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# CANADIAN MILLER

AIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

Old Series, Vol. X } NUMBER 7  
New Series, Vol. II }

TORONTO, ONT., JULY, 1892

(TERMS, \$1.00 PER YEAR  
(SINGLE COPIES, 10 CENTS)



## MAGNOLIA METAL

IN USE BY EIGHT LEADING GOVERNMENTS

The Magnolia Anti-Friction Metal Co., Ltd., New York, N.Y., March 6, 1892.

TESTS.—About March 27, 1892, samples of metal marked "Spencer's Finest Copper Metallite" were submitted to me for test, its test showed finest results, and on analysis it proved to contain no copper, and approximated the formula of Magnolia Metal.

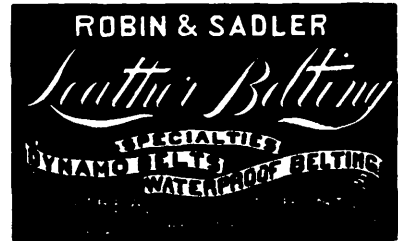
In October of the same year, other samples with same marks were submitted for test, and tested in comparison with Magnolia Metal, upon our new testing machine, built at great expense. This test for temperatures showed Magnolia Metal to save less friction and a temperature of about 100 degrees less. On December 1st this perfected test piece of Copperite was tested again with the result of its fusing with ten minutes run of 1,500 lbs. to the square inch.

On January 31st, Magnolia Metal was tested, which ran fifteen minutes with 1500 lbs. to the square inch and one hour with 2000 lbs. to the square inch, and at the end of the hour showed a temperature of 102 degrees Fahrenheit. Under separate cover we hand you detailed reports of the tests, showing velocity of rubbing surface about 2,000 feet per minute, diameter of shaft 3 inches, and revolutions, about 1,500.

Yours truly, H. G. TORREY

Note—Mr. Torrey is U. S. Assayer, and has been in U. S. Mint service at New York for 15 years.

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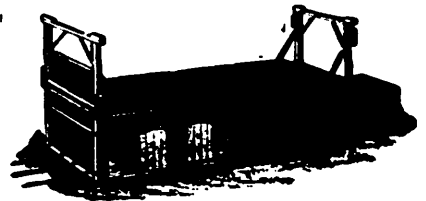
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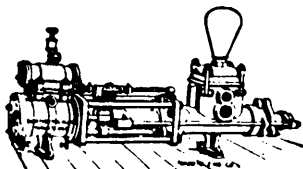
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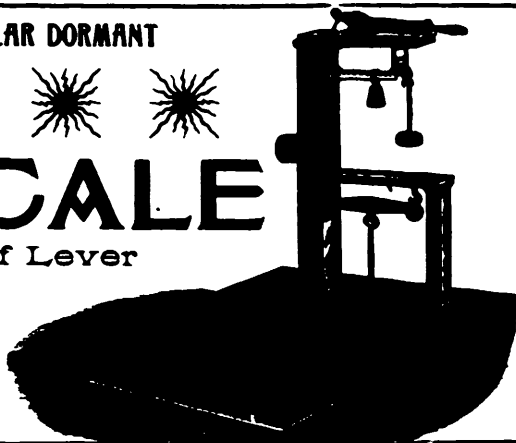


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Improvement secured by Letters Patent, issued 28th  
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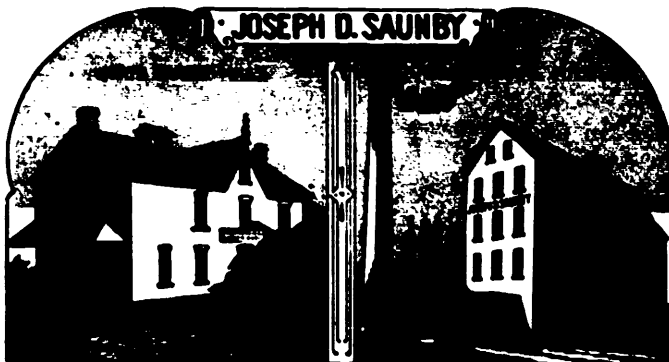
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~LONDON, ONT.~

# THE CANADIAN MILLER

OLD SERIES, VOL. X. NUMBER 7  
NEW SERIES, VOL. II.

TORONTO, ONT., JULY, 1892

TERMS, \$1.00 PER YEAR  
(SINGLE COPIES, 10 CENTS)

## NEWFOUNDLAND'S DISTRESS.

AT this date we do not suppose that there is a reader of the CANADIAN MILLER who has not heard of the terrible fire that on the 8th inst. visited St. John's, Nfld., laying in ashes almost the whole city. The more recent reports that have come from the scene of disaster indicate that the first news received, in place of magnifying, inadequately portrayed, the true situation. The whole of the business part of the city is destroyed. Every lawyer's office, doctor's residence and office and Protestant clergyman's residence was burned. Every daily newspaper and every printing office was destroyed, not enough type, paper or ink remaining in the city for a single poster. But, great as has been the loss from the destruction of the business part of the city, the greater distress has come from the devastating work of the flames among the homes of the people. Fourteen thousand people are homeless and five thousand are in absolute distress. Not a few lives are already known to be lost; starvation, and disease that stalks hand in hand with famine, threatens hundreds of others. Careful estimates place the loss at \$20,000,000, with less than \$5,000,000 insurance.

The news of the calamity that has overtaken our sister colony had little more than been proclaimed to the public before this same public, callous and indifferent in many matters, moved as one man, and each section of the Dominion, without regard to locality, has vied with the other in deeds of kindness and love. Their near neighbor, Halifax, N.S., forwarded almost immediately a ship load of provisions. St. John, N.B., Montreal, Toronto, Hamilton, London nearly every municipality has taken prompt and practical steps to relieve the distressed.

## A MILLERS' MOVEMENT.

Within a few hours after the morning papers of this city had been read the CANADIAN MILLER interviewed a number of the local millers and found that they were at one in the opinion that a millers' contribution of flour should be sent to Newfoundland, and promptly made their contributions. A circular was also sent out from the office of the CANADIAN MILLER to leading millers throughout the country, who have been equally hearty in their response; and altogether up to the hour of going to press, less than three days after the movement was started, contributions as follows have been received:

McLaughlin & Moore, Toronto	10	bbls.
J. L. Spink, Toronto	10	"
Citizens Milling Co., Toronto	10	"
N. Wenger & Sons, Ayton, Ont.	25	"
Dobson & Campbell, Beaverton, Ont.	10	sacks
I. D. Saunby, London, Ont.	15	bbls.
H. Brown & Sons, Carleton Place, Ont.	20	"
R. B. Clement and others, Walkerton, Ont.	20	"
and box of clothing.		
James Goldie, Guelph, Ont.	25	"
J. Knox & Co., Stayner, Ont.	5	"
P. R. Hoover & Sons, Green River, Ont.	1	"
John Hall, Lakefield, Ont.	5	"
Elliott & Hawkins, Holland Centre, Ont.	8	sacks

The CANADIAN MILLER, on behalf and with the warm approval of the trade, cheerfully undertakes this work. The Grand Trunk, Canadian Pacific and Inter-colonial railways have agreed to carry all flour for the purpose free of cost. Vessel owners, it is expected, will be equally liberal in the matter of carriage from the railway terminus to point of destination.

Remembering this country's relations, past and present, to the ancient colony, and taking right cognizance of the connection between the milling trades of Canada and the prosperity of Newfoundland, it is peculiarly fitting that the millers of the country should take a distinctive position in this work of relief.

"He giveth twice who giveth quickly." Let those who have not already responded do so at once. With quantity, when shipped and how. The telegraph companies will make no charge for messages of this character.

Address shipments: "CANADIAN MILLER'S Newfoundland Relief, Toronto." These will be placed together and forwarded in one lot to St. John's, Nfld.

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Since sending out the circular to millers referred to in the foregoing, the Weekly Bulletin of the Dominion Millers' Association has reached us containing a notice from Secretary C. B. Watts, saying: "It would be a graceful as well as humane act for our millers to send contributions of flour to the sufferers from the St. John's fire," and instructing contributors to consign their shipments, if residing west of Toronto, to Newfoundland Relief Committee, Toronto, and if east of Toronto, to Montreal, "and advise me of amount of contribution." When the CANADIAN MILLER suggested a flour contribution from the trade Mr. Watts was one of the first interviewed and heartily concurred in the proposal, voluntarily agreeing to do everything in his power to further the scheme, adding: "In the Bulletin of this week I will insert a notice informing millers of the project and instructing them to address shipments to CANADIAN MILLER'S Newfoundland Relief."

