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THE CANADIAN THRESHMAN & FARMER

CANADA'S FARM MACHINERY MAGAZINE
WINNIPEG CANADA

NOVEMBER, 1913

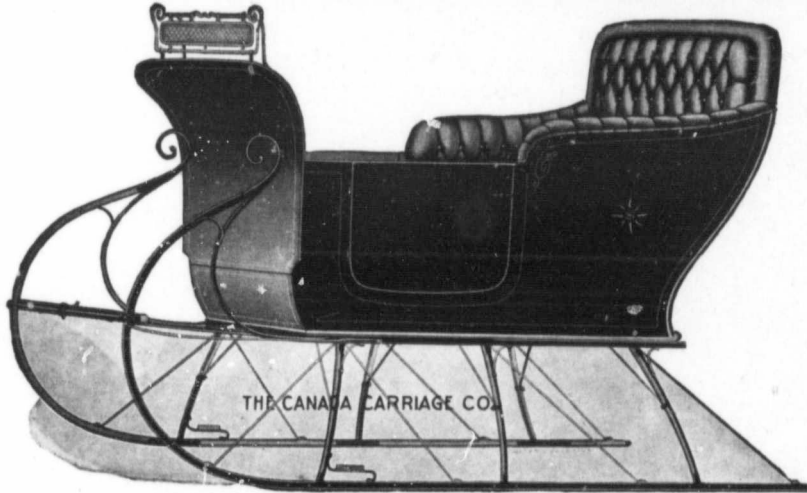


E.H. Heath COMPANY Publishers
LIMITED
ELEVENTH YEAR

JOHN DEERE IMPLEMENTS

Brockville Steel Cutters Stylish, Roomy, Durable and Comfortable

❖
Dash, Side
Back Panels
and
Foredoors
All of
Steel
❖



❖
XXX Hickory
Knees,
Runners,
Fenders
and
Shafts
❖

No. 217. Fitted with Steel Foredoors

Panel Construction Important

A SLEIGH, to stand up under the adverse conditions which it has to undergo, must be built right. Extreme variable weather conditions and severe strains have a telling effect on the ordinary sleigh.

The greatest trouble with sleigh building from the manufacturer's standpoint has been in panel construction.

The advent of built-up panels or three-ply stock was thought would solve the difficulty, but unfortunately they have to be put together with glue that dissolves with moisture, allowing the different sections to separate, and as cutters are used at the season of the year when there is the greatest amount of moisture resulting from melted snow, etc., the built-up panel, of which so much was expected, proved a failure, and it is hard to find a cutter that has been used one season in which the panels have not separated.

Superior Features of Brockville Steel Sleighs

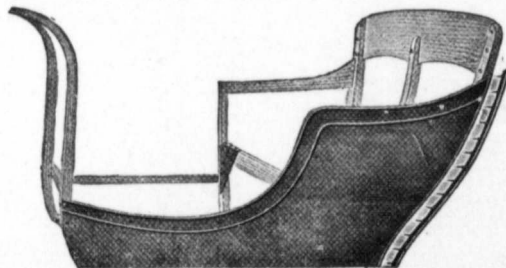
The Canada Carriage Company have tested out a five-panel steel plate that is smooth, strong, light and well adapted for cutter panels. It has proven a great success, as is evidenced by the large sales of these sleighs.

These pressed steel panel cutters have a raised moulding, being part of the panel itself, and the panels are treated with a special process which makes the adherence of paint absolutely perfect. Steel does not absorb paint and is not affected by the moisture of different temperatures. It is possible to produce a brilliant lustre to the varnish which lasts much longer than when used with wood.

The use of these steel panels produces a stronger and better finished cutter than can be made of wood and is not subjected to being damaged by ordinary accidents.

Other Advantages of Steel Construction of Brockville Sleighs

No split or marked panels
No defective joints
No moulding to be lapped on and knocked off when in use
All panels riveted to frame work or screwed



Rolled Crescent Steel Corner Iron Moulding used on Brockville Steel Panel Cutters

All joints covered on corners with angle steel especially rolled for this purpose
Positively no metallic sound when in use and a much neater and stronger job than can be made of wood

Remember, these Cutters are roomy and comfortable. You can ride in Brockville Cutters and have plenty of robes to keep you warm without that cramped-up feeling characteristic of ordinary cutters.

See your John Deere Dealer about Brockville Steel Cutters

JOHN DEERE PLOW CO., LTD.

WINNIPEG REGINA CALGARY
EDMONTON SASKATOON LETHBRIDGE

Write us for further information about these Cutters mentioning The Canadian Thresherman and Farmer

JOHN DEERE IMPLEMENTS

THE MARKET IS WAITING For PRIME CONDITION Stock



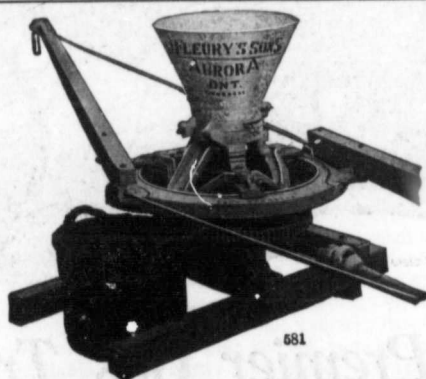
FLEURY "RAPID-EASY," No. 2

This machine is unsurpassed, not only for its great capacity and the uniformly excellent work it does, but for its structural superiority, the ease with which it is operated, and its lasting qualities. The feed trough is long and broad giving feeding and screening capacity equal to the rapid work of the grinder. 10 inch feed—also in 12 and 13 inch sizes. Baggers for this or any Fleury Grinder can be furnished.

Top prices are reached through the character and condition of the feed. Twenty per cent of grain fed whole to the stock is wasted. It is not masticated and is therefore never assimilated. It misses the "grinders," but a

Fleury Feed Grinder

will crush it to a fine meal, pulverizing at same time all the weed-seeds, so that your stock will have a perfect diet and your land will be infinitely cleaner.



THE "GOOD LUCK" HORSE POWER AND GRINDER

is a feed-mill and horse-power combined. You can have it with grinder attachment (as shown in cut) or without it. As a simple horse-power machine, it can be adapted to an endless variety of purposes. As illustrated, it is all ready to grind feed. By removing the hopper and grinder head, it can be used to operate Straw Cutters, Wood Saws, the "Rapid-Easy" grinder or any machine requiring the power service of two or four horses. In structural details and finish the machine is perfect.

"GOOD LUCK" POWER WITH GRINDER ATTACHMENT

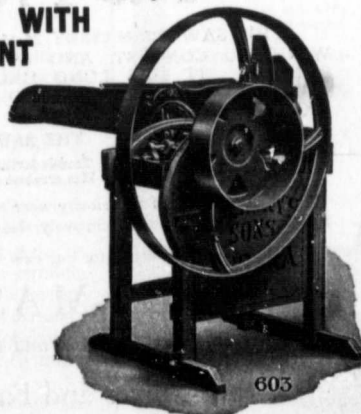
Why Burn Your Straw?

Said a well-known stock-man in sight of a blazing straw pile: "THERE'S SOME FELLOW CREMATING HIS DOLLARS!" That pile might just as easily be turned into crisp new dollars if cut with a

FLEURY STRAW CUTTER

and fed in its place to your animals.

We have a Fleury Straw Cutter to suit every possible requirement, from the small 8 inch feed Hand Lever Cutter to the large Ensilage machine with 14 inch feed, steel carrier feed table and elevating pipe, cutting and elevating from seven to 15 tons of corn per hour. These cutters are all in stock and they can be operated by Hand Belt or Rod Power.



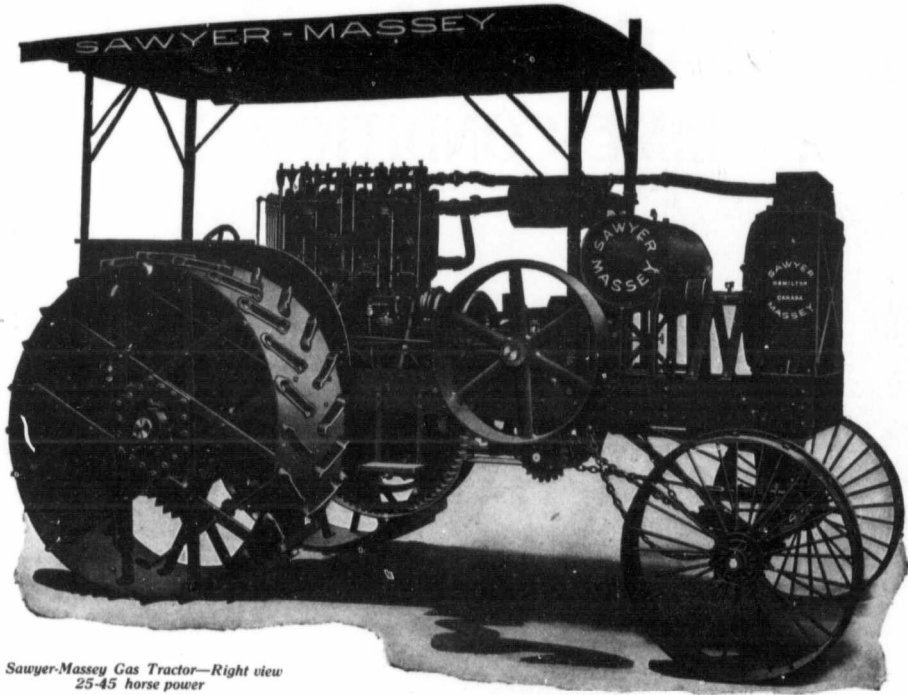
FLEURY STRAW CUTTER No. 2

JOHN DEERE PLOW COMPANY, LIMITED
WINNIPEG REGINA SASKATOON CALGARY EDMONTON LETHBRIDGE



The Premier Company

The Premier Goods



Sawyer-Massey Gas Tractor—Right view
25-45 horse power

The Premier Gas Tractor

THE SAWYER-MASSEY 25-45 H.P. GAS TRACTOR WON THE GOLD MEDAL AT THE 1913 WINNIPEG CONTEST, AND AGAIN PROVED ITSELF THE PREMIER GAS TRACTOR OF CANADA. IT HAS LONG HELD THIS REPUTATION AMONG CAREFUL FARMERS AND THRESHERMEN, AND HAS PROVED ITS SUPERIORITY BOTH IN CONTESTS AND ACTUAL WORK IN THE FIELD.

THE SAWYER MASSEY 25-45 H.P. GAS TRACTOR

Uses less fuel.
Uses less water.

Travels farthest without replenishing water.
Has greatest excess horse-power over rating.

Performs the highest quality of plowing.
Has the greatest speed range.

These points of superiority were established at the Winnipeg Contest. They are all of practical value to the tractor user, and show conclusively that the Sawyer-Massey is the tractor best suited to his needs.

Write for our new Catalogue and a copy of the "Sawyer-Massey Chronicle."

SAWYER-MASSEY COMPANY, Limited


Builders of Steam and Gas Tractors, Threshers and Road-making Machinery.

Head Offices and Factories


HAMILTON, CANADA

Branches and Warehouses: Winnipeg, Manitoba; Regina, Saskatchewan; Calgary, Alberta;
Buenos Aires, Argentina.

SAWYER~MASSEY



An armful of
COLUMBIA
Grand Opera
makes an evening
full of pleasure.



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295 Portage Av.

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Send your Raw
FURS to
John Hallam

Sixty thousand trappers now send us their Raw Furs. Why not you? We pay highest prices and express charges, charge no commission and send money same day goods are received. Millions of dollars are paid trappers each year. Deal with a reliable house. We are the largest in our line in Canada.

FREE
HALLAM'S TRAPPERS GUIDE
French and English.

A book of 96 pages, fully illustrated. Game laws revised to date—tells you how, when and where to trap, bait and traps to use, and many other valuable facts concerning the Raw Fur Industry, also our "Up-to-date-minute" for quotations, sent **ABSOLUTELY FREE** for the asking. Write to-day—address **JOHN HALLAM, Limited**—Mail Dept. 368 **TORONTO** 111 Front St. East.

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We Will Pay You \$120.00

to distribute religious literature in your community. Sixty days' work. Experience not required. Man or woman. Opportunity for promotion. Spare time may be used. International Bible Press, 182 Wapadina Ave., Toronto


Mention this magazine when writing advertisers

WIZARD LIGHT

Burns Kerosene and Gasoline

Latest invention in home lighting and an achievement surpassing all other known methods of artificial lighting. Cost of operating 1.00 per hour.

Our special lamps are 15 in. dia with an ordinary match like city gas. For complete illustrated catalog and money order send **THE NACEL-CHASE MFG. CO., 187 E. Erie Street, Chicago**



Mention this magazine when writing advertisers

About Ourselves

BETWEEN now and February 1st next we shall solicit subscriptions for this magazine from over 120,000 farmers in this Canadian West. We take considerable pride in this campaign, for we feel that it is the biggest thing that has ever been put on by any agricultural magazine in Western Canada.

It is costing us several thousands of dollars, and we are confident that we will get results. We have prepared a rather elaborate circular, dressed it up in blue and brown ink, and filled the pages with a talk so interesting and conclusive about this magazine that we feel those who receive it must be convinced of the good things we have to offer.

The majority of the farmers in your neighborhood will receive one of the above-mentioned circulars, and you will doubtless be in the post office when they get them. You can't help but recognize them from their bright blue color, and right here is where you can do us a great deal of good if you will. When your neighbor opens his circular, just step up to him and say something like this: "JOHN, YOU CAN DO NOTHING BETTER THAN TO PIN A DOLLAR BILL TO THE COUPON ON THAT CIRCULAR AND SEND IT IN RIGHT AWAY. YOU WILL FIND IT THE BEST INVESTMENT THAT YOU HAVE EVER MADE. I KNOW BECAUSE I HAVE TRIED IT AND I AM GOING TO KEEP RIGHT ON INVESTING MY DOLLAR EVERY YEAR."

You have really no idea just how much good such a suggestion on your part would do. Your neighbor knows you and has confidence in you, consequently your word goes a long way with him. We are strangers to him, likewise our magazine, and we are not on the ground to introduce ourselves. You, however, can do that for us with the result that we will gain another subscriber, build up a bigger and better magazine, thus giving you more value for the dollar you have already invested with us.

It is really surprising what our readers could do for us if they would. We know that you feel that when you have paid us your dollar for a year's subscription that you have done your part, and looking at it from a strict business standpoint you have. But during the next six months we are going to ask you to do just a little more and help us to double our circulation. Just induce one of your neighbors to join us and the job is done. We will even go a little farther. For every subscriber you can get in this way you can send us 75 cents and keep the other 25 cents for your trouble. It is understood of course that the one whose subscription you send in gets no premium. Under this arrangement you can send in just as many subscriptions as you like. Remember, it will only take four to make you a dollar.

The next time a number of your neighbors are helping you with your work, just see how many you can get. Better still. Perhaps you have a boy of your own who would like to make some money. Just have him write us and ask for our Boy's Subscription Proposition. We will do even better for him than we will for you, because he is a boy and one of "Canada's Future Men".

Think this over. With us it is a very serious business.



Utensils

Cleaned in a Jiffy

Burnt on matter, grease and dirt quickly removed with Old Dutch Cleanser.

Makes easier work—less rubbing. Just a little Old Dutch Cleanser takes away everything that ordinarily starts slowly, leaving the utensil bright and clean.

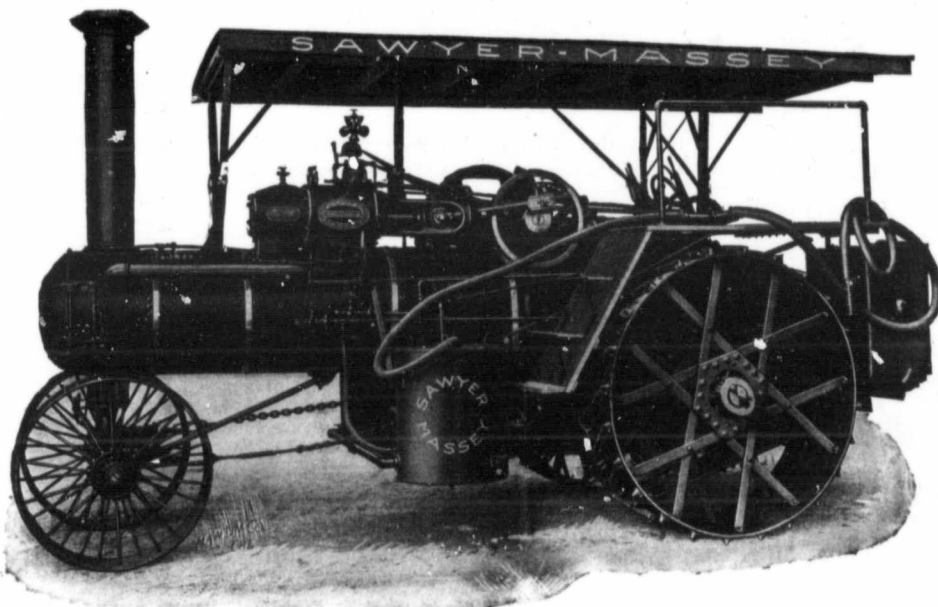
Equally effective on wooden ware and cutlery. No form of uncleanness can withstand its dirt-starting qualities.

Try it on hard things to clean.

Many other Uses and Full Directions on Large Sifter-Can

10c





The Premier Steam Tractor

The Sawyer-Massey 27-82 H.P. Steam Tractor demonstrated, in the recent Winnipeg Contest, the superiority of Canadian-made farm power machinery. Here it again proved its exceptional efficiency in meeting Canadian farming conditions.

The indisputable records of the Contest show:

The Sawyer-Massey 27-82 H.P. Steam Tractor excelled all others in competition in these points — all of greatest significance to the farmer and purchaser.

Economy of fuel.
Economy of water.
High plowing efficiency.
High quality of plowing.

Freedom from vibration.
Ease of manipulation.
Finish, durability and protection of parts.
Rate of travel.

Sawyer-Massey Tractors, both Gas and Steam, have earned an enviable reputation on the farm, as well as in contests. For these reasons, the careful farmer will investigate our line before he buys a tractor.

Write us today for any further information you would like about these Premier Tractors. We will be glad to give you the benefit of our study and experience and to mail a detailed report of the Contest, together with a copy of the "Sawyer-Massey Chronicle."

Sawyer-Massey Company, Limited

Builders of Steam and Gas Tractors, Threshers, and Road Making Machinery
Head Offices and Factories - - HAMILTON, Canada

Branches and Warehouses - - WINNIPEG, Manitoba ; REGINA, Saskatchewan
CALGARY, Alberta; BUENOS AIRES, Argentina.

SAWYER-MASSEY

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



Vol. XVIII.

WINNIPEG, CANADA, NOVEMBER, 1913.

No. 11.



Mr. J. Bruce Walker.

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 CANADA LAND AND  
 APPLE SHOW  
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had their own departments and handled them independently till the moment came to collaborate and then the work fell into line with the precision and placidity of the course of Nature.

While there was the usual big "committee" of celebrated or notorious men, the figureheads manifested their wisdom on this better than we have ever seen them do it on any occasion of the kind by wisely absenting themselves from the meetings of council and leav-



Mr. C. E. E. Umber
The man who introduced the Apple into the Canada Land and Apple show

sioner of Immigration and C. F. Roland, Industrial Commissioner of Winnipeg.

The good sense of this arrangement was abundantly evident in the completeness of the show, the marked satisfaction of every exhibitor and the fact that, unlike other expositions now in the public mind, its accounts showed a surplus. There were necessarily heavy expenses in providing for all contingencies; it was sensibly advertised, but so carefully had



Mr. C. F. Roland.

to the good of the next Canada Land and Apple Show.

The real significance and supreme importance of this effort did not appear to strike home to many people until the exhibition

THE Canada Land and Apple Show has written the first chapter of its history and it is one that will continue to be regarded by those who supported it with feelings of unqualified satisfaction and pride.

It was a really great—a most successful event, the precursor of even greater and still more successful expositions of what Canada can do in the growing of cereals, vegetables, fruit and timber, not to speak of the country's inherent mineral wealth.

It was a wonderful demonstration of that wisdom which is satisfied with the committee of one man to direct its affairs; of one supremely able, energetic and enthusiastic man who can be depended on. Strictly speaking there were two men here, but they

ing the onus of the responsibility and, for all practical purposes, the whole details of the real work, to J. Bruce Walker, Commis-

the management made its appropriations, that in the end there was the small but gratifying credit balance of seventeen dollars

had closed its doors, and even now it is the fact that a very large majority of men and women whose very existence hangs by the agricultural progress of these provinces are as "dead as doornails" to this simple fact, and for that reason they are uninterested. This is a humiliating admission, but so immersed is our citizen public in the trivialities of its own narrow environment, it seems that nothing short of a real novelty in a red and yellow wild-cat prospect will ever wean it from its office stool or bridge party.



General View of the First Canada Land and Apple Show

Messrs. Bruce Walker and C. F. Roland, are entitled to the entire credit for the most creditable thing that has been carried out in Western Canada for many years.

ject as the wheat is at the inspection point of Winnipeg, but it is of the very first importance that the prairie provinces should have an eye-opener of the kind, as they

Stillwell Trophy. Another feature of the Salmon Arm contribution was the fine specimens of "Tokay" and "Thompson's Seedless" grapes—grown out of doors.

The Salmon Arm apples certainly did not suffer by comparison with anything in the show. This district seems to be specializing on a number of popular varieties which find a ready market in the prairie provinces; among these the "Northern Spies," which it is affirmed are equal in every respect to the eastern product of the same apple. Others are the "Winter Banana," "Grimes' Golden," "Wealthy," "Jonathan," "McIntosh Red," etc. The district seems to be in luck's way in its competitive efforts, as for two years running at the great B.C. Provincial Show held at New Westminster, it has taken first prize for best district display of general fruits.

The Similkameen

This most Southern and possibly the most salubrious of all B.C.'s wonderful valleys is making a splendid bid for recognition

Apple Show opened its doors. For this reason it was impossible in the short interval to send a large quantity to Winnipeg but the exhibition units that were shown were really worthy of a first rank in any fruit exposition.

Apples only were shown, but they gave assurance that any soil and conditions which can grow these to such perfection of quality and appearance is capable of producing anything in sub-tropical fruits. The "Twenty Ounce Pippins" of this exhibit were probably the most attractive apples in the entire show, and they were magnificently backed up with representations of the "Winter Pearmain," "Yellow Newtown," "North-West Greening," "Winter Banana," "Spitzenberg," "Jonathan," "Wealthy," "Ben Hur," and the "Richter Banana," the latter being a new variety produced on his own ranch by the late Frank Richter. Mr. Richter's name is a household word in the B.C. fruit world. He came to the valley some forty years ago and settled at Kere-meos on one of its choicest morsels. In conjunction with his cattle raising he indulged his hobby for horticulture, and in this connection his record in a quiet, intelligent and wholly unostentatious way, probably beats anything that has been done in outdoor fruit culture in British Columbia.

Kootenay

The Kootenay district was well represented, but in a commercial exhibit only, sent in by the Nelson Board of Trade. It was, however, an extremely fine display, consisting as it did not only of choice fruits for which the district has established a great name for itself, but also by the fine collection of minerals, all of which, we believe, are being turned over



First for Vegetables: F. W. Hack, Grand Vital.

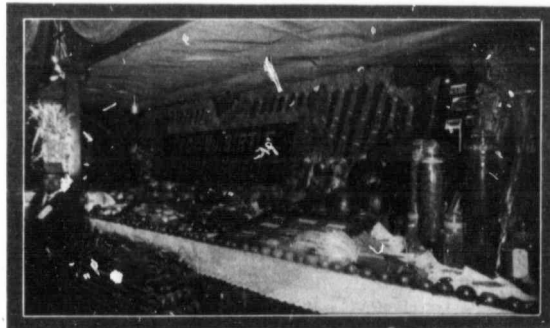
If language and pictoria' embellishment could adequately express one's appreciation of a fine conception materialized in masterly style, we would gladly give up the entire space of this magazine; and the more cheerfully if by any chance this might have the effect of realising what these men work for all the time, the development of an opportunity that has no parallel in the world's history.

A note of acknowledgement is due to the railways in removing, for the time at least, certain transportation obstacles between far distant points and the City of Winnipeg. In this connection it is due to Mr. Usher, of the C.P.R., to say that he was the man who imported the "apple" into the show, without which it would have been a somewhat lame affair, (to the visiting public at least), and which, after all, will probably figure in the productive history of the Dominion one of these days on a scale of scarcely smaller importance than its great cereal and timber crop.

It was the first experiment of the kind for the Dominion. Canada had not previously held an all-Canadian exhibition of the products of the farms of the Dominion big enough and broad enough to fit the greatness of the country, and it was peculiarly appropriate that it should be held in Winnipeg. What Winnipeg means to the grain crop is seen at once, but the special fitness of bringing those splendid shipments of specimen fruits from the coast is not apparent at first sight.

The bulk of these competitive fruit shows have been too exclusively confined to the district in which they are grown. It isn't so needful to exhibit for advertising purposes in the heart of the district where the fruit is grown and is as common an ob-

are to provide the best market for a long time to the fruit growers, and those whose interests are bound up with the development of the still unused lands are look-



First for District Display of Natural Resources. Birtle Agricultural Society.

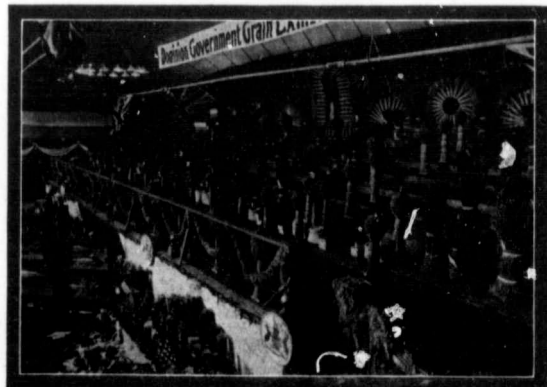
ing to the same source for recruits of the type they would wish to enlist.

British Columbia

The coast province carried the palm for its magnificent demonstration of fruit and vegetables, not only as to bulk but in quality, variety and effective display. Its vegetable products were wonderful and the fish models formed a welcome relief to the continuous lines of fruit boxes and were the "happy thought" of a really bright idea.

Salmon Arm won easily first honors for the best display of apples made by any district in Canada. It was a most imposing as it was the most artistic setting of the entire fruit show, and was designed and executed by Mr. F. W. Clingan. A box of potatoes (the celebrated "Scab-proof") in this exhibit drew a large amount of admiring comment. These represented the fine-skinned variety which received the highest score in the New York Land Show of 1911, when B.C. won the

no other claim than what it can do in intensive fruit culture. A very large percentage of this season's apple product in the



Dominion Government's Own Display.

Similkameen had found its way to the Australian market, one grower alone having shipped some 800 boxes but a short time before the Canada Land and

to the permanent exhibit of the Industrial Bureau.

Manitoba

But if B.C. has done justice to

herself and earned unstinted praise—what shall be said of Manitoba? It is not possible to give adequate expression to the feelings of satisfaction and pride every Manitoban must have felt as he looked at those extraordinary results in apples, etc., sent in by Mr. A. P. Stevenson and his neighbors from the Morden district. The fine show of Manitoba grains and vegetables presented by the Birtle, Kildonan and Russell worthies were beyond criticism, but then they were expected. Again and again have these localities "wiped the floor" with all competitors in garden truck, but the Manitoba apples were a positive surprise even to those who knew that great things were in progress in this way.

If this experimental event did nothing more than bring out into the open these "flowers" that have so long "blushed unseen" in their secluded nooks, it justified the effort even if it had been made at the cost of a substantial deficit. All honor to those people who are showing that Manitoba has more strings to her harp than the time worn strum-strum of "wheat, oats and barley," would indicate.

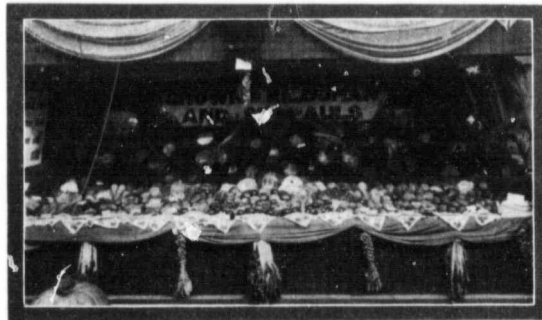
Continuing the "Manitoba" contribution: the "District" gold medal awarded to the splendid exhibit from Birtle, Foxwarren and Solsgirth was well placed, although in point of size and quality of units it did not surpass the neighboring display from Kildonan. The Birtle demonstration—ninety-nine per cent of it at least—was grown by Mr. Samuel Larcombe, who was in charge of the joint interests of these three districts and to whose taste and skill is to be credited the fine example of window dressing it received.

Mr. Larcombe is one of the greatest enthusiasts the province has ever known and for this rea-

son and the further fact that he is a persistent and tireless worker, he has been eminently successful in every branch of field or garden operations he has attempted. He

delights to record the continuous and practically invariable grain crops from his own locality, a failure being hardly known. The average certainly more than holds its own in all of the three provinces devoted to grain. Mr. Robert McBeth was in charge of the Kildonan exhibit of grains and vegetables and with Reeve Henderson was much in evidence throughout the course of the show. Taking second place according to the judges, this could only be because in the cramped facilities at their disposal, they could not "dress out" the wonderful and bulky array of stuff they had for show in the same dainty and captivating manner in which their clever neighbor had indulged; but with the true spirit of a clean English sportsman, Mr. Larcombe himself admitted that his neighbors were not behind him and indeed had many points in their favor which were not seen to the casual eye.

The Russell Electoral District had gone to a great deal of pains to make an exhibit worthy of this locality which has won its laurels

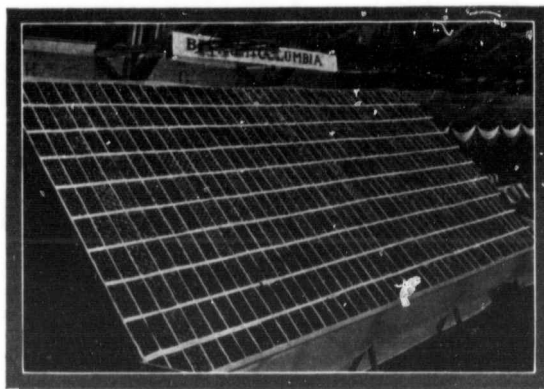


Display of Kildonan and St. Paul's Agricultural Society

again and again on many a well fought battlefield. And they succeeded and are to be congratulated on the great display they

showing in corn and potatoes. While Carman and Binscarth were in evidence with exceptionally fine representatives of the products on which they specialize.

honor to the occasion. Over 300 samples were sent in but a few of these arrived too late for the judging and when it came to adjudicating, the judges had a hot



B. C.'s Big and varied Apple Crop.

Ontario

Kenora sent in the only district exhibit from the Province of Ontario, but it was a splendid one, although taking only third place

time of it, so narrow was the dividing line between one sample and another, in a great many cases. This remarkable uniformity of grade covering many and widely separated points, is one of the most gratifying aspects of our grain industry at this date. The following are awards in all classes:

Wheat—1, \$250, N. Taitinger, Claresholm, Alta.; 2, \$150, Thos. Maynard, Deloraine, Man.; 3, \$100, W. L. Crandall, Pasqua, Sask.

Oats—1, \$100, Arthur Perrey, Cardston, Alta.; 2, \$75, C. H. Barrett, Lloydminster, Sask.; 3, \$50, M. P. Mountain, Solsgirth, Man.

Barley—1, \$100, J. Stegehius, Edam, Sask.; 2, \$75, Arthur Perrey, Cardston, Alta.; 3, \$50, A. M. Black, Paynton, Sask.

Apples—Best five boxes, 1, \$200, W. L. Hamilton, Collingwood, Ont.; 2, \$100, W. L. Bettanbrack, Waterloo, Ont.; 3, \$50, C. Trask, Oyama, B.C.

Pears—Best five boxes, 1, \$100, E. F. Palmer, Vernon, B.C.; 2, \$50, H. W. Collins, Grand Forks, B.C.; 3, \$25, W. L. Hamilton, Collingwood, Ont.

Vegetables—Collection occupying not more than 18 square feet. F. W. Hack, Grand Vital, Man., score 92 points.

Butter—10-pound crock, dairy: 1, \$50, Mrs. Peter McCrimmon, Carman, Man., score 86; 2, Mrs. T. E. Norris, Lipton, Sask., score 85; 3, Mrs. J. O. Johnson, Yetwood, Alta., score 84.

District display of grains and grasses—Prince Albert Board of Trade.

Provincial display of natural resources—1, British Columbia.

Provincial diploma for general display of fruits—1, Ontario.

Provincial diploma and gold

Continued on page 20



C.N.R. Wins the Trophy for its Display.

son and the further fact that he is a persistent and tireless worker, he has been eminently successful in every branch of field or garden operations he has attempted. He

made—particularly of their oat crop from land which "had not been summer fallowed for 17 years."

Selkirk made a very creditable

among district representations. But if the old province didn't waste much perspiration in showing her vegetable and grain possibilities, the fruit exhibit was "a stunner," consisting as it did of a spectacular array of apples, pears, peaches, plums and grapes, as well as preserved fruits and bottled honey. This province carried off the first and second prizes for best five boxes of apples packed, for shipment.

Grain Exhibits

The displays of grain, etc., made by the Dominion Government and the Canadian Northern Railway at opposite ends of the gallery were on a most imposing scale and arranged in a manner that reflected the highest credit upon the artistic judgment of those who planned and placed the many units.

Although the competitive samples did not fairly represent the entire Dominion, what was on show (from the West chiefly) was on a scale and of a quality that did



"Everything Begins and Ends with the Soil"

The CANADIAN THRESHERMAN & FARMER

CANADA'S LEADING AGRICULTURAL MAGAZINE

PUBLISHED MONTHLY BY

E. H. HEATH COMPANY, Limited, WINNIPEG, CANADA

E. H. HEATH, PRESIDENT. E. W. HAMILTON, MANAGING DIRECTOR F. C. BRAY, TREASURER
J. D. DUTHIE, EDITOR C. B. FULLER, FIELD REPRESENTATIVE
(MEMBERS WESTERN CANADA PRESS ASSOCIATION)

AUTHORIZED BY THE POSTMASTER GENERAL, OTTAWA, CANADA, FOR TRANSMISSION AS SECOND CLASS MATTER

NOV., 1913

ONE MAN OR MANY COOKS

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Postage prepaid, United States and Foreign Countries, \$2.00 Per Year.

Failing to receive paper, you should notify the office at once, when mistakes, if any, will be corrected immediately.

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Advertising copy in order to secure good position should be in our hands not later than the 15th of the month preceding date of issue.

Advertising rates furnished on application

OUR GUARANTEE

No advertisement is allowed in our columns until we are satisfied that the advertiser is absolutely reliable and that any subscriber can safely do business with him. If any subscriber is defrauded E. H. Heath Co., Ltd., will make good the loss resulting therefrom, if the event takes place within 30 days of date advertisement appeared, and complaint be made to us in writing with proofs, not later than ten days after its occupying, and provided, also, the subscriber in writing to the advertiser, stated that his advertisement was seen in "THE CANADIAN THRESHERMAN AND FARMER." Be careful when writing an advertiser to say that you saw the advertisement in "THE CANADIAN THRESHERMAN AND FARMER."

THE SMALLEST MINORITY the world yet knows of is that of the real successes which have been directly attributable to a committee of several or of many persons as distinguished from those which have been achieved by the "working committee of one man." This is a feature of our social and political economy that promises some startling disclosures in response to serious inquiry. It is one that is seldom heard of in open controversy, so habituated is the public mind to the time encrusted idea that to make anything "go," it is necessary to have a multitude of counsellors. But in general experience in history and biography, the only noteworthy successes have been directly the results of one man's efforts and where success was in the elements in many historic cases disaster came through the intermeddling of the multitude.

The fair board that does nothing but find an able and energetic man and put him on his mettle does more for the success of the institution than it could possibly do by any other means known to this generation. And the next best contribution the fair board members can make towards this success is to see that no one else shall get athwart the progress of THE MANAGEMENT. If a manager cannot be trusted to do his part, he has no right to be there under any supervision whatever; if he can be trusted, no creature has the semblance of a right to interfere with him.

WINNIPEG EXHIBITION, to be specific, is at the present moment figuring as a notorious instance of how the finest opportunity at the disposal of men can be wrecked by the mismanagement of an unwieldy committee of impossible units. There are men who have been identified with the executive of this institution in recent years whose single-handed efforts in other instances are a cast-iron guarantee for complete success, but who have been stripped of their value for really effective work by the intermeddling of unnecessary, if not perfectly useless, directors or committee men. We blame no individual; we hold a brief for no man, but we do say that THE MANAGEMENT here has never had a chance. It has been fettered so completely by the simple fact that before it could move one step that involved responsibility, it was compelled to call a meeting of the dead-heads to talk things over.

THE POOREST FARMER

in common with the best agriculturist believes that of all men he is the one man who is to be consulted as to the conduct of his farm. He would no more entertain the possibility of his farm being run by a "committee" than he would expect to have his private thinking done for him by a "board of directors." His farming operations may be successful or the reverse. If the best committee on earth managed the business, that would be no guarantee of success. Success or failure is to be expected in either case, but the all but universal experience is that a multiplicity of "authorities" pounding away at the same problem from different points of view, is about the least hopeful outlook for a successful issue to any scheme.

THIS IS MORE THAN AN OPINION. The man in the street sees it in this light and "the man in the street" has his own way of getting behind things for his information. He is not often far astray in his judgment, and his convictions in this case are supported by a mass of evidence that cannot be overset in the minds of the people however much it may be quibbled over by astute lawyers or interpreted by those who have a personal interest in coloring it to suit their own ends. There is now a great opportunity for those really magnanimous souls who have so long nursed the belief that they were "it" in all that is covered by the title of "The Exhibition Association." Let there again come into history a "self-denying ordinance" as it did into the affairs of the English people when they were "on the bum" from pretty much the same disease that has blighted the "Winnipeg Industrial."

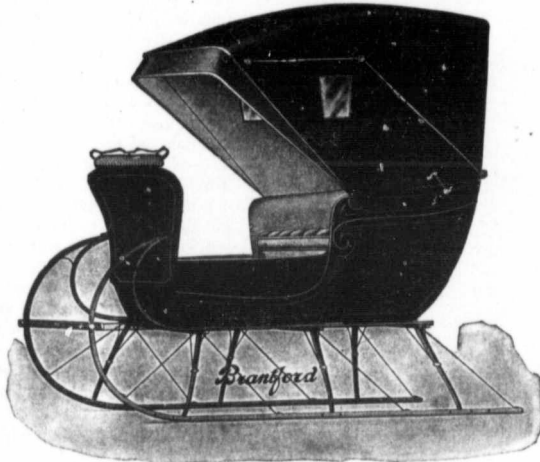
THE COMMANDER-IN-CHIEF of any military operation need not consult a single individual, but he may court the advice of a thousand if he wishes to do so. By some evidence of ability and general fitness, he has won the confidence of those who have delegated to him the supreme command. Certain things have to be done, and by tacit agreement these can only be done and the great objective arrived at through the concentrated and unimpeded direction of one person who appears to be eminently fitted for the job. The idea of a military campaign at the beck and call of a series of committee meetings is too ridiculous even for comic opera and in the inside history of battles it will be found that when events have had to wait the deliberations of a "council of war," the game has already been played out and disaster waits at the door.

HISTORY IS CROWDED with all kinds of successes that have been won by the unimpeded work of one man, but very few have been achieved by "a committee." Emerson said that "the initiation of that which is great and good is invariably the fruit of one strong soul that towers infeasibly above its fellows, and it is to the honor and glory of the average man that he is capable of following that initiative." Let us acknowledge THE MAN and share in the honor of supporting him.

WHY NOT TRY THIS PRINCIPLE of management with the country fair, among other functions of the kind? That is to say, why not let there be a distinct agreement among the committee or board of directors that they will do nothing to prejudice the good management of the show. This end can be best accomplished by simply refusing to "butt in" unless invited by THE MANAGEMENT to do some

Drive A Brantford Cutter for Comfort

THEY are modern in design and style but their main features are comfort, strength, and long service. Only the best materials are used in building these cutters. Points that are liable to strain are strongly braced, and points generally exposed to wear are carefully protected. For general all around satisfaction and comfort, drive a Brantford Cutter.



