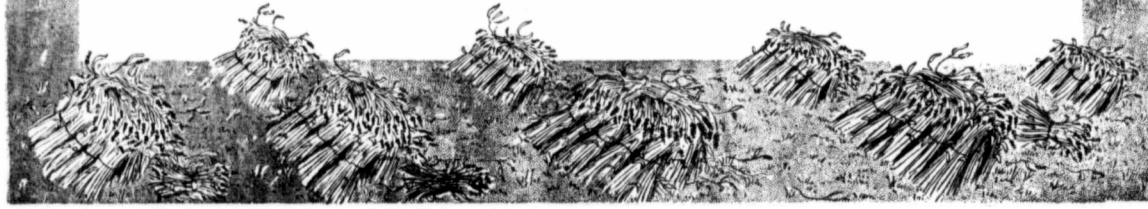
The oil cooled engine is a distinctive feature of Hart-Parr Tractor construction. It is sure insurance against a freeze up, even in below zero weather. F. J. Weber, Watson, Sask., Can., says: "It has got to be very cold when our Hart-Parr Oil Tractor will not start with the first turn of the fly-wheel. We got it started any cold day. It was the only one that could pull a separator behind it in the snow."

A COMPLETE STOCK OF TRACTORS At All Our Branches.

Write or call at our nearest Branch House. Order a Tractor for quick, immediate delivery. Then you have placed your threshing and all other farm power problems on a safe and profitable footing.

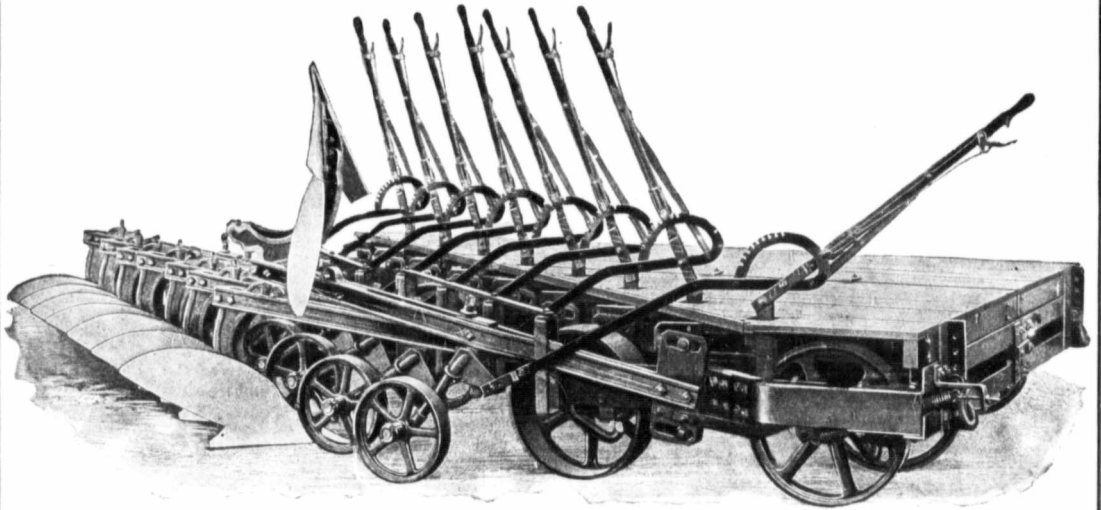
Hart-Parr Company

30 Main St., Portage la Prairie, Man. 57 West 23rd St., Saskatoon, Sask.
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The Chapin Co., 325-8th Ave., West, Calgary, Alta



Good Plowing-

THE FIRST STEP *to* GOOD CROPS



CASE-Sattley Engine Gang Plows

INSURE good plowing. They are Easily Controlled—pull easily—and plow with depth and uniformity—completely turning the soil and breaking up the ground and putting it in the best possible condition for Seeding. Their Strong and Heavy Construction makes them especially well equipped for Heavy Work and Hard Field Conditions. An Automatic arrangement which operates when the bottoms strike an obstruction effectually prevents injury to the bottoms and beams in ground so stony that it would be impossible to operate the ordinary type of engine gang.

Built in five sizes, 4, 6, 8, 10 and 12 Bottom, Stubble or Breaker. Can be used with Steam or Gasoline Tractor. Write for Catalog which describes them fully.

J.I.CASE THRESHING MACHINE CO.~

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CANADIAN BRANCHES, TORONTO, WINNIPEG, REGINA & CALGARY