We are sorry for Mr. Watt's sake that he has deemed it the wise thing to act in a manner altogether contrary to his own statement. We have no desire to take from him the glory that he may believe will come from securing one barrel or 500 barrels of flour for the sufferers of Newfoundland. We have an opinion, however, that glory obtained for sweet charity's sake is of somewhat shady quality. One thought only has moved the MILLER in this project and that has been a sincere desire to help a neighboring community terribly in need. Mr. Watt's Bulletin notice is apt to defeat to some extent this end in raising a doubt in contributors' minds as to what steps they ought to take in the matter. Assuredly the act was not "graceful" or courteous to the CANADIAN MILLER, which has always treated Mr. Watts with every courtesy and consideration. Not for a moment do we suppose the Dominion Millers' Association, nor its executive, has been party to this act.

## DOMINION MILLERS' ASSOCIATION.

THE annual meeting of the Dominion Millers' Association will be held in the Board of Trade Building, August 2 and 3. Not since the organization of the association will a more important meeting have been held. For the first time the association will assemble as an organization incorporated by special Act of the Dominion Parliament. We believe the members take a just pride in being so constituted, recognizing the powers and influence the changed conditions give them; and they will be prepared to congratulate the executive on the manner in which the work of incorporation, not unmet with difficulties, has been carried to a successful issue. By the time the annual meeting will have been held the new grain inspection act, concerning which we have something to say in our editorial columns, will have become law. We shall be prepared to write more exactly of the matter after we have seen a copy of the bill, but there is good reason to believe that in a large measure the wishes of the association have received proper consideration. Next to the duty fight, yet fresh in the memory of the trade, no greater victory in the interests of the milling business in Canada has been won by Canadian millers. Long and wearisome was the fight, but a righteous cause and John Bull persistency has conquered. Nor need we forget to mention the satisfactory solution of the Newfoundland difficulty,

which has been reached since the members last met together.

The programme is not yet completed but we have reason to know that aside from the especial prestige that will attach to the coming meeting, for the reasons we have already mentioned, that it will be such that ought to make August 2 and 3, in Toronto, memorable days to every Canadian miller.

Under the heading of By the Way and also on the Mill Product page we have touched on several practical questions that might fittingly be taken up at the convention.

## THE FLOUR PRODUCT OF BUDAPEST.

BUDAPEST, Hungary, can claim honest credit for the important inventions that within a period of twenty years have completely revolutionized the business of flour-making. The most important of these, as millers know, are the "middlings purifier" and gradual reduction system, and following these the substitution of steel rollers of various sizes and patterns for the old-time millstones.

In the July Century, Albert Shaw, who has made a study of civic government and the conditions and growth of the cities of both the old and new world, has an able paper on "Budapest The Rise of a New Metropolis." Where, in the successful placing of the products of the mill, so much depends on the methods of milling millers will naturally be interested in this paper by Mr. Shaw.

Budapest is to-day the capital of a nation of seventeen millions of progressive and ambitious people. Forty years ago when Kossuth found refuge in America, after Hungary's struggle for independence, the sister towns of Buda and Pest, lying on opposite sides of the Danube, together had hardly more than a hundred thousand people. The consolidated municipality has now a population of fully half a million people. Mr. Shaw tells us that despite its rapid growth, a condition out of which so many evils of civic management frequently grow, that it would yet be hard to find another large town whose development has been kept so well in hand by the authorities and has been so symmetrical and scientific from the point of view of approved city-making.

Hungary is an agricultural country, rich in the outcome of the soil, and Budapest is the market for the farm surpluses. It is the grain-receiving point of Hungary, and, as one might suppose, it has been found an especially desirable centre in which to develop the business of flour-making.

The mills of the Hungarian capital are magnificent establishments, fitted up with automatic machinery invented and made in the city, provided with electric lights and well supplied with ingenious contrivances to prevent fire. Their finest grades of flour are sent to all parts of the world except America, and command the highest prices. Both the flour product and the general commercial movement of Budapest have at least doubled within fifteen years. The annual output of flour is not less than 5,000,000 barrels, and the industry seems not yet to have reached its maximum, two or three new mills having been built within as many years; but the profits of the companies have suffered much from American competition and from the recent high tariffs of Germany and France. About one-third the milling business of the city is run by steam. The oldest milling company doing business to-day is the Pesth Roller Mill Company, founded by Count Szechenyi in 1839.

## KNOWLEDGE WILL TELL.

IF a miller does not understand his business and attempts to run a mill in competition with those who do he will find himself in the rear ten times out of nine.

## BY THE WAY.

THOSE who have made a careful examination of the growing crop in Manitoba say that wheat has reached a length of not less than twenty inches and indeed is already commencing to head out. All the rocks of agriculture in the prairie province have not yet been surmounted, but a good lead has been made, and present indications point to an early harvest. This, however, is to be remarked that the wheat acreage under culture this year will be 40,674 acres less than last year. This is accounted for by the large quantity of unthreshed grain held over from last season preventing farmers from giving sufficient attention to fall plowing. In other cereals the reports tell of an increased acreage. About 30,000 more acres of oats are under cultivation than ever before. The acreage of rye is increased by 315 acres, peas by 1,633 acres, barley by 7,816 acres, corn by 1,725 acres, and the area under roots is nearly doubled.

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One is hearing complaints continually of the impurity, less or more, of the grain and flour exported from this side of the Atlantic. Between the trade on the Canadian side of the Chinese custom line and that on the other side these doubtful honors are perhaps evenly divided. We have talked before in these columns of deceptive practices discovered in the shipment of both wheat and barley to Europe and in all cases the exposure has been to the prejudice of the whole trade - saints as well as sinners. It always will be so. If the punishment would fall alone on the heads of the guilty ones the case would not be quite as regrettable, but it never does. An English contemporary, the British Baker, has been making the complaint that maize in considerable quantities has been found mixed with recent arrivals of American flour. The English miller buys flour, not a mixture of flour and maize, and the presence of this adulterant in American flour must certainly create a hurtful impression of the flours that are made in this country. It is foolish business all through. We may think that sometimes it pays to be tricky. We have our own opinion. On the lines we cite there is nothing either clever or paying in the business.

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There can hardly be any doubt that the Dominion Millers' Association will be called upon to protect their members against a system of fraud that is the vogue in certain parts of the Province of Quebec. Millers in Ontario have filled orders from Quebec dealers for given quantities of flour at prices as agreed. After the shipments have reached their destination word is sent to the shipper that the flour cannot be accepted at the price invoiced and some flimsy excuse is given for the action. The shipper is entirely at the mercy of the dealer who practices these tricks. He knows that demurrage charges are quickly played on the waiting cargo. It would never pay to have the shipment recalled. This is known to the consignee, and he takes advantage of the situation, and, metaphorically, with bludgeon in hand, he says, "I will pay you such and such a price or you can keep your flour." These practices have been on the increase lately when flour prices have been on the decline. It will be readily seen at what disadvantage the honest dealer in Quebec is placed. His neighbor becomes possessor of flour which has been purchased, as a result of his dishonesty, at a price that enables him to undersell the other and yet make a profit. The honest man, to meet this form of competition, is obliged to sell at a loss, but sees no encouragement to continue trade on these lines. Here the Ontario miller is struck again. In a word, trade in Quebec is demoralized, and to remove the cause of the demoralization will be the work of the millers when in association assembled.