Brantford Cutter No. 131, equipped with top and wind boards.
One of thirty styles

Here is a Cutter you will be truly proud to drive

Brantford Cutter No. 131 is a big carriage industry's masterpiece for value. There is no service in higher priced cutters that you do not get in this one. Body is built with selected ash. Beams, knees, runners and shafts are made from second growth hickory. One and a half inch channel steel shoeing on $\frac{3}{8}$ -in. runner gives a good wide runner surface that will not sink into a soft road, resulting in light draft. The wide channel steel shoeing protects the hickory runner, making it practically indestructible. This is a feature that greatly lengthens the life of the cutter.

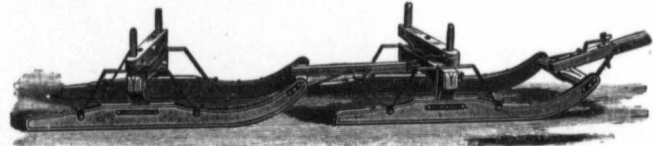
Cutter bodies are painted a variety of colors and striping. Gears are painted red or dark green. Best quality of trimmings are used—green, red or old gold plush, or green cloth. Spring cushions and backs. Padded quarters. Carpet in bottom. Shafts are leather trimmed.

Defy cold weather with a top and wind boards. They are a comfort that you should have this winter. The top affords great shelter from the wind, thereby giving great warmth to the interior. Top folds neatly and is not in the way when not required.

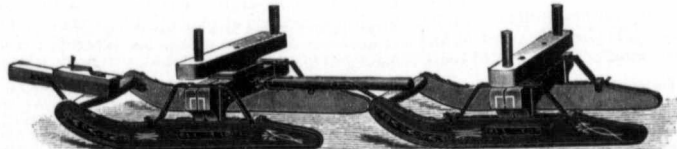
Adams Sleighs for Heavy Work

Strong and surefooted on a road of ice and snow. These sleighs are better proportioned, better finished and stronger throughout than any other sleigh on the market. They are built right by competent workmen from thoroughly seasoned, straight grained hardwood, properly braced and bolted where necessary. Adams Single Bunk Sleigh is an excellent farm sleigh, with 6-in. camel back oak runners. Front benches well reinforced. Long steel nose plates are rivetted on the sides of the runners.

Adams Double Bunk Sleigh is for heavy teaming purposes. It has 6-in. camel back oak runners and 8-in. double benches bolted together making it a very substantial sleigh.



Adams Single Bunk Sleigh



Adams Double Bunk Sleigh

Cockshutt Plow Company, Limited

Western Branches: WINNIPEG, REGINA, CALGARY, SASKATOON
Distributing Points: Red Deer, Lethbridge, Edmonton, Brandon, Portage la Prairie.

TRACTION PLOWING AS TOLD BY THE MEN WHO DO IT

A Big Season's Work

In answer to yours of recent date I submit the following as my experience in traction farming. Last winter I spent a little over a week at the Hart-Parr traction school in Regina, looking over and learning to run one of their tractors. I bought one and unloaded it in Herbert the first of April. A neighbor who owns a tractor helped me to unload and that is all the expert help I have had to date. The size of the engine I purchased was a 30-60. It burns kerosene, gasoline or distillate. I start with gasoline and when engine is warm turn on the kerosene.

The first work I did was to seed and harrow 750 acres in 10 days. I hauled three double discs, twenty-two run M. H. drills and 34 feet of lever harrows. When seeding I run altogether on gasoline and used about 45 gallons per day. I then backset 100 acres of stubble and sowed it with oats. I also backset some for my brother. I broke 250 acres for flax. On a class test one afternoon I broke 15 acres of gumbo on 45 gallons of kerosene and moved home five miles. I broke about 1,000 acres during the season and then double disced, planked and harrowed about 250 acres in five days. In doing this work I had one man helping me and several days I ran alone. In harvesting I hauled three eight-foot Deering binders with Deering engine hitch and cut about 75 acres per day with an operator on each binder. The cost of fuel for tractor per acre was 15 cents.

I threshed over 35 days and threshed about 56,000 bushels of wheat, oats and flax. During the season I was only laid up for a half day and that was on account of a broken valve spring, and altogether I put on about \$5.50 worth of repairs. I find that the use of a tractor eliminates the use of a hired man and that I get my work done much quicker, and as a couple of days means a lot in seeding and harvesting, the tractor is superior to horses in this respect.

Yours respectfully,
Ward H. Smith,
Neidpath, Sask.

Day of Horse Drudgery is Past

Dear Sirs,—In reply to your request for experience with traction farming, I may say that although I have been using a tractor for only one season, I feel that the day for horse farming in the Canadian West is past, at least to a great extent, where anything more than a section is to be farmed by one owner or company.

I did not get my engine, which is a Hart-Parr 30-60, until after seeding in the spring of 1912, but I used it to drag a small piece of 80 acres I intended summer fallowing, after which I

We keep one team of horses and one man besides myself. For plowing I allow \$2 per acre for all expenses in breaking, and in backsetting about \$1.75 per acre, but as I have not done any seeding with my engine yet, I cannot state what it costs.

The greatest advantage that I see in seeding with an engine is that the ground is worked, the grain sown and covered or packed all at once before the soil has a chance to dry out, and thereby giving the grain a chance to germinate at once instead of lying in a dry seed bed awaiting for rain. Any detriment the tractor

for barley. This consisted of about fifty acres. Just at this time we put on the Cuddy steering device which was a great saver of time and temper. After the barley land was plowed, we plowed about 260 acres of summer fallow. Before this plowing was done we had our engine well in hand and could do more efficient work with it. This was all the plowing we did until the fall and then owing to the short season we only plowed eighty acres with the engine, but we used it for threshing. We use two men on our outfit for plowing, an engineer and a plowman. A team also being required to move the tanks up once a day. We used on an average of forty gallons of water per day.

The cost of plowing per acre was as follows:

- Kerosene 30c. per acre
- Gasoline 5c. per acre
- Gas engine oil 8c. per acre

As we operated the outfit ourselves we do not give any charge for men and horses.

In getting land ready for a crop it is quite unnecessary to have a good seed bed with fine mulch on top. An engine used on plowed land causes the fine mulch on the top of the seed bed to become very hard through pressure, consequently drying out ensues. The track of the engine being plainly visible during the entire crop period.

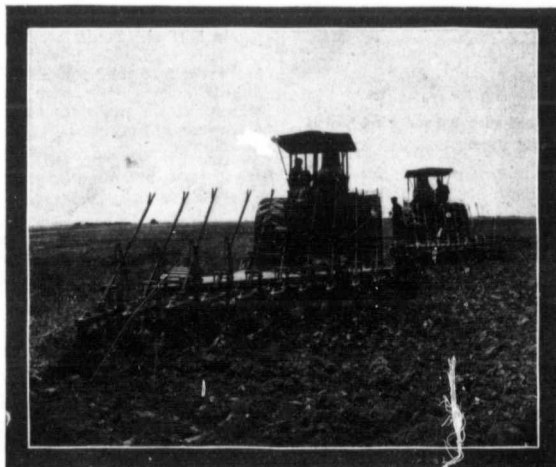
This is all the experience we have had in traction cultivation, and are satisfied under favorable condition, plowing can be done very successfully.

Yours very truly,
L. A. Bradley,
Per J. F. Bradlev

Plowing Cost Very Moderate

Dear Sirs:
Your letter of the 23rd instant to hand re our experience with traction engine.

I might state that we own a Rumely 15-30 OilPull, and find it a first class investment in many ways, both in plowing and threshing. Plowing, we can plow at any depth to suit ourselves, both in breaking and summer fallow. We only need one man to run the engine and plows, whilst we need a great many more men to drive the number of horses that it would take for a six furrow plow.



A Wholesale Line in Deep plowing.

went breaking for the public, pulling 6, 7 or 8 plows 14-inch, according to the depth the people wanted their ground plowed. In some cases I had a packer following behind the plows.

At first I tried using a kind of kerosene, which was called fuel-in, but did not get any satisfaction at all, and switched onto gasoline and found that I could plow with 2½ to 3 gallons of good gasoline per acre. I find that the weather makes a great deal of difference on the amount of fuel used, rather on the amount required, but I figure I use about 50 gallons per 12-hour run. As this make of engine required a certain amount of water in the mixture, and is oil cooled, we had to have a supply of clean water on hand, using about three-quarters of a barrel per day.

is to plowed land is completely offset by these advantages.

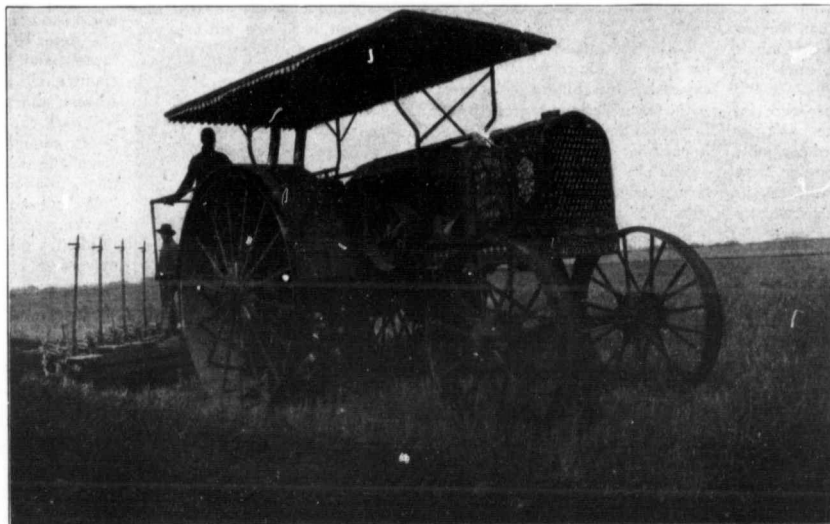
Wishing the Canadian Thresherman and Farmer every prosperity, I remain,

Yours truly,
Norman Jackson,
Bowell, Sask.

Improving by Experience

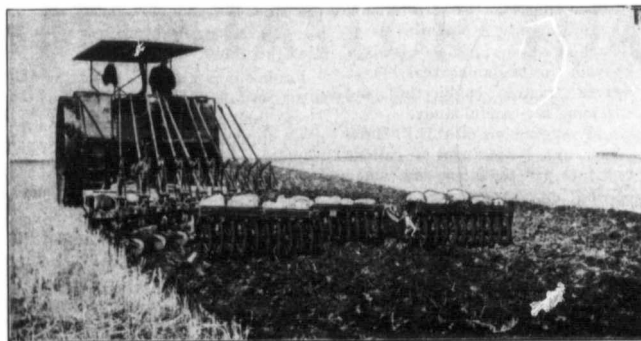
Dear Sirs:
Early in the spring of 1912, we purchased a sixty E.H.P. Hart-Parr tractor. The first work we put the engine to do was breaking for flax. The land was a very heavy loam, and as an oil tractor was a new experience, the work at first showed neither proficiency or efficiency. However, by the experience gained in the above we did better on our next piece of work which was plowing

Early Plowing—Bigger Crops



The season of 1913 has demonstrated beyond the question of a doubt that crops that are sown early will produce from 15 to 25 per cent. greater yields. This is especially true in Western Canada where large tracts are cultivated and where the growing season is short.

**In 1914
Farm the
Huber Way**



**Use a
Huber
"Thirty-
Sixty"
Gas Tractor**

In 1914 FARM THE HUBER WAY. Use a HUBER "THIRTY-SIXTY" Gas Tractor and cultivate a bigger acreage than you have ever before cultivated, and, what is more, get it in on time.

The HUBER is built for the big work of Western Canada. It is capable of meeting the most exacting requirements. Motor is of the four-cylinder type; drive wheels eight feet high; gearing of the strongest construction. No tractor has stronger pulling power, is more adaptable or more lasting. These facts are best demonstrated by actual use of the outfit. We urge your careful attention to the proposition we have to offer in this HUBER "THIRTY-SIXTY" TRACTOR.

For whatever purpose you need traction power, get it in the HUBER "THIRTY-SIXTY" four-cylinder gasoline or kerosene tractor. The cylinders are of large dimensions and generate an enormous amount of power. This power, when transmitted to the mammoth drive wheels, gives you a pulling force equal to any emergency that may arise in your work; and a force always under easy and instant control. Whether farming, or threshing, or road building, get all the pleasure you can out of your work. You will for the first time realize what pleasure in work is when you let a Huber Tractor do it for you. We say this because we know what the experience of others has been; and yours will be similar. While this is a high class traction engine, it is perfectly adapted to stationary work, such as threshing. A large belt pulley provides for connection with any machine you wish to operate with the motor. When contemplating the purchase of an engine, you shouldn't fail to carefully investigate the HUBER.

Don't forget that Huber Threshers are world beaters. They have won their reputation through Service

THE HUBER MANUFACTURING COMPANY

Canadian Office: Arlington and Logan, WINNIPEG, MANITOBA

Home Office and Factory: MARION, OHIO, U.S.A.

We can thresh our own grain just as soon as it is ready.

Two years ago we owned a Rumely 30 h.p. steam engine. We had a big crop ourselves, but pulled out to neighbors to thresh their grain, and left ours till last, with the consequence that our neighbors received from 12c to 15c more per bushel than we did, as the market dropped that much, but this year, we did ours first, and got the big price.

We find the cost per acre for plowing very moderate. We use from 30 to 40 gallons of coal oil a day at 20c, which comes to from \$6.00 to \$8.00 per day, then the lubricating oil, and grease for wheels, for which we allow \$2.00 per day, makes a total of \$10.00, out of that we plow from 12 to 15 acres per day.

We use six teams for stook wagons at threshing, which means six men for teams, and three field pitchers, making nine men in all.

We do not think the engine is very profitable when used for spring plowing, on account of the low spots. One has to miss so much land unplowed, and then there is a danger of getting stuck, which is a very thankless and expensive thing, especially when you get stuck for a whole day at a time, so we find it much more profitable to leave the engine stand until after seeding, when the engine can get a good firm footing and then keep her going. We find it much more profitable than doing one round and then getting stuck for two or three hours or more.

Yours truly,
Follett Bros.,
Duval, Sask.

Advices Less Expensive Machinery

Gentlemen:

Yours re experience of threshing to hand, and would say I have owned and operated a 45 h.p. Hart-Parr gasoline and kerosene plowing outfit. I consider this power good, so far as economy of power is concerned. The consumption of fuel is according to the management and load on the engine, but we average about five gallons of oil, and five gallons of water per hour.

When plowing we employ three men, and two horses, and when threshing, that is, stack threshing, we use seven men and two horses, and when shock threshing we employ from six to eight teams to haul the bundles.

The cost for breaking sod, discing and seeding averages about \$6.00 per acre, not including the cost of the seed.

I use a Cockshutt eight bottom gang, using only seven bottoms when breaking, but using the full

eight when plowing in stubble with discs or drag harrows.

I do not consider an engine of about ten tons weight detrimental to the land if not run too many times in one place. It depends somewhat on the condition of the soil. So much for economy of power for farming on a large scale.

I do not think I would advise my best friends to invest in such expensive machinery to farm with, considering the price of farm produce. I think I can safely say that nine-tenths of the big outfits are failures, and too many farms are mortgaged to maintain such a vast amount of expensive machinery, and the price of the machinery is too high.

We get about 18c for oats and 55c for wheat per bushel in this part of the country at the elevators.

I guess I had better close before I get too far from my subject, and stray into politics. I am fond of looking over your magazine, and I find some valuable information within its columns.

Yours respectfully,
A. R. Watson.

A Good Tractor Cannot be Beaten

Dear Sirs:

Your letter of the 23rd to hand requesting my experiences as to traction engine farming. I might say in the beginning that I have given traction engineering and farming my careful study.

My engine is a 60 B.H.P. Hart-Parr, and I use about 60 gallons of fuel per ten hour day, when doing heavy traction work, such as plowing. Our engine is oil-cooled, but we have to use some water to mix with the fuel. This is just to cut down the carbon, and to get a proper mixture we use about 15 gallons of water.

Last year I plowed and disc'd over 1,000 acres, and I just had one man besides myself. He oiled the plows and disc, and once a week went to fetch the oil tank, whilst I looked after both ends, and the same day he could draw me out three barrels of water.

I have worked this down to a fine point in my exams, and found I could plow an acre of stubble for 78½c, and discing at 40c per acre. This means double discing. Seeding cost about the same as double discing, namely 40c per acre.

When discing for a seed bed, I double disc my land and fallow with the seed drill, and could double disc 50 acres and seed and harrow 60 acres per day, using three drills and harrows behind the drills.

I do not believe that some tractors do any damage to plowed

land if the right machinery is attached behind, but on leaving a smooth surface. If a wheel marks it will cause a decided loss of moisture.

For plowing, a good tractor cannot be beaten, as our season is limited as well as our time for any one job, and with a large farm, the work must be rushed, but I do not believe in using a small tractor. Two men are necessary to rush a job such as plowing, discing, or seeding, and two men might just as well plow 20-25 acres as 12-15 acres, and so on with discing and seeding. A 30 B.H.P. will work a half section, but it is limited to that, but with double the power one can get over nearly three times that amount of land.

Hoping you will find this to your satisfaction, I will await your pleasure,

Yours truly,
Wm. J. Doney,
Boharm, Sask.

Ideal Power for Scrub Land

Gentlemen:

We operate a Hart-Parr 40 B.H.P. kerosene tractor of the three wheel type, purchased in the spring of 1912, and it has given good satisfaction.

We use a John Deere plow with six 14-inch bottoms, and where the land is reasonably level, we also use a harrow or packer behind the plows.

I think it is an ideal power to break scrub land. We use a John Deere jumbo plow, and can plow down stumps six and seven inches in diameter. Three to four acres per day would be a good average day's breaking, much depending on the condition of the land.

The only field work we did besides plowing was discing, using three seven foot discs loaded with stone and fourteen feet of harrows behind, which made about the same load as six plows and harrow. This would double disc and harrow ten feet.

For plowing about 16 acres per day we used about 25 gallons of kerosene, and about two gallons of gasoline. We cannot get cheap kerosene at Minnedosa, so had to use Sunlight oil costing 17½c per gallon in wagon tank, gasoline costing from 21½c to 28c.

We used from 15 to 20 gallons of water per day. The tank on the engine held enough for three days, except in very hot weather. The horses harrowing and seeding, moved the oil tank in the field, and hauled the oil from town. These were all the horses we used for attending to the machine.

The following is the average cost for plowing in a ten hour day of 16 acres.

25 gallons of kerosene at 17½c\$4.37
2 gallons of gasoline at 27½c56
1½ gallons cylinder oil at 42c63
Other oil and grease10

Total cost of fuel and lubrication . \$5.66

To this you may add wages and board for plowman and engineer.

If the ground were wet it would require more fuel oil, and would not do so good a job.

I prefer to do my seeding with horses, and if the land is damp enough to stick to the drive wheels, and fill up the cleats, it will pack the soil, but if the land is dry enough to leave the cleats clean, the tractor is not injurious to the plowed or cultivated land.

We use our tractor for plowing, breaking scrub and threshing, and think it a good investment. We drive a 28 x 42 thresher with all attachment.

Yours truly,
J. H. Broome,
Minnedosa.

Experience Very Satisfactory

Gentlemen:

My experience in cultivating with the tractor has been very satisfactory. I have a 22-45 Hart-Parr, which I bought two years ago, this coming spring.

As I have a horse ranch in connection with my farms, I only use my engine for plowing and threshing, having plenty of work-horses for seeding, discing, harrowing, cutting, etc.

The engine uses about a barrel (approximately 45 gallons) of kerosene per day, and about 1½ gallons of cylinder oil. I plowed from ten to fifteen acres per day in breaking, and about 25 acres with disc plows.

The quantity of water (for fuel) depends much on the temperature and varies from 25 to 40 gallons. The engine is oil cooled.

I generally use two men on the outfit, but I have often run it with one man only.

I require two horses one day in a week to haul a tank of kerosene, and one of water.

I only use my tractor on plowed land for disc plowing, and I do not think it affects the fertility.

My engine is still in good shape, and I would buy the same if I was in need of another one, as I consider kerosene much more economical than gasoline.

Yours truly,
Joseph H. Coupal,
Laford, Sask.

Diagnosed

"That's a smart thing I've done," said the doctor to his assistant.

"What's that, doctor?"
"I have put my signature in the column 'cause of death' in this death certificate."



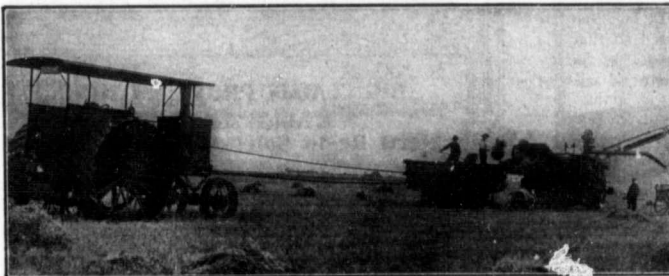
AULTMAN-TAYLOR THANKS

Threshermen and Farm Power Users the world over

We wish to thank you for the large number of orders with which you have favored us the past season for machinery of the **AULTMAN-TAYLOR "STARVED ROOSTER" Line**: Aultman-Taylor Gas Tractors, Steam Traction and Portable Engines, "New Century" Separators, "Matchless" Clover Hullers, Bean Threshers and Saw Mills.

While you have kept us busy as bees throughout the entire season, never, at any time, have we lost sight of the fact that your continued liberal patronage can be retained only by supplying every one of you with the most modern and most efficient machinery built and we have earnestly striven to give you the best that half a century of experience, honest workmanship and skill can produce. We have also had the best interests of each and every one of you at heart at all times.

That we have been well rewarded for our efforts is evidenced by hundreds of letters now pouring into our office from proud users, praising in the highest terms the quality and performance of **AULTMAN & TAYLOR** machinery. For these expressions of satisfaction and for your continued liberal patronage and confidence, the **AULTMAN & TAYLOR MACHINERY COMPANY** acknowledges its reasons for being thankful. **Our best wishes are with you for a prosperous run next season.**



Be sure to get our Catalog before you place your order for your next year's requirements. **We can save you money. Write right now.** International Harvester Company of Canada, Ltd., Canadian Sales Agents for "New Century" Separators.

The Aultman & Taylor Machinery Co.

Lock Box No. 64. MANSFIELD, OHIO

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

Course in Gas Engineering

Conducted by PROF. W. J. GILMORE

YEARS ago in the machine tool industry it was customary to build lathes with a light bed to carry the head stock, carriage and tail stock and support the whole on light curved legs. This style of construction served its purpose fairly well until the pressure of modern manufacturing conditions brought out the high speed steels which made

front section carries the radiator and fuel tank the middle section the motor, while the rear section supports the engineer's platform and carries the couple to which the load is attached.

Figure 168 represents an entirely different type of frame construction in which steel tubing is employed. It is a well known fact to all mechanics that for a

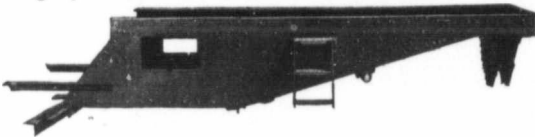


Fig. 166

it possible to take a heavy cut at two and three times the speeds formerly used. Then it was found that the old construction was not rigid enough. There was too much vibration, too much strain on the frame and the machines could not stand up and do perfect work. The remedy was, of course, to adopt the box section which is now the universal practice, not only for lathes but for every other class of machine tools.

About the same evolution is taking place in the tractor industry. Gradually all builders are coming to adopt some sort of box construction with all joints hot riveted. A strong frame is necessary because of the vibrational stresses imposed not only by the motor but by the rough ground over which such machines are compelled to work and on account of the twisting stresses of power, road and load.

Excellent examples of this type of construction were shown in the last lesson and also in figures 166 and 167 shown herewith. Figure 166 is built like one section of a cantilever bridge. There is the central web consisting of heavy

given weight of material the stiffest and strongest is the tube form. In this machine the problem which confronted the designer was to construct a machine of ample power and of the lightest possible weight. Naturally he hit upon using a frame built up of tubular section. His problem was that of the light weight tractor upon which so many designers are working at the present time and it is interesting to study the different styles of construction and observe how the different designers achieve the results they are striving for. The writer does not presume to pass upon the comparative merits of the different forms of construction but merely aims to present them in more or less orderly form for the consideration of his readers. In passing, however, it may be well to call attention to the fact that the only difficulty with the tubular style of construction is the difficulty of preventing the frame from twisting. This, however, is obviated to a considerable extent in all frames by the fact that the front end is pivoted so that the front wheels may follow the inequalities of the ground without

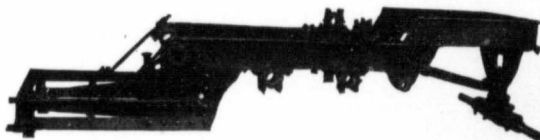


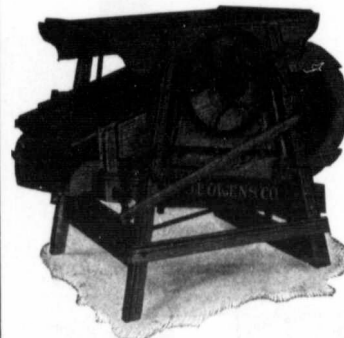
Fig. 167

channel beams riveted together with heavy boiler plate sections at the side reaching from well up in front, back to the rear. This style of construction, while rather heavy, is extremely strong and rigid.

Figure 167 is another modified form of box section consisting of three sections riveted together and all strongly braced. The

twisting the frame to any extent. In one or two of the low orchard tractors which have lately come upon the market, the frame is carried around the outside of the drive wheels to prevent them from rubbing up against and barking the trees. This style of construction may have some advantages in that respect but it makes a rather wide machine

KING of WILD OAT SEPARATORS



The Owens "New Superior" Wild Oat Separator

With our patented open and blank space sieves, it positively separates every wild oat seed, causing them to lie flat and not up on end.

Patented Adjustable Wind Boards are provided so that blast is always under control. Can blow out as much or as little as you like, making it a perfect oat cleaner and grader. The lower shoe is fitted with a cleaning rack that is adjustable, never touching the sieve, but just close enough to knock out any grain that gets stuck when going over the sieve. It is movable, working back and forth about two inches in opposite directions to the shoe. By this improvement the capacity is increased about 25 per cent.

It is strong, well built and bolted—not nailed

Our machine is built to clean any kind of grain and do perfect work. What the "NEW SUPERIOR" cannot do no other can do. Exceptionally easy to operate. Sizes 24, 32, 42 in. wide, with or without bagger.

Power attachment to operate with gasoline engine if desired. **Agents Wanted**

CUSHMAN MOTOR WORKS of CANADA Limited
202 Chamber of Commerce, WINNIPEG

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

"FLOUR CITY" TRACTORS



BIG CLAIMS PROVE NOTHING

Exaggerated statements and misleading advertising availed nothing at the FLEMONT DEMONSTRATION

Merit Rests Solely on Performance

40 tractors working side by side in the same field afforded the dealers and farmers present an opportunity to compare construction of the tractors and the class of work done.

The performance of the "FLOUR CITY" in this demonstration was an "eye opener" to those interested in power farming. The "FLOUR CITY" 20 h.p. pulling six and the "FLOUR CITY" 30 h.p. pulling eight 14 inch bottoms in the Fremont gumbo, was a revelation to those present.

It proves our claim for reserve power which was verified in our ability to pull our full quota of bottoms, where others could not. It proved our claim that by reason of peculiar design and construction the "FLOUR CITY" can produce more power with less weight than any tractor on the market.

If you are interested, ask someone who was there and get an unbiased opinion. If you are open for business, send for our catalog.

Kinnard Haines Co., 828 44th Ave. N., Minneapolis, Minn.



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

which is not usually considered a favorable style of construction, because in order to hitch the plows opposite the center of gravity of the tractors there must be a considerable number, otherwise the center of draft of the plows will lie to the furrow side of the center of draft of the tractor. This produces side draft which tends to draw the plows into the land and swing the rear of the tractor around. If the tractor is of light weight, it will be difficult to hold it in line, while if furrow wheels are employed to overcome side draft of the plows considerable power will be wasted. The best style of construction, especially for light weight tractors, if we merely consider the problem of side draft, appears to be as narrow a tractor as can be built. But if this is done many other difficulties at once arise. First, there is the matter of stability to be considered. If a tractor is built narrow it is liable to tip over on rough ground unless the center of weight is very low. If hung low there is the possibility of striking stones or other obstructions and of settling into soft ground. These are only a few of the difficulties that must be overcome by the designer and which make his task a particularly hard one, and one especially difficult when attempting to design a light weight machine which hauls only a few plows. He does not like to run the drive wheel in the furrow if it can be avoided and yet if he overcomes the difficulties of side draft entirely this is the logical thing to do. It is successful in that particular but introduces difficulties of traction, of running the entire machine at an angle and of picking up loose earth and carrying it around with the wheels.

quently require a slightly different system of bracing, as well as a different system of gearing for transmitting the power from the motor to the drive wheels.

Transmission Systems.--The methods used for transmitting the power from the motor to the drive wheels are quite as varied as any other part of the tractor. Some designers use chain transmission, some spur gearing, some bevel gearing, some friction transmission and at least one firm of foreign builders use worm transmission. Some designers have followed automobile practice closely and are using cut gears to obtain the various speed changes while still others have followed

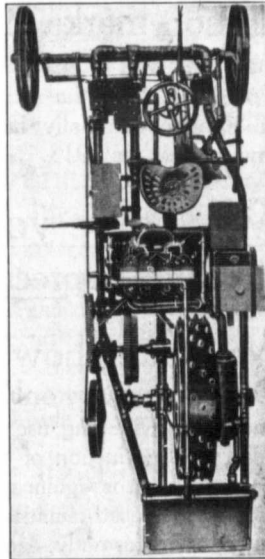


Fig. 168

the old style steam traction engine practice and use cast gears throughout. In some tractors the chain of gearing is very simple and in others complex. It will be interesting to follow the different systems through and observe their points of difference. This will be the subject of the next few lessons.



The Trial Course

"I'm afraid you may think we are giving you a lot of fish this week, old man," said the genial host, as they sat down to dinner. "The fact is, my wife has got hold of what sounds like a really capital device for removing a fishbone stuck in the throat, and we want to see if it works."

Up-to-date

"In straitened circumstances, is he not?"
 "Yes. He confesses that it is about all he can do to keep the wolf out of the garage."

Figure 168, however, shows how this difficulty may be overcome by using only one driver, and running one of the front wheels in the furrow. This construction very effectively overcomes the problem of side draft, but it reduces the driving element to a single unit and to that extent reduces the tractive power unless the wheel is made very wide.

There are other styles of frame construction which differ slightly in minor details from those already described, such as methods of bracing, and arrangement of the brackets for the various shafts. All of these depend principally upon the style or type of engine, whether of the single cylinder, double opposed, twin or four cylinder type the style of bracing the frame will depend to some extent upon whether the engine is placed crosswise of the frame or lengthwise. The vibrational stresses will be different in the two cases, and will conse-



SAVE

TROUBLE - TIME - MONEY

Buy a Columbia Multiple Battery. They last so long that they are the least expensive battery for your tractor. They are waterproof, damage proof.

If your dealer cannot supply you, write us, and we will tell you where to get them.

If you mention this advertisement, we will send an ignition handbook free. It gives you valuable points about finding and remedying trouble in gasoline engines and shows you how to keep your motor running properly.

Tractor Department

Canadian National Carbon Co., Ltd.

99 PATON ROAD, TORONTO, ONT.

IGNITION and LIGHTS

We furnish the magneto for ignition and lights for your automobile,

Write us today for our catalog and prices.



motorcycle, gasoline tractor, motor boat or stationery gasoline engine. Either direct current or alternating current types of magnets furnished for every purpose.

Henricks Novelty Co.

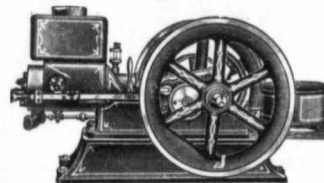
1504 St. Paul St.

INDIANAPOLIS - IND.

Cheapest Power

For Every Need FROM THE

Waterloo Boy Gasoline Engine



The Waterloo Boy gasoline engine will run all day without attention, furnish exactly the power you need, maintain a uniform speed, and save you money every hour it works.

Use Either Kerosene or Gasoline

The recent award of Gold Medal at Budapest, Hungary, in open competition with the best engines of all countries is clinching proof that the Waterloo Boy Leads The World in construction, power, service and durability.

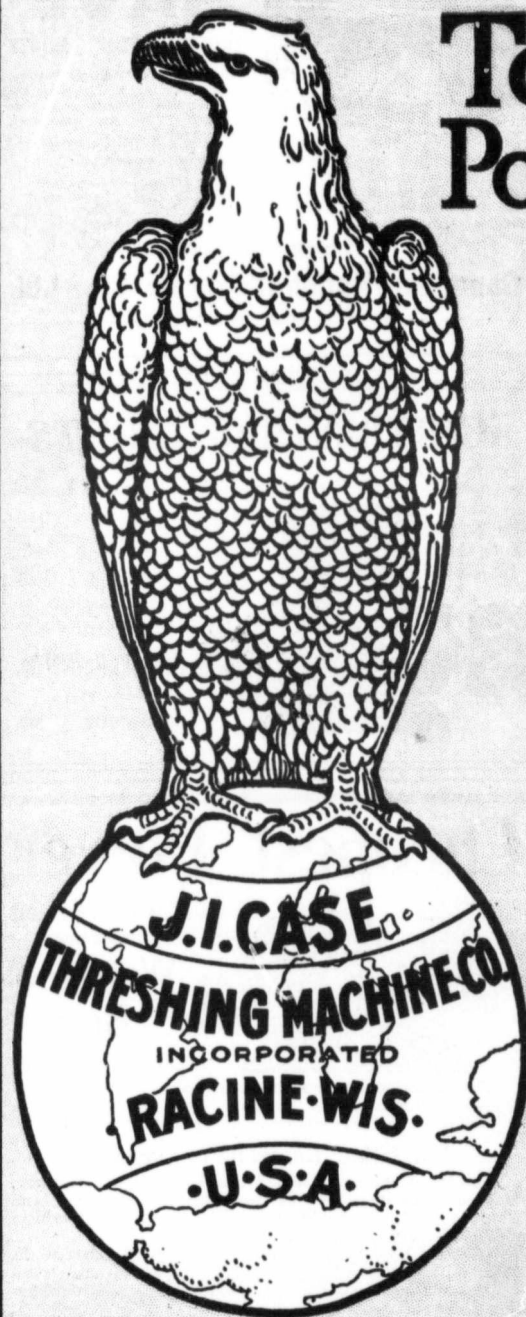
Has many important exclusive features: Speed, Lever works like throttle on a locomotive, old reliable fly-ball governor, automatic feed regulation, open jacket, starts easy in winter, interchangeable parts, etc.

Lowest in Price because made in large quantities at low manufacturing cost. Guaranteed 5 Years. Book free, write to-day.

We handle the following lines: Steam and Gasoline Traction Engines, Grain Separators and all attachments, Road Rollers, Asphalt Rollers, Engine Gang Plows, Well Drilling Machinery, Air Cooled, Hopper Cooled and Tank Cooled Gasoline Engines, Stationary and Portable Saw Mills, Vertical and Horizontal Boilers, Binder Engines, Marine Engines and Outfits, Electric Light Machinery, Waterworks Machinery, Wind Mills, Pumps, Power and Electric Washing Machines, Cream Separators, Steel Farm Trucks, Dump and Spreader Wagons, Grain Cleaners and Graders, Grain Grinders, Grain Elevators, Power Hammers, Lathes and Blacksmith Machinery, Cement Mixing Machinery, Power Hoists, Milking Machines, Manure Spreaders, Wet and Dry Batteries and Electrical Supplies.

BURRIDGE COOPER Co. Limited

303 Owens St., Winnipeg, Man. 1840 Dewdney St., Regina, Sask.



To Canadian Power Farmers:

The close of the present season marks the most successful year in Case history. The Farm Power Users of the nation, by making this possible, have materially increased their own profit and success for 1913.

We value your co-operation and appreciate it gratefully.

No matter how well we build Case Machinery only the most continued and ever widening use could justify, year after year, the production of more machinery of the Case type. It is significant that, in spite of enormously increased facilities, in spite of far greater output than formerly, each succeeding year finds us unable to meet this ever-increasing demand for Case Machinery.

That various Case products continue each year to establish prize-winning records is incidental. It is simply the logical result of our policy of building machinery that meets every demand made upon it. In other words, Case Machinery does just what we say it will do

J. I. CASE THRESHING MACHINE CO.

INCORPORATED

741-791 STATE ST.,

RACINE, WIS. U.S.A.

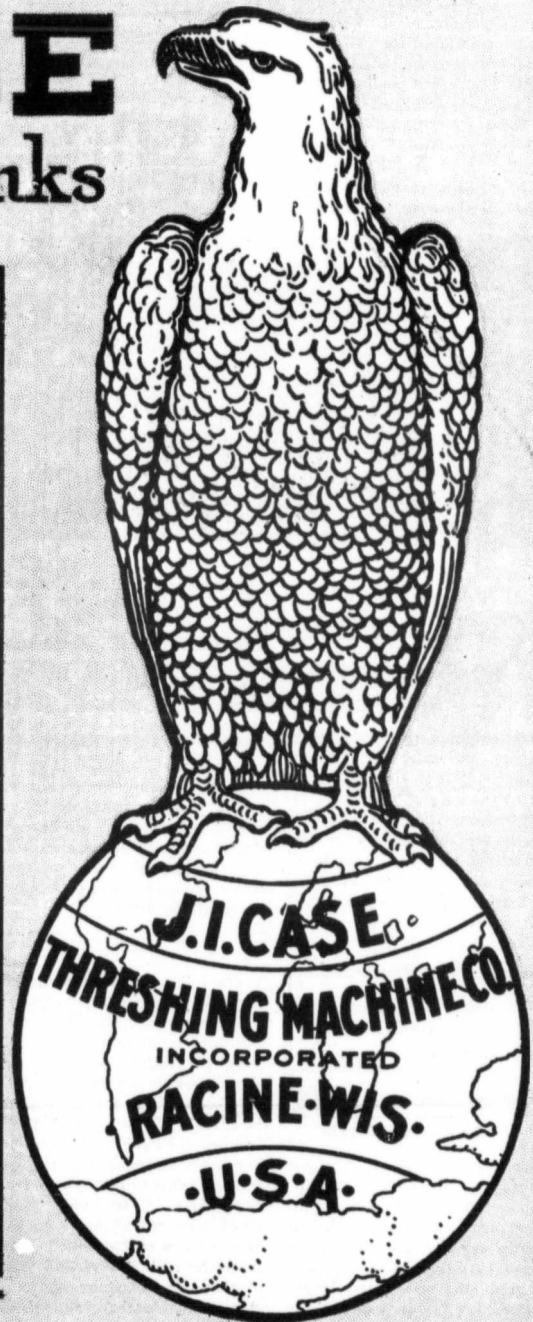
A CASE Message of Thanks

This pre-eminence is due to Case attention to detail. Every bolt, the smallest part, is tested individually. Our completed product must undergo, successfully, a factory system of testing far more rigorous than any demand of active service.

Seventy-Nine Branch Houses, dotting the maps of three continents; Nine Thousand Dealers, these—carefully chosen—go toward the making of the powerfully efficient Case Organization. An Organization whose purpose is to assist you in securing greater production, greater profit; to see that every piece of Case Machinery sold works up to that highest degree of efficiency without which greatest profit is impossible.

New ideas in the field of Farm Power Machinery find their first successful application in the Case types. Many of these new ideas are in the Case line for the coming year. The 1914 Catalogue describes them. Your name sent in now will insure your receiving it later, and supplementary literature also.

Talk with the Case dealer in your locality. It is something to know the whole Case Organization is back of him, ready to act in your behalf, for your best advantage, in the manner best calculated to increase your profits. Let us hear from you.



J. I. CASE THRESHING MACHINE CO. INC.

— CANADIAN BRANCHES —

TORONTO
WINNIPEG

SASKATOON

REGINA
CALGARY

The Land and Apple Show

Continued from page 9

medal for display of apples—1, British Columbia.

District diploma for exhibit of natural resources—1, Birtle Agricultural Society; 2, Kildonan and St. Paul's Agricultural Society; 3, Kenora Agricultural Society.

District diploma and gold medal for finest exhibit of fruit—1, Salmon Arm Board of Trade.

District diploma for best dis-

fat up to the end of July. This means between fourteen and fifteen dollars that one cow earned more than the other. Are your cows workers or shirkers? Dairy records alone will provide the means of ascertaining these facts beyond question. Forms for weighing milk either daily, or on three days per month, are supplied free by the dairy division, Ottawa. In your letter of application state which you want.



Most Wonderful of all—Manitoba's Contribution.

play of apples—1, Nelson Board of Trade.

Diploma for general exhibit—Canadian Northern Railway.

Not the least interesting and impressive display in this fine show was that of the Prince Albert exhibit organized by its publicity commissioner, Walter E. Gunn. It consisted of a magnificent showing of field crops, including some wonderfully fine growths of alfalfa and clover, and fully earned its place in taking all points for a special prize offered for district display of grains and grasses.

Turkey Tips

It is claimed that the most delicious, juicy broiler that an epicure can fancy is a turkey poult of about six pounds weight, or when about two-thirds grown, and of medium size. Many a young male two-thirds grown would be too large to broil; if rather large, however, the breast may be gashed, and thus more easily cooked through, but it must not be dried.

The following facts on marketing turkey feathers are well worth remembering: The quills from the third point or tip end of the wing are called pointers, and should be kept separate. In packing, keep tail and wing feathers separate. Tie each kind in bundles by itself, and press the bundles in the boxes tightly. All feathers must be clean, sound and dry-picked. The wing quills which have full plumage on both sides of the quill, which come from the first and second joints of the wing next the body, are more valuable than, and should be kept separate from the pointers. The tail feathers should be kept by themselves, and are the most valuable. The short tail and wing quills, if saved, should be kept separate from the long ones, as they depreciate their value if mixed with them. The directions for shipping are to mark the correct weight and tare on the boxes, also the name of the shippers, and ship as "turkey quills."

Dominion Department of Agriculture

Bulletin from Branch of the Dairy and Cold Storage Commissioner

Workers or Shirkers?

Those dairy farmers who are carefully noting the total production of each of their cows for the season are finding some curious differences. For instance, in one Ontario herd the yield of a 9-year-old grade that freshened March 5th, was 4,080 pounds of milk up to the end of July; her stable mate, also 9 years old, that freshened March 12th, receiving the same feed and care, gave only 2,970 pounds of milk. Over half a ton of milk in that short period indicates a considerable difference in income between the two cows.

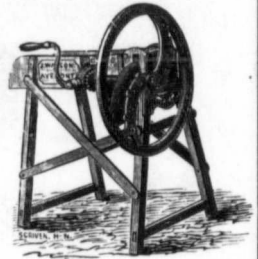
In another herd at the same factory between two six-year-olds that calved April 3rd and 4th, there is a difference of 1,400 pounds of milk and 60 pounds of

Economic Feeding

No matter what your supply of feed, economy is possible only when it can be cheaply handled and prepared. The

Canadian Hand Feed Cutter

is specially designed for the man who feeds only a few head of stock, yet it is as efficient in its way as any cutter made. Strongly constructed throughout; 7½ inch mouth, well-fitted feed rolls, heavy fly-wheel and two radial knives; spring feed—roll pressure.



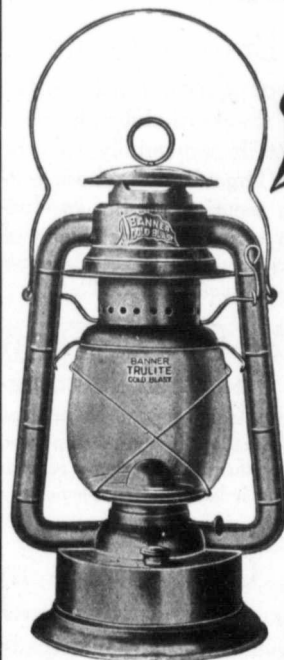
Write for our Free Catalogue

John Watson Mfg. Co.

Winnipeg

Manitoba

We are now manufacturing the largest assortment of Farm Equipment in Canada. This Book will tell you of much that would help you in your work.



The **Trulite**

Cold Blast Lantern

The Latest and Best Thing in Lantern Manufacture

Glass will not break, crack, or become smoked.

They give 12 candlepower bright white light.

They burn 24 hours with one filling.

Bowl shaped glass is easily cleaned.

Sold by all Dealers

Manufactured by **Ontario Lantern & Lamp Company, Limited**
Hamilton • • Canada

ALLAN LINE

ROYAL MAIL STEAMERS. "THE POPULAR PIONEER LINE"
FALL AND WINTER SAILINGS
FROM MONTREAL

Liverpool	Nov. 11th	Glasgow	Nov. 15th	Corinthian	Nov. 16th
Tunisian	Nov. 18th	Pretorian	Nov. 20th	Sicilian	Nov. 23rd
Victorian	Nov. 25th	Gramplan			
Corsican					

CHRISTMAS SAILINGS

Reduced Rates Effective November 7th.

Hullfax-Liverpool	Dec. 6th	Portland-Glasgow	Dec. 4th
Virginian	Dec. 20th	Scandinavian	Dec. 13th
Victorian		Ionian	
St. John-Liverpool	Dec. 10th	Boston-Glasgow via Hullfax	
Tunisian	Dec. 10th	Hesperian	Dec. 11th

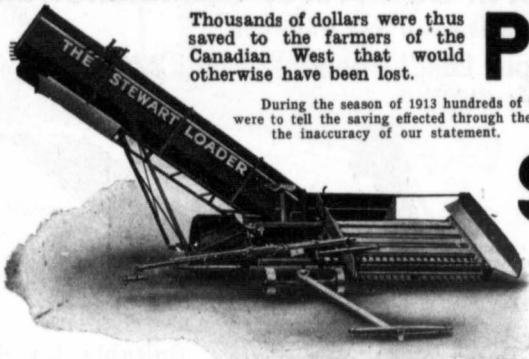
RESERVE BERTHS EARLY. For rates, reservation of berths, apply any railway agent, or W. R. ALLAN, General Western Agent, Winnipeg.

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

1913

THE SEASON OF 1913 WHICH HAS JUST CLOSED HAS PROVEN BEYOND A QUESTION OF A DOUBT THAT THE STEWART SHEAF LOADER IS A NECESSITY IN THE FARMER'S IMPLEMENT EQUIPMENT

Every farmer knows that the fall of 1912 saw an unusual amount of grain unthreshed, owing to the early snow fall. This grain was, of course, left in the field until the spring of 1913, and had it not been for the Stewart Sheaf Loader a large amount of this grain would never have been threshed. It was beaten into the ground and could not have been lifted by forks, but the Stewart Sheaf Loader picked it up as clean as if it had just been harvested.



Thousands of dollars were thus saved to the farmers of the Canadian West that would otherwise have been lost.

PROVED

The cost of labor was cut in two and the grain was marketed in record time and condition for top grade.

During the season of 1913 hundreds of these loaders have been purchased by the farmers of Western Canada, and if we were to tell the saving effected through the use of this machine, the figures would be so large as at first sight to suggest the inaccuracy of our statement.

SUPREMACY

The farm press and the daily press all over this Canadian West have witnessed the benefit derived from the Stewart Sheaf Loader, and in a spirit of fairness have devoted considerable space to what it has done towards bringing about a speedy and economical gathering of the 1913 crop.

OF THE

Sooner or later, you as a farmer and grain raiser will look upon this machine as much of a necessity as your harvester. Why not investigate it thoroughly for 1914? You are certainly interested in anything that will save you money and at the same time insure your crop against a short season and a shortage of labor.

We have scores of testimonials from users. Get into touch with us now, and give us an opportunity to show you what we have done for those who have purchased our machines. Remember, there is only one Sheaf Loader, and that is the Stewart.

The Stewart Sheaf Loader Co. Ltd.
804 Trust and Loan Bldg.
WINNIPEG

Stewart Sheaf Loader

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

Q. E.B. 1. How would you set the common D slide valve on a 25 horse power J. I. Case engine with Woolf reverse, and how can I obtain the right length of the reach rod? **2.** How often should a new boiler be tested after working under one hundred and fifty pounds steam pressure? I have been running three falls in threshing and pulled a 40 x 60 separator.

A. 1. In order to obtain the correct length of the reach rod, it will be necessary to write to the company, giving the size, style and number of your engine; then, when this is adjusted properly; place the engine on dead center and test the setting of the eccentric by moving the reverse lever. After it is set correctly, the valves should not move appreciably. If they do, either the eccentric is set wrong or the shaft is worn down in the main bearings until the center of the block is not opposite the pivot in the guides. In that case the only remedy is to rebabbit the main shaft. Having determined that the eccentric is set properly, the next thing to do is to give the valve the proper amount of lead by moving it on the stem; the usual lead is about one-eighth of an inch. **2.** There is no rule by which one can determine how often a boiler should be tested.

The Thresherman's Question Drawer

ANSWERS TO CORRESPONDENTS

After the engine has run three seasons it would not be amiss to give it a test of cold water of about two hundred pounds. If you do this, use an accurate steam gauge and bring the pressure up gradually. If there is no sudden drop of the gauge hand, it is evident that the boiler is in good condition.

Q. A.B. 1. What would you consider the standard H.P. of these engines and boilers: Engine No. 1 has boiler waist size, 28 in.; length of tubes, 78 in.; number of tubes, 42; diameter, 2 in.; length of fire box, 40 in.; height of fire box, 32 in.; size of cylinder, 8 x 10. Engine No. 2: Length of fire box, 36 in.; width of fire box, 26 in.; height of fire box, 32 in.; length of tubes, 78 in.; diameter, 2 in.; number of tubes, 42; waist size, 29 in.; cylinder, 8½ x 10.

Engine No. 3: Waist, 28 in.; fire box length, 40 in.; width, 25½ in.; height, 37 in.; number of tubes, 36; length of tubes, 84 in.; diameter, 2 in.; cylinder, 9 x 12.

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

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

A. 1. It is presumed that you have in mind nominal h.p. As you give no conditions under which these engines are to run, all we can do is to make a comparison between the sizes given in question. We will base our calculation on engine No. 1 and call it a 13 h.p. both in cylinder and boiler and if it is 13 h.p. No. 2 boiler would also be 13 h.p. as

there is very little difference in the size. The cylinder of No. 2 would be 14½ h.p. No. 3 boiler would be 12½ h.p. and the cylinder would be 16 h.p.

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

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

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

Q. M.C. There is something wrong with the valve gear on my engine. When I place the reverse lever in the centre notch while the

La Compagnie Desjardins Famous Small Threshing Machines

"THE CALL OF THE WEST" Sold by

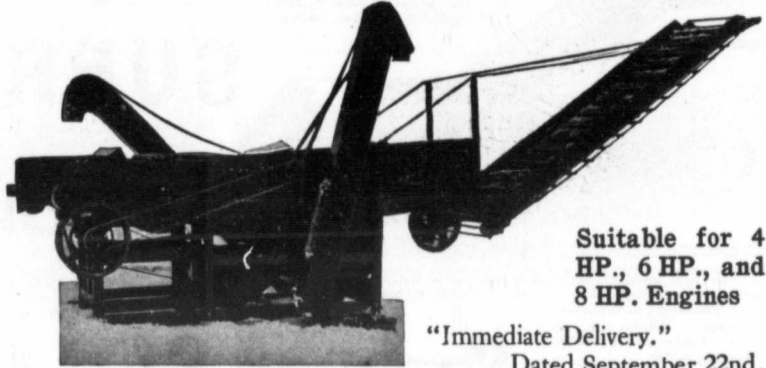
A. STANLEY JONES :: North Battleford, Saskatchewan

General Sales Agent for Saskatchewan and Manitoba

Head Offices: "The Industrial Spur East" Phone 223 and 220

Branch Warehouse: "UNITY"

Prices from \$315.00 to \$352.00 Separator and all belts, carriage paid to any point in SASKATCHEWAN, and most points in Manitoba. Capacity from 400 of wheat to 600 or 700, and of oats from 700 to 1500 and more according to size taken. The \$352.00 outfit will easily thresh 600 of wheat and as much as 1500 of oats if in average grain and fed properly, although only sold to thresh 600 to 800 of grain. If you have any size farm your usual threshing bill will be more than your payment on this machine. La Compagnie Desjardins have made these machines since 1864 and were the original makers of the Champion, but owing to the makers of other machines calling theirs Champions we have called ours by what it proved to be last year—



Suitable for 4
HP., 6 HP., and
8 HP. Engines

"Immediate Delivery."

Dated September 22nd.

"THE CALL OF THE WEST"

We make every bit of it. Don't buy any other machine or any sort of small outfit till you have had my prices. Outfits on hand at North Battleford. Drop a card RIGHT NOW. Free Fully Illustrated Catalog.

throttle valve is open, the engine will continue to run. If I reverse the engine and again place the lever in the centre notch it will continue to run in the reversed direction. I will say that the engine will only do this running without any load. Should it not stop when the reverse lever is in the centre notch? Don't this show that there is something wrong? How can this be fixed, I sent to the factory for a man, and he went over the engine, moved the valve on the stem a trifle, set up the boxes a little and it acted all right when he was here, but in a few days I discovered that it was all wrong again. The eccentric is keyed on the shaft; do you think this trouble will have a bad effect on the power and economy of the engine? If so, I would very much like to know what to do for it.

A. This is a very common freak of reversing engine with a constant lead. That is when the engine has the same amount of lead at all points of cut-off, and therefore it will have the same lead when the reverse lever is in the center notch. Therefore it opens the port when the lever is in the centre notch, which fills the clearance with steam, and the expansion thereof is sufficient to run the empty engine. This is not a fault of the engine and does not show that there is anything out of

adjustment. In fact, your engine must be set very accurately, as it often happens that an engine will run one way when the reverse lever is in the centre notch while the throttle is open, but when an engine will run either way under the foregoing conditions, it shows that the rod connecting the reverse lever to the valve gear proper must be of the correct length.

If the eccentric is keyed up to the shaft, this shows that it is in the place which the builder intended it to be. The fact that the engine did not run when the throttle was open and reverse lever in the center notch, after the man from the factory adjusted it, shows that he made one or more of the boxes tight enough to make enough friction to prevent the engine running with the little steam which the engine gets with the reverse lever in the center notch. Tight stuffing boxes will make enough friction to hold an engine under such conditions. The fact that it runs so easily shows that it must be well lined up and in good condition generally, also well oiled.



Q. L.A. In putting on a new engine bed on an engine would you make rigid fastening on pillow blocks when the boiler is cold, or would you steam up to

about 75 lb.—working pressure 150 lbs.—to divide the strain on the engine bed equally between expansion and contraction of the boiler, which shows apparently cracked the lower side of guide of the old bed?

2. The new bed comes with bearing for main shaft babbitted. Opposite bearing has never been opened and seems to be in good order. Would you put it up without re-babbitting both new and old bearings?

3. What h.p. will a 6½ x 10, 10-inch stroke tandem compound engine develop, running 230 revolutions per minute, at 150 lbs. pressure?

A. On some engines there is a slip joint where the cylinder is bolted to the boiler, which allows the boiler to expand and contract without exerting an undue strain on the castings; but if the cylinder and bed or frame are bolted rigidly to the boiler it certainly would help matters to bolt it up at a medium temperature of the boiler and thus reduce the danger of breaking the frame.

1. The temperature of the boiler at 130 lbs. gauge pressure is about 355 degrees F. Say the average temperature of the atmosphere is 45 degrees, this would make the average temperature of the boiler 200 degrees. Steam at atmospheric pressure, or

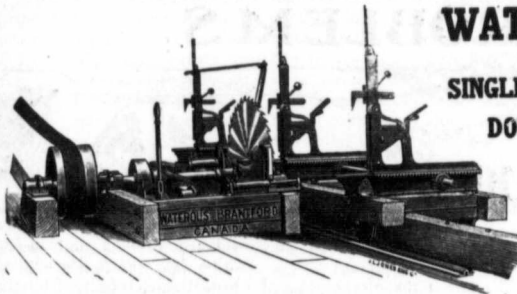
just before it shows on the steam gauge is 212 degrees; so you see a medium temperature would be at about this point. As there are only about 50 degrees between 75 and 150 lbs. pressure, 75 lbs. would be a medium pressure but not a medium temperature.

2. The main box in the engine frame is square with the cylinder and in the factory the shaft is bolted fast by means of the main bearing cap, so that after the cylinder and frame are bolted to the boiler, the shaft is rigidly held in place and the outer bearing is babbitted. It may be possible that the outer bearing will be exactly in position. This can be found out by close examination, and if it is not exactly in position the babbitt should be cut out and replaced, after the cylinder and frame are bolted to the boiler and shaft is securely held by the cap. To insure the shaft being held properly the liners should be taken out from between the cap and the box.

3. The nominal h.p. as given by the manufacturers is 20 and the maximum brake h.p. is 49.



Q. T.B. Please explain to me how to fire a straw burning fire-box boiler, and why the flues get to leaking so easily when straw is used for fuel?



WATEROUS PORTABLE SAW MILLS

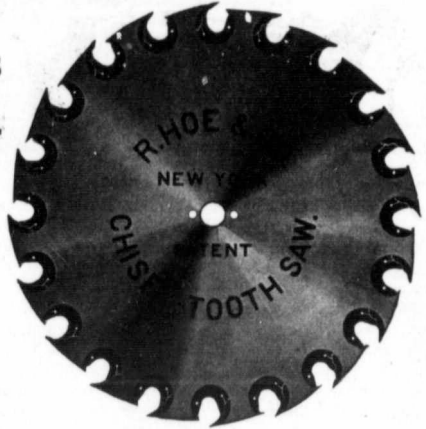
SINGLE EDGERS

DOUBLE EDGERS

TRIMMERS

BUTTING OFF
SAWS

LOG JACKS



A Waterous Portable Saw Mill consists of:

- One No. 0 Saw Frame, complete.
- One No. 1a log carriage, 3 head blocks, feed dogs, spring receder, overhead ratchet, set works, steel V, and flat track, cable drum drive with 75 ft. ½-in. cable.
- One tightener pulley and frame.
- One endless rubber belt, 8-in., 4-ply, 50 ft.
- One 46-in, No. 3 Hoe & Co. chisel-tooth saw with 200 bits.

Sole Agents in Western Canada for the Original Hoe & Co. Chisel Tooth Saw

Waterous Engine Works Co. Ltd., Winnipeg, Man.

Machinery on the Farm

The value of machinery on the farm depends to a great extent on its intelligent use, or its extravagant abuse. The farmer should have the best improved machines and implements to properly cultivate the crops and develop the producing resources of the farm. There is such a thing as over stocking the farm with machinery. This indiscretion in the purchase of machinery is almost as ruinous in farm management as a too stinted use of machinery.

A very successful farmer, on being interrogated as to his rather large supply of cast-aside machinery, not worn out, said: "When I read of some new machine or implement represented as a labor saver, I investigate it at once, with a view to determine how much it would save me in time, labor, horse power and general expense in the work it is to do. If upon investigation I find that it beats anything I have, then I figure up just how much. If I can do more work with it, or as much, and save one man or a team or a horse even, then I figure the wages of the hand, his board, investment in the team, etc., and such other items that naturally come into such an estimate, and I soon determine whether I can afford to keep on using the machine I have, or best lay it aside, even if practically new, and buy the new labor-saving machine. It is not a question of having a machine that will perform the work, but one of labor-saving and completeness of work performed."

There are many abuses of machinery that render them inoper-

ative and useless to a very large extent that should be corrected. This, however, is a matter of personal shiftlessness and laziness on the part of the farmer or machine owner. It is a lamentable fact, even in this age of improvement and progress in farm work and farm management, that some farms—we might say many farms—are without machinery sheds, and the farm machines and implements are scattered over the farm where last used and left out the whole year round. Some are more thoughtful and observe what they call system by congregating the machinery in one place, usually in the barnyard, and line them up alongside of a barbed-wire fence for protection and shelter.

The tool house and machine shed need no advocacy to the farmer with any sense of saving or care on the farm. The machine shed should be located with a view to convenience in use and storage. It should be located so as to be readily and easily backed into with all machines or wagons to be stored, and as easily hitched to when needed for service. The closed-tight shed that excludes live stock of all kinds, even poultry and pigeons, is important. Machines thus protected will last three or four times as long as the exposed-to-the-weather machines. Besides, it is more respectable and farmer-like to be neat and saving. The outdoor storage doesn't look good even to the lazy, careless fellow that practices it.

It pays to buy machinery when its saving advantages are manifest, and it pays to give it proper care at all times.

The Water Supply of Farm Homesteads

The shallow well, that is, one usually between 10 and 30 feet in depth, collecting the water from the surrounding soil and subsoil, is the source of supply most commonly found on the farm homestead and in the village. Provided that the environment is satisfactory from the sanitary standpoint, such wells may yield excellent water, but when, as is usually the case, convenience to the house or farm buildings is alone considered, the chances are that it is only a very short time after the location of the well before the water is polluted. On the larger number of farms we find the well sunk in the barnyard (where there must necessarily be more or less of an accumulation of manure) or under the barn or stable, or at no great distance from the privy (frequently a mere hole dug in the ground), or close to the back door, out of which the household slops are thrown and near which the garbage heap with all sorts of refuse may be found. It cannot be too strongly emphasized that wells so situated inevitably become contaminated.

It is quite true that most soils, and more particularly those that are porous and well aerated, such as gravels and sands, possess filtering and purifying properties in a marked degree, but the soil surrounding wells located as described must in time become saturated with organic filth of a most objectionable character, and it is then no longer able to purify but rather serves to contaminate the water passing through it to the well, which, under such con-

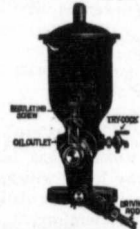
ditions, may be said to act as a cess-pit.

Further, we frequently find these wells through faulty construction or insufficient protection become the fatery grave for rats, mice, frogs and other small animals, the decomposing bodies of which render the water foul and unfit for use. Rotten crib work is another but not so dangerous a source of contamination. Imperfect protection of the mouth of the well may also allow the entrance of surface wash. If these latter features are guarded against and the well lined to a depth, say, of 10 feet with puddled clay or

Continued on page 26

The Practical FORCE-FEED OIL PUMP

"The Great Cold-Weather Lubricator"



Don't accept something claimed to be just as good

GET THE BEST

Your name and address on a post-card will bring full information, prices, etc.

McCullough Manufacturing Co.
Minneapolis, Min., U.S.A.

Crane & Ordway Co.
WINNIPEG, MAN.

Distributing Agents for Western Canada



ONE of the most important events of the past month was the meeting in Saskatoon on October 20, of the Western Canada Live Stock Union. The first meeting at which organization actually took place was held in Calgary in April, and in the May issue of the Canadian Thresherman I dealt at some length with the possibilities of this new organization. The Saskatoon meeting was really convened to discuss, at length, the statement of the case to be presented on behalf of the western breeders.

The original intention had been to present this case to the Minister of Agriculture of Canada, but after giving it very careful consideration the committee decided that the case should first of all be presented to the president of the National Records Board, for while this Board has no actual control over the executives of the various breed associations, any recommendations from it would naturally carry much weight; and if proceeding in this way the western breeders fail to get a redress of their grievances they would be in a still stronger position to approach the Department of Agriculture itself and ask that the matter be adjusted.

The President of the National Records Board is William Smith, M.P., and to him has been sent the lengthy letter which has appeared in full in the daily press, and which, therefore, it is needless to produce here. One of the strongest features of this letter was the suggestion with regard to representation on the executive of the various Dominion breed associations. While the Western Canada Live Stock Union was brought into being by this desire to get adequate representation for the western breeders on the executives of Dominion breed associations its work is not to be confined to that alone.

The provincial officers were elected at Saskatoon and the position of president was almost unanimously conferred on Dr. J. G. Rutherford, of Alberta, who was for many years the Dominion Veterinary and Live Stock Commissioner, and who is therefore fully posted on all the ins and outs of the present situation and being an enthusiast in live stock breeding will be able to do very much to further the interests of the Live Stock Union. He is now in charge of the Agricultural Sec-

attractive prize lists than they are able to do at present.

The date of the next meeting of this Union has not been fixed, but before it will be held the annual meetings of the various breed associations of the West will be held and no doubt the work done at Saskatoon and the possibilities of future work will come up for discussion. Every man who is interested in live stock breeding should make a point of being at the annual meeting of the breed associations of his province, and

shipped express both ways, in order that the horses will be as little delayed in transit as possible. The Live Stock Commissioner, J. Cochrane Smith will have charge of the exhibit on behalf of the Provincial Government and the breeders who contribute are all going to attend the exhibition.

This is the first time that Saskatchewan has been represented at the International, and while it is possible no very great amount of prize money will be secured the amount of advertisement to the province will be enormous. Very general regret is expressed that W. H. Bryce, of Arcola, Sask., has not been able to see his way to send his two beautiful Saskatchewan bred fillies. However, there is no doubt that the exhibit will be one which Saskatchewan will have every reason to be proud of.



Convention of Western Canada Live Stock Union at Saskatoon

tion of the National Resources Branch of the C.P.R., and is doing great work in Alberta in stimulating the promotion of high grade live stock.

In addition to the presentment Records Association the matter of the case to the National a national live stock show was taken up and fully discussed, and it was unanimously decided by this meeting that the geographical difficulties made the holding of such an exhibition, at least for the present very undesirable, and a strong resolution was passed suggesting that the money which it was proposed to spend in holding such a show be divided equitably among the shows now in existence in Canada which were especially devoting themselves to live stock and the encouragement of breeding. If this suggestion is accepted by the Department of Agriculture at Ottawa, it would put such live stock shows as Guelph, Toronto, Brandon, Regina, Calgary and Edmonton in a position to offer very much more

go prepared with suggestions and questions with regard to the present and future scope of this new organization.

International at Chicago

By the end of November the Chicago Live Stock Exposition, the largest show of its kind in the world, will be opened, and Western Canada is to have a larger representation than usual. It is now definitely decided that the Province of Saskatchewan will send down a carload of horses and that these horses will be principally young animals bred in Saskatchewan. The exhibitors will be the Hon. W. C. Sutherland, Robert Sinton, of Regina, R. H. Taber, of Condie, Alex Mutch, of Lumsden, the Saskatchewan University, R. McLean and W. J. Caswell.

The car will leave Saskatchewan on the 24th of November and the Provincial Government is promoting this exhibit to the extent of bearing the express charges and entry fees. The car will be

J. D. McGregor, of Brandon, who won the grand championship last year, is sending down four steers and a most beautiful calf herd. The steer which is being specially entered for the sweep stakes grand championship is the one who was first and champion in the yearling class last year and has made magnificent progress all through the season. Emmert, of Oak Bluff is to send down a herd of shorthorns. He probably possesses today the finest shorthorn herd on the continent of America. So far Alberta has not seen her way clear to an exhibit at the International at Chicago, but no doubt will do so next year.

Wesetrn Fairs

A matter which I would like to call the attention of my readers to is the proposal of the Province of Saskatchewan to change its winter fair from March to December. This is an extremely radical change, and one which if carried out will have far reaching effects. I have discussed the matter at

length with a number of prominent breeders of Saskatchewan, and find that they very strongly favor this change. They claim that frequently the weather in March is stormy, and that owing to the long distances which cattle and horses have to travel, they are liable to deterioration by delay in transit.

Another argument is that if instead of being stormy the spring is a fine one, that by March many of the men are anxious to get on their land and in that way refuse to attend the show. It seems to me that this is a matter for very careful consideration. I think that this question will come up for final settlement at the winter fair, which this year will be held in March, and Saskatchewan breeders would be well advised to have the matter carefully thought out before finally deciding on any new date. While much may be said in favor of the earlier date for a cattle show, I think it is questionable whether it would be as suitable time for a stallion show, and as yet it is hardly possible for some of the western provinces to disassociate these two things.

One argument which will no doubt be put up by the breeders, is that it is much easier to carry cattle, especially in good blood from the summer show over to December, than it is to carry them through the winter. Alberta has already made this change with regard to its fat stock show, but continues to hold its stallion show in the spring. Another great argument in favor of the December show is that the prime beef would realize more money for the Christmas market than it will for sale in the spring, when no such holiday season is in prospect.

Worth Considering

A matter which I would like my readers to ponder very carefully during the next few months is this: the three prairie provinces have, roughly, \$23,500,000 invested in motor tractors, and it is a conservative statement to say that forty per cent of these tractors never turned a wheel during the past season. In a trip which covered several thousand miles, while harvesting operations were tractors being used for cutting in progress, I saw only four motor grain, and this in a season when the ground was in perfect condition for the use of these machines, there having been no heavy rains to soften the ground for several weeks. I saw less breaking this year than for five years past.

This is an enormous amount of capital to be tied up in machinery which depreciates steadily from the time it leaves the factory. I have not a word to say against

motor tractor power under certain conditions, but a great deal of the hard times being experienced by the western farmers today is due to the fact that they have incurred liabilities for these machines and others which they really could have done without, and so far from lessening the cost of production, have raised it to a point where there is absolutely no money for them in the crop which they have reaped this year.

I have some figures furnished me by Geo. Lane, of the Bar-U, Bassano and Namaka Ranches by which he shows that he has reduced the cost of plowing with horses to 60c an acre. I am not going to give the details of these figures this month, but they are well vouched for and I would be very glad to have the statements of figures from other farmers as to what they find to be the cost of plowing, either by horses or tractors.

Ray Knight, of Raymond, Alta., pointed out last year that the man who bought his horses intelligently, and with the right proportion of brood mares, could double his horse outfit in four years. Mr. Lane, out of forty horses, which composed his eight five-horse teams, with which he did 2,000 acres of plowing during the past summer, got a very large percentage of high grade colts. I am not talking from hearsay, but from the foals which I actually examined myself during the month of August.

A good many men will have to decide during the coming months what form of power they are going to use for the future, and I would like them to try to gather data as to which is in the end the cheapest and most satisfactory method for the smaller farmer. In my trip this summer I found not a few farmers, especially in Saskatchewan, who had invested \$2,800 in a tractor outfit for use on a farm of 320 acres, while those who had them on farms of 480 and 640 acres were quite common.

It seems to me that the farmer who puts a liability of \$2,800 for one piece of machinery on a farm of 320 or 480 acres is very much like the man in the Scripture, who started to build without sitting down and counting the cost. Very careful inquiry leads me to believe that practically no wheat has been produced and marketed in the Canadian west this year for less than 60c a bushel, and as even good No. 2 Northern wheat has been selling at less than 60c a bushel, on the high freight rates which pertain in the very distant parts of Saskatchewan and Alberta, it is not difficult to figure out where the profit in such a transaction comes.

Ontario Wind Engine & Pump Company's
LINE'S ARE SUPREME



We made our goods good, our users made them famous. We manufacture what our customers say to be the best Kerosene and Gasoline Engines, Wind Mills, Feed Grinders, Saws, Pumps, Scales, Tanks, Water Basins, Stanchions, Well Drills, and Pressure Tanks, and we believe they know.

Our Guarantee is Our Reputation

The best guarantee is the one never used. The superiority of the O. W. E. & P. Co.'s lines is that guarantee and convinces both users and onlookers of the efficiency of the Wind Mill, Scale, Pump, Engine, Grinder, or Well Drill put out by us.

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A Bargain List
 Of Second-Hand or Used
ENGINES

IN STOCK AT WINNIPEG
 Prices f.o.b. Winnipeg

Horse Power	Description	Price
2½	Crown Engine, Frost Proof, Evaporator Cooled, Stationary	\$ 70.00
2	Vertical Fairbanks-Morse Evaporator Cooled	95.00
6	F.M. Horizontal Evaporator Cooled Engine on heavy skids, with magneto	235.00
25	Portable F.-M. Threshing Engine	1200.00
15-30	Fairbanks-Morse Tractor	1900.00
12	F.-M. Standard Stationary Engine	410.00

IN STOCK AT SASKATOON
 Prices f.o.b. Saskatoon

Horse Power	Description	Price
2½	Crown Gasoline Engine	75.00
6	Fairbanks-Morse Horizontal Gasoline Engine less skids	200.00
7	F.-M. 2-cylinder Marine Engine with battery equipment	100.00
8	I.H.C. Stationary Gasoline Engine	300.00
10	F.-M. Stationary Gasoline Engine	375.00
15-30	Fairbanks-Morse Oil Tractor	1500.00

IN STOCK AT CALGARY
 Prices f.o.b. Calgary

Horse Power	Description	Price
20	Portable, with old style large cooling tank and circulating pump	1000.00
Two 15-30	Fairbanks-Morse Gasoline Tractors	1750.00

NOTE.—All machines advertised above have been rebuilt and are guaranteed
IN FIRST-CLASS WORKING CONDITION.
 Some of them have been used very little, being practically new. All orders subject to previous sale.
TERMS can be arranged if desired.

The Canadian Fairbanks-Morse Co., Limited
 WINNIPEG REGINA SASKATOON CALGARY
 Montreal St. John Ottawa Toronto Vancouver Victoria

The Water Supply of Farm Homesteads

Continued from page 23

siderable value have been provided, but they must not be solely relied on if the well is badly located.

For those who must depend on the shallow well as the source of their supply, we would strongly advocate an undisturbed area, say of 50 yards radius around the well, to be kept free from manure and all deposition of filth.

Much better water, as a rule, can be obtained from the bored or driven well, tapping a deep-seated source, and especially is this the case when the rock strata through which the well is driven are free from fissures and cracks and care is taken that there is no possibility of surface water finding its way downwards between the piping and the sides of the boring. With such a well and a pump actuated by a windmill, small gasoline or hot-air engine, water of good quality can be supplied to the farm buildings for the watering of stock and to the farm house for the bathroom and kitchen. Such an arrangement would mean much, not only in the matter of convenience and the saving of labor, but in the still more important matter of securing a supply that would lead to better thrift in the stock and better health in the family.

Since 1887, we have analyzed some thousands of samples of waters from farmers' wells, and a survey of this work shows that not more than one-third of the waters examined in any year could be pronounced as safe and wholesome. These results may not represent the condition of the farm supplies throughout the Dominion, but of this there can be little doubt, that of the waters used on our farms there is a large proportion positively unsafe for use. Yet there is probably no better watered country in the world, the natural waters of Canadian lakes, streams and springs being of the purest. It is quite possible, therefore, on the majority of farms, save in certain semi-arid districts of the North-west, to obtain an ample supply of good water. Admitting this, it seems well worth while to continue the crusade for better water on the farm, and in this connection it is gratifying to be able to report an increasing interest in the matter of pure water on the part of our rural population. Instances are becoming more numerous every year of farmers going to considerable expense to secure a good and ample supply, and piping it for use in the farm house and for the watering of their stock.

In conclusion, it may be stated that analyses of well waters are made free of charge by the

Division of Chemistry, Experimental Farm, Ottawa, provided the samples are collected and shipped in accordance with instructions that are sent on application.

Farming Efficiency Due to Credit System

Longer terms for loans, cheaper money for farmers, and establishment of co-operative banks in rural districts are some of the important reforms which will be urged by the American Agricultural Commission which has been studying agricultural conditions in Europe for three months, according to Director General Clarence J. Owens, who heads the delegation of seventy-five members representing thirty states.

Director General Owens and other members of the commission agreed to publish the details of the three months' study and the legislation that the commission will urge Congress to put through. The statements are the first comprehensive and official ones that have been made by any member of the commission, which has just completed a tour of Italy, Austria, Hungary, Denmark, Belgium, Germany, Holland and France.

"Everywhere," declared Director Owens, "we have found that the wonderfully efficient farming systems of Europe, and especially crowded Germany, have been almost solely due to the systems of credit available to farmers. While we did not find any European farmer more competent, or more able, or more industrious than their brothers in America, we did find that the European farmers get more out of less territory than the American farmers. And I believe this is due to the system in vogue of long-term loans, cheaper money, co-operative banks, and integrity and character is an important factor when financiers are looking for security for loans."

Farming Efficiency

Doctor Butterfield, of the Massachusetts Agricultural College, was enthusiastic over the work of the commission. He believes that its report is of deepest interest and of vital importance to every farmer in America. "I am more than satisfied with our study abroad," said Dr. Butterfield. "I heartily agree with what Mr. Owens has said. The great 'farming efficiency' of Germany can be laid directly to the system of cheaper money for the farmers and to co-operative farmers' banks."

Continued on page 48

Similkameen Fruit Lands

FOR SALE AT EASY PRICES

THE SIMILKAMEEN VALLEY is the only district in Canada where all the sub-tropical fruits can be grown to perfection. Has the longest and warmest season in the Dominion. Fruit and vegetables mature **two weeks earlier** than in any other district in Canada. Has easy and quick transportation service to markets in Prairie Provinces, and in 1914 will have a daily service both ways to Vancouver, etc.

Complete irrigation system to every acre offered for sale at from **\$250 per acre (inclusive)** for best lands to be found in British Columbia. For occupation and development, or as an investment, this is positively

The Century's Opportunity

WRITE FOR COMPLETE DETAILS TO

SIMILKAMEEN FRUIT LAND CO., Limited Suite 300 Great West Permanent Building WINNIPEG (Box 2997)

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

SALMON ARM

BRITISH COLUMBIA

Lowliest Spot in the Canadian West

Won First Prize Gold Medal and Diploma at Canada Land and Apple Show, Winnipeg, October, 1913, for **Finest District Exhibit of Apples.**

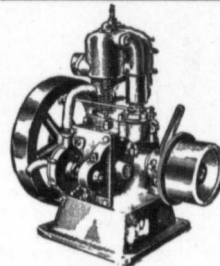
Won First Prize at British Columbia Provincial Exhibition, New Westminster, 1912 and 1913 for **Best District Exhibit of Fruits, AND MANY OTHER PRIZES**

SALMON ARM is on the main line of the Canadian Pacific Railway, has delightful climate, splendid scenery, uses no irrigation and has, besides her fruit lands, a **fertile dairy and mixed farming valley.**

For Reliable Booklet and further information address:

Secretary, Board of Trade, Salmon Arm, B.C.

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Cushman

LIGHT WEIGHT, 4-Cycle

HIGH POWER

Engines

HANDIEST OF ALL—4-H.P.

Equipped with Schebler Carburetor and Friction Clutch Pulley. An ideal engine for practically every purpose and especially all winter work on the farm, as running the feed grinder, wood saw, etc.

BIG POWER FOR LITTLE WEIGHT.

8 H.P. two Cylinder.—Speed, 600 to 900 R.P.M. Equipped with Friction Clutch Pulley and Schebler Carburetor.

A perfect all-purpose Farm Engine.

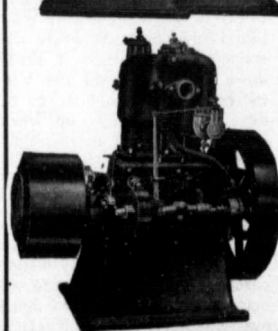
FIT FOR ANY DUTY—

20 H.P. two Cylinder. Speed, 300 to 750 R.P.M. Equipped with 16 x 8 Friction Clutch Pulley and Schebler Carburetor.

POSITIVELY THE MOST SATISFACTORY AGRICULTURAL ENGINES MADE.

Cushman Motor Works of Canada Ltd.,

208 Chambers of Commerce WINNIPEG.



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



Try pulling this Thresher Belt Apart

It is the thorough construction---the absolute union of duck and friction---that is the user's assurance against separation in service.

In Goodyear Thresher Belting the fabric is protected from the effects of the weather by a rubber covering. The seam is perfectly sealed by a high grade of pure rubber. Water cannot penetrate to the duck and cause rot and mildew.

The tenacious grip of Goodyear Rubber Belting is a continuous power saver to the Thresherman — "slip" is impossible.

Enormous strength is built into this Belting. Successive layers of specially selected hard staple cotton fibre — (each layer permeated with rubber—or "friction") are hydraulically compressed into an impenetrable and inseparable mass.

Every Goodyear Belt is "cured" whilst machine-stretched to the safety limit. There is, therefore, no "stretch" in actual working—consequently no slackening of the Belt or time lost to readjust. The splicing is carefully made and will last the life of the Belt.

A Goodyear Thresher Belt retains its pliability in all weathers—it will neither harden with heat nor stiffen with cold.

GOODYEAR
Thresher Belts

For Thresher service with its exposure—its long drives—and strenuous conditions generally, Goodyear Thresher Belts give entire satisfaction to practical men.

107

When ordering a Thresher insist on Goodyear Belt

Our Free Book on the choosing of a Belt would interest you. A card to our nearest Branch will bring one.

The Goodyear Tire & Rubber Co. of Canada, Limited

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Victoria, B.C., Vancouver, B.C., Edmonton, Alta., Calgary, Alta., Regina,

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Montreal, Que., St. John, N.B.

PRACTICAL TALKS TO THRESHERMEN

CONDUCTED BY PROFESSOR P. S. ROSE

Talk No. LXXIV

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

Indicated Horse Power.

THE indicated horse power of an engine, either steam or gas, is a measure of the work done in the engine cylinder. It is the work done by the steam or gas on the piston. No engine

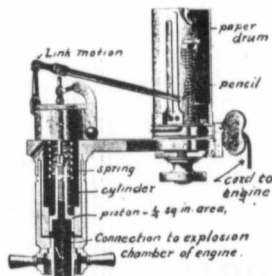


Fig. 158. Sectional view of Crosby gas engine indicator.

can do as much work at the band wheel or drive wheel because, between the piston and the band wheel, a considerable amount of work is required to overcome the friction of moving parts, and in gas engines the filling and emptying of the cylinder together with a certain small portion of the work of compression. The losses above indicated may amount to five or ten per cent in steam engines and from fifteen to twenty-five per cent for gas engines.