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A Manitoba paper draws a doleful picture of the losses of grain in that province. A plethora of good things is not always an unmixed success. The crop of 1891 was of a size and kind that sent a thrill of joy through the heart of every Canadian from ocean to ocean. But there has been some bollering before everyone was out of the woods. The amount of ground in the prairie province under cultivation was enormous and the yield per acre something unprecedented. The Manitobians,

however, appear to have bitten off more than they could chew. Says our contemporary: "The management of such a quantity of produce was wholly beyond the means at the disposal of farmers. Help was costly and difficult to obtain; the inferior and undesirable reaping machines in use were continually breaking in the heavy grain and the labor of stacking was exhausting owing to the usual weight of the sheaves, while many farmers had from fifty to a hundred and twenty stacks to build. Before the large harvest was gathered and while many fields were still covered by stubs the winter set in with unusual severity, commencing with a violent storm that battered the stacks full of snow and made the work of threshing difficult if not impossible. The intense cold caused the weak and brittle metal of the threshing machines to give way as if the castings had been made of clay in a brickyard instead of being constructed in a foundry. Thaws, followed by frequent blizzards, made the stacks a sheet of ice, crushed by snow, with the tops only projecting from surrounding drifts. Threshing had finally to be abandoned after enormous quantities of grain had been rendered useless by the ice that became mixed when the sheaves were passing through the machines, and the work of reducing the stacks that should have been done early last fall is going on now on some farms." The attempt to overtake this work has proved ineffectual. Hundreds of thousands of bushels of grain have been so damaged by ice and damp that the whole has become heated and is now useless. The mistake is fortunately one that is not likely to be repeated; and the information that the acreage of wheat sown in Manitoba this year is 40,000 acres less than 1891 is evidence that our friends in the Northwest do not get caught a second time in a blunder. Similar conditions have existed in Dakota and Minnesota. The Market Record, of Minneapolis, says, "There is much disappointment in handling the grain carried over the winter in stacks or otherwise unthreshed. The early threshings came out quite well in quality. The later ones are bad. Elevator people have lost heavily on such grain, until now many will not buy the wet grain at any price. Others buy at low figures. Still with sales here at twenty to fifty cents there must indeed be a low price paid to farmers at points where the freight alone is twenty cents a hundred to ship it here. So much is offered the market is glutted. That is a cause of the extremely low price now." The Jamestown Alert, of North Dakota, says, "It is said that not one farmer in ten has secured a grade of No. 1 hard for wheat threshed this spring, where, had it been threshed last fall, such would not have been the grade. In fact much of the wheat has turned out to be rejected, and occasionally a lot has been heard of that has been graded No. 2 northern, which is a fair milling grade. The disappointment over this condition of affairs has been general. Much of this damaged wheat will be only fit for feed." But after all it is cheering to know that there was the plenty from which these great losses could be taken and yet plenty remain.

## THE POWER OF WATER.

THERE are very many, generally unknown, peculiarities about water as a power-making agency, even to a great many mechanics that are quite efficient in practical hydraulic engineering. The spouting velocity of water is controlled by the same law as falling bodies. As an instance the spouting velocity of water under a 16-foot head is the same as that of a body falling 16-foot, that is, the velocity of the falling body at the end of the 16-foot fall is the same as the initial velocity of the spouting water from under a 16-foot head, both being 32.4 feet per second.

The velocity from under a 64-foot head is 64.8 feet. It strikes the careless thinker as being quite strange that water should have a spouting velocity of 32.4 feet from under a 16-foot head, and why 64.8 feet from under a 64-foot head, and each are apt to jump at the conclusion that as the head increases in height it loses relatively in power. That, however, is very far from being true. A 20-inch water wheel will yield eight times as much power under a 64-foot head as it would under a 16-foot head, but would, of course, use twice as much water. The power developed being always directly as the quantity of water used and the height of the head.

The square root of the multiple of increased height is the multiple of the increased spouting velocity. Thus, as we have seen, the head has been increased from 16 to 64 feet or 4 times, while the spouting velocity was increased 2 times only, 2 being the square root of 4.

The spouting velocities of streams of water issuing from under various heads is as the square roots of the heads; or, in other and plainer terms, velocities increase in exactly the same ratio that the square roots of the heads increase; and a convenient way to ascertain the spouting velocity of any given head is to take the square root of it and multiply it by the constant factor 8.1. As an example we will take a head of 16 feet, the square root of which is 4, which multiplied by 8.1 equals 32.4 feet the velocity of a 16-foot head. Again we have a head of 64 feet, the square root of which is 8, which, multiplied by the constant 8.1, equals 64.8 feet per second, the spouting velocity of a 64-foot head.

Now, if we take a 4-foot head as a basis and call its useful effect one, we are able to construct a simple formula for ascertaining the relative useful effect of any other head. First obtain the spouting velocity of the head as above explained, and divide it by 16.2 which is the spouting velocity of a 4-foot head; then divide the height of the head in feet by four and multiply the two together and the product will be the efficiency as compared with a 4-foot head. As an example take a 16-foot head, the spouting velocity of which is 32.4 feet, which divided by 16.2 equals 2; and 16 divided by 4 equals 4, which multiplied by 2 equals 8. Therefore, the efficiency of the 16-foot head is 8 as compared with one for the 4-foot head. Or again, take a 64-foot head, the spouting velocity of which is 64.8, divided by 16.2 equals 4, and 4 divided into 64 equals 16, which multiplied by 4 equals 64, the efficiency of the 64-foot head being that many times greater than the 4-foot head. It must be understood that the vents are the same in size in their calculations. As the size of the openings are decreased or increased the effectiveness is decreased or increased in proportion.

The result of these calculations are only relative to get at actual results. In any case we must know the actual quantity of water that can be used.

## THE WATEROUS COMPANY.

A REPORTER noticed the Waterous team going to the station last night with two very large pulleys, with two men on the wagon painting them. This rather raised his curiosity, and, on enquiry, he found that this was a shipment of two 82 x 16 inch face grip pulleys, arranged to work on one central driver, fifty inches in diameter, being made for Hunt Brothers, of London, for their electric light plant. The order was received Monday, June 27, and the pulleys shipped last night, making just nine working days, out of which can be counted the holiday of the first of July, when the Waterous people excused to Buffalo. When the mechanism of these pulleys is taken into consideration, it will be seen that this is very fast work. While on this subject, it might be mentioned that the Waterous people have shipped about twenty-five to thirty tons of these pulleys during the month of June, two of the largest shipments being to the Hamilton Electric Light and Power company, and the Kingston Light, Heat and Power company. The new feature of placing two pulleys on a double driver, economizing space, is highly appreciated by the electrical companies, who, as a rule, drive their dynamo from each side of their shaft, and crowd their pulleys as close together as possible. Several prominent electricians have (after a thorough examination) expressed their approval of the Waterous grip pulley, making the statement that they had not previously seen a pulley that they would care to attempt to use, and for that reason had not up to date used grip pulleys. The shipment just made to Hunt Bros. is the fifth to them of grip pulleys, they having some ten or twelve pulleys and couplings in use at their electric light station in London.—Brantford Expositor, July 7.

## PREACHING VS. PRACTICE.

IT is one of the easiest things in the world to make a barrel of high-grade merchantable flour out of 4.10 bushels of wheat—with the mouth or pen. And one of the hardest things to make it with the mill.

## VIEWS AND INTERVIEWS.

Bread  
Made of Blood.

Where next shall we look for the staff of life? Anywhere, we suppose, in Russia. Dr. Makarof has been making experiments in that country with the blood of animals in the manufacture of bread. He made a dough composed of two-and-a-half parts of rye meal and one-and-a-quarter of blood. This he baked, and so produced a very good loaf of bread, which was not only fit to eat, but also contained much more nourishment than ordinary rye or wheat loaves. Dr. Makarof considers that some regulations should be issued to people who slaughter animals, requesting them to collect blood, which has hitherto been wasted, and send it to certain specified centres, where it could be made into bread and distributed to the peasantry in the grain, so that they are obliged to grind it down, and as in most of the districts there has been a great dearth of fuel, the baking of the bread has been a great difficulty, which in some cases has proved insurmountable.

The  
Other Side.