Indicated horse power is so called because the force of the gas or steam acting on the piston is measured by an instrument called an indicator. (See figure 158.) This consists of a small cylinder fitted with a piston, which is attached to the engine cylinder so that whatever pressure there may be on the engine piston will act directly on the piston of the indicator also. The indicator piston is surmounted by a spring so calibrated that it will be compressed a definite amount, say one-third, one-quarter or one-fifth of an inch, by a force of one hundred pounds per square inch, acting on the engine piston. The piston rod projects out of the top of the indicator cylinder and is attached by suitable link work with a pencil arm which multiplies the movement usually about five times. Indicator springs are designated as twenty, fifty, one hundred, or two hundred pound springs, depending upon the pressure required per square inch to move the pencil arm one inch. For example, a spring that requires a pressure of one hundred pounds gage pressure in the engine cylinder to make the pencil

move one inch is known as a one hundred pound spring.

In addition to the cylinder, piston spring and pencil motion of the indicator which has been described, there is a drum to hold a strip of paper, which drum rotates an exact step with the movement of the engine piston. A cord attached to some moving part of the engine rotates the drum in one direction while a strong spring brings it back. All the time the pencil point presses against the paper and traces the diagram of pressures.

The purpose of this diagram is to determine the average pressure that actuates the engine cylinder. The finding of the average pressure from the diagram can easily be done by dividing the diagram into ten equal parts as in figure 159; measuring the height of the mid points of each section; adding these all together and dividing by the number of parts. Suppose the average height thus found is 1.2 inches and a one hundred pound spring were used; it

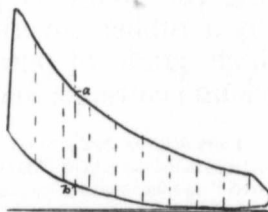


Fig. 159 Showing how to measure average height of indicator card. Each division measured along a median line as a-b.

is evident the average pressure on the piston amounts to one hundred twenty pounds per square inch for the entire stroke. Of course, at the beginning of the stroke the pressure amounted to say two hundred fifty pounds and at the end to only thirty or forty pounds, but for the whole stroke, it averaged one hundred twenty pounds and that is the figure we are concerned about in the measuring power; for, with the average pressure known, we can apply the old work formula for finding the horse power. Let us illustrate:

The area of the piston in square inches, multiplied by the average pressure, will give the total average pressure on the piston. If this be multiplied by the distance in feet the piston travels during a stroke, the product will be foot pounds of work. Now if this quantity be multiplied by the

number of power strokes in a minute and the product divided by 33,000 the quotient will be horse power. All we have done is to find the foot pounds of work done in a minute and divided by the number of foot pounds in a horse power.

This is all expressed mathematically in the indicated horse power formula:

$$\frac{P \times L \times A \times N}{33,000} = \text{I. H. P.}$$

where P is the average pressure found by the indicator; L is the length of stroke in feet; A, the area of the piston in square inches; and N, the number of power strokes.

Brake Horse Power

The brake horse power of an engine is the power the engine is capable of delivering at the band wheel. It is termed brake horse power because a brake or absorption dynamometer is employed to measure the power. Brake horse power is always less than indicated horse power by the friction of the engine. Brake horse power is the useful delivered horse power, it is the horse power the purchaser wants to know because it tells him just how much the engine can deliver as useful work. It is easy to measure, especially where engines are small and the amount of power to be absorbed is not large. Figure 160 shows the simplest form of brake, consisting of two wooden shoes, the width of the band wheel and hollowed out to fit said wheel. Two bolts with wing or tail nuts hold the two shoes in contact with the wheel. The long arm rests on a suitable weighing machine and is made five feet three and one thirty-second inches long to make easy calculation. In measuring brake horse power the engine is run at its normal speed and the nuts are gradually tightened until the en-

readings taken every minute. From the average weight read on the scales there must be subtracted the weight to balance the brake itself. With this correction the average readings may be used to figure the brake horse power.

The formula for the simple case with brake arm of the length shown in the figure is

$$\frac{S \times W}{1,000} = \text{H. P.}$$

where S is the r. p. m. of the engine and W is the corrected weight on the scales. Where any length of brake arm is used, the general formula applies.

$$\frac{2 \times 3,1416 \times S \times R \times W}{33,000} = \text{H. P.}$$

where the letters mean the same as before and R is the length of the brake arm in feet.

In operating the brake it is found advisable to grease the shoes to prevent sticking. If a long test is made it will be necessary to devise some means of cooling the band wheel.

Rope brakes are sometimes used instead of shoe brakes. An illustration of this type of brake is shown in figure 161 taken at the Winnipeg Motor Contest. This type of brake is better adapted for heavy loads than the shoe brake. In either case, the power of the engine is absorbed by friction at the band wheel or on a wheel directly driven by the band wheel. The same rule, slightly modified, applies to both cases.

Draw Bar Horse Power

is a measure of the tractive horse power developed by any traction engine at the draw bar. It is found by measuring the pull of the engine with a spring balance or traction dynamometer as it is called, and the speed of the engine in feet per minute. The product of these two quantities represents the work done per

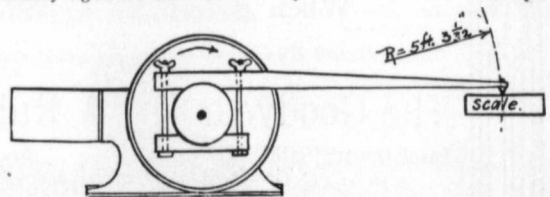


Fig. 160. Prony Brake on engine.

minute in foot pounds. If this weight is then read on the scales and the number of revolutions per minute of the engine is taken down. Then engine should be

run ten or fifteen minutes and the product be divided by 33,000, the quotient will represent the draw bar horse power. For example: Suppose the draw bar pull on an engine gang plow amounted to

You Are Thinking Now

About the Thresher or Engine or Tractor you are going to buy for next season

YOU WILL SOON BE INVESTIGATING

You want the BEST you can get for the money you pay out

There is a lot for you to consider. **NOW DON'T BE FOOLED AND DON'T BE MISLED.**

Take the time and trouble to thoroughly investigate the facts regarding the machinery wanted.

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You can learn the facts yourself, so that you do not have to depend upon someone else or their declarations.

You will find that the Red River Special will thresh more and thresh better than any other make.

You will find that it is popular with the farmers because it saves all their grain.

You will find it will make you the most money.

You will find that the old reliable Nichols-Shepard Steam Engine is still in the lead as it has been for over thirty years.

You will find that the Nichols-Shepard Oil-Gas Tractor always pleases the buyer.

It burns kerosene.

It can be furnished to cool with oil instead of water.

You will find that every one sold STICKS and is used constantly by the buyer.

You will find that it drives a thresher steady, like a steam engine.

You will find that all of them are being operated right now, and that none of them stand in fence corners or behind the company's factory or branch house, abandoned.

You will find that they are not built or sold by a trust.

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Write us and we will put you in the way of learning the actual facts.

Good material, good workmanship, good machinery, well designed, is the boast of Nichols & Shepard Company, and they stand ready to enable you to prove this to yourself.

Get the facts.

Then decide for yourself.

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

Canadian Branches: REGINA, Saskatchewan; WINNIPEG, Manitoba

five thousand pounds while the engine was traveling one hundred eighty feet per minute; what is the draw bar horse power?

Solution:
on: 5,000 x 180
80 ————— = 27 3-11 draw bar H.P.
—27 3-33,000

Nominal Horse Power

is only another name for rated horse power. It is what the makers rate an engine. It bears no fixed relation to either indicated, brake or draw bar horse power and usually means nothing at all except as applied to a particular firm's engine. Each firm has adopted its own system of rating, usually some fraction of the average maximum brake horse power. Some makers rate their traction engines at one-third of their brake horse power, others have adopted forty per cent while still others rate their engines almost equal to full brake horse power. All of this leads to confusion, but since there is no organization to undertake standardization it will have to continue until corrected by common consent. There is a strong tendency among tractor manufacturers to abandon nominal rating altogether and substitute both brake and draw bar; as for example: 60 brake, 30 draw bar. This is much better and really means something, provided the figures given are correct. When so rated it seems to be the custom to make the draw bar pull just one-half of the brake horse power. This is apparently a conservative figure, as tests at Winnipeg showed that the draw bar pull of gas tractors was generally considerably more than half the brake horse power. Sixty-five or seventy per cent would be nearer the truth. However, no one can reasonably find fault with the adoption of fifty per cent. The figure is safe and represents what may reasonably be expected under even adverse soil conditions.

Packing Cylinder Head

When the cylinder head is removed for any purpose, quite often the packing is damaged sufficiently to cause leaks, or leaks may be caused by the packing blowing out. Should a new packing be required, first remove the cylinder and lay a sheet of asbestos over it. Next tap lightly with a hammer, denting the asbestos where it is to be cut. After cutting you will have a washer for the cylinder head. The packing surface on both the cylinder head and cylinder should be thoroughly cleaned and freed from portions of the old packing in order to allow the new packing to hold satisfactorily. The gasket should be soaked in oil, and securely fastened to cylinder, but not so much as to strip the thread or break the studs. After the engine has been running for a few minutes, the cylinder head nuts should again be drawn tight. This should be done before any water is turned into the water jacket.

There are several kinds of packing on the market, of which many are good. A good plan is to try different kinds in a small quantity, and make a study and see which suits your condition. Many firms will supply you with gaskets already cut for their machine, thus saving the time of cutting. Some firms use copper gaskets, which are very durable. It is always well to carry extra gaskets in the tool box, so that one may be replaced in a short time. By increasing the thickness of the gasket on the cylinder head the compression chamber can be made larger, thus decreasing the amount of compression. Other parts of the tractor may need a new gasket, but the method of cutting and placing applies.



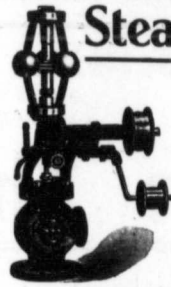
Some one has likened human energy to gasoline. A man is found, for instance, who uses all his energy, hope and ambition in one big explosion. He usually causes more damage than good. The other fellow takes his tremendous storage of power, sends it through an engine which applies it systematically, intelligently and regularly, conserves his forces and is ready for a new task when one is complete. One big blow with a compressed air hammer would mash the rivet and spoil the work, while a succession of lighter blows skillfully applied, fits the rivet so closely to the iron that it seems like one piece. The sum total of the force applied would burst the hose by which the air is conveyed. Misapplied energy never accomplished much in this world.

He Passed

There were some questions in geography required in the preliminary examinations for law students who aspired to admission to the bar. Among them was: "Name ten animals that live in the Arctic zone." One of the young men wrote: "Five polar bears and five seals. N.B.—Permit me to call your attention to the fact that the question does not specify that the animals should be of different varieties."



Almost everyone you meet knows more on some subject than you do. Turn that side of him towards you and absorb all you can.



Steam or Gas Tractors

Equipped with



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FITTED TO EVERY BUILD OF ENGINE

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

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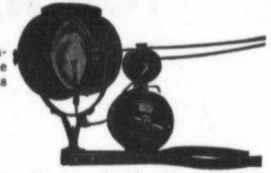
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SPARK ARRESTER

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



ACETYLENE GAS HEADLIGHT

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

FLUE CUTTER

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

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"I have been using your Gandy stitched-cotton endless thresher belts for the last twenty-five years and they have given entire satisfaction. The Gandy is the only belt of its kind on the market that is any good. One Gandy is worth four rubber belts."

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The GANDY Thresher Belt has the endorsement of at least 20,000 American threshermen, no less enthusiastic than our friend Mr. Hayes.

To protect you from imitators, we have painted one edge of the red Gandy Belt GREEN—so look for the red belt with the green edge.

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CALGARY

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

"YOU people are early," said the expert, as Mr. Scott and Charlie came into the shop the next morning just as the expert was getting into his overalls.

"I thought that it would be best to see the whole works while we were about it; and then as I have never seen an engine worked over, I wanted to learn the proper way to go about taking an engine apart."

"You have picked a good engine to start on then, for in this job we will take the engine all apart, grind the valves, put on new rings, and fit new bearings, so that you will see everything that needs to be done to an engine; and while we are about it we will give this engine a good cleaning; did you ever see an engine that was dirtier than this? Looks as though the operator of this engine had heard that oil was cheaper than repairs and was using plenty of oil not only where oil is needed but all over the other parts to be sure and have enough. That is one thing that a man should learn. Too much oil is almost as bad as not enough, especially when the engine is never wiped off; for the surplus oil will cause all of the dirt to

The Engine Expert and His Son

By EDW. B. CHALK.

stick to it, and will cause the dirt to work in the bearings and wear them out and then if you have to do any work on the engine it is one of the dirtiest kind of jobs."

"Charlie kept our engine clean when we first got it and seemed to like the job, but now I find that I must call his attention to the fact that the engine needs wiping off."

"I don't mind the job now," said Charlie, "but I am so busy that I don't think of it only when the engine is running and I can't do it then."

Grinding the Valves

"I will start on the valves and, Jimmie, you can start taking the piston out and make the crank bearings loose. Get a little box and put all of the nuts and bolts in it so none of them are lost, and don't lose the shims, as we will need them and some more too,

when we put the parts together again."

"Some of the automobiles and one or two of the stationary engines have a cage that the valve works in and that makes them easier to work on, as you can put them in a vise and in that way get it in a comfortable position to work on. Then, too, sometimes the valve seats burn out and that makes it easier to replace them. With this engine we will have to work over the cylinder. Now, what we need is a valve tool to take the springs off the valves. As we don't happen to have the tool we will have to put up with a makeshift. We will block up under the spring washer and that will hold the washer off this little key that keeps the spring on the valve."

"Some people use the spring to hold the valve on the seat while they are grinding the valve. The trouble with that method is that

the spring sometimes causes the valve to seat out of square and that will sure cause trouble."

"I thought that the way to grind valves was to put them on a grindstone and grind them sharp that way," said Charlie who had been listening to the talk.

"You would not have much luck that way," said the expert, "for you would have to grind the seat and the valve at the same angle and it would be a big job to get into the combustion chamber with a grindstone."

"I didn't know how it was done myself," said Mr. Scott. "But I didn't think of the grindstone, and I don't see yet just how it is done."

"You see this valve — the beveled edge seats or rests against the beveled edge of the hole that it works in. When both the seat and the valve are ground at the same angle and are both smooth it makes a gas-tight joint; but as the valve must lift off its seat to let the gas in and out, carbon and dirt will collect on it and the valve doesn't close tight; then, when an explosion occurs in the cylinder, part of the hot gases are forced out through the opening and that burns off part of the metal until finally the engine

loses all of its compression. The thing to do is to take emery flour or ground glass, and after mixing it with oil so that it will stick to the valve, then with this grinding compound between the valve and its seat rotate the valve and the emery or glass will smooth off the high spots.

"This valve has a slot in the head of the valve and so we will use a screwdriver bit in a common brace to turn the valve. Some valves have two small holes in the head instead of the slot and in that case we would have to use a fork instead of the bit. The fork is a bit that has two small projections instead of a straight blade like a screwdriver; the projections fit in the holes. Where you only have one or two valves to grind, a fork can be made of stiff wire twisted together and putting the two ends in the holes.

"In grinding a valve, instead of turning the valve in one direction all of the time the valve should be turned back and forth, that is, turn it three-quarters of a turn in one direction then back a half turn then three-quarters of a turn again and back a half. If the valve is turned in one direction all of the time it will have a tendency to cut ridges in the valve and the valve seat. The valve should be lifted off its seat occasionally so that in case there should be a coarse grain in the grinding compound it will not wear a furrow in the valve or seat.

"When the compound that you are grinding with quits cutting, put on some more and grind until the valve and seat are both bright. The exhaust valve will need more grinding than the intake valve because there is more heat in the exhaust than in the charge that is taken in."

"Say, Jimmie, what is a shim? I haven't found anything that looks like that," said Charlie.

"I guess this is the shim," said Jimmie, as he picked up a piece of pasteboard that had been in the bearing where the two pieces go together.

Mark the Parts

"Jimmie, did you mark the parts before you started to take them apart?"

"Mark them?" asked Jimmie, "What do you mean?"

"All engines when they are taken apart should be marked so that you will know how to put them together again."

"I thought that as you were an expert you would know how to put it together again, and so I didn't notice where the things came from. I am sorry, Dad, but you can put it together again can't you?"

"Yes, I can put it together and it will work all right, but at the same time all of the parts should

be marked even if there is an expert on the job. The idea is this, Jimmie—there are some parts that even an expert won't know just how they came off without a lot of bother. For instance, the caps on the connecting rod and the caps on the main bearings. These must be a perfect fit and if one is placed on the wrong bearing it may need fitting and that means more time and work. Then, too, where the bearings are babbitted the journal may be out of alignment and that would throw them clear off if the caps were changed. However, there is no harm done here as we are going to put in new bearings anyway; but we will mark them so

that we will leave it in good shape for the next person.

"If the valves are changed they will leak and make it harder to grind them in, or after they are ground and then changed they will leak anyway. In the valve gear one tooth is marked and the place between the teeth should have a mark on it so that there will be no chance of the gears going together wrong. The difference of one tooth will make a lot of difference in the working of an engine and if the gear is set off two teeth on the timing gear, it will keep the engine from working.

"Now, to get back to the valve grinding, we don't want to get

any of the grinding compound in the cylinder, so we will plug up the space leading to the cylinder with a piece of waste. If we allowed the compound to get in the cylinder it would cut out the cylinder and cause the engine to leak compression, so when we get done the valves should be washed off with gasoline, so that the compound will all be removed, or it will cause the valve to wear out the guide, or cause the valve to stick open."

"You say that it is emery flour that is used to grind valves with?" asked Mr. Scott.

"That is what I usually use," said the expert, "just mix the finest emery dust that you can get

The Conditions under which our Beltings are made

Serve to Substantiate their Superiority

Come with us on a mental journey through our Belting Plant, and see with your mind's eye the unusual precautions which we take to win and hold your confidence—to put 100% of Service and Value in each and every Belt which we produce.

THE MATERIAL ROOM

This is the material room where the various grades of duck are stored. Note its fine quality and the immense quantities which we have to purchase in order to cope with the demand for our Belting. Each foot of this duck has been examined by experts and the pieces which showed even the slightest imperfections, have been discarded. Even the unseen parts of our Belts are 100 per cent Perfect.

DRYING THE DUCK

The Duck is first sent to the drying room in order to prevent against any possibility of moisture remaining in it. When this precaution is not adopted the belts crack, stretch and break. All our duck is thoroughly dried before use.

THE FRICTIONING MACHINES

Watch them putting the duck—from which all the "stretch" has been taken—through these huge frictioning machines. Note how these heavy steel drums drive and force the high-grade rubber stock, at tremendous pressure, through every strand and fibre of the duck. See how carefully the frictioned duck is examined for imperfections—flaws can't possibly pass unnoticed.

CUTTING THE FRICTIONED DUCK

Here is the frictioned duck going through the cutting machines. Watch how perfectly the guillotine-like knives do the work and how each strip is closely scrutinized for ragged finish. There is no chance for human carelessness to mar the perfect work.

VULCANIZING AND FINISHING THE BELT

Having stretched the frictioned duck to the limit of tension—thus eliminating any sagging tendencies from the finished belt—it is then sent to this huge belt making machine. See how the tough rubber stock is evenly distributed over the surface of the frictioned and vulcanized fabric.

Those experts are examining it again for imperfections before it goes to the vulcanizing room, where it is vulcanized into a permanently solid piece. After that the belt is finished and is as nearly perfect as human ingenuity can possibly make it.

Let Us Make Your Next Belt. It is Sure to Give You Satisfaction

IF YOU ARE NOT GETTING THE SERVICE YOU SHOULD FROM THE BELTING YOU BUY, LET US DEMONSTRATE WHAT OUR BELTINGS WILL DO. WE WOULD WELCOME AN OPPORTUNITY TO PROVE THAT THEY POSSESS GREATER TENSILE STRENGTH, FLEXIBILITY, GRIPPING POWER AND SURFACE TOUGHNESS, THAN THE BELTINGS YOU ARE NOW USING.

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The "Dreadnoughts" of the Prairies

NOT IN ANY COMBINE

FOR PLOWING, THRESHING,
HAULING, ROAD GRADING,
ETC.

The "Marshall" British "Colonial" Tractors

Built like a Battleship!

MADE IN TWO SIZES:

16 H.P. Draw Bar,
30-35 Brake H.P.; and
32 H.P. Draw Bar
60-70 Brake H.P.

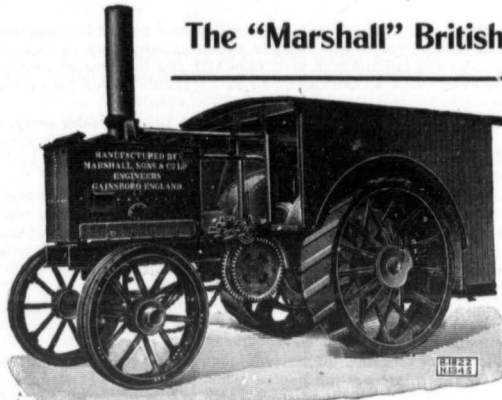
ECONOMICAL

DURABLE

RELIABLE

HAVE STOCKS OF TWO SIZES ON HAND

HAVE COMPLETE LINE OF REPAIR
PARTS



The illustration represents a 32 H.P. Draw Bar and 60-70 Brake H.P. Class F Tractor, with two travelling speeds

Runs like a Watch!

HAVE SKILLED MECHANICAL
ENGINEERS FROM WORKS IN
GAINSBOROUGH, ENGLAND

CUSTOMERS MAY RELY ON PROMPT
SERVICE AND CAREFUL ATTENTION

REFERENCES TO THOROUGHLY
SATISFIED USERS

MANY TESTIMONIALS

Messrs. Marshall, Sons & Co. (Canada) Ltd.
Engineers, Saskatoon.

You will be glad to hear how the 32 Draw Bar Horse Power Tractor has behaved, as you know I bought this in 1912 and got delivery in May. I started work on the 10th May and by 11th June had broken 640 acres, that includes all stoppages and fixing up and I only pulled six plows, the soil being very heavy and this fact makes the work of Engine more satisfactory than had it been pulling 8 or 9 plows in medium land, and I was in every way satisfied. During the season I plowed a total of 1750 acres and in addition 1 Double Disked and Drag Harrowed 560 acres, pulling a width of 30 ft. Emerson Discs. My repair bill has been very small, and my Engine is now in as good shape as when new, except ordinary wear and tear. My Bull Pinions are worn out which is not to be wondered at considering the value of work done—anyhow I am thoroughly satisfied—I am sending them to you to show prospective customers what they have done, please send me a new set. Well all I can say is—that any one who wants an Engine built by Engineers buy a "Marshall," there is nothing to touch it and you can refer anyone to me, and you can if you like publish this letter.

Yours truly,
T. T. CHALMERS.

Glen Uic, Sask., June 30, 1913

Messrs. Marshall, Sons & Co. (Canada) Ltd.
Saskatoon.

Dear Sirs,
We have much pleasure in forwarding you a testimonial re the "Marshall" 4 Cylinder Engine that we purchased in the Spring of 1912. We ploughed in 1812 1400 Acres, and we also Double Disked, Drag-harrowed and Scribed 700 Acres and Threshed 80,000 Bushels of Grain. We started out and broke Virgin Prairie to the amount of 300 Acres in 81 days and the first day was so wet that we only broke 12 acres and the rest of the work was all done in daylight. All we can say is, that the Marshall Engine is everything claimed by them in their Catalogue, it stands up to its work and is built by Engineers, everything that we can say is in its favour, and it is the DADDY of all Gasoline Engines in Western Canada.

Yours faithfully
Geo. Weiss & Son.

Kelfield, Sask., July, 11th, 1913

SEND FOR ILLUSTRATED CATALOGUE WITH FULL DESCRIPTION—AND DO IT NOW!

Marshall, Sons & Co. (Canada) Ltd., Engineers, Saskatoon, Canada

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

with enough oil to make a sort of mud the same as I did here. You can buy grinding compounds in collapsible tubes if you want to and it is handier to use as you can get it in three different grades, coarse, medium and fine. You use the coarsest first and polish up with the fine. I have ground valves with the dust that one finds in the bottom of the trough on a grindstone, and it will do a mighty fine job, too. Although it is fine and doesn't cut fast it leaves a good surface."

"Say, Dad, isn't it about dinner time? I am getting awful hungry," asked Jimmie after they had worked a while in silence.

"Just twenty minutes to twelve," said the expert, "and as dirty as we are we might start to washing up. It will take some time to do that and we don't want the boys to starve."

"Big Money in Trapping Fur Bearers"

DOES the average farmer stop to consider the thousands and even millions of dollars that are paid out every year by the large fur houses for the skins of the "farm yard pests?" The Mink, a menace to the chicken coop, the Skunk,

Muskrat, Weasel and other fur-bearing animals, classed as "varmints" and considered a nuisance to the crops, all have their intrinsic value, and it would do well for many to forget the nuisance end of the story and look at the profit side.

The money picked up by the wise farmer boy in a season, to say nothing of the professional trapper revenue, is something that would make a great many people sit up and take notice. Just a few years ago, it was hardly worth while to skin these animals and ship the fur, but since the supply of nearly every fur-bearing animal with the possible exception of the Skunk has decreased at an alarming rate within the last few years, the prices have gone up accordingly, until now it is a mighty profitable occupation during the winter months. Fifteen years ago 75c was good value for a Skunk, \$1.00 was considered a high quotation for a Mink and ten to fifteen cents was all anyone ever expected for a Muskrat. Compare these prices with the present day values, \$4.00 to \$5.00 for a black Skunk, \$6.00 to \$10.00 for a prime Mink and 50 to 60 cents for Spring Muskrats taken on the average. Over 300 per cent and in some cases 500 per cent increase in value in a comparatively short length of time.

Is it any wonder that the farmer boy finds it profitable to get out and trap the "varmints?"

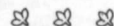
However, many a dollar is lost to the man who does not exercise good judgment and common sense in gathering his collection of raw fur. How many thousands of Rats, Mink and other furs are graded down to second and third class every season because the shipper did not have sense enough to leave his gun on the rack, and purchase a comparatively cheap steel trap? If a person went to buy a fur coat or hat, and he was shown one shot full of holes or with even one hole in it, he would laugh at the dealer who tried to sell it to him. Yet many a shipper does not seem to realize that every time he shoots an animal, he practically cuts the value of the fur in two. The money that is saved by trapping one or two Mink or Skunk will more than make up for the cost of the traps, and it is easily the best in the long run.

As most everyone knows, the time to trap is when the fur is prime. Nevertheless many a thoughtless trapper or "wouldbe" trapper, proceeds to kill the fur bearers all summer, to dig them out of their dens when they are breeding, and in every way possible to exterminate the fur-bearers completely in his locality.

Of course no good can come out of this practice, and he might just as well wait until the fur is prime as to kill the animals in the summer when their furs are almost worthless.

One peculiarity about the American Raw Fur collection of last season is the fact that over three million Rats as well as thousands of Mink, Skunk and other fur-bearing animals were taken from the central states, namely Illinois, Michigan, Wisconsin, Minnesota, Iowa, etc. This will dispel all thought from the minds of the persons who imagine that there is no fur left in the thickly populated states, and it is also a fact that the fur collected from these states was the best and most satisfactory.

The golden opportunity of the farmer boy to pick up a neat little pile of money in his spare time this winter should not be overlooked, and the exercising of a little "common horse sense" will go a long way towards determining the amount of his earnings.



Wounded vanity and unsatisfied selfishness, these are the old, vulgar causes of man's unrest.

Meekness and lowliness cure unrest by making it impossible.

Big Power, Big Profit.

ANY tractor will do your work at less cost than will animal power, because tractors reduce the number of men necessary, and man-power is what makes expenses mount up so fast. The larger the tractor you can employ, the greater the reduction in your expenses and the greater your profits will be.

Just think this over. A 30-60 OilPull or 40-80 TigerPull should save 75 per cent of your horse-haul expenses.

Suppose you had 1,000 bushels of grain to haul to a market 10 or 11 miles away, which is about the average haul in Western Canada. The grain could all be loaded into 8 big wagons, which would each require 4 horses or mules, so it would take 32 of them. It would require 8 drivers, and every animal in the lot, including the drivers, would have a mighty good appetite for supper when you got back.

If 15-30 OilPull or GasPull tractors were used, it would require two. Each would easily pull 4 wagons and 4 men—2 to drive the tractors and 2 to watch the loads—would be sufficient. The work would be easier and the loads safer. If you used a 30-60 OilPull or a 40-80 TigerPull, you could hitch all of the 8 wagons on at once. Instead of the 8 men required with animal power and the 4 men required with small tractors, only 2 would be required with the big one. Saving the wages of 2 to 6 men is important, too, when labor including board costs \$3.50 to \$5.00 per day for each man.

While the small tractors could make the trip a little more quickly than the big one, because they could come back on high speed, they could not make a second trip the same day, so you really could not deliver grain any faster because of the time saved.

The cost of up-keep, the cost of fuel, and the cost of lubricating oil are a little more for a big tractor than for a small one, but these items are much less per ton hauled when a big tractor is used, because its capacity is so much greater. Get a tractor big enough to do all your work easily. It will pay you better.

Not only in hauling, but in plowing, discing or drilling the big tractor makes a proportionate saving over the small one. The same is also true of big belt-power work like threshing. For such jobs, tractors like our 30-60 OilPull or our 40-80 TigerPull should be used. All our tractors make money, but the bigger the one you use the greater your profits from it will be.

Last Call for Threshing

You should have one of our big tractors and one of our separators for late fall and winter threshing. Flax may not be easy to handle—the straw is often damp and tough and an occasional chunk of ice is not unusual. From now on, threshermen need one of our big power tractors and one of our big, strong separators.

We have the machines ready. We can furnish you with a separator or a complete threshing outfit from a warehouse near you without delay.

We also have engine gang plows, traction disc plows, saw mills and other machines to help keep your tractor busy. Get a tractor and put it to work now. You will learn all about it and how to get the most out of it this winter, and you will be that much better off when the spring rush begins.

If you expect to buy a tractor, no matter what size or kind you have in mind, you should have one of our tractor text books, "Power-Farming." This book tells you about the many things a tractor will do for you and the best way to care for one. "Power-Farming" or a catalog of any of our machines sent on request.

Rumely Products Company

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Power-Farming Machinery

LaPorte

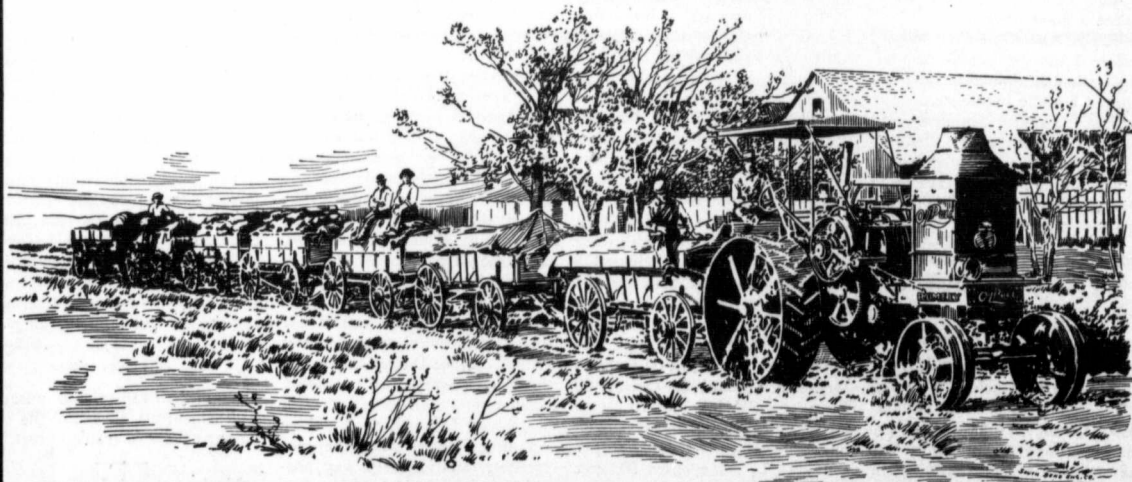
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Right Power, More Profit.

NOW, we're talking about *your* work. To do your light power jobs by hand costs almost five times what engine power would cost. Animal power to do your bigger jobs costs more than three times what engine power costs. The average gas engine on the average farm will make these cuts in work costs. We believe our engines are way above the average. You ask some of the Olds and Falk engine users near you and you will see why we think this.

So just figure what our gas engines can save for *you*. You cannot afford to be without one. You will find work for a gas engine from sun-up until Sunday all the year round.

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Hoisting Hay
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You have a lot of these jobs to do on your place. Why do them the hard expensive way? A gas engine should save you at least one-half and we have the right one for you.

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Furnished mounted on truck, skid, or stationary base or combined in handy outfits with such machines as balers and saws. Burns gasoline and has been getting every pound of pull out of every bit of fuel for more than 33 years. You expect a lot from engines that began to do good work more than 33 years ago and have been at it ever since. Olds engines do more, better and cheaper work than is expected of them every time.

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We have not only the right engine for your work, but a full line of machines to go with it. Our line includes among others such machines as feed mills, grain mills, baling presses, power pumps and hoists.

Get acquainted with the Rumely dealer near you. He is a good man to know. If you do not know a dealer within easy reach, tell us the name of some one whom you think would like to handle our line and we shall try to arrange matters with him.

We will gladly send catalogs describing our engines or any of our other machines. Ask us or our nearest branch.

Falk Kerosene Engine

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Burns kerosene. Falk kerosene engine employs the Secor-Higgins Oil-Fuel System and is equipped with the Secor-Higgins Carburetor. This is the same system that is used on OilPull Tractors. Like the Oil-Pull, Falk engines burn kerosene perfectly at any kind of work, at all loads under all conditions.

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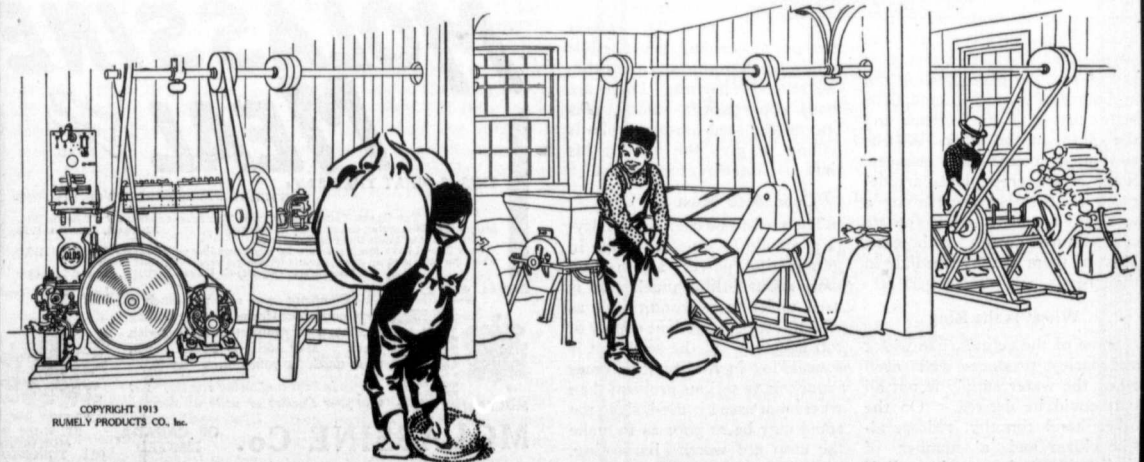
Power-Farming Machinery

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Seed Production on Dry Land

By Dr. F. S. Harris

ALL practices in dry-farming focus around the one idea of saving the moisture. This is done in two general ways. First, by preventing loss as near as possible and, second, by using the limited supply which is present as economically as possible.

In regions of small rainfall all the various factors entering into the production of crops must be as favorable as possible if profitable yields are to be obtained. Dry-farm crops are growing under the stress caused by a lack of water, and if other things in their environment are not favorable, it is difficult for them to mature properly. By supplying their needs in other respects they can in part overcome the handicap caused by the scarcity of water.

Only certain kinds of crops can withstand the withering hand of drouth. Some are by their very nature suited to grow in humid climates, and they could not withstand the dry conditions encountered in arid regions for a single day. Their leaf area and structure are such that all the moisture would very soon be lost from the plant itself. Other plants are so arranged that they can retain much of their water even under very dry conditions. Their amount of evaporating surface is small in proportion to root area. Thus the leaves can be supplied with water as fast as it is lost and the plant itself is not in danger of being withered. The water lily is at one extreme and the cactus at the other. All the cultivated plants lie between. Some of the crop plants are decided in their preference for a wet environment while others can endure drouth with ease. Most of them are intermediate in their needs.

Wheat is the King

Some of the cereals, like wheat and barley, produce well even when the water supply is not all that could be desired. On the other hand timothy, redtop, alsike clover and a number of similar crops do not do well if kept too dry. For the hotter arid

regions the various sorghums have been found to be good crops. In cooler climates potatoes and peas often do well. Alfalfa is sometimes a good crop, especially in the production of seed. Taken for most climates, however, wheat is king of all the dry-farm crops. There are a number of varieties of this crop which are good drouth resisters.

After deciding what crops to raise on the dry-farm the next question is to get varieties which are suitable for arid conditions. It is here that the seed producer must understand his business if he is to be successful. On the dry farm it is not enough that seed wheat be free from weeds and disease but it must also be of the varieties which are capable of thriving in dry weather. If the seed is being raised under arid conditions and sold for planting under wet conditions the variety is not so important except in so far as it affects the original yield. On the other hand, if a person is going to cater to customers with dry farms he must pay strict attention to varieties if he desires to build up a reputation for wheat. Of the winter wheats, Turkey red has given almost universal satisfaction. It has some bad features, but these are more than compensated for by its many desirable qualities. Of course the best varieties must be determined for each set of conditions.

By following the correct methods of breeding, it is possible to develop desirable strains within the several varieties. There are many opportunities along this line for the seed producer who is willing to give the subject his time and intelligent attention.

Good Seed Must Be Used

The seed to be used on the dry-farm should be especially high in germinating power and purity. Only about half as much seed is used under arid conditions as where there is abundant supply of soil moisture. If the seed that is sown is low in vitality, it becomes a much more serious problem than where more seed is used, since the stand may be so poor as to make the crop not worth harvesting. Likewise any foreign material will cut down the already small

Dairy Farming

is Coming into its own in Western Canada and is being provided with the milkers and the machinery that makes it elsewhere the biggest profit end of the farming business. There is no secret or royal road to success here. It is simply a question of good Cattle and a



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THE "MAGNET" is as invariable and dependable in its operations as the course of Nature on the crop, because its construction adapts it perfectly to the process of extracting the last obtainable ounce of butter fat from the milk. It is **MADE IN CANADA** by men who have spent a lifetime in dairy mechanics. Its **SQUARE GEAR** precludes all the wobbling experienced in using the old "worm" system still employed on other machines. Its **RIGIDITY** and **ROCK LIKE STEADINESS** is in remarkable contrast to any other cream separator now being used in Western Canada.

Our Slogan is **"TO SATISFY"**—and we will do it at all costs. We will prove every point we claim for the superiority of the "Magnet" on your farm—at our expense

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Dear Sirs—I have much pleasure in recommending your "MOLASSINE MEAL" which has been used by this Company for several years with good results.
Yours truly, (Signed) G. E. BELCOURT, General Manager

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This Company owns and uses such a large number of Horses that the feeding becomes a very important feature with them. "MOLASSINE MEAL" will do as much for your horses—try it.

Put up in bags containing 100 lbs. Get it at your Dealers or write us directly.

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amount of seed below the profitable limit.

Weeds in seed intended for the dry-farm are particularly undesirable, as there is usually barely enough moisture in the soil to produce a crop, and if the weeds are present they easily rob the crop and cause a failure. Under irrigation enough water can be added for both the crop and the weeds but this is not possible on the dry-farm.

Since the dry farmer uses a comparatively small amount of seed he can afford to pay more for good quality than his fellow farmer under the ditch, so that in arid regions there should be special emphasis put on the seed problem.

In no branch of the seed business is there greater opportunity than in producing seed for use on dry farms. The very life of the dry-farming industry is dependent on the quality used. For the man who is willing to learn and practice the principles of dry-farming, and who will devote himself to building up a business of furnishing good seed, there is eminent success awaiting. He can fill his pockets with worldly wealth and can also be of great benefit to his fellow farmers in reclaiming the arid parts of the earth.

Poultry

Dry Feeding Becoming Popular

By M. K. Boyer

OF late years dry feeding is becoming quite popular, although it is not a new idea in the poultry ranks. Fully 20 years ago the matter was agitated and adopted by some poultrymen, but as a general thing it was not favorably received.

The arguments used today in favor of the dry mash and whole grain diet are, first, after becoming used to it, fowls will prefer the ground grain dry to that which is either cooked or steamed; second, it is a labor-saving method, better fertility to the eggs.

At first the fowls will not take very kindly to the dry feed. As meat scrap is mixed with it, they will pick out all such, then probably the cornmeal, or some may prefer the bran, but all of it is seldom consumed until the fowls become accustomed to it. Gradually they will eat more and more of it, finally cleaning the trough. Another benefit is that after eating a few mouthfuls they will repair to the drinking vessel and secure several swallows of water, then back again to the trough, and so on during the entire meal.

It is claimed that more water is consumed by dry-fed fowls, and as water enters so largely in the composition of the egg, increased egg production should be the result.

The method is a great labor-saver. It is possible to both feed and water the stock in the same time it takes to prepare the wet mash and feed it.

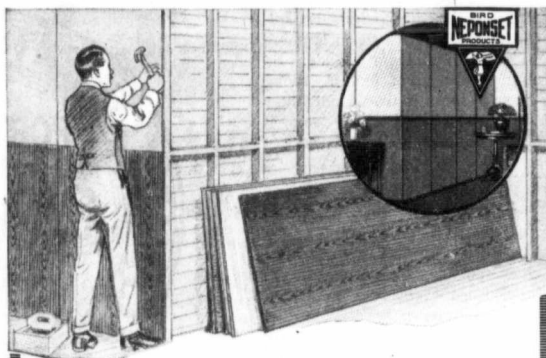
The writer prefers feeding the dry mash in troughs instead of hoppers, unless a hopper is used that will be proof against mice and rats. Such a hopper should be constructed of galvanized iron, and made to close at night and open in the morning. If large enough to hold sufficient material for several days' feeding, still more labor can be saved.

There is also a decided advantage in the system from a health standpoint. There is not so much danger of overfat hens, and consequently there will be less soft-shelled and deformed or ill-shaped eggs. There will be fewer cases of bowel disorders, and less trouble with indigestion. Wet mash allowed to remain in troughs any length of time during hot weather will sour, which is the cause of many cases of sickness.

For growing chicks it is recommended. They eat a few mouthfuls and then take a swallow of water and scamper off for a run. In a few minutes they return and repeat the doze. They never gorge themselves, and when they feel a little hungry a little food helps them out. At night an extra allowance of food is placed in small boxes in their houses so that the youngsters can help themselves at break of day. Nothing gives a chick a worse setback than pining for food.

But we like the mash only to be fed fowls in that way. The whole grain should be strewn among some light litter, like leaves or cut straw, so that the birds must scratch for all they get. This exercise is needed. The grain should be given at least an hour before time for them to go to their roost, so that ample time is given to hunt. If thus fed in a scratching shed, the fowls will continue their search the next morning at break of day, and the attendant will find them hard at work when he comes around to give them their breakfast.

Referring to the theory that eggs wrinkled at the narrow ends produce cockerels, an English writer says, to the student of embryology this fallacy is at once apparent. For the first few days the chicken is sexual, from then to about the seventh day it is distinctly hermaphrodite, and contains within itself the elements of both sexes. After this stage it diverges in one direc-



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Six hundred dollars is the new price of the Ford runabout; the touring car is six fifty; the town car nine hundred—all f. o. b. Ford, Ontario (formerly Walkerville, Post Office), complete with equipment. Get catalog and particulars from Ford Motor Car Company of Canada, Limited.

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tion, one set of organs developing and the other diminishing, according to whether the germ is going to produce male or female. So that if the germ had a living consciousness it would not know at the sixth day which sex it would ultimately be.

Each spring there are more or less complaints that the wing feathers of chicks of the Mediterranean class grow so fast that the wings droop and the chick loses vitality. A number of authorities have been consulted with the following result: Bause advises pulling the large wing feathers as soon as the chick droops. Arnold says he finds sweet milk the best preventive for this trouble, giving milk instead of water to drink. White advises clipping the ends of the wing feathers. Kulp believes in cutting rather than pulling the wing feathers. He says pulling them might injure the socket where the feather grows. Howell says he makes it a practice to clip off the ends of the flight feathers on all chicks when they are ten days old.

But, after all, is it the rapid growth of the wing feathers which causes the chick to droop? Is it not more reasonable to believe that the body fails to develop as it should? There certainly must be something wrong in the management that produces such forlorn specimens of chickenhood.

Compare a drooping chick with one that carries the wings folded close to the body. Take it in your hands. Notice the difference in weight, feel how sharp and bony is the breast of one, and how plump the other. Look at the legs—it will take both of the one to equal in size the strong, thick shank of the other. How weak the bird is; it scarcely moves when you grasp it. And the other: why you can feel every muscle struggling in your hands. It is full of life and strength. Give them their liberty: the droopy one goes a little way and stands exhausted. Those dreadful wings seem to bear him down

to the earth. The other chick darts from your hands the moment you relax your hold, and flies from the restraint which was so hateful to his vigorous little body. It certainly does seem that it is cruel to prolong the life of a chick so puny that it cannot carry the weight of its own feathers—if it is not so cruel, is it profitable to raise such specimens?

It is estimated that laying Pekin ducks require from two-thirds to three-fourths of a quart of food per day for each duck, or from 66 to 75 quarts per hundred ducks.



"Colonel Gore," a young lady cried, "they tell me that in one of your battles an enemy died to save your life. Is that true?"

"Quite true," said the colonel, stroking his great military moustache.

"Oh, how beautiful! How noble! Tell me how it happened, won't you?" said the young lady.

"Well," said the colonel, "it happened like this. The enemy had his revolver pressed against my temple, and I ran my sword through his stomach!"

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can be depended upon to make concrete that will last for generations.—There is only one grade—the best that science and skill can make.

The label on every bag is your guarantee of satisfaction.

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There is a Canada Cement dealer in your neighborhood—If you do not know him, ask us for his name.

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Underground Silos

By H. M. BINER

THE underground silo is exceptionally well adapted to those districts having a limited rainfall, and in such localities may with impunity take the place of the over-ground construction. It is distinctively a western type, and the western farmer and stockman, especially those of limited means, find it possessed of many interesting and worthy features.

No longer an experiment, the underground silo has a value that is fully demonstrated. In New Mexico, Texas and Colorado, as well as Nebraska, a number of these silos have been in constant use for years, giving perfect satisfaction. The underground type, if properly constructed, will keep silage as well as the average silo of the over-ground variety and will be found to justify all reasonable claims made for it.

The underground silo is not only free from the possibility of blowing down or drying apart, but has no hoops that need tightening or expanding, and the expense of maintenance is com-

paratively nothing. Its type of construction appeals strongly to the man who has but little capital and who desires a silo. It can be built by the farmer himself when he is not otherwise engaged on the farm. The cost of construction is conservatively placed at from \$1.00 to \$1.50 per ton capacity, which includes the price of materials and labor.

Not only is the cost of construction of this silo cheap and favorable to the farmer who desires to make a dollar go as far as possible, but owing to the fact that neither a blower nor an elevator is required in connection with the silage cutter, expensive machinery is unnecessary. The silage cutter without conveyor costs about one-half as much as with the combination. The power required is about one-half as much with the cutter alone as compared to cutter and conveyor combined.

Dimensions Should Be Right

As stated in the outset, the underground silo is especially well suited to sections where there is limited rainfall, but it is equally true that it should not be constructed in wet ground, or where the water is near the surface.

The walls should be even and

Lump Jaw

The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Test-Pocket Veterinary Advice.

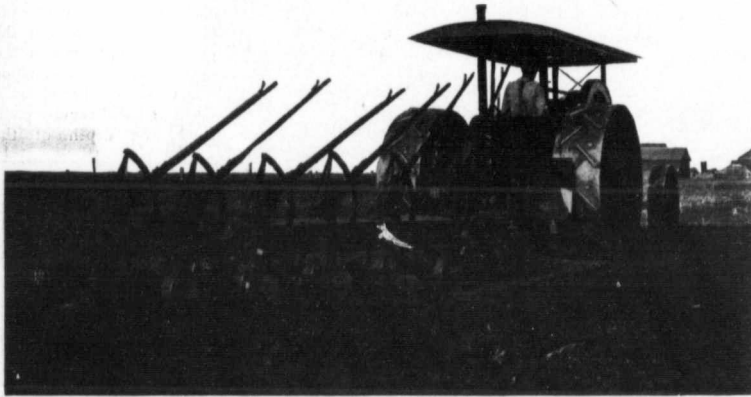
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P & O

MOGUL ENGINE PLOWS



Do You Place a Value on Your Time?

Then you should consider carefully those points on the Mogul which make for economy of time during the plowing season.

The long powerful levers afford quick action in raising and lowering the bottoms. Being grouped toward the center, the path of the operator is thereby shortened, requiring a minimum amount of time to get from one to the other, and saving the operator many steps in the course of a day's work.

The bottoms, including the beams and couplings, are interchangeable. In case one of the inside ones should be damaged, the end one can be put in its place and the plowing can proceed with but the loss of one bottom.

The Break Pin feature is extremely simple, and for foul ground it is one of the best things ever put on a plow. While but a few moments are required to replace a broken pin, it would take from several hours to several days to procure a new bottom, which would be necessary on a plow not having this feature.

There are many other features on this plow which will appeal to you if you will let us tell you about them. Write for our Pamphlet on Traction Engine Plowing.

International Harvester Corporation of Canada Limited
Sales Agents for Canada

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perpendicular, the depth about twice the diameter, and the size of the hole, which is round, proportioned to the number of animals to be fed. The assumption that an underground silo must of necessity cover a wide area at the expense of its depth, thus causing a great loss through spoilage on account of its extensively exposed surface, is wrongly based and has no legitimate place in the consideration of this important construction. There is no more reason for the assumption that the underground silo should have a width out of harmony with its depth than that the over-ground construction should be equally disproportionate with the accepted rules of silo building. Once equipped with the inexpensive and simple devices described in connection with this bulletin for the removal of silage from the underground silo, there is no reason why the depth should not in all cases conform to the rules of dimensions applying to the over-ground silo, namely: Depth equal to twice the diameter.

Cement Covering

The earth wall of the successful underground silo must necessarily be covered with cement to prevent the silage juices from being absorbed. If the earth wall stands well, without danger of caving, a ½- to ¾-inch covering

of good, rich cement plaster on the dirt will be found sufficient. It is often found advisable to plaster on close-mesh rabbit wire that has been securely anchored to the dirt wall, this plaster being put on in from two to three coats, the first being a rough or scratch coat. The first two coats will be well constructed if made of about one part cement to four parts of clean, sharp sand, while the third coat should be made of one part cement and three parts of sand. In applying these coats of cement the second should be put on before the first gets well set, and the third should be put on before the second gets set.

In order to save the necessity for scaffolding in the application of this plaster, it should be put on at the time of digging the hole, beginning at the top and finishing in sections as the excavation progresses.

If there is danger that the earth wall will cave, or not stand well, the applied cement wall should be made from two to three inches thick, a wooden or metal mould or form being required to hold the cement in place until after it "sets." This mould or form need not be over three feet in height, which arrangement requires that construction of the cement wall begin at the bottom of the silo, and the structure will be in sec-

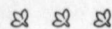
tions of three feet each, rather than all at one time. Thus three feet at each placing of the mould or form, the wall is continued upward from the bottom until the top is reached. The form is moved up as rapidly as the section which it last held sets. A good mixture for this wall will be made about one part cement, 2½ parts sand and 2½ parts of gravel or broken stone. This mixture should be made wet enough to pour, and must be tamped or stirred enough after being placed in the mould to insure driving out all air and closing open spaces.

The top of the underground silo should be constructed sufficiently high above the surface to keep out storm or flood waters. This cement wall or plastering should not be considered as finished until after it has been painted or washed with pure cement and water, which can be easily applied with a whitewash brush or broom. This wash fills up all pores and small openings, thus making the wall both air-tight and water-proof. It is not necessary to construct a floor in this type of silo.

Removal of Silage

Perhaps the main objection against this type of silo has always been that it is too laborious to elevate the silage from it, but

this is not so serious as it has often been represented, and is largely offset or over-balanced by the cheapened cost of construction, and the lessened expense of machinery, together with the ease of filling. The silage is easily elevated by use of a horse in connection with a block-and-tackle or windlass. It is also raised by hand with a swinging derrick in connection with a windlass and pulley. This silage is often elevated to an overhead track, from which it is suspended and carried to the stable or yards in an invertible manure carrier box or trip-bottom box. The device suggested in the foregoing is similar to and may be constructed and installed in exactly the same way as the overhead tracks extensively used throughout the middle west for the unloading and storing of hay in barns and also for the removal of manure from stables. Materials necessary for such a device may be secured from any well stocked hardware store.



The Latest Cut

The young man was disconsolate. Said he: "I asked her if I could see her home."

"Why, certainly," she answered; "I will send you a picture of it."

REPAIRING FARM EQUIPMENT AND ROADS

The following extremely useful matter to all our country as well as many citizen friends has recently been prepared by the Agricultural Engineering Department of Manitoba Agricultural College and issued (free) in the form of a bulletin, which we take great pleasure in reprinting. We are indebted to the Department of Agriculture for the use of the illustrations to the article. Ed.

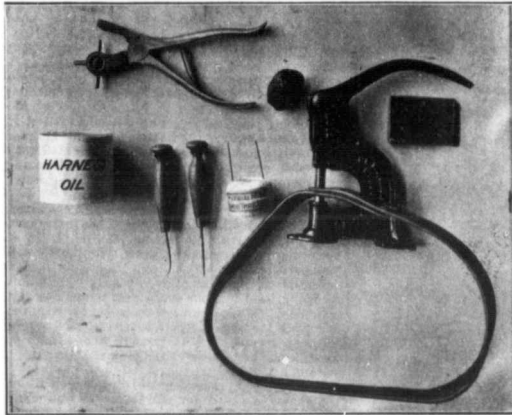


Fig. 1.

Harness Repair

NOTHING adds more to the appearance of a nice well groomed horse than a neat, clean and proper fitting set of harness. A good teamster will pride himself on keeping his harness in good repair, and fitting his horses properly. Such

whiffletree to knock the horses' heels; hames with the hame straps so loose that the hames will not stay on the collar; lines twisted and knots tied over a ripped splice, or used on a cross-line to shorten it instead of punching a new buckle-hole; crupper so slack that it will not stay on; breeching so large that they look

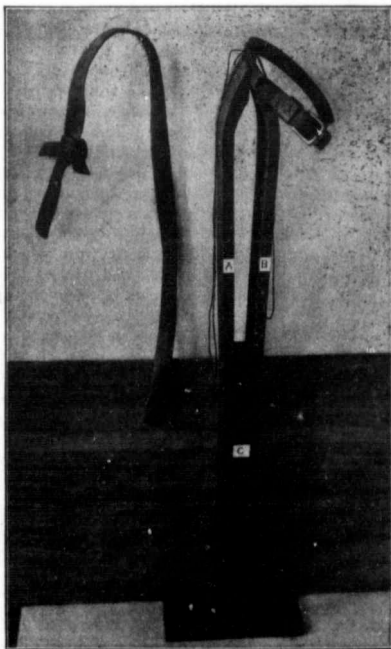


Fig. 2.

negligence as allowing the harness to be repaired with binder twine or hay wire; a broken trace hitched short so as to cause the

like falling off if the horse were to jump; broken hooks and rings in the back pods, which allows the lines to flip all over; and the

check reins to drop till the horse is in danger of stepping into the loop;—all, or any of these, show gross slovenliness on the part of the driver and owner. Even a respectable horse would feel disgraced to be seen with such an outfit, not to say anything of the sore shoulders and chafed skin from which he is liable to suffer through such negligence.

It is the intention of this pamphlet to give the farmer a few suggestions as to how he can keep his harness in better repair at an extremely small cost. By so doing, he improves the appearance of his farm generally, and, in many cases, overcomes the common trouble of sore shoulders and chafed sides and legs.

Every farmer should have a harness repair outfit. There is plenty of time in the spring, and rainy days during the summer, when repairing can be done. The outfit should consist of the following:

- Half dozen sewing needles...\$0.10
 - Half dozen awls10
 - Two awl handles20
 - One ball shoe thread10
 - One ball shoe wax05
 - One revolving punch70
- \$1.25

In addition to this a small handy riveter, as shown in figure 1, is useful, especially on very old leather when quick repairs are necessary. The riveter can be purchased for about 75 cents, thus making the cost of the outfit \$2.00. Another tool that is needed is a sewing clamp to hold the work.

A clamp can be made easily by anybody at home. The jaws, A and B (figure 2), are made from two oak barrel staves. The lower portion, C, is made from any sound piece of plank 3 by 3 and 20 inches long. The staves should

be cut about 2 feet long and 3 inches wide. Clean up the stave with a spokeshave or plane, leaving one end the full thickness and thinning to about half an inch toward the jaws of the clamp. Round the outside corners and smooth the inside flat. The dovetail-shaped tenon on C should be about 6 inches long and will require careful cutting, the depth of the

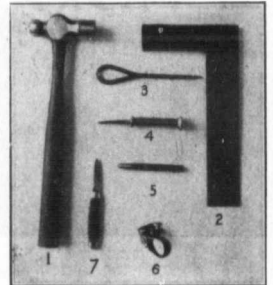


Fig. 3.

shoulder and the width of the upper end depending on the curve in the staves. The object is to imbed the stays firmly, so that the upper ends press tightly together. The staves can be fastened to the tenon by small bolts or screw nails. Such a clamp does very well when there is not a great deal of sewing to do. It holds the

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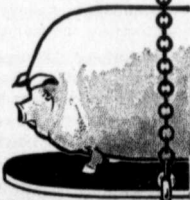
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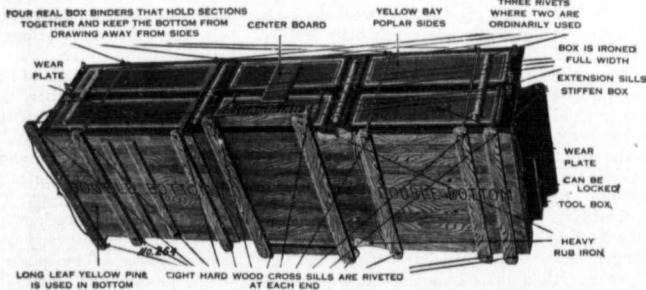
JUDGING wagons is, of course, not a question for eyes alone. Reputation counts far more; you are keenly aware of that fact. You buy wagons for hard usage and you go about it shrewdly. It is easy to make wagons look well; attractive finishing often covers inferior quality. That is what has put the buyer on his guard.

The buyer of I H C wagons and sleighs has the great advantage of established reputation. The Canadian farmer has learned through years of acquaintance, test, and trial, that in

Wagons and Sleighs with the I H C Trade Mark

the best value is under the surface. He knows them to be good for many years of hardest wear and tear and strain. All doubt he may ever have had has been broken down long ago by uniform good records of I H C products. I H C wagons and sleighs, through the uniform high standards of the materials in them, of their design and assembling, and the careful inspections that follow them to completion, have achieved a great Canadian popularity.

Chance does not appeal to you when you are buying machines or vehicles. Buy the wagon and the sleigh that bears the I H C mark—the I H C wagon or sleigh that supplements its attractive finish with a widely known value and reputation. At the I H C agent's you may see them. And our catalogues will interest you. A post card in the mail now to the nearest branch house may be a worth-while investment.



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work securely, takes little room, and can be held between the knees.

To make a wax thread; first, if you can, find a small tin box to put your ball of thread in. Make a small hole in the centre of the lid, through which the thread can pass. This keeps the thread clean and prevents it from becoming snarled. If the end of the thread has a square cut end it will be necessary to make a fresh break. This can be done by holding the thread in the left hand and rubbing it down your knee with your right hand about ten inches from where you hold with your left hand. This takes out the twist. When the twist is all out between your hands, give it a pull and it should break with long ragged ends. The more ragged the ends break the better will be the point on the finished thread. If the first break does not leave a good ragged end, break it a few times until you find how it is done. When you can break it all right, give the end a wind on the first finger of your left hand and draw it through your right hand. When a sufficient length has been drawn out, throw the centre of it over a hook or nail in the wall or bench, pull it until the ends are even and each about 3 feet long; keep the hemp tight with the end in the left hand, and with the right hand spin or rub it on the knee as before, and break it.

Put the end from the ball almost even with the first broken end; give the two a wind on the forefinger of the left hand and pull out thread the same length as the first, and break as before. Repeat this till you have the required number of strands, which may be from three to fifteen, depending upon the work to be done. Six strands of No. 8 thread is usually plenty heavy enough for sewing lines; but for tugs, or heavy sewing, eight or ten strands is better. The ends of the thread should not be quite even, the object being to get a long tapered point to put the needle on. Hold the ends separate in the left hand, take the shoe wax in the right hand and pull it over the ends two or three times, just enough to keep the ends together; then give the end on the left of the hook a wind on your left forefinger, and twist the other end. When it has enough twist, hold the two ends in the left hand and rub the wax on with the right hand. Make sure the ends taper to a fine point and are well waxed. Now put the needles on the ends.

Draw the point through the needle about two inches, depending on the length of point on the thread; bend the points back and twist into body of thread. This holds the needles—one on each end of the thread—securely. A

little beeswax rubbed over the thread makes it slip through the leather. Wax will not work satisfactorily in a cold room. It will peel off the thread.

When a strap has been broken and it is the intention to splice it, thin the ends down with a sharp knife to a gradual taper, for about three inches, then lap the ends and it is ready to sew. Small wire tacks are very useful in holding the straps in position while the stitching is being done. Put the splice on the clamp, make a hole with the awl and pull the thread half way through; make another hole, put one needle through a few inches, then put the other needle through the same hole from the other side and pull both up tight. Care should be taken to keep the stitches straight and of uniform length.

Leather for repairing can be bought in strips from any harness

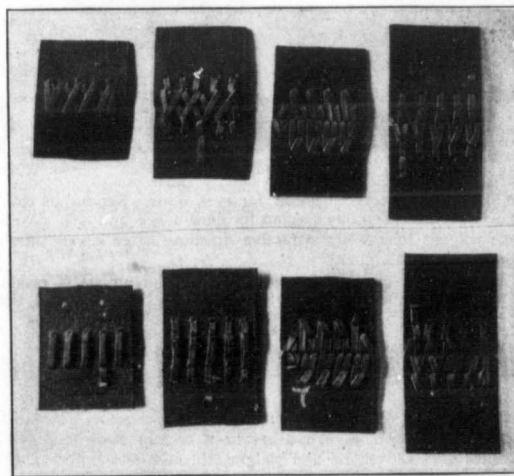


Fig. 8.

shop, but the cheapest way is to buy a half hide. In this you get some good leather from the back, and also some soft belly leather, which can often be used for straps where there is not much strain, as trace, carriers spudder straps, etc.

The average life of harness could be prolonged many years if proper systematic care were adopted. Harness should be thoroughly oiled twice a year, or at least once a year. This oiling should consist in taking the harness all apart, washing it all thoroughly in warm soft water and soap, hanging up to dry for a short time, and then applying a good coating of harness oil. Let the oil soak in for an hour or two, then wipe with a flannel rag and they are ready to assemble and put to use again. This is also a good time to repair any badly worn pieces, or splices that are starting to rip.

If a systematic repair of harness were adopted the life of the

harness would be prolonged, and also a good deal of time and annoyance saved to the teamster. One man could easily wash, oil and repair the average set of harness in a day; and as there are many days when work cannot be done outside there is no reason for neglecting the harness.

Oil for Farm and Team Harness.—Melt three pounds of pure tallow without letting it boil, and gently add one pound of pure neatsfoot oil. Stir continually until cold so that it will be perfectly mixed, otherwise the tallow will harden in lumps. To color, add a little lamp black.

Belting

The subject of belting is one that the farmer or engineer ought to give careful consideration. He should study the different kinds of belting, their care and treatment, and the proper methods of repair-

together, making a two, three or four ply belt, depending on the strength required.

When a single belt can be used it is more satisfactory than a double one. If the power transmitted is too great for a single belt a heavier one should be used, but it should not be made to pass over pulleys of small diameter as the continual bending will cause them to crack at the glued joints.

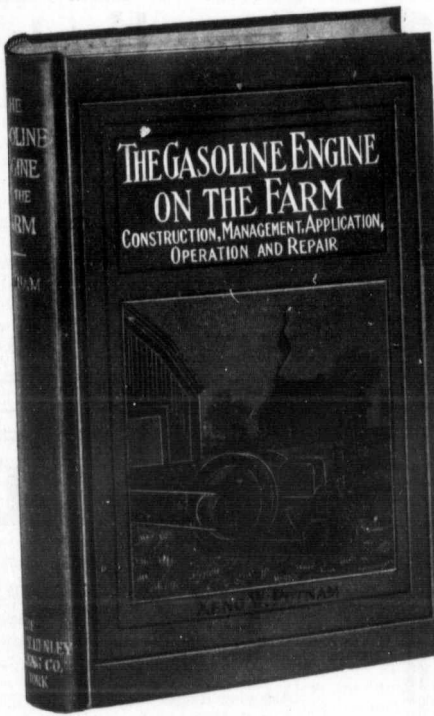
The strongest and most elastic part of a piece of belting is the flesh side. The hair side is smooth, comparatively brittle, and is liable to crack. For these reasons the hair side should always be run next to the pulley. It brings the flesh side, which is the stronger, to the outside, where the strain is greatest; and at the same time the brittle hair side is next to the pulley, where it is under compression. If belts are run with the flesh side next to the pulley, small cracks crosswise soon appear, which grow deeper and deeper, and finally ruin the belt.

The tensile strength of a leather belt is variable, but a safe estimate would be about 3,000 lbs. per square inch; that is, a belt a quarter of an inch thick and four inches wide will stand 3,000 pounds pull before breaking.

Care of Leather Belting.—A leather belt should be kept clean and dry. If it gets wet it will shrink and become hard and brittle. All leather belts should be put under cover at night or when a rain storm comes on. Neatsfoot oil is as good a dressing for leather belts as can be found. After a season's run they should be thoroughly cleaned and given a good coat of neatsfoot oil before being stored away. The oil will keep a belt soft and pliable, and in the best possible condition for work. There may be prepared belt dressing as good as neatsfoot oil, but very few are any better. The main thing in leather belting is to keep it soft and pliable so that it will cling tightly to the pulley. Mineral oil should never be used on belts as it tends to rot them, making them soggy and inelastic.

Rubber Belts.—Rubber belting is made from canvas and rubber. The canvas is folded and vulcanized with rubber. This process holds the plies of canvas securely together, while the rubber on the outside gives the belt a smooth surface which is well adapted for adhering to the pulley and transmitting a maximum of power per unit of width. The quality of the belt depends on the weight of duck used and the process of manufacture. The good quality of belts are made from 32-ounce duck—that is, a square yard of duck weighs thirty-two ounces.

(To be Continued.)



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Farming Efficiency

Continued from page 26

"Queer banks we have seen" might well be the title of a chapter in the commission's report," said Congressman Moss, of Indiana, the only Congressman in the party. Mr. Moss was with the sub-committee which toured Italy, Austria and Hungary.

"The queerest co-operative bank of all we saw was in a little town in Italy. It was located in a small room of an old but beautiful church. The priest was the banker, cashier, clerk and book-keeper. He received no salary. The bank was started some years ago on a capital of \$9.20, which represented the cost of the books. It has loans out at 4½ per cent to farmers for \$20,000. The bank has a fat reserve, of which the priest-banker is the custodian. The bank has never lost a dollar. It costs 20 cents to become a stockholder.

"In Hungary we found small banks in farming communities where the government paid the cost of administration so the farmers might borrow money at 2 per cent., while the government at the same time was borrowing at 4 per cent.

"While I am doubtful if the United States could adopt the German system, I firmly believe great success would follow the adoption of these systems with modifications. Conditions in Germany and in Europe in general are much different from those at home. The little banks in Germany are often in the back room of a village postoffice. The postmaster, the preacher or the village schoolmaster is usually the banker. The loans are long, frequently stretching over a period of from 50 to 75 years.

Let Money Circulate

"The people are grateful and appreciative of small things. The opportunity for investment and earning capacity of money is small. In some sections of Hungary we found that the greatest factor in improving conditions, in putting more money into circulation on an increasing value of property, was the money sent home by Hungarians who had gone to America, and to adopt some of Europe's banking schemes it would be necessary to adopt some European conditions. You can foreclose and turn a man off his place—sell him out of house and home—take everything except the clothes on his back, in three weeks in Europe."

S. A. Lindsey, chairman of the Texas Farm Life Commission, was deeply impressed with the co-operative banking of the German farmers. "In Germany the borrower, particularly the farmer, receives far more consideration

than at home," he said. "Industry, character and reputation are the chief securities for loans, and yet losses are comparatively rare. As a result of our tour, I am convinced that the terms of our farm mortgages must be longer. We could well adopt the German plan of gradually paying off mortgages. For instance, here a farmer will pay 5 per cent on his loan. Four of that is interest and the other one per cent applies on the principal."

Clarence M. Smith, banker of San Francisco, believes the German small farm plan ought to be tried in California. "I believe," he said, "that if some of the ten and twenty acre farms were laid out in such a way that the houses were at some central point, each farmer living upon an acre of ground, thus forming a villa colony or village, it would go far toward solving the problem of social life on the farm."

**HORSES
And a Little "Horse Sense"**

One of the most common troubles experienced in the stable is that of filled or puffy legs and joints, a condition which may arise from various causes. It may be and very usually is associated with a certain inherent weakness of the legs, or it may result from the effects of wear and concussion to which they are subjected in the course of a horse's work, while the trouble is also specially apt to affect horses whose legs have suffered from sprain of the tendons or ligaments, and so become permanently weakened. Want of exercise is yet another cause which very often gives rise to filled legs, and the evil is in this case generally much intensified if a great deal of corn is given, on account of the heating effects which a high diet entails. Briefly, filled legs consist in their becoming more or less swollen at the back between the knee and fetlock, as a result of a form of passive congestion and the exudation into the tissues of serous fluid. The fetlock joint may also be involved, and exhibit similar signs of puffiness, the puffy condition of this joint, however, usually being due primarily to windgalls—that is, swellings brought about in consequence of the secretion of an excessive amount of joint oil or synovium, as veterinarians term it. On the horse being taken out for work or exercise, the accumulated fluid which has caused the legs to fill becomes absorbed, thanks to the quickened circulation resulting from movement, and they then quickly fine down, so that when



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the animal returns to the stable they are found to be perfectly fine, no signs of filling being observable. Gradually, however, they commence to swell again in the stable, and by the evening or the following morning they are filled in the usual manner, and the weaker the legs are the more do they usually fill. As a rule, the trouble is confined principally or wholly to the forelegs. If the hind limbs are similarly affected, they do not generally fill so badly, excepting as regards puffiness about the fetlock joint. Such puffiness is very often quite as bad behind as it is in front.

Bandaging

The question in cases of filled and puffy legs is how to keep them fine, as the horseman expresses it, if only because of the unsightly effect of this trouble; and the usual expedient adopted in well-managed stables in order to cope with it is to bandage the legs as soon as the horse comes in from work or exercise. Properly applied, bandages prove more or less effective in preventing filling, but they will not actually cure the evil, for they keep the legs fine only as long as they remain on, the former soon swelling after their removal. The efficacy of the bandages may be much increased by wrapping a layer of cotton wadding round the legs before applying the bandage. This ensures a much more uniform degree of pressure, and by means of such cotton wadding bandages one can keep the legs absolutely fine.

Hand-rubbing

A very fine excellent remedial measure in dealing with filled legs consists in hand-rubbing them, which has the effect of lation, and so brings about the removal or partial removal of the fluid which has collected in the tissues. To be of any use, however, the hand-rubbing must be vigorously performed and persisted with for some little time, say not less than five minutes each time, and the oftener it is done the more beneficial will be its effects. They should at any rate be hand-rubbed thrice a day to produce a tangible result. Apart from helping to keep the legs fine, hand-rubbing is also of undoubted value in permanently strengthening legs that are weakened as a result of wear and concussion or owing to the after effects of a sprain or strain.

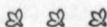
Exercise

When want of exercise is at the bottom of the trouble—and even the strongest and soundest legs are apt to fill if a horse is kept standing idle in the stable for whole days, and insufficiently exercised—the remedy is self-evident. A daily outing of from one

and a half to two hours, even if it be only walking exercise, or a few hours' run in a paddock, will under these circumstances suppress all tendency for the legs to become filled, while hand-rubbing, as described above, will contribute to the same result. When horses are under-exercised there is certainly nothing better for their legs than to hand-rub them well, and for this reason this expedient is generally adopted, and with most beneficial results, in the case of horses which are undergoing a journey aboard ship, where they are kept in close confinement without getting exercise.

Sometimes the practice is adopted of occasionally administering a diuretic, such as nitre, in cases where there is a tendency for the legs to fill badly. This will relieve the undesirable symptom while the effect of the dose lasts, which is not for long, and that constitutes the whole extent of the advantage to be gained from this measure. Thus the result is most elusive, and no permanent benefit accrues, and to continue giving medicinal agents time after time will inevitably cause the health and constitution of the animal to become undermined. Therefore, the use of medicine is ordinarily not to be advocated in these cases, but on the contrary, is reprehensible. If prescribed by a veterinary surgeon, it will, of course, be an entirely different matter. When filling and puffiness of the legs and joints are due to their being weakened in consequence of exercise, wear and tear, there remains the more drastic remedy of blistering the legs, and then turning the horse out for a prolonged rest at grass. That will tend to strengthen them, and gives them a chance of recovering their tone. At its best, however, this course can be expected to be only of partial benefit. On being taken up from grass and brought into work again, the horse's legs may keep fine for a certain time and show no disposition to fill or become puffy, and in favorable cases this desirable state of affairs may last for quite a long period, but sooner or later, as the effect of constant work begins to tell hardly on the legs again, the old trouble will gradually commence to reassert itself.

Argus.



Sharpe—"On his birthday before their marriage she gave him a book entitled 'A Perfect Gentleman.'"

Wheaton—"Any change after a year of married life?"

Sharpe—"Yes; on his last birthday she gave him a book entitled 'Wild Animals I Have Met.'"

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ACCUSTOMED as Canadians have become to hearing of new high records of crops and crop movement in Western Canada, probably no one had even surmised that the grain could have been moved off the prairies in such tremendous volume. With another five weeks yet to go before the close of navigation it now looks as if from seventy to seventy-five per cent of the wheat will be off the farms by December first. This is an unusual condition of affairs and well worth noting by those holding back grain. Note the inspections to October 31, as compared with those of 1912.

	Bushels 1913	Bushels 1912
Wheat	64,614,375	36,203,625
Oats	15,768,100	6,805,800
Barley	6,583,200	2,987,400
Flax	2,829,750	1,753,500

Remarkable it may seem, but much Saskatchewan wheat is now coming ahead, which three weeks ago was under snow, yet most of it does not even lose a grade from bleach. Grades continue very high. The railways are bending every energy to move the grain while the weather is fine and operation costs are low. The need of ready money in most quarters has induced quicker marketing than usual and very likely will result in a rather small grain movement next spring.

Naturally with such a movement stocks at terminals, October 31, were large, even though the Lake movement is heavy.

	Bushels 1913	Bushels 1912
Wheat	10,993,404	9,623,620
Oats	3,600,187	1,879,845
Barley	2,760,438	931,686
Flax	1,065,952	761,691

Stocks at transfer elevators on way to Seaboard are very large and there is always much Canadian grain afloat at Buffalo, waiting turn to unload, so the Canadian visible is heavy, being at that date 18,585,106 bushels against 15,994,092 last year.

The opening of two big new elevators at Fort William and Port Arthur, the Government terminal and the Fort William elevator, means a fine addition of 5,000,000 bushels storage and much quicker handling of flax off the C.P.R. lines. Owing to the uniformity of crop this year, and fewer grades, the terminals have a greatly improved outlook

for little congestion this winter, especially since already great quantities of oats and barley are going for export to the United States.

The markets in early October steadily sagged under the extremely heavy deliveries, free offerings by exporters who often found they were obliged to press offers to affect sales, plentiful supplies abroad as Russia, was also a good shipper and the movement of hard wheat in the United States heavier than had been anticipated. The uncertainty about the tariff bill removed, and no "free wheat," the marketings dropped off rapidly over there, and our markets took on new strength here, a nice rally being recorded before the end of the month. Now the early freeze up has again increased marketing both in the United States and Canada and the markets are again declining. Of course apprehension over the Argentine and the Indian crops were decided factors in the recent advance. If any decline to around eighty cents store for one northern again takes place (and very likely will), farmers will do well to hold as the drying up of shipments from the country will make foreign shorts apprehensive.

Foreign crop conditions are fair. Russian shipments recently dropped off somewhat and this combined with frosts in the Argentine caused bears to cover and bulls to take heart. The winter wheat acreage in the United States is about 36,025,000 acres, the largest amount on record, or about eleven per cent more than seeded last year.

Coarse Grains

The coarse grain prices since the duty reduction has been disappointing to grower and dealer alike. With lower British cables for corn almost every day now, other nations than Canada and the United States are pressing their fodder crops upon European markets and despite extreme cheapness in our oats and barley, at least one cargo of Argentine corn has come to Montreal. Stocks of oats everywhere are large and not until the movement from the farms lets up and we have the heavy consumption cold

Telephones—Main 46 and Main 3570

THE DECLINE WAS OVER DONE

and wheat had a nice rally. Farmers will do well to consign and have their grain sold on some strong spots. There will be a good demand some days between now and the end of the month. Careful attention given to each shipment, that is why our business has had such a phenomenal growth. We invite a trial shipment from new patrons. Get in touch with us quickly about your coarse grains before you ship, as there are several places for special shipment where better prices can be obtained than to Port Arthur or Fort William.

BLACKBURN & MILLS (A. M. Blackburn) (D. K. Mills)

531 Grain Exchange Winnipeg, Man.

Licensed Reference: The Royal Bank of Canada Bonded

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Donald Morrison & Co.

ESTABLISHED 1904

GRAIN COMMISSION

725^o Grain Exchange,

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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.

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Daily Market Letter and Sample Grain Bags. Send us your name and address and we will put you on our mailing list—its free. Let us keep you posted on market prices for grain. Personal attention given to selling and grading of all cars. Our Car Tracing and Claim Departments work in our Clients interests. We have every facility for prompt service and we get best results for shippers. Send a day for a supply of sample bags and deal with a firm whose business has been built up by satisfied customers.

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FARMERS! SHIP YOUR GRAIN

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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.

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Remember to renew your Subscription

weather always brings, need we look for improvement in prices and such advance will be slow. Despite smaller Western oat and barley crops, prices are three cents lower for oats and 10 cents lower for barley than a year ago. Farmers should keep these grains at home, but if obliged to ship, should write their commission firms for particulars as there are three or four markets at present for such grains where better prices are to be had than at Canadian terminals. Barley is about the cheapest grain in the world today and low grade barley should be fed at home. Farmers should do some figuring and note how much more profitably such grain can be fed on the farm.

Flax

Increasing stocks of oil and the big movement of flax despite a smaller Western crop have all contributed to the heavy sag in prices. The big deliveries on each current month's option shows that large quantities are being held by dealers, yet owing to money scarcity each one tries to get the other to carry the load. There is a general feeling that flax is unwarrantably cheap and the movement of spring requirements of oil from wholesalers to retailers will spell improved flax prices though the increase is likely not due for some months yet.

Glancing over the whole grain situation, those farmers who can afford to keep their grain at home for better prices in the spring and early summer should do so. In a larger sense than he may now think, each such well-to-do farmer is "his brother's keeper."

The Progress of Dairying in Canada

Conditions affecting the marketing end of the dairy industry in Canada have undergone rapid changes during recent years. In the past it has been the custom to estimate the growth of the industry on the export trade. This, however, has become an entirely unreliable guide because Canada no longer has butter to spare but on the other hand finds it necessary to import from other countries. Cheese exports too have greatly decreased. These facts were brought to the attention of the Select Standing Committee on Agriculture and Colonization during the past session of Parliament by Mr. J. A. Ruddick, Dairy and Cold Storage Commissioner, who showed very clearly that the industry is not losing ground but is making steady progress. It was brought out that the Canadian people are consuming relatively more milk and milk prod-

ucts than heretofore and that an increasing quantity of milk is being manufactured into condensed milk, casein and other products.