The article of Louis H. Gibson on "Winter-Wheat Flour in Europe," republished in the June MILLER from our new contemporary, Milling, and matter in a similar line, which the same writer has recently contributed to other journals, is vigorously criticised by the Kauffman Milling Co., of St. Louis. They want to know what difference it makes to Mr. Gibson, so long as the European buyer buys his flour from this side of the Atlantic whether he takes spring or winter-wheat flour. "We do not wish to detract from the merit of the spring-wheat flours," writes this concern, "but would respectfully request Mr. Gibson to kindly state (in view of the fact that winter-wheat flours are bringing a higher price to-day in all the principal markets in Europe and America) upon what grounds he bases his statement that he 'does not believe winter wheat generally has ever been milled as well as spring wheat; that the winter-wheat milling has always been behind that of the Northwest, and that winter-wheat flour would have a much higher place in the market if it were milled in the same spirit of enterprise and intelligence. Mr. Gibson does not seem to remember that the spring-wheat flours first got a foothold in the markets of America during a time when a very poor crop of winter wheat, of poor quality, had been raised, and winter-wheat flours were that year of an inferior quality, and now if there is a market in the world where spring-wheat flours to-day are selling higher than winter-wheat flours we do not know it. By consulting the principal markets of Europe we think Mr. Gibson will not find one wherein winter-wheat flours at present are not selling for more money than spring-wheat flours. At least, to the best of our knowledge and belief, this is the fact, and if it is a fact, why should the enterprise and intelligence of the winter-wheat miller in America be placed below that of the spring-wheat miller? This question is asked in all spirit of fairness." And commenting on this letter the Modern Miller adds: "This is a reasonable communication, and the grounds taken are well held. It is a mistake to assume or attempt to school the trade into believing anything but facts in a financial way; therefore it is useless to inform the trade, either domestic or foreign, that winter-wheat flour is poorer or possesses less value than spring-wheat flour. Facts are against such an assumption, and the quotations of to-day, like those of the past, prove this; and likewise make promise of the future."

A Millers'  
Creed.

Why not a millers' creed? The miller is a worshipping animal. At least the miller is a man. That is sure, and we have good authority for saying that man is a worshipping animal. Then why not a millers' creed? One miller, if no other, believes in a millers' creed, and has constructed one after this fashion: "I believe in the Great Creator of heaven and earth, and the Bible, inasmuch as it does not conflict with the True Short System. I believe that flour-making is a business and not a pastime, and that experimenting is the most expensive operation machinery is put to. I believe that cleanliness is next to godliness, and I deny that the 'mills of the gods' were in any respect as good as mine. I believe that the miller who says that he knows all about

the business is a liar, and, in the language of a much-quoted writer, "the truth is not in him." I believe in water power as a feature of economy, but I am not the kind of prohibitionist who waits for rain, hauls water or employs a poor damned excuse instead of steam power. I believe in differentials and corrugations, and I admit that I don't know all about them. I believe it is wrong to spoil good wheat. I believe that wheat has whiskers and wind purifiers are a natural consequence. I believe in milling only good wheat after it has been well cleaned and paid for, as I desire, before making any breaks or purification, to know that the product of my mill is mine own. I believe in making flour that will sell, even though my head miller dislikes the finish, on the theory that the people know what they want and that I am no back number. I am an advocate of electricity that will electrify trade, but am not at all partial to the alternating current system. I believe a barrel of flour can be made from 4.14 of wheat, but I will not agree to recommend it, or promise to tell where the addition to the feed pile came from. I believe that wind is not a good mill power. I believe in reciprocity if I am allowed to arrange my end of the schedule. I don't believe all I hear about the export trade, and I am not spoiling to feed Europe, nor do I give credence to the rash sayings of statisticians. I believe I know a little something about my business, or I wouldn't have any; likewise my competitors are not all fools, or I would be doing all the business, which I ain't by several per cent. I believe in the "survival of the fittest," and I fancy I'm "in it," or I wouldn't be "on the map."

Flour Production  
in Manitoba.

With the large acreage of wheat grown in Manitoba it is to be expected that the people of that province would manufacture their own flour. In Winnipeg is located one of the large mills of W. W. Ogilvie whose fame as an extensive and successful miller is world-wide. In the country districts, however, the want of water power is a serious drawback to manufacturing of any kind and particularly to the production of flour. This is the view of the Pilot Mound Sentinel, which, as a local newspaper, has spoken in very distinct terms on the subject. This is what is said: "Manitoba is not possessed of any water power worthy of the name, manufacturing languishes in consequence and especially is the drawback felt in the production of flour in country places. When settlement was advancing in the eastern provinces, the situation was much better; there was good power, at intervals on every river and stream. A few hundred dollars were sufficient to erect a mill that would grind corn and wheat in a satisfactory manner. At such an establishment farmers had flour and meal made from their own grain, the miller taking one bushel in twelve as toll. In Manitoba the case is very different; flour mills are required in every district and are of such an expensive description that little profit is obtained either by the millers or their customers. The town and districts where the mill is to be erected generally give a bonus of a few thousand dollars, the mill costing, perhaps fifteen or twenty thousand dollars, then there is the cost of insurance, the interest on the money which is usually borrowed, there is attendance, fuel, and sometimes a difficulty in obtaining water, with the outlay for frequent repairs. Grinding in such a mill is of course expensive. If a farmer sells his wheat at fifty cents a bushel, it will take the price of about twelve bushels to buy a barrel of flour. If he pays for grinding the cost is considerable, and the farmer is often dissatisfied with the returns, especially when his wheat has been damaged by frost, although the miller may do the very best he can. The cost of grinding must always be high in a prairie country where there is no water power, and where fuel to produce steam is scarce and dear. Some relief might be obtained by using less expensive mills, and for country work, if wheat is fairly good, millstones would perhaps prove more satisfactory than rolls, as then every customer might have flour from his own grain. In seasons when there is no damage to wheat by frost the business of a miller would be more satisfactory to himself and to his customers than when he has to contend with inferior grain. During the few years when early frost has been so disastrous to grain fields the position of millers in country places has been most undesirable."

Certain  
Business Methods.

Perhaps in the good times to come, when Bulwer Lytton's "Coming Race" will have peopled this earth, or Bellamy's new world has been ushered in, excessive profits and excessive competition may be consigned to the limbo of the past. These two abnormal elements, in the opinion of the Bankers' Magazine, give rise to the various difficulties in production and exchange. The pity is, though the wish may seem chimerical, that we are not able to right these matters now, and not be obliged to wait for another generation, when the remedy will do no good, at least to those of us who are about here at the present time. Conditions are unevenly balanced. Constantly one end of the teeter and again the other is in the ascendant. The see-saw is not guided by any rules of a fair equilibrium. Is the trouble where the Bankers' Magazine places it? Our impression is that this journal has very squarely struck the mark. The reasoning is supported by the logic of a wise political economy and the lessons that one's own observation and experience teach. The journal in question says: "The profits from production and exchange in many cases are so great that those who reap them seek to produce and exchange beyond what may be termed the normal or healthful limits of society. That this remark is true is within the ken of everyone's experience. The modern machinery for forcing business in many directions furnishes abundant proof. The conduct of many producers and exchangers would seem to imply that men no longer had any wants; that production and exchange were not based on mutual interest, but could be affected only by the application of extraordinary energy. This seems to be the underlying idea in much of our modern exchange, and yet, as we have seen, it must be wholly false, or else our leading premise is erroneous. Another explanation for this forcing business is the small profits, which compels producers and exchangers to increase their business in every possible manner in order to get enough to pay their expenditures and save themselves from bankruptcy. We are all familiar with the consequences of attempting to do business when insolvency is pending. All know what extraordinary efforts are often made in order to avert that event. How goods are pledged for future advances; how they are sold at very low prices and often at ruinous loss; how money is borrowed at high rates of interest; in short, all sorts of methods adopted in order to escape such an unwelcome fate; and the result of these things, of course, is most destructive to all legitimate business. Reasonable prices are destroyed, the entire market is demoralized, and, in fine, the whole process of production and exchange thrown out of gear, when the pressure to produce and sell originates from this state of things. And yet, in the past, a great deal of production and exchange has had such an origin; the unlucky are always with us, who, in trying to save themselves, too often draw many others nearer to the danger line than they were before. These, in brief are the leading explanations of the phenomena which we set out to explain. Men seek to produce and exchange beyond any rational desire, either to enhance their profits or to escape ruin. It is either a fight for too much or a fight for life. Probably society suffers more from the operation of the last cause than from the operation of the former; but in either case the suffering is great. Production and exchange should lead to no such results; these processes should yield mutual gains and pleasure. And they would if kept within proper limits. What produces so much loss and misery at the end is the extension of production and exchange beyond these boundaries."