During the course of Mr. Ruddick's evidence he gave out a great deal of interesting information concerning the tendency of the industry. This has now been printed in a pamphlet of fourteen pages for free distribution to all who apply for it to the Publications branch of the Department of Agriculture at Ottawa.



Placing the Blame

On his birthday little Freddy received a present of a beautiful model steam-engine from grandpa. He played and played with it until he managed to break the wheels off.

Mother was very angry with him, and talked to him severely on his roughness. Then she punished him by putting him in the corner.

When father came home he found his little man with suspicious red eyes.

"Hallo, sonny!" he cried cheerily. "What's the trouble?" "Oh, nothing!" replied "sonny." "But look here, old chap," said father kindly. "Tell me. I want to know."

Freddy's lips quivered as he answered:

"Well, if you must know, I've just been having a row with your wife!"

Life is the finest of the fine arts. Many people never learn how to live; they grow up at random, carrying into mature life the merely animal methods and motives they had as little children.

TRAVELING SALESMEN
Earn \$1000 to \$5000 a Year
 You can learn to be a Salesman in eight weeks by mail and earn good wages while you are learning. No former experience and business! We have a large number of our students now making money from hundreds of our students. National Salesmen's Training Association, Chicago, New York, Kansas City, San Francisco. Address nearest office. Department 251. Mention this magazine when writing advertisers.

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 and Station Agents' Work taught by our new Home Study Course or by attendance at our school. This course will lead to a good salary. Write for booklet and sample lesson. Address Shaw's Telegraph and Railway School, 395 Yonge Street, Toronto. W. H. SHAW, President. You saw this advertisement in this magazine. Don't forget to say so when writing.

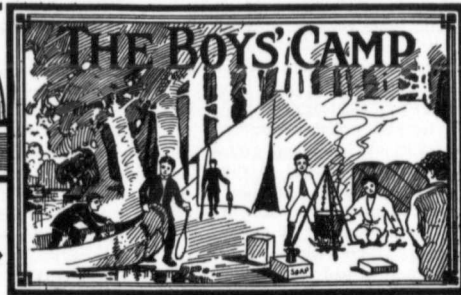
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 AT ONCE, families, sons and daughters to color pictures in the home for the trade, by a NEW COLORING PROCESS. We furnish everything, you do the work. We send plain, outline pictures which you color and return to us. No experience required. Work is easy and fascinating. Good wages. Work all year round, for whole or spare time. No canvassing our travelers sell the goods. Write today for instructions and contract (free) and start work at once. Highest Award Toronto Exposition, 1912. Commercial Art Studio, 316 College St. TORONTO, Canada. Mention this magazine when writing advertisers.

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 An extra strong and serviceable Rubber Boot—the only durable and waterproof boot on the market that sells for our special low price of \$2.95. Made of good quality gum rubber which has been reinforced in many parts so Send \$2.95 that they will render unusually long service for a low priced boot. For those desiring an inexpensive boot, this boot cannot be equalled anywhere at this price, \$2.95 per pair. Made in all sizes. Send For Our New Big 100 Page Catalog. You need it. Our Guarantee is an assurance of perfect satisfaction. Our enormous business has been built up by selling only the best merchandise at prices that will save you money. A. Weinberger & Co., 112-113 South Street, NEW YORK CITY. Mention this magazine when writing advertisers.

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 Unitarian Literature SENT FREE on request. Mrs. JESSIE DONAHUE, 728 Beech Street, Manchester, N.H., U.S.A. Mention this magazine when writing advertisers.

THE FARM OUTFIT THAT INCLUDES A Manitoba ENGINE
 is equipped for maximum results on the lowest possible chance of trouble. Do you realize what this means? Idle hours mean lost money—the Manitoba Engine eliminates them. Cold or other extremes that may have meant trouble to you in the past have no effect on the Manitoba. It is an engine correctly built—built regardless of cost where efficiency is concerned. We put into this engine the best materials, the best workmanship (our catalogue gives the full technical details). Every year our output has to be increased accordingly. Would not such an engine be your best investment? For every use on the farm the Manitoba Engine has its points of superiority. It is the right engine for pumping, chopping, threshing, and a hundred other needs. Write for our catalogue to-day. WE MANUFACTURE Gasoline Engines, 1 1/2 to 25 H.P.; Grain Grinders, 8 to 12 inch; Wood and Iron Pumps; Wood Saws, all sizes; Pumping and Power Windmills, 8 to 14 feet. "MADE IN THE WEST FOR WESTERN NEEDS" MANITOBA ENGINES, LIMITED Brandon, Man. Calgary, Alta. You saw this advertisement in this magazine. Don't forget to say so when writing.



Girls' Cozy Corner

JACK FROST

The door was shut, as doors should be
Before you went to bed last night,
Yet Jack Frost has got in, you see,
And left your window silver white.

He must have waited till you slept;
And not a single word he spoke,
But penciled o'er the panes and crept
Away again before you woke.

And now you cannot see the hills
Nor fields that stretch beyond the lane;
But there are fairer things than these
His fingers traced on every pane.

Rocks and castles towering high;
Hills and dales and streams and fields;
And knights in armor riding by
With nodding plumes and shining shields.

And here are little boats, and there
Big ships with sails spread to the breeze
And yonder palm trees waving fair
On islands set in silver seas.

And butterflies with gauzy wings;
And herds of cows and flocks of sheep;
And fruit and flowers and all the things
You see when you are sound asleep.

For creeping softly underneath
The door when all the lights are out,
Jack Frost takes every breath you breathe.

And knows the things you think about.
He paints them on the window-pane,
In fairy lines with frozen steam;
And when you wake you see again
The lovely things you saw in dream.

—Gabriel Setoun.

GIRLS' PRIZE LETTER

Meskanow, Sask., Aug. 26, 1913.
Dear Cousin Doris—I was reading over the letters in the Canadian Thresherman and I decided I would write.

The harvest is on now. That is what I like, taking lunch to the men, the hum of the threshing machine, but it means lots of work. How many of the cousins like picking berries? The strawberries and raspberries were scarce this year. Of course when we should have got them it was raining. The high bush cranberries are nice to pick. My father and I go down into the woods and pick them. Two bears have been seen quite close to our place, and my sister and I don't like going down in the bush alone.

My sister and I are keeping house for my brother and father. We have been living in Sask. four years and were getting things comfortable when our house got burned. It happened in the spring (in April), but by the end of July we were in another. I will close with a riddle.

In a little bluff there was a little pond,
On the little pond there was a little boat,
In the little boat there was a little girl.
If you can't guess her name,
Eve your ownself to blame.

For I told you in the middle of the riddle.
Answer—Eve.
I hope to receive a prize—Maude Wilton.

Benito, Man., Aug. 25, 1913.

Dear Cousin Doris—This is my first letter to your club. I take a great notice at reading the letters. I am ten years old. I am in third book at school. I have about a half a mile to go to school. I have two sisters and five brothers. Our school name is Thunder Hill. We live nine miles from Benito and seventeen from Swan River. We have five cats and four of them have kittens. We have an Edison phonograph. My birthday is on the 24th of June. My letter is getting pretty long, so I will close for this time.—Beatrice I. Abigail.

Ravine Bank, Sask., Sept. 29, 1913.

Dear Cousin Doris:—This is my first letter to the girls Cozy Corner. I am a girl 12 years old and I like to read the letters in the girls' Cozy Corner. And my brother takes The Canadian Thresherman and Farmer. I have one dog, one cat, four turkeys, one calf and a doll. I wash the dishes and sweep the floor and make the bed. We live 3 miles and a half from school. And I have not been going to school for a while. We live 37 miles from town. My mother runs a store, and I like to eat candies. I will close with some riddles, as it is getting near dinner time.

At what time of day was Adam born?
Ans.—A little before eve.
Why is a dead hen better than a live one?
Ans.—Because she will lay wherever you put her. Yours truly,
Mary Underwood.

Canadian Boys' Camp

THE GOSSIPS

Susan M. Kane

Sunbeams trooping out to play,
Met the gossip, Wind, one day.
Secrets whispered in his ear,
Made him murmur, "Dear, oh, dear!"

Quickly, then, away he flew,
Down where friends, the willows,
grew,
When the news to them he told,
Out they hung their curls of gold.

Bending low, they told the brook,
Who with gurgling laughter shook,
Blackbird cried, "Ka-leel! Ka-leel!
Please do tell the fun to me!"

Robin next received the word,
And from him the snowdrift heard.
She the message brought to me,
As I stood beneath the tree.

"Keep it secret? No," I said.
"News like that should always spread.
Winds, come, blow the word along!
Robins, put it in your song!"

"Rattle, showers. Tell it, trees.
Fling your banners to the breeze!
Sweetly, bells of flowers, ring!
Here's the secret. It is Spring!"

BOYS' PRIZE LETTER

Regina, Sask., Oct. 1st, 1913.

Dear Cousin Doris—I have been a silent reader of the boys' letters for a good number of years and have found them very interesting.

I am fourteen years old and have lived on the farm all my life, so I thought I would write and tell you of my experiences in seeding time.

I live on a farm of four hundred and eighty acres. We generally sow about two hundred and fifty acres, as we leave some for summer fallow and we also have quite a large pasture field.

In seeding time I arise about five o'clock in the morning. I feed, water, clean, and harness my horses, and then I clean out the stable, which takes all told about three-quarters of an hour. I breakfast at six o'clock. After breakfast I take a four-horse team and hitch it to a wagon (which has been filled with thoroughly cleaned grain before-hand, and pickled the night before). I take this to the field that my brother intends to sow, and leave it in readiness for him to fill the seeder as often as is necessary. I then hitch the horses to a six sectioned harrow, and harrow everything that is sown, which is on the average twenty-five acres a day.

At half-past six we stop work in the field. After feeding the horses for supper, we have our own supper, which is at seven. After supper we see that the horses are comfortable for the night, then we pickle enough grain to use the following day. We sow about one and a quarter bushels of wheat to the acre, and about two bushels of oats to the acre. Seeding takes us about ten days, according to the weather.

This is about all I can tell you on seeding, so I will close my letter with best wishes to the "Campers."—I remain, William Zinkhan.

Mountain View, Alta., Sept. 22, 1913.

Dear Cousin Doris—I thought I would write to your club because the boys are getting behind. My father takes the Canadian Thresherman and Farmer, and I like it very much.

We live on a farm, and have twenty head of cattle and lot of horses. We have over a hundred chickens, and lots of hogs. I am eight years old, and I am in the second grade. I have three sisters and one brother. I would like someone to correspond with me about my own age. Hoping to see my letter in print and would like to get a book. Wishing the Club many success, a loving cousin.—Melvin Tolley.

THE LIVE CAR-LOAD

By Frank Lillie Pollock

(From Youths' Companion)

The trainmen regarded the car-load of live bees as a huge joke, and spoke of it as a "load of humming-birds," and as a "car of hot stuff." To George Fisher it meant hours of torturing worry, for not only was most of his own capital locked up in it, but some that was not his.

Moving bees, especially by rail, is a business likely to add gray hairs to a bee-keeper's head. It is like moving dynamite: the slightest miscalculation or accident may cause an explosion. Young Fisher had discovered that

bees could be bought much more cheaply in the South than in northern Ohio, where his apiary was, and had brought up fifty colonies from Tennessee by freight the spring before. He sold them at a profit of more than a hundred dollars.

Encouraged by this success, he went South the next spring, taking all his own spare cash and a hundred dollars that he had borrowed on the security of his home apiary, and bought a hundred and fifty colonies in Franklin, Alabama. He packed them there at the end of April, and filled a cattle-car with the hives. They were billed through by fast freight to Cleveland.

George himself traveled in the caboose of the train. At every stop he got out and, through the bars, inspected his "humming-birds." Each time he half-expected to find that the tiers of hives had been jarred loose and that the bees were escaping. As the weather was warm, he sprayed water over them twice a day. In this manner, all went well until they reached central Kentucky.

The fast freight was to make only three stops between Nashville and Cincinnati. At midnight George awoke from a doze, and found the train at a standstill. Looking out, he saw in the darkness the buildings of a town; a short distance ahead a street lamp burned beside a crossing.

On learning from the conductor that the train would probably not start for twenty minutes, George took the opportunity to look at his bees. He walked down to the car, and finding everything in order there, was turning away, when his eyes fell upon a cloud of insects round the electric light a few yards away. At first he took them to be moths; then he saw that they were bees.

In sudden alarm, he unfastened the car door, climbed in, and lighted a lantern that he kept in the car. The place resounded with a dull, dining roar, and he saw at once that the white hives were covered with crawling bees, that from time to time took wing and made for the luring lamp outside.

At each end of the car George had piled the hives in tiers reaching nearly

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Womans' Department

Conducted by PEARL RICHMOND HAMILTON

A HOUSEHOLD FORUM FOR THE DISCUSSION OF EVERYTHING THAT PERTAINS TO THE HOME



Love in the Heart

One smile will glorify a day;
One word true hope impart.
The least disciple need not say,
I have no alms to give away,
If love be in the heart.

The dear Lord's best interpreters
Are humble human souls;
The gospel of a life
Is more than books or scrolls.

There are nettles everywhere,
But smooth greengrasses are more common still;
The blue of heaven is larger than the cloud.

—E. B. Browning.

WOMEN IN THE BUSINESS WORLD

(Read at the Swan River Society)

Fifty years ago there were very few women engaged in what is called the business world. Today we find them by the thousands; almost every avenue is open to women. We find them from the girls who are working for three or four dollars a week to the women who are earning several thousand dollars a year. I do not know of a single profession in which we may not find women. The only place they have not gained a visible foothold is in the legislature, and we believe that it will not be very long before we shall find them even there. It would take more time than has been allotted to me to site more than an instance or two where women are holding offices of the highest responsibility and trust.

Miss Naomi Farrell, of Winnipeg, has the distinction of being the only woman bank manager in Canada. A Western girl, Miss Cora Hind, whose home is in Manitoba, is an accepted authority on stock and grain statistics, and is the only woman who was ever allowed to go on the floor of the Chicago Grain Exchange. Miss Catharine Hughes, of Edmonton, holds the office of archivist to the Alberta Government. She is a Canadian by birth, coming from the smallest of Canada's provinces, from Melbourne, Prince Edward Island. She has held her present office since 1908. It was in the following year that she made a tour alone of the Peace River and Athabasca districts by frontier stage, canoe, scows and river boats in search of material for the Alberta archives. She is a journalist and author, and in 1903 was elected vice-president of the Women's Press Club.

At the last meeting of the Association of Chartered Accountants it was decided to admit women. The assistant secretary of the United States Treasury at Washington is a woman. Fifteen years ago she took a civil service examination, and later applied for and got a position as stenographer in the United States mint. She has advanced step by step until today for weeks together, in the absence of the head official, she is acting-secretary of the United States Treasury. The question is being asked, not only by men quietly or otherwise, but by a large proportion of women themselves, to what is all this

tending? And what is the goal to which all this development of their capabilities—a development which has been perhaps the most extraordinary feature of the past couple of decades—is helping women to attain? And there seems to be as many answers as there are different people in the world. On one point, however, there seems to be comparative unanimity: women unquestionably get a better time now than their mothers or grandmothers did. They have more opportunities of education, fewer restrictions, possibility of leading healthier lives, due in a large measure, we believe, to the increased opportunities of earning their own living. One result of this increase of liberty is an astonishing alteration in physique. Someone has said that while the men of the race tend to grow smaller and weaker, the women are growing taller and stronger. Now, whether this be true or not, I do not

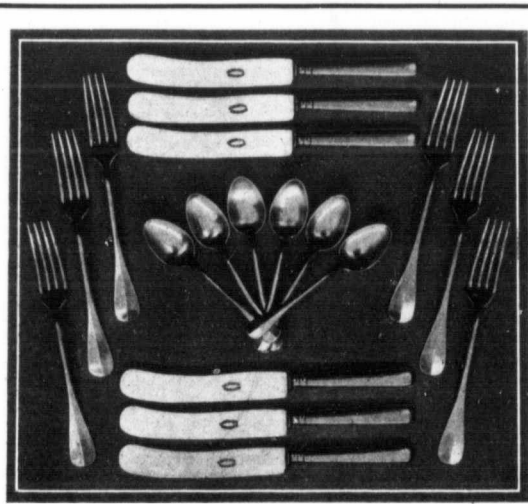
pretend to say, but this I do believe that women are gradually coming into their rights designed for them by the Creator. Of course, we know how men have, and some do so still, interpreted the story of Creation to suit themselves—that God meant woman to be subject to, and the slave of man, whereas He never meant anything of the kind. If He had, I fancy He would have taken a bone from one of Adam's toes and created Eve. He could have made just as perfect a form. But instead He took the rib nearest Adam's heart, thus showing that He intended woman to be man's helpmate and companion.

I have no patience with, or respect for, masculine women, and I think we can safely say that more of that kind are found among what may be termed society women than among women who earn a living by working at some useful, respectable business or profession, or personally attending to the management

of their homes. We know that men give this as one of their reasons for not wishing to have women in public offices: that they will become bold and unwomanly, and that contact with the world will wear off the fine edge of womanly delicacy and refinement. But this only shows how little such men know of real, true womanhood. Of course, we admit that there are women in business positions who are a disgrace to the name of woman, but it has not been the position which made them so; they would have been the same if living a private life, and an opportunity was given them. One's occupation only develops what is in one; all the care a gardener could give would not change a plum tree into an apple tree.

Woman is the mightiest force in the world today, and if all good women would only realize this and exercise their privileges, we would soon see still greater advancement and improvement. While the home is woman's realm, every wife should make it her business to learn something of what her husband is doing, for men have worries and trials just as trying as any woman can have, especially men who are cooped up in offices all day meeting all kinds of people, for there are people who would try the patience of Job and wear out the strongest nerves. We often hear women say, and sometimes rather boastfully, "Oh, I don't know anything at all about my husband's business." Perhaps the husbands have never shown any inclination to confide in them, but that, I believe, to be the women's own fault in the majority of cases at any rate. If she showed a sympathetic and kindly interest in her husband's affairs (not just curiosity), the average man would be only too glad to discuss matters that were perhaps worrying or otherwise.

Women are clamoring for more power when they already have a share of all the power that's going—except the franchise. An American gentleman has gone so far as to say that woman is absolutely—"the moral law." She sets the standard men propose, but women decide. The social sanctions are determined by women, and also more business and affairs of state than we are aware of. The truth is that men will eventually do what women like. They may bluster about it and talk a lot of independent masculine talk, but in their hearts men wish to be approved by women. But we are verging upon a new era. Men are awakening. Let women awaken, too, that they may solve together the problems of life, sharing alike the pleasant toil and the recreations that come naturally to people with bright minds and healthy bodies.



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Home Economics

(Address all communications to this department to Pearl Richmond Hamilton, 983 Grosvenor Ave., Winnipeg.)

Dear Members of H.E.S.—We have two excellent papers for publication this month. I trust other societies will send in papers read at their meetings. The one entitled "Women in the Business World" was read before the Swan River Society. I wish we might have had the name of the member who wrote it. Our readers will find it both interesting and instructive. "How Needlework and

Books Reveal Our Aims" was read before the Virden Society by Mrs. St. John. I wish every young girl in Western Canada might read it. This paper is full of excellent suggestions. We thank the Swan River and Virden secretaries for sending these in. The subject, "Slighting as a Fine Art," read at the Miami Society, makes me curious, as it is unusual. May we have it for publication? In answer to my request, the Miami Society sent in their salad recipes, which I am sure our members will appreciate. The photos are from Miami. Number one is the picture of Mrs. Kerr, President of the Miami Society; Major Forrest, Miss Cusack and Rev. W. C. Rumball, the judges of the flower show, and Mrs. Rumball, the secretary-treasurer. In photo number two is a table showing some early vegetables and the winners of prizes.

Sometimes our printers make errors. I am often astonished to see in print a sentence conveying a different meaning from my intention. This is also true of reports. Mrs. Dayton, our H.E.S. president, requests this correction: "In the reports of the convention addresses the shorthand reporter makes me say - 'I don't believe in accomplishments.' It should read - 'Not in accomplishments alone!'" Mrs. Dayton believes in all that tends to make a refined versatile womanhood—capable of doing her part of the world's work, she adds in her note.

And, now, dear members of the H.E.S. I must tell you of a beautiful blessing that has come into our home—a dear little baby girl, born September 18th. I simply could not keep from letting you know about it because I am so happy over her arrival.—Sincerely, P. R. H.

Swan River

Dear Mrs. Hamilton—I enjoy our department very much, and am sending herewith, under separate cover, a paper we had at our meeting last Thursday, which we thought very good. We meet the third Thursday of every month, and while the attendance the last two meetings have not been so large, they have made up in enthusiasm. Have a membership of thirty-two, and have had an average attendance of sixteen. We hope to have larger meetings from now on as our busy season will soon be over.

We are going to start sewing classes for the schoolgirls, and also are going to try to procure a "Rest Room" where people coming in from the country can come to when in town. We try to have an interesting paper and some demonstrations at each meeting. We are all new at the work, but feel that if we do our best it is all anyone can do. Enjoyed meeting Mrs. McCharles and Miss Black on the train this summer. Should there be any information you would like at any time, will be most pleased to answer.—Caroline Hanchett, secretary, Swan River, Home Economics Society.

Helping the schoolgirls in this way is excellent work.—P. R. H.

Wawanesa

Mrs. Pearl Richmond Hamilton: Dear Madam—Considering the inclemency of the weather and the "rush" of the season, our H.E.S. was fairly well attended. Our society is thinking of getting up a concert to raise funds. The following questions brought forth a lively discussion:

1. Should a woman have an allowance?
2. How can we get rid of the flies?
3. How can a woman belong to several societies and do her house work?
4. Which is the better—corporal punishment or moral suasion?

Miss McKenzie gave a demonstration of making boiled almond wafers. These were afterwards eaten and pronounced delicious. Readings were given by Mrs. Smith, Mrs. Rodgers and Miss Storey. A solo, "The Children's Song," was rendered by Mrs. Batty. A light lunch was served at the close of the programme. Mabel McPhail.

May we have a discussion on these questions in our department?—P. R. H.

Miami

The Miami H.E.S. held their regular meeting on Friday, Aug. 22. After the usual opening exercises, a flower show

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was discussed. Many thought that seeing we had held a successful one last year that we ought to keep it up. It was decided to hold it on Labor Day. A committee of six was appointed to look after it. A new programme committee of Mrs. Anderson, Mrs. Blanchard and Miss Seip was appointed for the coming three months. A very interesting paper entitled "Slighting as a Fine Art" was read by Mrs. Blanchard. Miss Bowman gave us some interesting facts about the care of milk. The meeting closed with God Save the King.

Flower Show

The Miami H.E.S. held a very successful flower and vegetable show on one of the beautiful lawns in the village on Labor Day. Although the season had been very backward and flowers had a poor show for growth, a rich exhibit was displayed. Among the exhibits were sweet peas of every variety, asters, stocks, pansies, bouquets of flowers, large and small. One fancy arrangement of pansies was a bed of moss with letters H. E. S. of pansies in the centre. Some beautiful house plants were exhibited, both blooming and non-blooming. The vegetables were very good, including tomatoes, cucumbers and collections of vegetables.

Coffee and cake was served both afternoon and evening. In the evening the Miami Brass Band was in attendance, which added greatly to the show. Rev. M. C. Rumball, Major Forrest, Mrs. Rumball and Mrs. Forrest (from Morden) were the judges.

Virden

My Dear Mrs. Hamilton—According to my promise to send you our news, I should have written before, but we were disappointed both in our June and July

meetings on account of wet weather. We always hold our summer meetings out-of-doors at the invitation of our country members, and although in both cases every preparation had been made by Mrs. T. Gibbons and Mrs. E. E. Blake-man we were unable to go.

Our August meeting was held on the lawn of Mrs. Mullin in town on a beautiful afternoon. The programme consisted of an original paper by Mrs. St. John (which I am enclosing for publication if you wish) and was greatly appreciated for the beautiful and useful thoughts it contained. Mrs. Chisholm's address given at the annual convention was read by Mrs. Rawlins and was very highly thought of. Mrs. Morrison, Miss Moore and Mr. Hutchinson delighted us with their lovely songs, after which refreshments were served by Mrs. Mullins and Mrs. St. John to about sixty members, many of whom had driven in eight and ten miles.

Valley River

Our August meeting took the form of a garden party, held on Mrs. Jones' lawn, which proved to be a desirable change. The president gave an excellent address on the history of our society and the objects of the H.E.S., dwelling on the value of women's work and suggesting that we should be provided with all up-to-date inventions. She also put in a very good word for the men. There was a good attendance and several new members were admitted. We have not yet seen all our ventures crowded with success, but we think the time will still come for the fulfilment of all worthy ambitions. Much interest was taken in the books of the travelling library. Tea tables were prepared by Mrs. Kilty, Mrs. J. W. McQuay and Mrs. Weir, and looked very attractive under the trees with the pretty arrangement

of flowers and dainty china. A little music and singing added to the afternoon's pleasure.

I promised you a report of the July meeting in connection with the grain growers' picnic. This was not quite what we had hoped for in point of numbers as heavy rain kept some away, but our banner was displayed and our speaker, Mr. Henders, paid us a compliment in his very interesting address. All who attended will remember it as a record day.

Minnedosa

The August meeting of the Minnedosa Home Economics Society was held in the Rest Room. After the usual afternoon tea Mrs. Cooper (the president) opened the meeting. She mentioned the sale of home produce and cookery which had been held on August 9th in aid of the Rest Room, and which was most successful. Then she read a letter from Professor Herzer, of the Manitoba Agricultural College, on the co-operative marketing of eggs and dressed poultry. The members were interested in this and intend to get fuller information on the subject. There was some more business, and then Mrs. Cooper gave a most interesting address on "The Improvement of School Conditions." Having been for some years a school teacher, both in rural districts and in the Winnipeg schools, Mrs. Cooper was well qualified to speak on this subject. Speaking from the teachers' point of view, she divided her subject into four heads.

1. The trustees' part. This is to provide a fully qualified teacher, not too young; to see that the school is properly equipped in every detail—sanitary, well lighted and ventilated; also that some good games are provided. The playgrounds should be properly fenced and cultivated so th-

children can have good gardens and seed plots.

2. The parents' part.
It is the parents' duty to know the teacher personally; to give her sympathy and encouragement; and provide some recreation for her in rural districts. Parents should visit the school frequently and see that the children are properly cared for; that they have sanitary and beautiful surroundings, good water, separate drinking cups; and also that there is some way of providing hot soup or cocoa in the winter, to make the school lunches more appetizing and nourishing. Unless the parents take an interest in the school (this is particularly the mother's part) and see to all these details, they are very likely to be neglected. The parents can do a good deal to improve the school and its surroundings and make it an object of district pride. It is well to know the school inspector so that you can get his help in making reforms.

3. The teacher's part.
It is the teacher's duty, apart from the actual teaching, to watch over the children in school hours; to supervise their play as far as possible; to encourage the children in their studies and give them sympathy when necessary. Teachers can do a great deal in fostering patriotism and love of empire.

4. The Home Economics Societies' part.
This consists in using their influence as a society to get medical inspection of schools, proper supervision of playgrounds, and to see that suitable amusements are provided for the children.

Mrs. Cooper advised all members to study the School Act and the school curriculum. There was some discussion after this address, and we heard something of the mothers' point of view. It was agreed that there is a great need of domestic science and manual training being introduced into these schools, also that two of the trustees on each school board should be women. It is felt that women should give more attention to the many little details that are so often neglected and which are so important for the welfare of all concerned.

The meeting closed with the singing of the National Anthem.
E. M. Ewens, secy.-treas.

Swan Lake

In spite of the busy season and the many ladies in the country who expected a visit from the threshers early in the following week, the August meeting of the Swan Lake H. E. Society was very fully attended. At this meeting there were six ladies in charge of the afternoon, a fact which was accounted for by the omission of the July programme, owing to the absence of the president and many of the members.

The first item on the programme was a reading by Mrs. H. Dodd of an excerpt from Ruskin's *Sesame and Lillies*, which was listened to with the greatest attention. It is probably too well known to need any but a passing reference. Mrs. Dodd had chosen the passage which emphasised the sort of education necessary to transform the girl into 'the perfect woman,' and which spoke of the influence our private feelings have on the building up of our character, of moulding the brain as well as the body, of the way in which we can educate ourselves in both mind and habit, and of the effect which the reading of good and inspiring books can produce.

This was followed by the singing of a duet by the Misses Eva Simpson and Nita Simpson, which was much enjoyed. Mrs. Harman's choice was a poem supposed to have been written by one of the pioneers of the West, and which was both amusing and instructive. It was written in an old-fashioned style, which gave it an interesting narrative form, and told of the hardships of the early days as shared by a man and wife, and of the first quarrel between them, which unhappily was the last, also, since it resulted in the death of the wife, an unhappy ending which seemed unnecessarily severe. This reading was thoroughly enjoyed, as was also a recitation by Mrs. Clarke, entitled, "A Day Too Late," which also told a story

of sadness and death, and at the same time taught a much-needed lesson to everyone — never to postpone the performance of a kind action lest it come to late. The last item on the programme was a reading by Miss Vera Gordon of the steps which were taken to stop the spread of disease in Friend-Ship Village, which paper was of such excellent practical value that the society suggests it being read again in early spring with the view of adopting its suggestion of having a systematic weekly collection of all garbage and waste which is likely to prove a source of, and breeding place for, disease.

The secretary of the Cemetery Committee also promised to call a meeting of their members to see how much work still remained to be done in the cemetery and to report the result of her enquiries at the September meeting of the society, and the afternoon closed with the singing of the National Anthem and the serving of lunch.

September Meeting

The September meeting of the Swan Lake H. E. was held on Saturday, 27th, and was one of the most important meetings held here.

Miss Beech opened the programme by reading an interesting and well thought out paper on "Our Woods." Only a few sentences were needed to show that Miss Beech is a real lover of nature and had prepared her paper on amore. She spoke of the beautiful flowers and foliage to be found in Manitoba, and gave some recipes for utilizing the wild fruits, and the paper opened up a discussion as to the possibility of having pretty hedges round the fields, instead of the useful but inartistic barbed wire.

Miss Inez Shirley, who substituted for her mother, Mrs. W. W. Shirley, caused much amusement by a recitation on the woes of an editor whose caller began his greeting with "I've come to pay—" which so overjoyed the editor that he ordered lavish refreshment, only to find after it had been consumed that the rest of the greeting ran—

"I've called to pay my respects to the press, and to borrow a dollar from you!"

The third subject on the programme

Our Big Lists Make It Easy To Choose The Right Xmas Gifts



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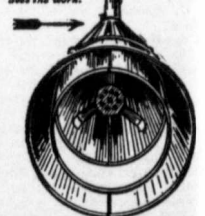
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The Rapid has been so well advertised throughout Canada, and the States, and has given such perfect satisfaction, that it is unnecessary to again explain all the wonderful things it will do. We will just mention some of the exclusive features to be found in the Rapid. It is the **only washer that has a valve**, which is absolutely necessary to create a vacuum, and properly compress the air. It is the lightest and strongest made. A child of ten can operate it. It will wash a tub of clothes perfectly in three minutes. It can be used in any tub, boiler, or pail. It will wash the finest garments without wearing or tearing them. Sent to any address on receipt of price. *If you are not satisfied we will return the full amount of your money.*

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was called "The Schoolage," and was read by Miss Rushton, and led to a long discussion and important decision. The paper dealt with the need for systematic medical inspection of our

schools, the importance of proper ventilation, light, etc., and of the value of varied and tasty lunches.

Then the president opened a discussion which had far-reaching results. It

has long been seen that more supervision is necessary than is exercised over the children just during school hours and the president pointed out how much good could be done by the parents

if they would take the matter up, and instead of each acting independently, as now, would form themselves into a group, and so deal with the social questions which so closely affect, for good or ill, the young lives growing up around us. Children must have a high standard of truth, morality and self-respect set for them and must be helped to live up to it. It was argued also that unrestrained liberty for the young people, and especially during the late evening hours, was not good either for the individual or the community, and so it was moved, seconded and carried unanimously that the Council be petitioned to pass a by-law to authorize the ringing of the Curfew Bell each night. It is hoped that all parents will help to make this law work smoothly and will impress upon their children the necessity of obeying the law promptly and willingly.

Mrs. T. W. Simpson, who substituted for Miss Docking, sang a very pretty song, which was much appreciated, coming as it did after the serious discussion which preceded it. The singing of the National Anthem, and the serving of a dainty tea, brought a very interesting afternoon to a close.

Mothers' Corner

Would you know the baby's skies?
Baby's skies are mother's eyes;
Mother's eyes and smile together
Make the baby's pleasant weather.

Mother, keep your eyes from tears,
Keep your heart from foolish fears,
Keep your lips from dull complaining,
Lest the baby thinks 'tis raining.

God thought—
A million blazing words were wrought!
God will'd—
Earth rose, while all Creation thrill'd!
God spoke—
And in the garden love awoke!
God smiled—
Lo, in the mother's arms, a child!

Dear Mothers—I have a beautiful bit of news for you this month. On the eighteenth of last month a dear little girl came to bless our home. She is just the sweetest little baby in the whole world — except all of the other babies that belong to the mothers who read the Canadian Thresherman and Farmer. Now I have two little girls. This fact makes the Mother's Corner my favorite "corner" of the Woman's Department. Of course, I like the Home Economics Department, but I believe nearly all of the H.E.S. members belong to this corner as well.

Is there any period quite so wonderful as the first week of baby's life? The mother, as she watches the muscles play about the face, learns marvelous lessons. She is a little nearer Heaven than anyone else — for watching baby innocence is Heavenly pastime. Child-life is a blessing, not a burden; it is a help, not a hindrance; an uplift, not a weight. You say—"I am weighed down with responsibility." Responsibility cheerfully acknowledged and wisely worked out brings ample blessing in its train; but responsibility made a corroding care, brings wrinkles, gray hairs and a tired heart. It is one of the mistakes of mothers to take the sweet child-life too much as an encumbrance; too little as a privilege. We should grow young under it. It is fresh, new life put into ours, and if we receive it rightly, assimilate it properly, love it dearly and use it well, it will keep us young. It is our mistake if we grow old under it. It is our sad mistake if, with this buoyant life swelling about us, we sink under it instead of rise with it. Our children should be our youth preserves, and they will be if we relate ourselves to them wisely.

One reason why many a mother finds this glad, young life a weight is that she thinks she has more to do with it, for it and about it than she really has. A sweet and lovely mother was once much puzzled by the possession of a child of rare nature. The wise remarks of the little girl, her keen insight into life, and her remarkable intuitions about people and things made the mother feel that

she has a task to perform which defied her ability.

"I do not know what to do with her," said this mother to a friend one day.

"How am I ever to bring her up?" asked the friend, who saw that in some respects, at least, the child was greater than the mother.

You know the Wise Teacher once said: "And a little child shall lead them."

But, dear readers, a feeling of sadness comes over me in my personal joy. On my desk is a pile of unanswered letters from readers of this department—from expectant mothers. These letters are requests for the little booklet, entitled, "Helps for Expectant Mothers," which we send free to our women readers. I shall attend to these requests immediately. When I think that I had all medical help needed and that in Western Canada, hundreds of wives must experience this trying time with no medical help, my heart cries out to the men and women of Canada to "Save Our Mothers." In one insane asylum alone not so far away there are twenty women who are there because they had no medical attention during confinement. Their little ones are at home hungry for the mothers' love and care. This number is in one asylum alone. What must the record be in all of Western Canada? Can this country afford to sacrifice so much motherhood? Can we afford to allow these boys and girls to grow up without mothering? It is time that we awaken to the situation and see that nurses are stationed in isolated places. I am very much interested in the letters that come to this corner. "The human family is bathed with an element of love like fine ether," and we women of the West are all sisters.

Sincerely,
Pearl Richmond Hamilton.

THOUGHTS ARE THINGS

A "Good Samaritan" came in the mail the other day and left this paper. I need not tell my readers the name of the woman who is always ready to help in time of need, for we all know her as Nellie L. McClung.

The last twenty-five years have witnessed a great change in our attitude toward disease. We no longer hold God responsible for it, but we lay the blame where it belongs, on broken laws, ignorance, unsanitary conditions, dirt. If we progress as rapidly in the next twenty-five years as we have in the past, we will be a long way on the road to right living.

One hundred years ago, and less, people broke every law of sanitation, and when plagues came, declared them to be God's will, and were resigned. Now we know it is not God's will that human beings should perish; He is not willing that any should perish. He does not plan the destruction, but the salvation of His creatures, and instead of resignation, there has come investigation.

Our thoughts have changed, and for the better. We have come to a more reasonable and happier conception of God. We no longer believe Him to be a whimsical creature, who wantonly destroys the creatures He has created. God is life, love and growth. Destruction comes from sin and ignorance.

Good thoughts are revolutionizing the world; we have come to saner and better ways of looking at so many things. Fifty years ago the idea of feminine beauty was that of a sweet clinging creature who burst into tears, or fainted, on the slightest pretext; she always looked worn and pale. The time is coming when beauty will mean health, both mental and spiritual, and when all evidences of unrest, such as worry, envy, jealousy and peevishness will be as distasteful as an eruption of smallpox is now. For thoughts are contagious as well as diseases, and are even more deadly in their operations. But it is fortunately true that good thoughts and health are contagious as well as bad thoughts and disease.

A good thought travels far, passing from one to the other, yet staying with each and blessing all it touches.

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Thoughts travel in currents just like air or water. If we could see the thought currents we would see that some people are continually sending out bitter, discouraging, enervating thoughts, while others send forth strong, buoyant and healing thoughts. The child of God, whose heart is touched with the healing of Grace, is on the thought circuit with the greatest and the best of earth, and if he will open his mind to the healing thoughts, if he will keep the windows of his soul open toward Heaven, he will be sustained from day to day.

The science of thought is but imperfectly understood, but the world moves. The truest things written about thought and its marvellous bearing on human welfare is to be found in the Bible. "As a man thinketh in his heart—so is he." This is really the key that unlocks the hidden wealth. If we understand this fully, we have found the philosopher's tone.

A GOOD MOTHER

What does it mean to be a good mother?

Many are the answers that could be given to this question, but one answer is this: A good mother is one who has the tact and wisdom to train aright her children's three-fold nature—the head, the hand and the heart, for they go hand in hand; and cause them to grow up to be useful men and women, an honor to themselves, their country, and their God. We will all agree that most parents turn the intellectual training of the child over to the teacher as soon as it reaches school age, and that most of us know all too little of what is going on inside those walls where our children spend so many bright days of youth.

The training of the mental, the moral, and the physical nature of the child, is a grave responsibility and needs the sympathy of the parents and the different teachers who have the child under their care, for it must be apparent that there is a close connection between the home and the school. The home is the real primary school and the mother is the first teacher, and where there is sympathy and co-operation between the parents and teacher, we may expect the most gratifying results.

Let us think for a moment about the training of the hand. By all means, teach the child to use his hands. It is a well-balanced theory, that every child should learn to do some work by which he could earn his own living, and there is just as much need of this training at the present time, as in the time past.

No child ever landed in a reformatory, except through misdirected energy, and we can readily see the need of this training, when we know that not one in ten of the inmates of our reformatories knows how to labor with his hands.

How can we cultivate the moral nature of the child? In the first place, by example. The parents should set the example of an upright Christian life before their children. Be perfectly honest with the child and you may be sure that the same honesty will be returned. Win the confidence of the child, and keep it, too.

There are other things that will aid the mother in the training of the moral nature of the child. There is nothing more uplifting than good music. Beautiful pictures also are an inspiration to better things, and if we cannot buy all the works of art we might wish we can enjoy the pictures nature spreads out before us if we will but use our eyes.

Another aid in this development is the use of good books. So often this point is overlooked. We supply the child with an abundance of food and clothing and are indifferent to the supply of good books and papers.

Let us not pass lightly by this question of "how to be a good mother," for it is of grave importance and needs the prayerful thought of every mother in the land, and although we may not reach perfection we feel sure that wherever a true mother is, with her unselfishness, her self-denial and her devotion to her family, her influence will be felt. She will be a help and consolation to many weary ones, and will live long after she has passed to her reward, and her chil-

dren will rise up and bless the memory of their sainted mother in her eternal home.—

RECIPES

Potato Salad

Take eight or ten boiled potatoes. Slice them. One small onion (grated). One-half cupful blanched almonds or shelled walnuts.

Dressing: Two eggs, 1 teaspoon pepper and salt, 1 teaspoon mustard, 2 teaspoons melted butter, 2 teaspoons cream, 1 cupful vinegar.

Cook until looks like cream. Have salad bowl ready. Put in layer of potatoes, a sprinkle of onion, dressing, and nuts. Continue until bowl is full. Garnish with lettuce leaves or nuts.

Orange and Banana Salad

Six oranges, 3 bananas, juice of ½ lemon, ½ cupful pineapple juice, ½ cupful sugar, white of 1 egg.

Peel and cut in small pieces four of the oranges. Slice the bananas. Mix lemon juice, sugar and beaten white of one egg with juice of two remaining oranges. Bring this to a boil. Strain and pour over the fruit. Add pineapple juice last. Serve cold.

Dressing—Two eggs, ½ cupful sugar, butter size of egg, 1 teaspoon of cornstarch, 1 teaspoon of salt, ½ teaspoon of pepper, ½ cup of water, 1 cup of vinegar. Add ½ cup of cream when cold.

Lettuce Salad

Rub inside of salad bowl with juice of half a lemon. Mash yolks of two hard-boiled eggs up with a wooden spoon until smooth. Add one tablespoonful of water and two tablespoonfuls of salad oil. Add slowly one teaspoon of salt, mustard, powdered sugar. When blended evenly add three tablespoonfuls of vinegar. Pour this over a bowl full of crisp lettuce decorated with chopped beets or whites of hard-boiled eggs.

PIE RECIPES

Pie Crust

Soften a cupful of lard, then rub it into a pint of sifted flour, add a scant teaspoonful of salt, and a scant cupful of cold water, and mix very lightly. This will make two pies. Turn out upon a well floured board one-quarter of this mixture. (Rub a little flour on the pie tins to keep the crust from sticking). Cover the pie tins with the crust patting the crust. Trim off the rough edges and mark around the edge with the tines of a fork.

Pie Crust for Dyspeptics

One cup flour (half pint), one heaping teaspoonful baking powder, one-half teaspoon salt. Sift together, and work in lightly two tablespoonfuls shortening, preferably cooking-oil, though fresh butter or melted suet may be used, not lard. Add sufficient water to make a dough as soft as can be easily handled. Fill a deep agate or earthen plate with tart sliced apples, add one-half cup sugar, one-fourth cup water, one-fourth teaspoonful cinnamon; sift on top about a tablespoonful of flour. Cover with pastry made as above, rolled thick; bake till well browned and apples are tender, and a toothsome and harmless dessert will result. Of course, a little butter on top of the filling adds to the flavor of the pie, though not to its digestibility. If an under crust is preferred, the same quantity of pastry will suffice, rolled thinner, and a smaller, shallower plate may be used.

Orange Pie

Take one cupful of sugar, the yolks of three eggs, one tablespoonful of each of butter and cornstarch, one teaspoonful boiling water, the juice and grated rind of one lemon. Mix together and bake with only an under crust. When set, cover with meringue made from the whites of eggs beaten with sugar, and brown in oven.



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THE SECRET OF LONESOME COVE
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Continued from page 66 October Issue

"Hardly probable at present. No; go on the stand when you're called, and tell the truth, and nothing but the truth."

"But not the whole truth?"

"Nothing of the necklace. You thought struck Kent that, Kent pleasantly. "Where's the body?"

"Inside. Just brought it over from Doctor Breed's. He's the medical officer, and he and the sheriff are running the show. Your friend want a lawyer, maybe?"

The thought stuck Kent that, while a lawyer might be premature, a friend in the town might be very useful.

"Yes," he said; "from to-morrow on."

"Meanin' that you're in charge to-day," surmised the big man shrewdly.

Kent smiled. "I dare say we shall get on very well together, Mr.—" his voice went up interrogatively.

"Bain, Adam Bain, attorney and counselor at law for thirty years in the town of Annalaka."

"Thank you. My name is Kent. You already knows my friend's name. What kind of man is this medical officer?"

"Breed? Not much. More of a politician than a doctor, and more of a horse trader than either. Fidgety as a sandpaper undershirt."

"Did he perform the autopsy at his own house?"

"Him and the sheriff last evening. Didn't even have an undertaker to help lay out."

The lobe of Ken's ear began to suffer from repeated handling. "The body hasn't been identified, I suppose?"

"Nobody's had so much as a wink at it but those two and Ira Dennett. He viewed the corpse last night. That's why I guess your friend needs his friends and maybe a lawyer."

"Exactly. Mr. Dennett doesn't seem to be precisely a deaf mute."

Lawyer Bain emitted the bubbling chuckle of the fat-throated. "It's quite some time since Iry won any prizes for silent thought," he stated. "You are known, hereabouts?" he added, after a pause.

"Very little."

"Gansett Jim, yonder, looks as if he kinder cherished the honor of your acquaintance."

Over his shoulder Kent caught the half-breed's glance fixed upon him with stolid intensity. A touch on his arm made him turn to the other side, where Sailor Smith faced him.

"Didn't hardly know you, with your beard off," piped the old man. "Howdy, Professor? You're finicked up like your own wedding."

"Good morning," said the scientist. "Are you going inside?"

"No hurry," said the other. "Hotter'n Tophet in there."

"I want a good seat; so I think I'll go in at once," said Kent. "Sit with us, won't you? Mr. Sedgwick is with me."

The ex-sailor started, "Him?" he exclaimed. "Here?"

Kent nodded. "Why not?"

"No reason. No reason at all," said the old seaman hastily. "It's a public proceedin'."

"But you're surprised to see him here?"

"There's been quite a lot o' talk—"

"Suspicion, you mean."

"We—ell, yes."

"People are inclined to connect Mr. Sedgwick with the death of the woman?"

"What else can you expect?" returned the old man depreciatingly. "Iry Dennett's been tellin' his story. He's certain the woman he seen talkin' to Mr. Sedgwick is the dead woman. Willin' to swear to it anywheres."

"What about Gansett Jim? Has he contributed anything to the discussion?"

"No. Jim's as close-tongued as Iry is clatter-mouthed."

"And probably with reason," muttered Kent. "Well, I'll look for you inside."

He returned to join Sedgwick. Together they entered the building, while behind them a rising hum testified to the interest felt in them by the villagers.

Within, a tall wizened man, with dead fishy eyes, stalked nervously to and fro on a platform, beside which an hastily constructed coffin with a humped cover stood on three sawhorses. On a chair near by slouched the sheriff, his face red and streaming.

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A few perspiring men and women were scattered on the benches. Outside a clock struck eleven. There was a quick inflow of the populace, and the man on the platform lifted up a chattering voice.

"Feller citizens," he said, "as medical officer I declare these proceedings opened. Meaning no disrespect to the deceased, we want to get through as spry as possible. First we will hear witness. Anybody who thinks he can throw any light on this business can have a hearing. Then those as wants may view the re-

mains. The burial will take place right afterwards, in the town buyin' ground our feller citizen and sheriff, Mr. Len Schlager, having volunteered the expenses."

"That man," said Sedgwick in Kent's ear, "is a great deal more nervous this minute than I am."

"Perhaps he has more cause to be," whispered the scientist. "Here comes the first witness."

A sheep-herder had risen in his place, and without the formality of an oath told of sighting the body at the edge of the surf at seven o'clock in the morning. Other, following, testified to the

position on the beach, the lashing of the body to the grating, the wounds, and the manacles. Doctor Breed announced briefly that the deceased had come to her death by drowning, and that the skull had been crushed in, presumably, when the waves flung the body upon the reefs.

"Then the corpse must have come from a good ways out," said Sailor Smith; "for the reefs wouldn't catch it at that tide."

"Nobody knows how the dead came to Lonesome Cove," said the sheriff in his deep voice.

There was a murmur of assent. The people felt a certain pride in the ill-omened locality.

Elder Ira Dennett was the next and last witness called. Somewhere beneath the Elder's dry exterior lurked the instinct of the drama. Stalking to the platform, he told his story with skill and fervor. He made a telling point of the newly finished picture he had seen in Sedgwick's studio, depicting the moonlit obarge of the wave-mounted corpse. He sketched out the encounter between the artist and the dead woman vividly. As he proceeded, the glances turned upon Sedgwick darkened from suspicion to enmity. Kent was almost ready to wish that he had come armed, when Dennett, with a final fling of his arm toward the artist stepped from the platform and resumed his seat, amid a surcharged silence.

Then Sedgwick rose. He was white; but his voice was under perfect control as he said, "I presume I have the right to be heard in my own defense?"

"Nobody's accused you yet," growled Schlager.

"Public opinion accuses me. That is not to be wondered at, in view of what Elder Dennett has just told you. It is all true. But I do not know the woman who accosted me. I never saw her before that evening. She spoke strangely to me, and indicated that she was to meet some one and go aboard ship, though I saw no sign of a ship."

"You couldn't see much of the ocean from your house," said the medical officer.

"I walked on the cliffs later," said Sedgwick, and a murmur went through the court room; "but I never found the woman. And as for throwing her out of a ship, or any such fantastic nonsense, I can prove that I was back in my house by a little after nine o'clock that night."

He sat down, coolly enough; but his eyes dilated when Kent whispered to him:

"Keep your nerve. The probability will be shown that she was killed before ten o'clock."

Now, however, Doctor Breed was on his feet again. "Form in

line, ladies and gentlemen," said he, "and pass the coffin as spry as possible."

At this, Sheriff Schlager stepped forward and loosened the hasps, preparatory to removing the cover. "The body has been left," said he, slipping the lid aside, "just as—" Of a sudden, his eyes stiffened. A convulsive shudder ran through his big body. He jammed the cover back, and, with fingers that actually drummed on the wood, forced the hasps into place.

"She's come to life!" cried a voice from the rear.

"No, no!" rumbled the sheriff. Whirling upon the medical officer, he whispered in his ear; not more than a single word, it seemed to the watchful Kent.

The doctor turned hastily. "Gents," he said in a quavering voice to the amazed crowd, "the program will not be carried out as arranged. The— the— well, the condition of the deceased is not fitten—" He stopped, mopping his brow.

But Yankee curiosity was not so easily to be balked of its food. It found expression in Lawyer Adam Bain.

"That ain't the law, Doc," he said.

"I'm the law here," declared Sheriff Schlager, planting himself solidly between the crowd and the coffin. One hand crept slowly back towards his hip.

"Don't pull any gun on me," retorted the lawyer quietly. "It ain't necessary."

"You heard Doc Breed say the body wasn't fitten to be viewed," pursued the sheriff.

"That's all right, too. But the doc hasn't got the final word. The law has."

A quick murmur of assent passed through the room.

"And the law says," continued Bain, "that the body shall be duly viewed. Otherwise, and the deceased being duly buried without view, an order of the court to ex-hume may be obtained."

"Look at Breed," whispered Kent to Sedgwick.

The medical officer's lips were gray, as he leaned forward to pluck at the sheriff's arm. There was a whispered colloquy between them. Then Breed spoke, with a pitiful effort at self-control:

"Lawyer Bain's point is correct; undoubtedly correct. But the body must be prepared. It ought to 'a' been looked to last night. But somehow I—we— Will six citizens kindly volunteer to fetch the coffin back to my house?"

Ten times six offered their services. The box was carried out swiftly, followed by the variable hum of excited conjecture. Quickly the room emptied itself, except for a few stragglers.

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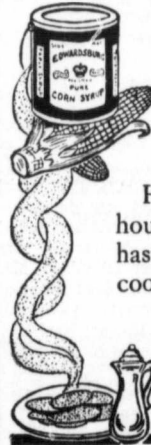
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CHAPTER V.

One Use for a Monocle.

Sedgwick, who had followed the impromptu cortege with his vision, was brought up sharply by the glare of a pair of eyes outside the nearest window. The eyes were fixed on his own. Their expression was distinctly malevolent. Without looking round, Sedgwick said in a low voice:

"Kent!"

No answer came.

"Kent!" said the artist a little louder.

"Huh?" responded a muffled and abstracted voice behind him. "See here for a moment."

There was neither sound nor movement from the scientist.

"An Indian-looking chap outside the window is trying to hypnotize me, or something of that sort."

This information, deemed by its giver to be of no small interest, elicited not the faintest response. Somewhat piqued, the artist turned, to behold his friend stretched on a bench, with face to the ceiling, eyes closed, and heels on the raised end. His lips moved faintly. Alarmed less the heat had been too much for him, Sedgwick bent over the upturned face. From the moving lips issued a musical breath which began its career softly as Raff's Cavatina and came to an inglorious end in the strains of Honey Boy. Sedgwick shook the whistler insistently.

"Eh? What?" cried Kent, wrenching his shoulder free. "Go away! Can't you see I'm busy?"

"I'll give you something to think about. Look at this face of a cigar-store Indian at the window. No! It's gone!"

"Gansett Jim, probably," opined Kent. "Just where his interest in this case comes in, I haven't yet found out. He favored me with his regard outside. And he had some dealings with the sheriff on the beach. But I don't want to talk about him now, nor about anything else."

Acting on this hint, Sedgwick let his companion severely alone, until a bustle from without warned him that the crowd was returning. Being aroused, Kent accosted one of the villagers who had just entered.

"Body coming back?" he asked.

"Yep. On its way now."

"What occurred in the house where they took it?"

"Search me! Everybody was out for twenty minutes."

At this moment the sheriff entered the hall, followed by Doctor Breed, who escorted the coffin to his supporting sawhorses. The meager physician was visibly at the fag end of his self-control.



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Gentlemen—Please send me your new Edison Catalog and full particulars of your free trial offer on the new model Edison Phonograph.

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

Even the burly sheriff looked like a sick man, as he lifted aside the coffin lid and spoke.

"There was reasons, neighbors," said he "why the corpse wasn't suitable to be looked at. Nobody had seen it since last night. We've fixed it up as good as we could, and you'll now please pass by as quick as possible."

In the line that formed Kent got a place behind Elder Dennett, who had decided to take another look for good measure, as he said.

The look was a productive one. No sooner had it fallen on the face of the dead than Dennett jabbed an indicatory finger in that direction and addressed the sheriff:

"Hey, Len! What's this?"

"What's what?" growled Schlager.

"Why, there's a cut on the lady's right cheek. It wasn't there when I seen the corpse last night."

"Ah, what's the matter with

your eyes?" demanded the sheriff savagely. "You want to hog the limelight, that's your trouble!"

This was evidently a shrewd lash at a recognized weakness, and the Elder moved on amid jeering comments. But Sedgwick, whose eyes had been fixed upon Kent, saw a curious expression flicker and fade across the long-jawed face. It was exactly the expression of a dog that pricks up its ears. The next moment a titter ran through the

crowd as a bumpkin in a rear seat called out:

"The dude's eyes ain't mates!"

Chester Kent, already conspicuous in his spotless white flannels, had made himself doubly so by drawing out a monocle and deftly fixing it in his right eye. He leaned over the body to look into the face, and his head jerked back the merest trifle. Bending lower, he scrutinized the unmanacled right wrist. When he passed on his lips were pursed in the manner of one who whistles noiselessly.

He resumed his seat beside Sedgwick. His eyes grew dull and melancholy. One would have thought him sunk in adaze, or a doze, while the procession file past the unknown dead. His monocle, which had dropped from his eye as he turned from the coffin, dangled against his hand. Chancing to look down at it, Sedgwick started and stared. Kent's knockle, as seen through the glass, stood forth, monstrous and distorted, every line of the bronzed skin showing like a furrow.

The monocle was a powerful magnifying lens.

The sheriff's heavy voice rose. "Any one here present recognize or identify the deceased?" he droned, and, without waiting for a reply, set the lid in place and signaled to the medical officer.

"Feller citizens," began the still shaking physician, "we don't need any jury to find that this unknown drowned woman—"

"The deceased was not drowned." Emerging from his reverie, Chester Kent had leisurely risen in his place and made his statement.

"N-n-not drowned!" gasped the medical man.

"Certainly not! As you must know, if you made an autopsy."

"No autopsy was necessary," replied the other quickly.

"There's plenty of testimony without that. We've heard the witnesses that saw the drowned body on the grating it washed ashore on."

"The body never washed ashore on that grating."

A murmur ran through the crowd. "How do you figure that?" called a voice.

"On the under side of the grating I found a cocoon of a common moth. Half an hour in the water would have soaked the cocoon through and killed the insect inhabitant. The insect was alive."

"How'd the grating get there, then?"

"Dragged from the high-water mark on the beach. It was an old half-rotted affair such as no ship would carry. Ask Sailor Smith."

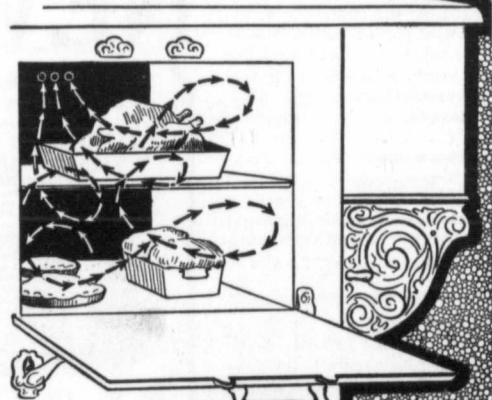
"That's true," said the old seaman with conviction.

McClary's Sask-alta Range

Sask-alta Ranges are sold everywhere by good dealers who back up our guarantee on this splendid range. **McClary's**

Juicy roasts retain their natural flavor—puddings, bread and cakes are always light and sweet when cooked or baked in the Sask-alta steel range. The reason is that a scientific system of oven ventilation has been perfected. You should know all about this and numerous other exclusive features before selecting your range.

722



LONDON TORONTO MONTREAL WINNIPEG
VANCOUVER ST. JOHN HAMILTON,
CALGARY SASKATOON EDMONTON

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

"You're an expert, Mr. Smith. Now, was that grating large enough to float a full grown human body?"

"Why, as to that, a body ain't but a mite heavier than the water. I should say it'd just barely float it, maybe."

"Exactly; but plus several pounds of clothing, and some dead metal extra?"

"No."

"The clothes would have been soaked, and handcuffs weigh something," said Kent calmly.

"There might have been extra spurs under the grating, that got pounded loose on the beach and washed away," propounded the medical officer desperately.

"Look at the face," said Kent with finality. "This is a bad coast. Most of you have seen

drowned bodies. Did any one ever see an expression of such terror and agony on the face of one who came to death by drowning?"

"No, by thunder!" shouted somebody. "He's right."

Others took up the cry. Clamor rose and spread in the room. The sheriff silenced it with a stentorian voice. "What are you trying to get at?" he demanded, facing Kent.

"The truth. What are you?"

Schlager's eyelids flickered; but he ignored the counter-stroke. "Look out it don't lead you where you won't want to follow," he returned, with a significant look at Sedgwick.

"This is as far as it has led me," said Kent, in his clear even voice. "The body, already dead, was

dragged down and soaked in the sea, and then lashed to the grating by a man who probably is or has been a sailor."

"Then the deceased met death on shore, and presumably by violence," said Lawyer Bain.

"It's murder!" cried a woman shrilly. "Bloody murder! That's what it is!"

"Murder!" echoed a voice from the doorway. Gansett Jim, his half-Indian, half-negro face alight with fury, stood there pointing with stiffened hand at Sedgwick. "Dah de murderer!"

CHAPTER VI.

The Retreat in Order.

No one moved in the court room for appreciable seconds after that pronouncement. As a



MOST PERFECT MADE

THE INCREASED NUTRITIOUS VALUE OF BREAD MADE IN THE HOME WITH ROYAL YEAST CAKES SHOULD BE SUFFICIENT INCENTIVE TO THE CAREFUL HOUSEWIFE TO GIVE THIS IMPORTANT FOOD ITEM THE ATTENTION TO WHICH IT IS JUSTLY ENTITLED.

HOME BREAD BAKING REDUCES THE HIGH COST OF LIVING BY LESSENING THE AMOUNT OF EXPENSIVE MEATS REQUIRED TO SUPPLY THE NECESSARY NOURISHMENT TO THE BODY.

E. W. GILLETT CO. LTD.
TORONTO, ONT.
WINNIPEG MONTREAL

Mention this magazine when writing advertisers

BEAUTIFUL PLATINETTE FREE PENDANT



Platinette Pendants are the latest novelty in jewelry, and are all the rage. YOU can get one set with twenty-four genuine sparkling rhinestones, ABSOLUTELY FREE. It will cost you nothing but a little spare time.

Simply sell 36 packages of beautiful, assorted Post Cards at 10c. per package (6 in a package) which we will send you post paid.

When you have sold the cards, remit us our \$3.60 and we will send your Pendant by return mail.

A free present coupon is given with each package, which will help you sell them on sight.

Don't delay. Order now and have this Pendant before the other girls in your neighborhood see this advertisement. Address

COLONIAL ART CO. 2288 M 1 TORONTO, ONT.

Mention this magazine when writing advertisers

"GOES LIKE SIXTY" TRACTOR

With All Latest Improvements
The economical, practical tractor for modern farming. Light in weight, strong and powerful, easy to operate. The real one-man tractor for field or farm work.

Special Heavy Duty Tractor Motor
Long stroke type. Large crank shaft, connecting rods and bearings. One-piece cam shaft. The Gilson is the pioneer light-weight tractor and no equipment. Will do any kind of farm work more cheaply than horses.



Mention this magazine when writing advertisers

flash-light photograph fixes an assemblage poised, with eyes staring in one direction, thus the half-breed's words had cast a spell of immobility over all. It was a stillness fraught with danger. No man could say in what violent form it might break.

First to recover from the surprise was the sheriff. "You, Jim, set down!" he shouted. "If there's to be any accusin' done here, I'll do it."

"I do it," persisted the half-breed. "Blood is on his han'. I see it."

Involuntarily Sedgwick looked at his right hand. There was a low growl from the crowd.

"Steady!" came Kent's voice at his elbow. "Mistakes like that are Judge Lynch's evidence."

"Whah was he the night of the killin'?" cried Gansett Jim. "Ast him. Whah was he?"

"Where was you, if it comes to that?" retorted the sheriff, and bit his lip with a scowl.

At that betrayal Chester Kent's eyelids flashed up, and instantly drooped again into somberness.

"This hearing is adjourned," twittered the medical officer. "Burial of the unknown will take place at once. All are invited."

"Invitation respectfully declined," murmured Sedgwick to Kent. "I don't know that I'm exactly frightened; but I think I'd breathe easier in the open country."

"Well, I'm exactly frightened," replied Kent in the same tone. "I want to run—which would probably be the end of us. Curious things about those handcuffs, isn't it?" he went on in a louder and easily conversational voice.

During their slow progress to the door he kept up a running comment, which Sedgwick supported with equal coolness. The crowd, darkling and undecided, pressed around them. As they went through the doorway, they were jostled by a sudden pressure, following which Kent felt a touch on his shoulder. He turned to face the sheriff.

"Better get out of town quick," advised Schlager in a half whisper.

"Thank you," said Kent in a clear and cheerful voice. "Where can I get some tobacco?"

"Sterrett's grocery keeps the best," said some informant back of him. "End of the Square to the right."

"Much obliged," said Kent, and strolled leisurely to his car, followed by Sedgwick. As they took their seats and started slowly through the crowd, Sedgwick inquired earnestly:

"Do you crave tobacco at this particular moment worse than you do the peace and loneliness of the green fields?"

"Policy, my young friend," re-

EASTERN EXCURSIONS

VIA THE

Canadian Pacific Railway

**December 1st to 31st
Return Limit, 3 Months**

Extension of Return Limit on payment of \$5 for each 15 days

Stopovers East of Fort William

4 EXPRESS TRAINS DAILY

"Imperial Limited," "Eastern Express," to MONTREAL
"Queen City Express," "Toronto Express," to TORONTO

Return Fares from and to a few of the principal points:

FROM	TO	Toronto Hamilton Sarnia Windsor	Montreal Ottawa Belleville Kingston	St. John N.B. Moncton	HALIFAX
Brandon		\$44.00	\$49.00	\$63.30	\$67.45
Calgary		61.00	66.00	80.30	84.45
Edmonton		61.00	66.00	80.30	84.45
Fort William		40.00	45.00	59.30	63.45
Lethbridge		62.90	67.90	82.20	86.35
Medicine Hat		59.80	64.80	79.10	83.25
Moose Jaw		52.00	57.00	71.30	75.45
Port Arthur		40.00	45.00	59.30	63.45
Regina		50.65	55.65	69.95	74.10
Saskatoon		52.00	57.00	71.30	75.45
Swift Current		55.30	60.30	74.60	78.75
Weyburn		49.45	54.45	68.75	72.90
Winnipeg		40.00	45.00	59.30	63.45
Yorkton		48.35	53.35	67.65	71.80

Through Standard and Tourist Sleeping Cars and Dining Cars to Toronto and Montreal

Corresponding excursion fares from all stations, Port Arthur to Calgary and Midway, B.C. to all stations east of Port Arthur in

Ontario, Quebec and the Maritime Provinces

For booklet of information and full particulars as to fares train service, tickets and sleeping car reservations apply to nearest Canadian Pacific Railway ticket agent, or write to

A. C. Shaw, Gen. Pass. Agent, Winnipeg. J. A. MacDonald, Dis. Pass. Agent, Brandon. J. E. Proctor, Dis. Pass. Agent, Regina. R. Dawson, Dis. Pass. Agent, Calgary.

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

\$2 worth for 1\$

The 2 in 1 Automatic Awl is a combination of the two best known dollar tools in the world, the Awl using a waxed thread and the Awl using a copper wire. This illustration shows the inside workings of the 2 in 1 Automatic Awl. There are several dozen different kinds of Automatic Awls on the market, but this is absolutely the only Awl in the world that will sew with both waxed thread and copper wire. Did you ever try sewing with copper wire? If you haven't, get a 2 in 1 and try it—you will be delighted. Some of the other improvements to be found only in the 2 in 1 are: special hollow grooved needles to prevent the thread from cutting, patented needle for solving boot, diamond pointed needles, and everything packed inside the handle, so that it will slip in your pocket like a knife. We will send the 2 in 1 Automatic Awl complete, with three extra needles, including the patented needle for solving boots, a large reel of best waxed thread and a skin of our special process copper wire. We will send the whole outfit complete, by mail, charges paid, to any address for \$1.00.

FISHER-FORD MANUFACTURING CO.
Dept. W95 31 Queen St. West, Toronto, Ont.
AGENTS WANTED

Mention this magazine when writing advertisers

JUST RIGHT FOR WINTER

Thousands of people are now cosily shod for the worst weather in

LUMBERSOLE BOOTS

You should join them today.

ALL SIZES

For Men, Women, Youths and Girls

ALL ONE PRICE

Lined throughout with thick felt. Ask for them at your store.

If you can't get them, write us.



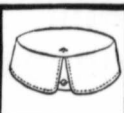
The **Scottish Wholesale Specialty Co.**
263 TALBOT AVENUE, WINNIPEG
or from our retail store
306 Notre Dame Avenue
(2 minutes from Eaton's)

Mention this magazine when writing advertisers

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Ambitious young men for good positions in Canadian Railway service. The completion of two national transcontinental lines next year creates immense demand for telegraphers, station agents, freight and ticket clerks. Railways must begin to supply by training men now. If you wish to secure a good position with full pay at the start, assuring rapid advancement, write immediately, Dominion School Hauling, Dept., Toronto, Ont.

Mention this magazine when writing advertisers.



CHALLENGE COLLARS

Acknowledged to be the finest creation of Waterproof Collars ever made. Ask to see, and buy no other. All stores or direct for 25c.

THE ARLINGTON CO.
of Canada, Ltd.
88 FRASER AVENUE
TORONTO

All "ARLINGTON COLLARS" are good, but our **CHALLENGE BRAND** is the best. Mention this magazine when writing advertisers.

torted Kent. "I wish I could think up a dozen more errands to do. The more casually we get out of town, the less likely we are to be followed by a flight of rocks. I don't want a perfectly good runabout spoiled by a mob."

Both of them went into Sterrett's store, where Kent earned the reputation from Sterrett of being "awful dang choosy about what he gets," and came out into a considerable part of the populace which had followed. As they reembarked, the sheriff put his foot on the running-board.

"Better take my tip," he said significantly.

"Very well," returned Kent. "There will be no arrest, then?"

"Not just now." A peculiar smile slid sidewise off a corner of the scientist's long jaw. "Nor at any other time," he concluded.

He threw in the clutch, leaving Schlager with his hand in his hair, and the crowd, which might so easily have become a mob, to disperse, slowly and hesitantly, having lacked the incentive of suggested flight on the part of the suspects to be spark to its powder. When the car had won the open road beyond the village Sedgwick remarked:

"Queer line the sheriff is taking."

"Poor Schlager!" said Kent, chuckling. "No other line is open to him. He's in a tight place. But it isn't the sheriff that's worrying me."

"Who, then?"

"Gansett Jim"

"What did the sheriff mean by asking Gansett Jim where he was the night of the murder?"

"Murder?" said Kent quizzically. "What murder?"

"The murder of the unknown woman, of course."

"Oh, well, the death of the unknown woman, than."

"I don't know that there was any unknown woman."

"Quit it! From what you do know, what do you think the sheriff meant?"

"What do you think?"

"I think that Gansett Jim killed her and is trying to turn suspicion on me."

"Humph!"

"But if the sheriff knows where Gansett Jim was at the time of the killing, he can't suppose me guilty. I wonder if he really does believe me guilty?"

"If he does, he doesn't care. His concern is quite apart from your guilt."

"It's too much for me," confessed the artist.

"And for me. That is why I am going back to the village."

"But I thought you were frightened."

"If I stayed away from every-

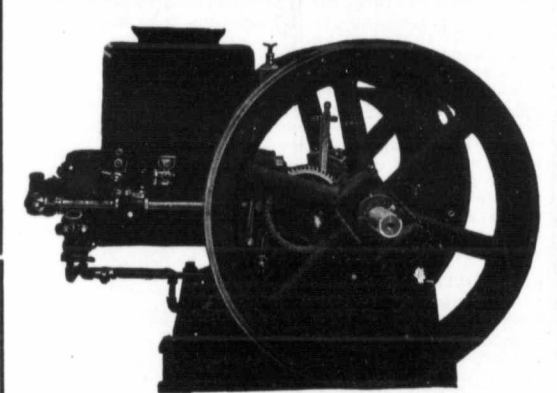


Black Knight Stove Polish

MAKES HOME BRIGHTER AND LABOR LIGHTER
A PASTE | THE F.F. DALLEY CO. | NO DUST
NO WASTE | HAMILTON, CANADA | NO RUST

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

THE STOVER
Is the Very Best Engine to Buy



Write for our Extraordinary Prices of
Dry Cells, Crusher Plates, Harness, Oils, Plow Shares, Bag Holders, Scales, Buggies, Cultivators, Plows, Harrows, Thrashers, Belting, Grain Crushers, Pole Saws Etc., Etc.
NOTE: OUR PRICE for 12-inch plow shares is \$2.26, for 14-inch plow shares is \$2.50, for 16-inch plow shares is \$2.75. All Guaranteed.
We Can Save You Money

Canadian Stover Gasoline Engine Co., Ltd.
EIGHTH and PACIFIC AVENUE, BRANDON
The Original Farmers' Company

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

THIS BIG 4 HP. ENGINE IS YOURS FOR
\$15 DOWN AND BALANCE IN EASY PAYMENTS
IT IS EASY TO BUY the Gilson "GOES LIKE SIXTY" Engines "60-SPEED" and "100-SERVICE," on the above plan. The Gilson has over 40,000 satisfied users. It is simple in design, staunch in construction, unflinchingly reliable, and will make you a special, big money-saving proposition. Now is your chance to get this famous Gilson Engine at a remarkably low price. A positive guarantee with every engine. You can try it and test it out yourself. Can anything be fairer? This Engine is made in Canada; therefore, you save the duty. Ask your banker about our reliability. Write for free catalogue, and let us know what work you have for an engine to do.
ALL SIZES FROM 1 HP. TO 40 HP. AGENTS WANTED
GILSON M'FG CO., LIMITED 915 YORK ST., GUELPH, ONT., CANADA

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

Patronize Those Who Patronize This Magazine

Making High-Priced Pork while Grinding their own Feed.



AGENTS WANTED
in Every Town and District

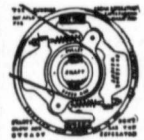
Shipments made from Galt, Ont. and Winnipeg, Man.

Address to Head Office

Canadian Hog Motor Co. Ltd.

372 Portage Ave. Winnipeg, Man.

Mention this magazine when writing advertisers.



Dealers Increase Your Sales!

Take a Look at the **Stite Governor Pulley** It's the original and the only thing for driving cream separators with gasoline engines. Once you've always used, TRY ONE. More to use than all others combined. Costs no more than imitation. Also, ask about our friction clutch pulleys.

STITE GOVERNOR PULLEY CO., 310 S. 3RD ST., MINNEAPOLIS

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Learn the Auto and Gas Tractor

repairing; our students are receiving from \$3 to \$8 per day. We have an employment system that enables us to place students after graduation. This institute is the newest and most up-to-date practical school in Canada. We teach driving on the streets with different makes of autos; also teach bricklaying, plumbing, etc.

OMAR SCHOOL OF TRADES AND ARTS,
483 Main Street, WINNIPEG.

Mention this magazine when writing advertisers.

Books \$1.00 Each

- Physical Life of Woman - - - Napheys
- Home Cook Book - - Ladies of Toronto
- Transmission of Life - - - - - Napheys
- Advice to Wife and Mother - - Chevasse
- Chase's Recipes - - - - - Dr. A. W. Chase
- Family Physician - - - - - Leading Doctors
- Gleason's Horse Book - - - - - Gleason

AGENTS WANTED

The Hunter-Rose Co. Ltd.

15 Sheppard St., Toronto, Ont.

Mention this magazine when writing advertisers.



THE Double Track Route

Detroit, London, Hamilton, Toronto, Montreal and New York via Niagara Falls

Smooth road-bed, polite employees, unexcelled dining-car service, and latest standard equipment

AGENTS, COOK'S TOURS AND ALL STEAMSHIP LINES

Rates, reservations and all particulars at Ticket Office

Phone Main 7098 WINNIPEG 260 Portage

Mention this magazine when writing advertisers.

Erickson Leg

Does not chafe, overheat or draw and of stamp. Sold on easy terms. E. B. Erickson Artificial Limb Co., 24 Wash Av. N., Minneapolis, Minn.

Mention this magazine when writing advertisers.

thing that alarms me," said Kent, "I'd never have a tooth filled or speak to a woman under seventy. I'm a timid soul, Sedgwick; but I don't think I shall be in any danger in Annalaka so long as I'm alone. Here we are. Out with you! I'll be back by evening."

CHAPTER VII.

Simon P. Groot Does Business.

To his surprise, Kent, turning into the village Square, found the crowd still lingering. A new focus of interest had drawn it to a spot opposite Sterrett's store, where a wagon, decorated in the most advanced style of circus art, shone brilliant in yellow and green. Bright red letters across the front presented to public admiration the legend:

Simon P. Groot
Simon Pure Goods

A stout projection rested on one of the rear wheels. Here stood the proprietor of the vehicle, while behind him in a window were displayed his wares. It was evident that Simon P. Groot followed the romantic career of an itinerant hawk, dealing in that wide range of commodities roughly comprised in the quaint term, "Yankee notions." Before the merchandizing voice came to the new arrival's ears as anything more than a confused jumble, Kent was struck with the expansive splendor of the man's gestures, the dignity of his robust figure, and the beauty of a broad whitening beard that spread sidewise like the ripples from a boat's stem. Two blemishes unhappily marred the majesty of Simon P. Groot's presence; a pair of pin-head eyes, mutually attracted to each other, and a mean and stringent little voice. Freed of these drawbacks his oratory might well, one could not but feel, have rolled in any of our legislative chambers more superbly and just as ineffectually as much of the other oratory therein practised. That the Annalakans were truly spellbound by it was obvious. Indeed, Kent was at a loss to understand the depth of their absorption until he had come within the scope of the high-piping words.

"There, gentlemen and ladies," Simon P. Groot was saying, "there in that place of vast silences and in-folding shadows I met and addressed one who was said to be no more. 'Madam,' I said, 'you are worn. You are wan. You are weary. Trust the civility of one who might be your father. Rest and be comforted as with balm.' Standing by the roadside, she drooped like a flower. 'There is no rest for me,' said she in mournful tones. 'I must away upon my mission.' 'Stay! I bade her. 'Ere you go, but touch your lips to this revivi-

WINCHESTER

Hunting Rifles

The Choice Of All Sportsmen Of Experience.

The name "Winchester" on a rifle is a guarantee of its accurate and strong shooting qualities, entire reliability of action and superior finish. Winchester rifles represent in accuracy, reliability and quality the highest development in gun making. No matter what you hunt there is a Winchester made suitable for your purpose. Whichever model you select, you will find that it will stand the rough, hard usage that hunting rifles often receive. Winchester rifles are mechanically correct in design, are made of selected and tested materials under skillful supervision. Every rifle is thoroughly tested in every way before it leaves the works. Nothing is omitted in their manufacture that will make Winchester rifles shoot well, wear well and look well.

Winchester Guns and Ammunition—The W Brand—Are Made for Each Other and Sold Everywhere.



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

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE

10 Days FREE—Send No Money



We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied. We want you to prove for yourself that it gives five to fifteen times as much light as the ordinary oil lamp, beats electric, gasoline or acetylene. Lights and is put out just like the old oil lamp.

BURNS 7 HOURS ON 1 GALLON OIL

Gives a powerful white light, burns common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Guaranteed.

\$1000.00 Reward

will be given to the person who shows us an oil lamp equal to this Aladdin in every way (details of offer given in our circular). Would you dare make such a challenge to the world if there was the slightest doubt as to the merits of the Aladdin? We want one person in each locality to whom we can refer customers. Write quick for our 10 Day Absolutely Free Trial Proposition. Agents' Wholesale Prices, and learn how to get ONE FREE.

MANTLE LAMP CO., 276 Madison Bldg., Montreal & Winnipeg

AGENTS WANTED

to demonstrate in territory where oil lamps are in use. Experience unnecessary. Make a good average five sales a day and make \$500.00 per month. One farmer cleared over \$800.00 in 6 weeks. You can make money evenings and spare time. Write quick for territory and samples.

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



TO FUR SHIPPERS FREE

The most accurate, reliable and only Market Report and Price List of its kind published

"The Shubert Shipper"

Mailed Absolutely Free to Fur Shippers—Send "Shubert" your name—a postal today

You want this valuable publication—it is worth hundreds of dollars to you, issued at every change of the Fur Market, giving you an accurate and reliable report of what is doing in all the Markets of the World in American Raw Furs.

Write for it now—it's free
A. B. SHUBERT, Inc., DEPT. 633 CHICAGO, U. S. A.

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

Well Drilling Machines

Over 700 sizes and styles for drilling either deep or shallow wells in any kind of soil on wheels or on glaces or horse powers. Strong, simple, durable. Any mechanic can operate them. Send for catalog.

WILLIAMS BROS., ITHACA, N. Y.

Mention this magazine when writing advertisers

Imperial Bank

OF CANADA
Established 1878

Capital Authorized..... \$10,000,000
Capital Paid Up..... 8,825,000
Reserve and Undivided Profits..... 8,100,000
Total Assets..... 72,000,000

BRANCHES IN WESTERN CANADA

Province of Manitoba
Brandon Portage la Prairie Winnipeg

Province of Saskatchewan
Broadview North Battleford
Regina Fort Qu'Appelle Prince Albert
Saskatoon Moose Jaw Regina
Witkie Hague Wynyard

Province of Alberta
Athabasca Landing Edmonton Strathcona
Banff Lethbridge Wetaskiwin
Calgary Red Deer Redcliff
Rocky Mountain Hts. Medicine Hat Millet

SAVINGS DEPARTMENTS AT ALL BRANCHES

Interest allowed at Current Rates
Drafts and Letters of Credit issued available in all parts of the world.

Winnipeg Branch
N. G. LESLIE, Manager.

Mention this magazine when writing advertisers.

ying flagon. De Lorimer's Life Giving Tonic, free from intoxicants, poison and deception, a boon to the blood, a balm to the nerves, a prop to the flagging spirit.' She looked, she tasted, she drank. New color sprang to her cheeks. Her form pulsed with joyous vigor. 'Aged sir,' said she, 'I know not your name; but if the blessings of a hurried spirit are of avail, your sleep will sweet this night.' Of this wonderful balm, ladies and gentlemen of Annalaka, I have still a few bottles left at the low price of half a dollar each. Sickness flies before it. Amalgamating at once with the blood, it clears the precious life fluid of all impurities, and rehabilitates man, woman and child, body, soul and mind."

The shrill voice rose and fell, the wide beard quivered with the passion of salesmanship, the gaudy bottles on the shelf were replaced by half-dollars, until the market flagged. Whereupon the orator again took up his tale.