## LOADING GRAIN.

THERE is soon to be a change in the regulations governing the loading of grain on the steamships in the port of Montreal. Steamship men have for a long time been complaining that the regulations in regard to the fitting of the boats for the reception of the grain were too stringent and entailed too much cost on the steamships. They pointed out that the regulations here were much more severe than those enforced at any of the American ports, and asked the Board of Trade to modify the rules. The matter is now under consideration by the Board and the wishes of those concerned are likely in a measure at least to receive consideration.



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BY ARTHUR G. MORTIMER

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J. S. ROBERTSON, Editor.

THE CANADIAN MILLER AND GRAIN TRADE REVIEW caters to the Miller and all his associations, and to the Grain Dealer with all his allied interests.

The only paper of the kind in Canada, containing full and reliable information on all topics touching our interests, and recognized as an organ by any manufacturing company, we will always be found honestly and earnestly endeavoring to promote the interests of our subscribers. Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

MANITOBA GRAIN INSPECTION.

THE steady agitation that the Dominion Millers Association has kept up against the system adopted in the inspection of Manitoba wheat is likely at last to produce a remedy. Our friends in Manitoba have themselves come to recognize the justice of the complaints, and are learning, as has been plainly recognized by the trade in the east, that Manitoba's interests are being injured by the system of inspection in vogue at Port Arthur.

The Winnipeg Commercial, which is to-day fighting the Port Arthur methods with as much vigor as has ever been employed by the CANADIAN MILLER or the Dominion Millers' Association, excuses its inaction until now on the ground that "grumbling from the east is looked for as a matter of course, and has on this account not received as much attention perhaps as should have been given to it." No pleasure was taken by any one in this part of the Dominion in persistently calling attention to this trouble, but it was a case where the evil protruded itself with such remarkable frequency that the grievance was, so to speak, before one all the time. Then it was an evil of an aggravated character and becoming more aggravated all the time. The sufferers were here, and when no effort was made to allay the suffering, where it might be allayed, the only recourse open to those injured was to fight on until victory was attained.

The Commercial gives away the whole charge of what it pleases to call "a chronic disposition on the part of our eastern friends to grumble," when it says, "complaints from the east and from abroad as to the grading of Manitoba wheat have been principally affecting Port Arthur inspection. Now it must be understood that the grain trade of Manitoba has no control whatever over the inspection at Port Arthur, though nothing but Manitoba grades of wheat are inspected at Port Arthur and Fort William. Inspection there is carried out under the rules provided by the Dominion Government, independent of the Manitoba boards of trade." If our contemporary will refer to reports of the meetings of the Dominion Millers' Association, which appeared in the CANADIAN MILLER of August and December, 1891, and April of this year, at each of which this subject was discussed, it will find that the charge of unfair inspection was laid at the door of the Port Arthur inspector and nowhere else.

Two circumstances have no doubt hurried Manitoba action in the matter at the present time. (a) The circular sent out by the Dominion Millers' Association in these words: "It is a notorious fact that nearly all the Manitoba wheat coming forward is much inferior to the standard of the grade at which it is certified. No. 2 and No. 3 especially are in most every case three to eight cents per bushel poorer wheat than are the Government standards of these grades. The loss of from \$20 to \$30 a car is thus sustained by the purchaser. We have so far been unable to get this unjust state of affairs rem-

edied, but would strongly urge you to refuse to buy Manitoba wheat on inspection certificates. Buy by sample only, comparing it with Government standards, which is the only way you will get a fair value for your money. In this way it will not only prevent your being robbed but will probably lead to the inspection being made more satisfactory in the near future." (b) The complaints, to quote the Commercial, from the east, which have been much in excess of previous years, and complaints from New York and other export points as to the grading of Manitoba wheat, "some of which have been of a serious nature."

The reformer who leads in the vanguard of reform is at times likely to be misunderstood. We suppose that the trade in Manitoba may have considered that those in the east were pursuing this matter with unnecessary determination. They are now ready to admit that the importance of the case required it. Using again the language of our Winnipeg contemporary, we can say it is most important "to have the grading of our wheat above the possibility of undue manipulation and reproach. The reputation of the country demands this. The interest of our grain growers and grain dealers demands this. Our grain exporters, who ship upon certificates of inspection, have a right to demand that every possible security be placed about our system of inspection, so that there can be no possibility of tampering with the grades. Their business depends upon this, for if export shipments are below the grades which they are supposed to represent, the effect of this will be felt disastrously upon our exporters in time."

The whole country has too intense an interest in the success of Manitoba wheat to be else than jealous of any element that would prove prejudicial to its character. And the Dominion Millers' Association, in fighting its own battles as against Port Arthur inspection, has also been standing out just as boldly for Manitoba's interests.

Grain men in the east will cordially welcome as a friendly ally the grain men of Winnipeg in the steps they are now taking to "make such representation to the Dominion Government as in their opinion is necessary to place our system of inspection upon a sound and satisfactory basis." And it will be gratifying to them and the trade generally to know that the Government has finally recognized the serious nature of the trouble, and that a bill on the lines suggested by the Dominion Millers' Association is now before the Commons. We do not know just how completely the measure will serve to meet the whole case, but we have reason to expect that the Government will not any longer permit the looseness that has characterized the present system of inspection to prevail any longer.

BANK OPINION.

IT is doubtful if in any other way the financial situation throughout the country is more clearly and correctly focused than by means of the reports and addresses of our leading bankers, which usually come along about this time of the year.

Sir Donald A. Smith, president, and Mr. E. S. Clouston, general manager, of the Bank of Montreal, each delivered instructive addresses at the annual meeting of this bank, recently held. The occasion was the 74th annual meeting of the leading monetary institution of the Dominion. Illustrative not alone of the growth of the business of the bank, but also of the commerce of the country, for the two in this case go hand in hand, the president drew a contrast between the transactions of the bank in its early years, and those of to-day. In 1817 its capital was \$350,000, and as there was no other bank in the country at that time this represented the entire banking capital of Canada, where at present the capital of the banks doing business in Montreal alone is upwards of \$50,000,000. The capital of the Bank of Montreal is now \$12,000,000, with a rest of fifty per cent., or \$6,000,000.

The growth of the commerce of the Dominion during these years, and more particularly the past twenty-five years, is shown in a comparison of the imports and exports of this period, some interesting figures on this line being furnished by Sir Donald. In 1868 the total value of our foreign trade was \$131,027,532. It has not

always maintained an easy level, fluctuating more or less at times. The trade returns, however, for the fiscal year, ending April 30, show an extraordinary development as contrasted with the preceding year, the figures of the export trade being, 1891, \$77,452,314, and 1892, \$88,435,793, and this notwithstanding the McKinley Bill. So with the shipping. The month of May just closed shows an inward tonnage in the port of Montreal of 174,000 tons, against 132,615 tons in '91 and 157,000 tons in '90, or 17,000 tons more than in May, '90, which was the largest previous record. Throughout the entire address President Smith takes a hopeful view of the business situation, believing there are great things ahead for this Dominion.

Hardly running in parallel lines with this view is the opinion expressed by General Manager Clouston, but his remarks are none the less wholesome, even though in contrast with those of the president, decidedly pessimistic. Better times were expected when it was known beyond peradventure that the country had been favored with an exceptionally fine harvest, but Mr. Clouston says "we have experienced as dull, if not a duller, year than those preceding." The explanation of these hard times is attributed to the fact that farmers used what money was realized from the sale of grain for the payment of obligations due the loan associations, implement manufacturers and others. The residue of grain they have held in hopes of higher prices. "If, however," he says, "as it is supposed, there is still a considerable amount of grain in the farmers' hands, we are undoubtedly on a better and more assured basis, and with anything like a good harvest we may reasonably hope for some improvement in the future." Albeit, conditions would have been improved if the farmers had sold their grain earlier in the season instead of holding for higher prices, which have not been, or seem likely to be, realized, whilst the grain is suffering, in the opinion of those competent to judge, a depreciation of fully twenty per cent. from storage and attendant causes.

The deposits of the bank have increased largely during the year. In fact there has been, and is now, no lack of money in the country, but as Mr. Clouston remarks: "Cheap money is not an unmixed good, and is often a sign, as in the present case, of general distrust, and a widespread and far-reaching inactivity in business." The weak side of business in Canada to-day is the hesitancy exhibited, by those who have the money, to invest it in commercial undertakings. The general manager of the Bank of Toronto touched on the same matter in his annual address when he said: "The most conspicuous feature in the financial situation throughout the world has been the continual accumulation of unemployed money, which has been accompanied by a state of heaviness in general business, and an absence of new outlets for capital." And in this country, the Toronto manager goes on to say, this feature has "markedly characterized the business situation."

The one important article of confidence is what is most required to give healthfulness and tone to the commercial situation.

ONE QUARTER OF A CENTURY.

THIS month Canada has celebrated her twenty-fifth anniversary as a united Dominion. It is an experience of human nature that the forebodings of trouble that often take hold of the individual heart are seldom as black as they are first painted. No more can the picture drawn by the enthusiastic optimist be taken as real life. Rocks and quicksands covered the pathway of this young nation as she started on her journey twenty-five years ago - so prognosticated opponents of confederation. A future that could know few storms, made under a sky overcast with sunshine, appeared on the canvas touched with the brush of the over sanguine unionist. Neither picture has been true to nature. The history of these twenty-five years tells of difficulties that had to be overcome; but we are stronger as a nation to-day for having to work for what we have attained. Now we see clearer than ever before the great possibilities of this Dominion, and, pointing towards another twenty-five year milestone, we may, with Sir Donald Smith, "look forward to the fact that Canada shall within the next twenty-five years be a country not only of great importance, but very great importance."



CENTRAL Wheat Buyer Charles B. Watts says: "As a result of our representations re inspection of Manitoba wheat, the Government will investigate the first authentic case. I would strongly urge all millers who are not now buying their wheat on standard basis to start doing so at once, as I am sure there will be a lot of shrunken wheat this harvest which will involve the miller in heavy loss if bought straight basis, and it will cause bitter feeling amongst the local farmers if millers begin taking their light wheat standard basis after only paying them straight for all their heavy."

"One thing," writes Mr. J. Clarke, of Moncton, N.B., "I think the Canadian millers could discuss with more or less profit, in conjunction with English, Scotch and Irish millers, and that is a duty on all flour coming from any country not British, but no duty on wheat going into England from any country. This would give large employment to millers in England and her colonies without increasing the cost of bread to the masses in England, as the competition between the home millers and the millers in the colonies would be sufficient to keep prices down to a proper level. This I believe should be the first stone to lay towards Imperial Federation. You know it to be a fact that there are sufficient mills in Canada and England to supply the flour demand, as the state of milling in Canada requires something to bring it into a healthy business, and that on the whole they do not run half time to-day. I trust the Dominion Millers' Association will take this matter up at its next meeting in your city, and pass resolutions and send copies to British associations across the water. I think 4s. per sack of 280 lbs. would be sufficient. Furthermore, I am firmly of the opinion that English millers will meet our millers with prompt action."

President Hugh Baird, of the Toronto Board of Trade, does not often forsake, to quote our evening contemporary, The Telegram, "his usual unruffled mien"; but on 'Change a few days ago he let himself loose in expressions of protest at the manner in which Ontario breadstuffs were being decried abroad because of the dirty condition of the grain when shipped from here. He declared that a halt must be called. "I am no alarmist," he said, "when I tell you that this is about one of the most serious problems that the farmers of this country ever had to face. We are being discredited at home and abroad by sending dirty grain on to the open market of the world, and this must be stopped at once. Of course, apart from this, the trade will be ruined by the refusal of British importers to take Canada wheat altogether, but what with the infection of smut and the indifferent inspection the exporters on this side have already to suffer a surcharge of from 2s. to 3s. a quarter. This can and must be stopped if the farmers will only take the trouble to clean their seedling before sowing it. I am told that a solution of blue vitriol will effect all that is necessary. But, anyhow, I intend to take immediate action in connection with all the leading commercial bodies of the country."

The Collingwood Board of Trade has passed a resolution commending the efforts being put forth by the promoters of the Ontario Ship Railway. Rochester business men are aroused on the subject, believing that the carrying out of the scheme would be a great boon to that city. President Max Brickner, of the Rochester Chamber of Commerce, in an interview says: "If the working of such a railway can be made a practical success, this particular route would be of inestimable value to the business interests of Rochester as well as of Toronto. It would shorten the distance from this city to the great lakes about 600 miles on the round trip. This would be a great saving of time and money in the

handling of such an immense tonnage as would be offered for carriage. It would make Rochester one of the most important lake ports in the country and that would mean a large increase of our population and an impetus to all business enterprises can readily be seen." It had been the intention of Mr. David Blain, the chief promoter of the scheme, to have visited England with the purpose of raising the necessary capital to carry on the work, but in a conversation I had with him a few weeks ago, he had, in the meantime, abandoned this idea, believing that sufficient interest was being manifested in the States to secure the money there. It was his intention to interview leading New York bankers on the question.

A travelling man for a large mill furnishing firm has come to the conclusion that "millers, like other men, have their superstitions, no more or less." "And strange to say," in his experience, "the millers' fear of the occult influences is more identified with the omens and prognostics of that day of the week called Friday than any other single thing connecting the understandable with the supernatural; yet the average miller indulges in about all the weird dictates that flesh is heir to." The following story told by this travelling man, to illustrate what he has already said, is narrated in the columns of our contemporary, the St. Louis Miller. Engaged to construct a certain mill, "we happened to arrive in the place," he said, "Thursday night, and next morning, Friday, I showed up at the mill early. The mill was a contract job and under a forfeit of \$20 a day was to be done at a certain date, which had then transpired five days previous. I was ordered to the place by telegraph to 'make quick time—not to lose an hour in getting her under way,' and of course when I arrived I had a move on me. I hunted up the proprietor and introduced myself, at the same time requesting the presence of the boss millwright in the office. He came in at once, and I asked: 'Is she all ready to go?' 'She is,' replied he, 'ready since yesterday noon. My men are all ready to pack up and are remaining subject to your orders in case you want to make any changes.' 'Tell the engineer to get up steam,' I replied. 'Hold, McDuff,' said the proprietor, 'this is Friday, and if the court knows herself you don't start my mill up on Friday.' 'How about the forfeit?' I asked. 'The devil take the forfeit, it stopped yesterday. 'How about my expenses and the cost of keeping the millwright crew here?' 'How much is it?' he asked. 'About \$60.' 'All right,' said the proprietor, 'I wouldn't have this mill started on Friday for five times \$60.' We all adjourned to the Y.M.C.A. rooms (?) and spent the day, and started her up Saturday with a whoop loud enough to produce a shower had rain-making been fashionable at that time. At another time I had everything ready for a next day start, the next day happening to be Friday. It was six o'clock and our crew were all leaving the mill with the understanding that a start was to be made 'in the morning.' The proprietor called me to one side and said: 'Take just what men you require to start and I will give you all \$5 apiece to make me a barrel of flour before twelve o'clock to-night.' We did it. It cost him \$50, which he paid cheerfully, and said: 'I would have given \$100 rather than have started to making flour on Friday.' Again, once on Thursday evening we had a mill ready to go, but the next morning the proprietor, who always locked and unlocked the mill for the crew to come and go, sent down word to the mill that on account of sickness in the family all work would be suspended at the mill for the day at his expense. That evening I got an invitation from him to attend a social hop with him and his wife. And notwithstanding the fact that I was paralyzed with surprise, I went. On asking about the sudden recovery of the sick that permitted their attendance at the frolic, the wife said: 'Oh, it was only the family dog that was ailing. And then, you know, Mr. Blank didn't want the mill started up on Friday.'