"Ever shall I give thanks for the inestimable privilege, the privilege of having given cheer to one on the brink of a dreadful doom. She vanished, that fair creature, into the forest. I looked at my watch—the unerring, warranted, sixteen-jeweled chronometer which I shall presently have the honor of showing to you at the unexampled price of three seventy—and saw that the hour was exactly—for these timepieces vary not one fraction of a second in a day—eight-forty-five. When next I looked at the face of Father Time's trustiest accountant, it was to mark the hour of the horrid shriek that shook my soul; precisely nine-thirty-one. And later, when I heard the dread news, I realized that my ears had thrilled to a death cry."

He looked about him with a face of controlled emotion. His voice dropped to a throaty and mesmeric gurgle.

"How frail," he continued: "How frail and uncertain is the life of mankind! Who of these happy faces before me may not to-morrow be bathed in tears for the loss of some loved one? Best be prepared against the time of sorrow. I show you here a unique collection of framed mottoes, suitable alike for the walls of the humblest home or the grandest palace. Within these tasty frames are enshrined comforting mortuary verses, delicately ornamented by the hands of our leading artists, such poetry as distils assuagement upon the wounded heart; and these priceless objects of art and agents of mercy I am distributing at the nominal charge of one dollar each."

(To Be Continued)

UNION BANK OF CANADA

Established 1865



Head Office Winnipeg

Paid-up Capital..... \$5,000,000
Reserve and Undivided Profits 3,378,000
Total Assets, over..... 70,000,000

Hon. President - WM. PRICE

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London, England, Branch No. 51 Threadneedle Street, E.C.

This Bank, having over 300 branches in Canada, extending from the Atlantic to the Pacific Coast, offers excellent facilities for the transaction of every description of banking business. It has correspondents in all cities of importance throughout Canada, the United States, the Continent of Europe, and the British Colonies. Collections made in all parts of the Dominion, and returns promptly remitted at lowest rates of exchange.

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Grain Drafts Negotiated. Interest Allowed on Deposits.

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Alberta—Aldrie, Alix, Barons, Barbow, Bassano, Bellevue, Blainville, Blairmore, Bowden, Bow Island, Brooks, Calgary, Carbon, Cardston, Carlstadt, Carstairs, Clearwater, Cochrane, Consort, Cowley, Didsbury, Edmonton, Fort Saskatchewan, Grande Prairie, Grassy Lake, High River, Hillcrest, Innisfail, Irvine, Lebouche, Langdon, Leithbridge, Maplewood, Medicine Hat, Okotoks, Pasburg, Pincher Creek, Seven Persons, Strathmore, Sealwell, Three Hills, Wainwright.

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F. J. BOULTON, Manager Portage Ave. Branch, corner Gary (adjoining Post Office)

The Pump That Pumps

Double-acting, Lift, Tank and Spray PUMPS

Stays on Flexible Door Hangers

Mention this magazine when writing advertisers

THE ORIGINAL PECH Boring Machine

THE OLD RELIABLE

Improved Up-to-date Drilling Machines

CHEROKEE MFG. CO., Dept. A. Cherokee, Iowa.

Mention this magazine when writing advertisers

WELL DRILLING

GUS PECH FOUNDRY AND MANUFACTURING COMPANY

Manufacturers of the Celebrated MONITOR WELL AUGERS AND DRILLS

Write for prices and Illustrated Catalogue.

127 MARSH, IOWA U.S.A.
Branch House: REGINA, CAN.

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CAEW

"BAT"

PLUG TOBACCO

THE ROCK CITY TOBACCO CO. LIMITED - QUEBEC.

Secure Today's Market Price

For Your RAW FURS

Every day Fur prices are liable to advance. Our daily pricing system ensures you highest market value for every shipment. Satisfied customers have dealt with us year after year. Let us prove to you why we are able to hold their trade. Send us a trial shipment. We pay all expenses, and give you our expert advice free. If desired, your furs will be held apart until you approve our offer. Write today for Price List R and shipping tags, free.

To Get Market Value

Established 1890. References: Imperial Bank and any Commercial Agency.

Pierce Fur Co., Ltd.

Cor. King and Alexander, WINNIPEG, CANADA

FULL VALUE FOR YOUR FURS

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



SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS.

Any person who is the sole head of a family or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre. Duties—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price \$5.00 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. GOEY,
Deputy of the Minister of the Interior
N.B.—Unauthorized publication of this advertisement will not be paid for.
Mention this magazine when writing advertisers

Enough to Make a Cat Laugh



A Reply Unkind

Pat and Mike, who were neighbors in the "Ould Country," happened to "retire" from public gaze about the same time. Pat had stolen a watch from a blind man; while Mike mistook a friend's cow for his own and sold it.

As luck would have it, they were drafted to the same prison, and at church parade on the first Sunday they had a chance for a moment's forbidden conversation. Said Mike:

"Top av the mornin' to you, Pat, an' pwhat might the toime be? Sure, an' 'tis you that knows all about watches!"

But Pat was not to be done. "Mike, me lad," he replied, "begorra, an' 'tis just about milkin' time!"

To the Letter

Above the great editor's desk appeared the motto: "Be accurate"—a motto that was hammered into every member of the staff with painful insistence.

One day Sam, the latest cub reporter, sent in a news paragraph containing the following mysterious statement:

"Three hundred and ninety-nine eyes were fixed upon the speaker."

The delinquent was haled before his chief.

"Young man," demanded the editor sternly, "what is the meaning of this ridiculous statement?"

The cub was not abashed, and answered quickly:

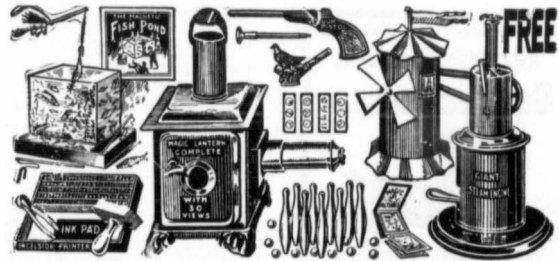
"Sir," said he, "an old man in the audience was blind in one eye!"

Innocent

Rastus—"What yo' tink is de mattah wif me, doctah?"

Doctor—"Oh, nothing, but the chickenpox, I guess."

Rastus (getting nervous)—"I 'clare on mah honah, doctor, I ain't been rowhar I could ketch dat!"



FREE Giant Toy Outfit for Boys FREE

Here it is boys, the famous Giant Toy Outfit. Just what you have been wanting all your life and right here, easy to get without a cent of cost.

READ WHAT EACH OF THESE WONDERFUL OUTFITS CONTAINS!

First, a dandy Giant Steam Engine, with beautiful varnished brass and brass iron body, exhaust valves, nickel plated fly wheel and substantial metal base. We give you with it a lubricated tin water wheel or wind mill, and when your engine is running you can fasten a belt to the fly wheel and operate the mill or any other toy you desire. Next, we give you the finest Little Magic Lantern ever seen! Made of Russia Iron, with high grade lamp and extension lens complete to show any number of beautiful views and you get thirty pictures (six slides) with each lantern. Then comes the famous Vacuum pistol game that you have all seen. This fine revolver shoots a harmless rubber tipped arrow that sticks to whatever it hits. It is a complete game with pistol, arrow and a fine colored target all complete in a box. Next you get this fine Excelsior Printing Outfit, with tweezers, type holder and everlasting ink pad, and a complete set of the famous game of Magnetic Fish Pond, the funniest, most entertaining game ever devised. Then besides all those great, big presents, each outfit comprises the great "Little Flip" ten pin game, a book of funny Austrian Magic disappearing pictures, and last but not least, the famous Swiss Marble and Countery Bird White's, a wonderful game certain to **ALTOGETHER 9 BIG PRESENTS. COUNT THEM!**

Boys! Just look at the picture of all these grand presents and then imagine what fun you and all your friends can have with such a wonderful outfit. It's the easiest thing in the world to win them all. Just send your name and address to day and you will get by return of mail only 35 handsome bottles of the delicious Royal Japanese Perfume to sell among your friends at only 10c a bottle. Six different delightful odors—White Rose, Arabian Violet, Heliotrope, Lilac, Jockey Club, Carnation, etc. They are so delicious that everyone buys two or three bottles on sight. It is no trouble at all to sell this lot; it won't take you an hour. Return our \$3.50 when sold and we promptly send you the complete Giant Toy Outfit—every article you see in the picture—exactly as represented and listed above, absolutely free. Hurry boys! and grasp this chance of getting the most complete outfit of toys ever offered. We are spending thousands of dollars to introduce this delightful perfume throughout the Dominion, write to day. We arrange to stand payment of all express charges on the outfit under our reimbursement system.

Address—**REGAL MANUFACTURING CO., DEPT. C. 128 TORONTO, ONT. 53**

1877-1913

Thirty-six years' experience in brewing

Drewry's Redwood Lager

tells the story of its popularity

TRY IT

Mention this magazine when writing advertisers.

CHEW

MAPLE SUGAR TOBACCO

MILD, SWEET, MELLOW AND JUICY
Manufactured by
ROCK CITY TOBACCO CO.
Quebec, Winnipeg

Mention this magazine when writing advertisers

Big Ben



To wake up on the installment plan

Big Ben gets you up on the installment plan, a little at a time, by ringing every other half minute for ten minutes, so you'll wake up gradually. Or he'll do the whole job all at once, with one long, straight, five-minute ring.

You can set him to do it as you choose, and shut him off short in the middle of his call either way.

That makes him *your good clock in one*, to suit everybody's taste in early rising.

He plays no pranks. He won't go off before it's time and rob you of your full measure of sleep. He won't go off behind time and rob you of your work time. It's Big Ben's business to run on time, to ring on time and stay on time.

Big Ben attends to his own business and helps you attend to yours by getting you and the farm hands out early.

Then he sticks around the house and keeps time all day for the women folks so they can have your meals on time.

There never was a clock that fitted in better with farm work.

He's triple-nickel plated and so handsome you'll want to keep him in the parlor instead of a bedroom.

Stands seven inches tall from the top of his head to the tip of his toes; has big, easy-winding keys, large hands, and big figures that you can read at a distance on dark mornings, and is built of good implement steel so he'll last for years. He's doing this kind of work in 3,000,000 American homes today.

Six thousand Canadian dealers sell him—his price is \$1.00 anywhere. A community of clock-makers stand back of him. Their imprint, "Made in La Salle, Illinois, U.S.A. by Wenzel," is the best alarm-clock insurance you can buy.

Big Ben Alarm Clocks

ARE ILLUSTRATED IN THE CATALOGUE OF

D. R. DINGWALL, Limited
JEWELLERS, WINNIPEG

WRITE FOR A COPY OF THIS BOOK

Warranted to Give Satisfaction.
Gombault's
Caustic Balsam



Has Imitators But No Competitors.
 A Safe, Speedy and Positive Cure for
 Curb, Spillat, Sweeney, Cappee Hook,
 Strained Tendons, Founder, Wind
 Puffs, and all lamenesses from Spavin,
 Ringbone and other bony tumors.
 Cures all skin diseases or Parasites,
 Thrush, Diphtheria. Removes all
 Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism,
 Sprains, Bone Throat, etc., it is invaluable.
 Every bottle of Caustic Balsam sold is
 Warranted to give satisfaction. Price \$1.50
 per bottle. Sold by druggists, or sent by
 express, charges paid, with full directions for
 its use. (Send for descriptive circulars,
 testimonials, etc. Address
 The Lawrence-Williams Co., Toronto, Ont.

Mention this magazine when writing advertisers

PATENTS TRADE MARKS AND DESIGNS
 Write for booklet, circulars, terms, etc.
FETHERSTONHAUGH & CO.
 FRED. B. FETHERSTONHAUGH, E. C. M. E.
 GERALD S. FOXBURGH, E. A. SC.
 Portage Avenue, WINNIPEG.
 209-10 Bank of Nova Scotia

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\$1500 to \$5000 Per Year

have been made by hundreds of people operating the "American" Drilling Machines, 40 years' experience, 50 regular styles and sizes and the output of the world's largest manufacturers of this kind of machinery make "AMERICAN" MACHINES STANDARD

Made in types for every kind of earth and rock drilling or mineral prospecting, equipped with any power, or operated with your traction engine. Our new 100 page Catalog Free.

THE AMERICAN WELL WORKS

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AURORA
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 Chicago Office: First Nat. Bk. Bldg.

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ERZINGER'S No. 2 CUT PLUG
 Leads them all. It's the Best Dollar Tobacco sold anywhere.
JOHN ERZINGER
 McIntyre Bldg. - 293 Portage Ave.
 Phone 69 Phone 3077

Mention this magazine when writing advertisers

To be Candid
 "What sort of a ticket does your suffragette club favor?"
 "Well," replied young Mrs. Torkins, "if we owned right up, I think most of us would prefer matinee tickets."

He Was Mistaken
 "I asked your husband last evening if he had his life to live over again if he would marry you and he said he certainly would."
 "He certainly wouldn't."

The Easiest Way
 The Playwright—"Ah! The audience is calling for the author."
 The House Manager—"I hear 'em; but you can get out through the alley and I'll hold 'em back while you beat it."

R-r-revenged
 "Shine yer boots, sir?"
 "No!" snapt the man.
 "Shine 'em so's yer can see yer face in 'em," urged the bootblack.
 "No, I tell you!"
 "Coward!" hissed the bootblack.

Effective
 Police Commissioner—"If you were ordered to disperse a mob, what would you do?"
 Applicant—"Pass around the hat, sir!"
 Police Commissioner—"That'll do. You're engaged."

Puzzling
 Mrs. A.—"They say your Ned's wanted by the police."
 Mrs. B.—"Well, there's no accounting for tastes."

Breaking the I-c-e
 When Alice Jones was eighteen she became Miss E. Alysse Jones. When she went to enter a college she was asked her name by the dean. She replied:
 "Miss E. Alysse Jones—A-l-y-s-s-e-e."
 "Yes," said the dean; "and how are you spelling 'Jones' now?"

In the Dog-watch
 "Well, old man, how did you get along after I left you at midnight. Get home all right?"
 "No; a confounded nosey policeman haled me to the station, where I spent the rest of the night."
 "Lucky dog! I reached home."

His Master's Voice
 Casey—"Now phwat wu'd ye do in a case loike thot?"
 Clancy—"Loike phwat?"
 Casey—"Th' walkin' diligente tills me to stroike, an' me ould woman orders me to ke-ape on wurkin'."

Mackenzie, Brown, Thom & McMorran
Mackenzie, Brown, MacDonald & Bastedo
 Barristers, Solicitors, &c.
Regina, Saskatchewan, Canada

Norman MacKenzie, K.C. Hon. George W. Brown Douglas J. Thom
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 General Solicitors in Canada for the National Thresher Manufacturers' Association of America
 General Solicitors in Canada for the American Collectors' Association.
 General Solicitors in Saskatchewan for Fifteen Canadian and American Thresher and Implement Companies.

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

The Occidental Fire Insurance Co.
 Head Office: WAWANESA, MAN.

A. NAISMITH, President R. M. MATHESON, Vice-President
 A. F. KEMPTON, Sec. and Mgr. C. D. KERR, Treasurer

Subscribed Capital \$500,000.00
 Security to Policy-holders 640,817.28

Full Deposit with Dominion Government
Agents wanted in unrepresented districts

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

Alex. Naismith, Pres. S.H. Henderson, 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, 1912 \$54,606,660.00
 Assets over Liabilities 857,557.67

THE NUMBER OF FARMERS INSURED, 31st. Dec. 1912, 23,261

The Largest Farmers Mutual Fire Insurance Company in Canada. Agents wanted in unrepresented districts

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

INSURANCE—INSURANCE
 FRED W. PACE F. J. HARRISON F. GRANT MILLAR
PACE, HARRISON & MILLAR
 Keewayden Building - Portage Ave. East
 General Agents:

NATIONAL FIRE INSURANCE COMPANY of Hartford, Conn. Assets Exceed \$12,000,000.00
GENERAL FIRE ASSURANCE COMPANY of Paris, France. Assets Exceed 7,500,000.00

Adjustment and payment of losses arranged from our office. Liberal contracts to live agents. WRITE FOR AGENCY.

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

National Trust Company, Ltd.
 TORONTO, WINNIPEG, EDMONTON, MONTREAL, REGINA, SASKATOON
 Capital and Reserve, \$2,900,000.00

The strain and worry of managing Estates will all be borne for you by this Company.
 A PRIVATE Executor may die or become incapable of acting before the completion of the Trust. A Trust Company is PERMANENT and will survive the longest Trusts.
 This Company's financial strength and expert staff ensure responsible and capable administration.

We act as Trustee, Executor, Administrator, Guardian, Liquidator, Assignee, Financial Agent
SAFE DEPOSIT VAULTS SAVINGS DEPARTMENT MONEY TO LOAN
D. H. COOPER, Manager, Winnipeg Branch, 323-325 Main Street.
C. Y. STAINER, Secretary.

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

The Marlin
 Model 1897
Repeating Rifle

Shoots all .22 short, .22 long and .22 long-rifle cartridges; excellent for rabbits, squirrels, hawks, crows, foxes and all small game and target work up to 200 yards.

Here's the best-made .22 rifle in the world!

It's a take-down, convenient to carry and clean. The tool steel working parts cannot wear out. Its Ivory Head and Rocky Mountain sights are the best set ever furnished on any .22. Has lever action—like a big game rifle; has solid top and side ejection for safety and rapid accurate firing. Beautiful case-hardened finish and superb build and balance. Price, round barrel, \$14.50; octagon, \$16.00. Model 1892, similar, but not take-down, price, \$12.50 up.

Learn more about all Marlin repeaters. Send 3 stamps postage for the 125-page Marlin catalog, 105

The Marlin Firearms Co.,
 Willow St., New Haven, Conn.

Don't Fail to Renew Your Subscription Before it is Too Late.



Conducted for the benefit of Dealers, Threshingmen and Farmers who have anything to sell or exchange. Three cents a word for each insertion.

FRUIT LANDS—Write for particulars of Florida land. Where you can raise three and four crops each year. We have 10,000 acres of the finest truck and fruit land in the world. Easy terms. Full information on request. Norris & Anderson, Regina, Sask.

FOR SALE—Several first-class farms, improved and unimproved. One improved close to Winnipeg. Section, four hundred cultivated; fenced; first class buildings; new implements; best of stock; abundance of water, no alkali; river runs through part of it. All information readily given. We can suit you if you want a farm. Nixon & Rutherford, 12 Bank of Hamilton Bldg., Winnipeg.

FOR SALE—A number of pedigreed Tamworth pigs, four weeks old. They are perfect specimens. Also a number of Berkshire and Duroc three years old—especially choice animal. Nixon & Rutherford, 12 Bank of Hamilton Bldg., Winnipeg.

FOR SALE—45 H.P. Moal gasoline traction engine, on easy terms or would exchange for clear title land. 142, Louise Bridge P.O., Winnipeg.

POSITION WANTED—Spring till winter driving gasoline engine, Rumely preferred, experienced electricity and gasoline plowing on private character, obtains work long hours if necessary. Reply, stating wages offered. Engineer, care Canadian Threshingman.

WANTED—Position as Engineer on a steam traction outfit. Fully experienced. Can furnish references. Address: E. Pasch, Clava, Man.

SALESMEN WANTED—Threshingmen or engineers to sell oils, greases, belts, packing, lacing, paints, etc. First class opportunity for first class men. O. L. Doty, Cleveland, Ohio.

SALESMEN—Are drawing two to six hundred dollars per month. Travelling with their own teams. Selling our Lubricating Oils, Greasy Paint and Specialties, direct to the consuming trade. Now is the time to take orders for immediate and spring delivery. Inland Oil Works Company, Winnipeg, Canada.

FOR SALE—45 H.P. 2-cylinder gasoline engine and 8-furrow gang plow. Used one season; good reasons for selling. E. Schroeder, Hanley, Sask.

FOR SALE—A Cuddy steering device for a 20-H.P. International gasoline engine. Device only used two days. Terms: \$70 f.o.b. purchaser's shipping point. S. Melville Webb, Sunny Isle, Sask.

WANTED—Live salesmen in every good town and district in Western Canada. Only our Handy Tested Nursery Stock. Highest commissions paid. Exclusive territory. Equipment free. Canada's greatest Nurseries. Stone & Wellington, Toronto.

FOR SALE—Cock of the North engine, 22-H.P. This engine is in perfect order and nearly new. Apply to E. Reas, Keyes, Man.

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 Bldg., Minneapolis, Minn.

WANTED—Strictly high class gas tractor salesmen for Minnesota, Nebraska, North and South Dakota, Montana and Western Canada. Permanent and attractive proposition to live salesmen that can make good. Address c/o Canadian Threshingman, Winnipeg, Man.

STREAM PLOWMEN—Look! Good section of All steam plow land on C.N.R., Saskatchewan-Regina Line in Twp. 23, R. 26. Level—from scrub or stone. Clear title. Only \$10 per acre, one-quarter cash, balance in 1, 2 and 3 years. This is exceptional. For further particulars, write S. O. Cromie, 12 Bank of Hamilton, Winnipeg.

FOR SALE.

We have on hand at present a very fine line of rebuilt and second-hand Engines and Separators, which we are offering at attractive prices. Write to fully what you are thinking of buying, whom we shall be pleased to tell you what we have and quote prices. All our rebuilt goods are sold under same guarantee as new ones and of course are carefully repainted and look exactly like new. If you write us at once we are sure to have the size you almost want.

We have also a thoroughly Rebuilt 25 H.P. Saw Mill Engine. Can hardly be distinguished from new goods.

SAWYER-MASSEY COMPANY, LIMITED, Winnipeg, Man.

FOR SALE—Owing to ill-health I will sell Hart-Parr Engine, sixty horse-power, with Cocksfoot Eight Furrow Plow, with six bottoms, and Aultman Taylor Twelve H.P. Oil Tank. This outfit has been run one short season and is guaranteed in first-class shape. Will sell cheap, and good terms. W. Gibbins, Rosetown, Sask.

Mention this magazine when writing advertisers

BUYERS, ATTENTION!

THE GEORGE WHITE & SONS COMPANY LIMITED, BRANDON, MAN.

- ENGINES**
- 2-25 H.P. White tractors thoroughly rebuilt and in good shape. Each \$160.00
 - Second Hand
 - 1-16 H.P. American Advance traction. \$ 700.00
 - 1-18 H.P. Minneapolis traction. \$ 600.00
 - 1-20 H.P. Brandon Cornell, Portable. . . \$4000.00
 - 1-20 H.P. White traction. \$1200.00
- SEPARATORS**—Second Hand
- Aultman Taylor, \$2500, all attachments. \$ 400.00
 - 1-40x62 Waterloo separator, all attachments. \$ 400.00
 - 1-36x60 Goddison separator, all attachments. \$ 300.00
 - 1-36x60 American Abell, all attachments. \$ 325.00
 - 1-36x56 Felshie separator, all attachments. \$ 300.00
 - 2-32x56 Great West separator, all attachments. \$ 200.00
 - 1-36x56 Great West separator, all attachments. \$ 200.00
 - 2-White Challenge separators, thoroughly rebuilt, all attachments. Each. . . \$ 900.00
- Write us re new goods—We have the best.

HOW TO START YOUR GAS ENGINE in the coldest weather, first clip. No hot water (save time). **Formula 90.** P.S. For your information—This Formula is a liquid, very high explosive, will evaporate in cold weather, and use itself at all times in cold weather. J. W. BARRON, 2112 Louise, Brandon.

BARGAINS.

- 1-32 H.P. Port Huron engine, rebuilt and in first class shape.
 - 1-American-Abell 20 H.P. engine, rebuilt.
 - 1-Minneapolis Separator 44x72, rebuilt. With all connections.
 - 1-32x54 Avery Separator complete, just rebuilt.
 - 1-36x60 Avery Separator to be rebuilt complete.
 - 1-36x56 Great West separator, no attachments.
 - 1-30 H.P. Northwest engine, not rebuilt, cheap.
 - 1-1 J. I. Case steel, 42x60 separator complete with all attachments.
 - 1-42x70 Avery separator, will be rebuilt in time for next fall's work.
- If you are interested in second hand goods, please write and let us know what you want as we are making deals almost every day, and feel sure that we can fix you out with almost anything you want, either in new or second hand goods.

HAUG BROS. & NELLEMOE Co., Ltd. WINNIPEG.

GASOLINE TRACTOR FOR SALE—I have a first-class 30 H.P. Gasoline Tractor for sale. This tractor is manufactured by Kinard-Haines, Minneapolis, whose Gas Tractors have carried over more Diplomas and first class prizes 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 the next season. Write for particulars. Address W. D. Weedy, Brandon, Manitoba.

FOR SALE.

- 15 Horse Case Simple Portable Engine. \$640.
 - 15 Horse Case Simple Portable Engine. \$583.
 - 15 Horse Compound Portable Engine. \$1342.
 - 18 Horse Simple Traction Waterloo. \$ 223.
 - 16 Horse Portable Sawyer-Massey. \$290.
 - 20 Horse Portable Sawyer-Massey. \$410.
 - 20 Horse Simple Traction Sawyer-Massey. \$116.
 - 20 Horse Compound Traction Engine, Case 7936. \$1721.
 - 20 Horse Simple Traction Engine, Case. \$6912.
 - 32 Horse Simple Traction Engine. \$19019.
- J. I. CASE, THRESHING MACHINE COMPANY, WINNIPEG, Canada.**

FOR SALE—One 65 horsepower Marshall gasoline tractor, thoroughly overhauled and in first-class condition. G.S.C., Box 3079, Win.

FOR SALE—Gas Traction engines, 25 horsepower. In good condition, all ready to run, cheap as I am going out of business. A. D. Danison, Dakinda, Sask.

WANTED—Positions as engineers on Rumely Oil Pull and Hart-Parr Gasoline Engines, by two parties. Address R. J. Sharp, Cotton Wood, Sask.

FOR SALE—One 36-in. Sawyer-Massey separator, one 30-in. Bell City separator, both with wire steering and high lagers, in good shape. Would exchange for farm stock, motor car, straw cutter, hay press, etc. C. D. Grant, Ituna, Sask., New Jersey.

BRED FOR EGGS AND MEAT—Bellevue Strain of White and Columbian Wyandottes, S. C. White Leghorns and Light Brahmas. Stock for sale. Over 30 years in business. Michael K. Boyer, Box 22, Hammonont, Atlantic County, New Jersey.

SKUNK FARMING—More profitable than raising hogs, sheep, cattle or poultry. Requires less space and only small capital to start. Send for free information. Laymon Fur Farming Co., Box 11, Spencer, Ind.

Mention this magazine when writing advertisers

LEARN RAILROADING and earn good wages. Our New Home Study Course is all you need. Write for particulars. Address Shaw's Railroad and Telegraph School, 395 Yonge St., Toronto.

WANTED—Good engine for plowing. Have first class quarter section to exchange half mile prosperous town. P. O. Box 189, Estevan, Sask.

POSITION WANTED AS FIREMAN—Steam plow, three seasons firing threshing engine. A very preferred. Good knowledge of gasoline engines. Write Box 3079, Canadian T. & F., Winnipeg, Man.

FOREMAN wishes to take care of big farm, first class work guaranteed. Address: Billy Brown, Wilcox, Sask.

WANTED—Position on a gas oil or kerosene engine, must be 30 or 40 horsepower, also steady run. Seven years experience. Can do repair work. Best references. Apply, stating wages, size and make of engine to: J.R. Hishop, Felly, Sask.

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FOR SALE—One Pair White Wing Feeders, Six Dump Racks, Eight Breaker bottoms for Cocksfoot Engine Gang. All nearly new but will sell cheap for cash. Arthur Troford, Dysart, Sask.

EXPERIENCED ENGINEER wishes position for coming season on steam plowing outfit, strictly temperate and reliable, can furnish references, apply stating wages. D. McDonald, Red Jacket, Sask.

FOR SALE—One 32 horse J. I. Case engine as good as new, one 44-inch Nichols & Shepard separator, one ten bottom John Deere plow and one set of breaker bottoms. Will sell cheap, all together or separate. S. Latrasse, Tessier, Sask.

FOR SALE—30 H.P. Double, single, undermounted 42-7" Cabsone 2 water tanks, pump and pump hose (new) \$2,000. Cash. R. A. Brodie, Pierson, Man.

FOR SALE—One 20 H.P. American Abell traction engine, run six seasons, in good shape \$1,100. Will take portable steam engine 15 or 20 H.P. in part payment. Ap #1 Box 10, Laidler, Man.

FOR SALE

- Thoroughly Rebuilt Threshing Machinery.
- 1-110 H.S. Tr. J. I. Case Engine.
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- 1-15 H.S. Portable J. I. Case Engines.
- 1-40 x 62 J. I. Case Steel Separator.
- 1-36 x 58 J. I. Case Steel Separator.
- 1-32 x 54 J. I. Case Steel Separator.
- 1-28 x 50 J. I. Case Steel Separator.

J. I. CASE T. M. CO., Regina, Sask.

TWO EXPERIENCED ENGINEERS desire positions on gas tractors for the coming season. Understand thorough maintenance and repairing of engines. Write F. E. Watson, Elkhorn, Man.

WANTED POSITION on either steam or gas tractor for season of 1913. Have had several years experience. Can do own repairing. Strictly temperate. Address E. C. Winchester, Melita, Man.

FOR SALE—Big "Dutchman" Engine Gang—six new breaker bottoms, with extra shafts and standards. A real bargain for cash. W. S. Manly, Cut Knife, Sask.

FOR SALE—One 30 H.P. undermounted Avery Engine and ten-bottom Cocksfoot plow. Or will trade for land, livestock, or gasoline Engine. For particulars address P.O. Box 1830 Lethbridge, Alta.

WANTED—Position as engineer for steam or gasoline engine for plowing, etc.—Season 1913. R. J. Co. Box 379, Winnipeg.

FOR SALE—International 20 H.P. gasoline tractor with 4-bottom P. & O. Breaking Plow. Also Aultman Taylor New Century Separator, size 27x42 in first-class condition. Has done one season's work. Price and terms reasonable. Appl. E. T. Hargreaves, Ernfold, Sask.

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For the months of June, July and August only, we will sell White Wyandotte, Columbian Wyandotte, and S.C. White Leghorn Eggs at \$1.25 per 15; \$3 for 20; \$6 for 100. For Light Brahma Eggs 2 for 15; \$3 for 20; \$6 for 100. Write to: Address, Michael K. Boyer, Box 22, Hammonont, Atlantic Co., New Jersey.

ENGINEER—Wants position on steam plowing outfit for spring and summer, fully experienced. Write care of J. Christie, Elkhorn, Man.

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FOR SALE—Three sections P. & O. Engine Disc Plows, two steam, one four—Samuel Meek, Blackwood, Sask.

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FOR SALE—One Stewart Sheaf Loader, good as new, run ten days. For sale cheap. R. A. Brodie, Pierson, Man.

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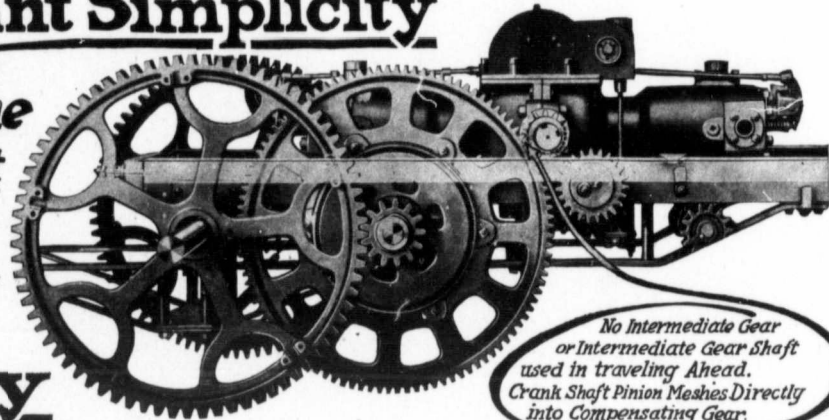
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You Want Simplicity

**Here's the
Simplest
Tractor
built —
The
Avery**



*No Intermediate Gear
or Intermediate Gear Shaft
used in traveling Ahead.
Crank Shaft Pinion Meshes Directly
into Compensating Gear.*

Every man knows that **Simplicity** is one of the most important points to consider in getting a Tractor.

You want **Simplicity**. You are sure of that. But you are perhaps a little uncertain as to just what **Simplicity** means in a Tractor.

It's to answer this question that we are writing this advertisement—to explain to you fully what **Simplicity** means in an Avery Tractor.

Why the Avery Tractor is the Simplest Tractor Built.

In the first place, the Avery Tractor has no intermediate shaft and no intermediate gear is used in travelling ahead. The crankshaft pinion meshes directly into the compensating gear. It has never been done and we do not believe it is possible to build a successful Tractor of equal power with less shafting and gearing.

Second, the Avery Tractor has no fan. The exhaust is piped in such a way that the cold air is drawn past the tubes and no fan is required.

The fuel pump has also been done away with in the Avery Tractor. The fuel is fed to the carburetors by gravity.

No water pump is used. The Thermo-syphon system of water circulation is used and the pump eliminated.

There is no outside lubricator. We use a positive force feed gear pump inside the crank case.

The Avery Motor is of the opposed type and requires no counterweights on the crank shaft to give it a running balance.

Simplicity Means Greater Durability

You can readily see that with fewer gears and shafting you have fewer working parts to wear out or break. With the fan done away with, you are free from a part that is easily broken and often gets out of order. Fuel and water pumps often break but you never have any trouble of this sort with an Avery Tractor. And there's no possibility of a counterweight on the crank shaft coming loose and ripping your motor to pieces for these troublesome parts on other Tractors are entirely done away with.

It's steady service day after day, year in and year out, that you want when you get a Tractor. The Greater **Simplicity** of an Avery insures your getting Greater **Durability**.

Simplicity Means More Power.

The elimination of the intermediate gear and the intermediate gear shaft with the boxings does away with the friction of these parts and increases the pulling power at the drawbar. You will also not find in an Avery Tractor any idle gear in mesh and consuming power when belt driving. There is no loss of power in driving a fan which has been found to be as much as 3 horsepower.

The power of Avery Tractors is constantly spoken of by owners and others seeing them in operation, and their simplicity is one of the reasons for their Greater Power.

Simplicity Means Easier to Handle and Keep in Running Order.

Many Avery Tractors are being operated by boys only 13, 14, 15 and 16 years of age. Any man or boy can easily handle an Avery Tractor and keep it in running order, with reasonable care and attention.

That's what you want—a simple Tractor that doesn't require an expert to operate it. That's what you have when you get an Avery.

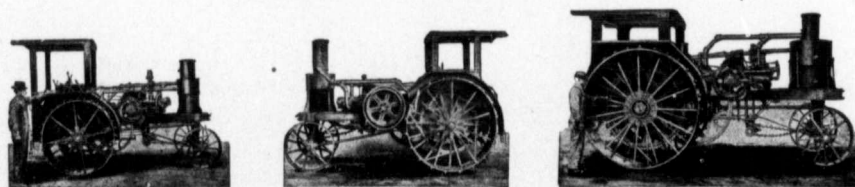
Get All the Facts About Avery Tractors.

Write for our complete catalog. Study out these points for yourself. Compare the construction of an Avery Tractor with any other Tractor built. We invite comparison with any and all other makes. **Simplicity** is only one of the Important Features of Avery Tractors. They are also **Light Weight**. They are sold at **Low Prices**. They are Sold on **Approval**. They are **Fully Guaranteed**. Call on us at our Home Office or any of our Branch Houses, Jobbers or Agents or write direct for copy of the complete Avery Tractor Catalog. Address:

EVERY COMPANY, 675 Iowa Street, Peoria, Illinois

Canadian Avery Co. Ltd., Winnipeg, Regina, Calgary.

WESTERN CANADIAN DISTRIBUTORS.



Avery Tractors are built in 4 sizes—12-25, 20-35, 25-50, and 40-80 H.P.
They are the Simplest Successful Tractors built.

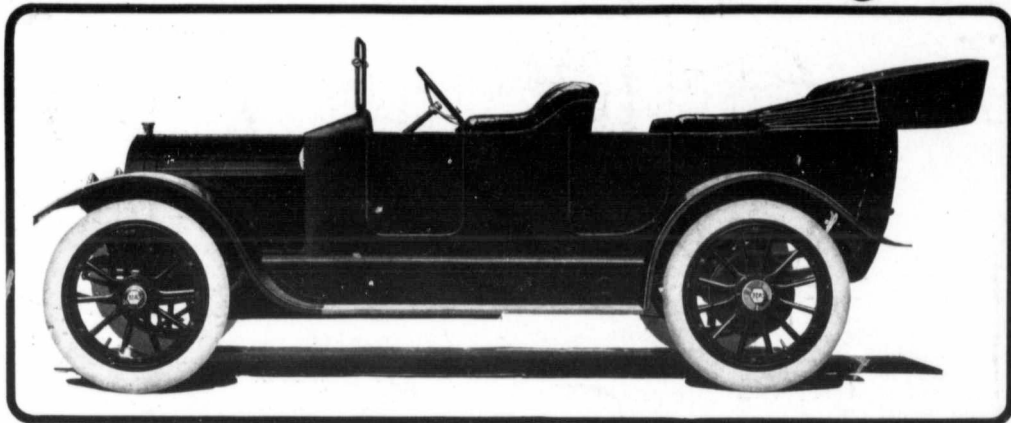
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CASE



The Car With The Famous Engine



The CASE "25" - Standard Case Complete Equipment - Price \$1250. F.O.B. Factory

WHERE THOSE HIDDEN VALUES COUNT

Into every Case Car go values in materials and construction that few makers of even higher priced cars can afford to put into their products.

These are the values alone that determine **how long a car will last**—how long it will run with that smoothness, quietness and sureness for which you bought it originally, and how much you can get on re-sale should you ever want to dispose of it

Every man who buys a Motor Car must consider more than merely **appearance**, and first **demonstration**. Neither indicates real worth, though these elements are most essential. *And you want the most that your money will buy.*

HOW TO GET IT. *There is only one way to get it.*

Use your best judgment as far as you can. Then take the seller's reputation as a guarantee for what you cannot judge yourself. Take his word for the values that do not show on the surface. All buyers of motor cars must do that. For no car's real value shows at first.

WHERE IT DOES SHOW. It shows at the twenty, forty or sixty thousandth mile on roads that are not smooth boulevards. That's where the hidden values count, that's where real money's worth shows. Case cars never grow old.

We are building a car at \$1,250 with this long-time service in it. A 25 horse power, five passenger car, with everything anyone needs for touring included in the price. But you must buy this car on faith, as you'd buy any other. So we ask you to see whose word you are taking for the values that make it good.

FOR SEVENTY YEARS. For 70 years this company has been selling farm machinery. Millions of dollars' worth of Case products are in use today. The fathers and grandfathers of hundreds of men who have bought Case Motor Cars bought Case machinery. No other concern in the world has a greater reputation. And it came from giving these **long-time values**, the same values exactly that, for four years, have been built into **Case Cars**.

SOME DETAILS OF THE "25" Westinghouse Electric Starting and Lighting Equipment. Bosch Magneto—Duplex System. Warner Auto-meter. 8 day Clock. Electric Vibrator Florn. Baker Six-Bolt Demountable Rims. Goodyear No-Rim-Cut Tires. 32x4 Extra Tire on Rim. Two Extra Inner Tubes. Tire Cover. Weed Tire Chains. Rayfield Carburetor, superheated, dash adjustment. Mohair Top. All lamps Electric. Left Hand Drive. Center Control. T-Head Motor 3 1/4 x 4 1/4. 25-Horse Power. Work Light on Long Wire. Electric Dash Lamp. Rain Vision Ventilating Wind Shield. Wheel base 110 inches.

HOW YOU SAVE ON CASE CARS.

There is this saving in building Case Cars—hence a better value. When we started making motor cars we added practically no selling expense. We had 9,000 dealers and 65 Branch houses before a car was built. We saved in overhead salaries and systems. We saved where most makers had to spend, so we spend where they had to save. That's why we can put into these cars at these prices the materials and construction used in more costly cars. No other maker equipped otherwise can possibly do it.

The result is the **handsomest, smoothest, sturdiest** motor car we know—a car that will save you repair money because it is built to last.

FIRST GET THE CATALOG. Write for it before you decide on a car. It goes into details in regard to three models that are destined to make great records this year. The Case "25" at \$1,250—full specifications printed below; the Case "35" at \$1,850, a little larger with more power, and the Case "40" at \$2,300, as large and as powerful a car as any man will ever want to drive. All these cars carry Case Standard Complete Equipment included in the price, ready to tour on delivery.

Don't buy a car till you've read this book and called on a Case dealer or Branch House.

ALL FOR \$1,250

Case Cars are sold through 65 Branch Houses and 9,000 dealers in United States, Canada, South America, Philippine Islands and Europe.

J. I. CASE T. M. COMPANY INCORPORATED

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