Spending a brief holiday a few weeks since in the Royal City of Guelph, I took advantage of the occasion to visit the Ontario Agricultural College, situated, as my readers no doubt know, about two miles out of Guelph. It so happened that I reached there on closing day and at the hour when the large gymnasium hall, recently

erected, was filled with townfolks and visitors who had been attracted thither by the closing exercises of the college. The proceedings were presided over by the principal, Professor Mills, and associated with him on the platform were the newly-appointed Lieut.-Governor, Hon. G. A. Kirpatrick, Hon. John Dryden, Minister of Agriculture, and many local celebrities. I think that with everyone there is a certain indescribable charm in attending the commencement exercises of a college. If one is young there is an inspiration in the presentation of medals and diplomas that sends the blood coursing through the youthful veins, for which one feels the better, even though an academic training may be something that has for some untold reason passed 'om one's grasp. If the years are growing on us we are apt to think of those of our own flesh and blood to whom we are striving to give an education in special and liberal lines; or the memory takes us back to the days of our own Alma Mater with their many and diversified associations. We are taken out of the rut and humdrum of everyday life, and life is the sweeter when its monotony is broken even for a brief spell. How true it is that the sins of the fathers are visited upon the children of the third and fourth generation, and, conversely, it is a fact, verified by observation and experience, that the better qualities of manhood and womanhood are impressed on those who follow after us in coming generations. I thought of this as I looked on the boyish face of J. A. S. Burns, of Halifax, N.S., who delivered the valedictory address. He was introduced as the son of the Rev. Dr. Burns, the well-known Presbyterian minister of the Maritime Provinces, and a grandson of Rev. Dr. Burns, at one time minister in Knox Church, Toronto, and for years one of the best-known faces on the streets of this city. We talk of heredity; in facial expression, carriage, manner, method, there stood the senior Dr. Burns in that boy. The boy was talking agriculture and not theology; but where else was the difference? Whether the grain we grow will tank as high grade or low grade, depends primarily on the seed that is sown. The flour we mill rests on the quality of wheat that reaches the rolls. The boys we raise depend on the fathers and the grandfathers who have gone before them. I have not donned the preacher's robes because perchance I am talking of a preacher's boy, but the thoughts are suggestive. They are not even foreign to the business of grain growing or flour milling. Principal Mills in his remarks told of the number of excursionists that had reached the farm during the month, from 300 to 3,000 in one day. Hon. John Dryden, a man whom honors do not spoil, one of the most practical and intelligent farmers in the province, gave sound advice to the young men who were that day leaving the college halls with diplomas in their hands. They should be close observers and constant readers of all that pertained to their work. They should not think that agriculture was all science; it was an art as well as a science, and the young men should apply the knowledge they had obtained in a practical manner. He advised them not to be ashamed of their business; it was as noble a calling as any, requiring the greatest amount of intelligence. Our Lieut.-Governor showed that he had kept himself in touch with the important interests of agriculture. It was now the chief industry of the province. He complimented the province on possessing an institution of the character of the Ontario Agricultural College, and told how Denmark, which had about the same population as Ontario, had, under the fostering care of its Government, so improved their butter-making that they sent to Britain last year \$18,000,000 worth of that product. I have no space to tell of the pleasant hour spent in rambling through the grounds of the farm. The country around looked grand, and if no setback is encountered, one can believe, with the report of R. G. Dunn & Co., that the wheat yield will not unlikely approximate the unprecedented crop of 1891.

C. A. Pillsbury, the big Minneapolis miller, says: "I have never sold a bushel of wheat short in my life. This has certainly not depressed the market. I have been called a gambler, and if my selling what I actually own is gambling, then I am a gambler. I believe I have done more to keep up prices for the farmer than any other man."



## CLOTH AND FLOUR.

BY R. JAMES ABERNETHY.

**T**HERE seem to be some very feeble notions extant in relation to the effect that the bolting-cloth may have on the rising qualities, otherwise the strength, of the flour. Some imagine that, if the cloth is too fine, the flour will be void of strength, will not rise well, and therefore will not make good bread. A little calm reflection ought to convince every thinking man that the cloth itself can have no influence in the matter. It can neither add to or take from the flour any of its natural constituents. Cloth simply separates the flour from the offal and divides the coarse and the fine. Whatever quantity of flour there may happen to be in a mass of chop material, that is fine enough to pass through No. 16 cloth, will be separated from the mass by the use of that grade of cloth, but does any one suppose for a moment that the mere operation of separating the fine from the coarse will rob it of any of its baking or other natural characteristics? Assuredly not. Cloth is simply an agent used in separating, and can have no possible effect either in favor of or against the flour, and all persons interested may feel easy on that point.

There was a time when it was thought and frequently said, and undoubtedly believed by many millers, that flour could be irretrievably injured by grinding. But that was when low and very fast grinding with buhrs was the fashion. It was thought that chemical changes, caused by the frictional heat, sometimes took place during the process of grinding, which injured the flour. The fact was never indisputably established, and whether it was true or not does not now matter, as the method of grinding and the supposed resulting injury have both passed away, and we are no longer interested in that part of the subject, further than to add that the recollections of the past may have something to do with the present idea among some, that the cloth has an influence in determining the natural condition of the flour, it being formerly supposed that the flour ground too fine was the most injured, which was undoubtedly true, if there were any changes on account of the engendered heat, as the closer the grinding the greater the heat, other things being equal. Close grinding required fine cloth, and now some retain the idea that, if fine cloth is used, injury may result.

It is true, buhrs are still used for grinding wheat in making flour, but not as formerly. Much less is ground in a given time, and the grinding is higher, so that there is no longer any danger of "killing" the flour by grinding. There is, of course, not the slightest danger of any such injury with the rolls, as the product is merely touched by them and no time is given for dangerous heating. It is not so much as to how fine or how coarse flour may be that millers must consider, but rather its evenness. We adapt cloth to the grinding, and if the intention is to make coarse granular flour, then we must use cloth coarse enough for the purpose. On the contrary, if fine flour is the object, then we must use fine bolting-cloth; but in neither case has the cloth any effect other than to perform its function. There is a medium that may be regarded a fair standard, and that is to have the finishing-cloth in a system of bolting about No. xx14. The trouble in having finishing-cloth very much coarser than that is the difficulty experienced in clearing the flour. It is likely, in fact almost sure, to be specky, a condition that decreases its commercial value although its bread-making qualities may not be impaired. If much finer cloth is used for finishing, then the grinding must be lower to suit, and there is a greater liability to unevenness in the flour, part being coarse and part quite fine, which does not work well, especially among domestic bakers.

Coarse flour needs more manipulating than fine, and when the two are together, the inexperienced baker, that is the domestic baker, is liable to have "runny" dough and bad bread, no matter how naturally good the flour may be. If irregular flour is sufficiently kneaded, not much trouble is experienced by baker of any kind, domestic or otherwise, but if not, the above indicated fault may as a rule be expected. And therein lies the trouble. The domestic bakers, as a class, do not like to knead dough very long, there being too much work about it, and then sticking—a mixture of very fine coarse flour—are most sure not to knead it enough to get the best

results, and therefore make trouble for themselves and the makers of the flour, if in reach of said bakers. In view of the foregoing facts the miller will need to ask no questions nor borrow any trouble about fine cloths injuring flour, or expect that coarse cloth will make it any better. They should all aim to make it as nearly even as possible by adopting a standard about as here indicated. There is but little doubt that a straight flour dressed through extra heavy 13 and 14 cloth will come about as near meeting all requirements as any other standard that can be adopted. Coarse flour will be objected to because of specks, and fine because some will think there is not body enough.

## REMOVING FUZZ FROM WHEAT BERRY.

BY H. E. LITTLE.

**A**N old shoemaker once said: "Show me an old shoe and I will tell you something of the character of the wearer." This person had, undoubtedly, as he pegged, sewed, and twisted the tiny ends of the bristles on the well-waxed thread, been somewhat of a student of nature, and especially of humanity. The old shoes as they came to him to be repaired were indeed instructive object lessons. They presented many shapes and forms: some worn in one place and some in another; some with the heels turned in and some out. This diversity of effect must have had a corresponding diversity of cause, thought the cobbler, and he asserted that he found the causes in the different characters in the neighborhood.

The thoughtful, observing miller of to-day can, I think, with security say: "Show me the quality of wheat and the cleanliness thereof and I can determine the quality of the flour produced." The wheat in its natural condition, however good may be its quality and however thoroughly all foreign matter may have been eliminated, needs to be improved before it can be accepted as fit for reduction into flour. This has much to do with good yield and high quality of the flour made. Since the advent of rolls, purifiers and other machines that have tended to improve the quality of the flour, the first principle of good milling has in some degree languished, but at present this condition exhibits signs of improvement and millers are beginning to recognize the importance of having clean wheat. The extraction of cockle, cheat, rye and other matter that tends to depreciate the quality of the wheat is no more necessary than that the article should be thoroughly scoured and have all the extraneous fuz and adhering dirt removed as nearly as possible. In proportion as this is thoroughly done so will the break flour appreciate. One has but to subject a grain of wheat to a test under a magnifying glass and it will be seen that it is as fuzzy as the upper lip of a sixteen-year-old lad. This condition usually remains the same after the wheat has passed through so-called cleaning machines, and how imperfectly the cleaning is done millers generally can attest.

That this extraneous matter will discolor flour cannot be denied. One has but to put a handful of wheat that has been prepared for grinding, on a clean, white cloth, and put water enough on it to thoroughly moisten it and then double the cloth around the wheat and rub briskly between the hands. After about two minutes of rubbing you will find that the white cloth has become very much discolored. Or, place the same amount of wheat in a small vessel with clean water and stir for a few minutes. Take out the wheat, strain the water through a very fine cloth to remove all fine specks. Then take some flour on a testing board and insert in the water, and if you are not very much surprised it is because you have a very good cleaning outfit. This extraneous matter can be removed, and will be, as the next step in advanced milling. There is no reason why the flour from the break rolls should not be as white as the flour from the sizing rolls, and if this can be accomplished the results will be much more satisfactory than they are at present.

The old design of scourers has been much improved. The upright machines are giving way to the horizontal ones, for most of the manufacturers of the uprights are making the horizontal ones. I believe that the horizontal machine will be the machine of the future. Some object to the horizontal machine because it runs a little harder than the upright; but, considering the efficient work and that it is easier and cheaper to connect to the

mill and that swiftly revolving upright shafts are avoided, as are also the quarter-twist belts to which operative millers strongly object, the horizontal machine has decided advantages; and then, too, the power required to run it is proof of the work it is doing.

I was once in a mill where there was a horizontal machine, the first one I ever saw, and this machine was continually giving trouble. It would choke and the belt would come off. Of course this was very exasperating to the operator. One day the machine was giving more trouble than usual. The head miller's attention was called to the state of affairs, and after several attempts by that dignitary to make the thing go, and a few uncomplimentary remarks about the machines and the maker thereof, the millwright was called and the wheat spouted around it and the belt thrown off. In this condition did it remain until another man took charge of the mill and put in an upright machine. Subsequent events and experience has led me to the opinion that that was a much-abused machine. In the first place, I believe, the machine was put in without any regard to the capacity of the mill and the belt had not sufficient power to drive. These two conditions alone are enough to blast the reputation of the best machines.

No reason exists why the break flour should not be as white as that from the sizing rolls, as I said before, and it would be if the wheat was thoroughly cleaned; but this will not be accomplished by the present modus operandi, and there must be a radical change, and when this change takes place one-half of the machinery that is in the mills to-day will not be necessary. The future course of the miller will be to put his wheat in condition so that it can be milled at small expense and with as little loss as possible. He will not accept the wheat in its natural condition, and put in machinery to overcome that condition after it has thoroughly impregnated the whole mill. The expense of putting in a proper cleaning plant would not be so great as at present with the unnecessary amount of machinery now used, if the first condition of the wheat was improved. Nor would the cost of keeping in repair a proper cleaning plant equal the expense in adding new machinery to overcome conditions attributable to unclean wheat. That the outside coating and fuz on the berry exists is a fact, and if it is allowed to get into the break flour it will greatly depreciate it. The only remedy is to absolutely remove it before it comes in contact with the break rolls. The advocates of sieve scalpers assert that that machine will prevent this, or much of it, from getting mixed with the break flour, and they undoubtedly do; but they cannot prevent the action of the rolls from doing so. So the only proper method is to remove this hurtful matter before it reaches the stage where its removal is impossible. This fact will not long remain a secondary consideration. The mill builder who recognizes it and will furnish a thorough cleaning plant, thereby making the manufacture of clean flour possible at a small outlay, will get the trade.—American Miller.

## THE USE OF CORN IN GERMANY.

**T**HE Indian corn crusade in Germany, as it has been termed by our American friends, is making considerable headway. Thirteen new mills have been put in operation for grinding corn, and the demand for the product is so great that some of them have been working night and day. In Dresden, where two corn mills are in operation, more than half the bakers are selling maize rye bread, composed of one part maize and two parts rye, in which the taste of the maize is not perceived. Even the two mills in the latter city, one of them T. Bienert's, the largest rye mill in Germany, are baking and selling large quantities of this bread, and the old government garrison bakery is turning out thousands of loaves daily. The Government is now putting in a corn milling plant in their large mill at Modgeburg, and a government report on the value of corn as food will soon be published.

## BE TRUE.

**T**O the head miller: Do not on any account trifle with the confidence of your men by any species of misrepresentation or falsehood. One act of this sort begets others, invites imitation, and poisons that mutual trust which is the very life of business relations.

# TO THE MILLERS OF CANADA :

This is WM. & J. G. GREEY'S page. You will know that by the tint, and while we are talking of tints, the tint of this page is typical. It signifies perfection, the "PINK OF PERFECTION," and that is what our machinery is. You only need to try it once to discover its merits. We make it a point to have all the latest ideas and improvements, and embody them in our machines. That is, as soon as we know them to be improvements. We do not believe in sending out untried or unproved machinery to vex our customers and cause them loss of time and trade.

In the line of proved machines the "**LITTLE WONDER**" Reel is away ahead of any Dresser for flour or for scalping or grading that has ever been put on the market. If you have any point in your mill that the separations or dress do not come up to your ideas, we will undertake to place a Little Wonder at that point on its merits. It never fails to satisfy the most critical and exacting miller, and will satisfy you if you will try it.

Now about Rolls. Yes, we do cast our own Rolls, and we will say this that we are making a Roll that is **UNEQUALLED** by any in the world. Why not? We have the **Best Material**, the **Knowledge** and the **Plant**, and what more is required? We have had our make of rolls submitted to the most severe tests as to hardness, toughness and uniformity of surface, and we know they are right, and guarantee them to be **THE BEST**.

Among some of the users of our make of Rolls are the following prominent millers, from any of whom you can get direct testimony as to their superiority:—W. W. Ogilvie, Montreal; Jas. Norris, St. Catharines; John Campbell, St. Thomas; J. D. Saunby, London; T. H. Taylor & Co., Chatham; Thos. McKay, Ottawa; H. A. Mulhern, Peterboro.

Then as to Adjustments for Grinding, why our new frame is superb, and the feeder, it will make you smile to see it work even on the most troublesome stocks. It will feed anything down to bran or flour as even as this sheet of paper. A true and perfect roll is absolutely essential and why not a true and perfect feed? We make both.

Do we make the latest improvements in Purifiers and Scalpers? Yes, we have the **GERARD AIR BELT ATTACHMENT** for the old style sieve purifiers, and we can assure you that more and better work can be done on fine ungraded stock on one good Sieve Purifier with this attachment than on any other. We also have the best regular air belt machine built. Write for particulars and circular about it.

Next month we intend to tell you something about our small mill plants and how to get the best value for your money; also something about cleaning machinery, bran dusters, mill supplies, etc. So look out for the "pink page" again, and meantime write us for anything in Flour Mill Machinery and Supplies, and a catalogue if you have not got one already.

**WM. & J. G. GREEY** 2 CHURCH STREET  
TORONTO, ONTARIO

# SUPERIOR CHILLED IRON ROLLS

Fifty per cent. Harder than the Hardest Imported

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**ABSOLUTELY WITHOUT A FLAW** We will replace free any of our Rolls in which a single flaw the size of a pin point can be discovered . . . . .

## ALL STEEL JOURNALS

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The discovery of a new process whereby the manufacture of Chilled Iron Rolls is governed at will, enables us to make Rolls of ANY DESIRED HARDNESS, and, at the same time, VERY TOUGH—results never accomplished hitherto. . . . .



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GERARD'S IMPROVEMENT



## Dustless Air Belt Sieve Purifiers

Perfect Separation

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Upward Air Suction through Sieve  
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**NO DUST**

No Dust Collector or Blow Room Required

NO AIR BLOWN INTO OR DRAWN FROM MILL

NO CLOGGING OF CLOTH

... SIMPLICITY COMBINED WITH EFFICIENCY ...

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CANADA.

JOHN JOHNS & SON, millers, London, Ont., have assigned. The Pacific coast will produce a good wheat crop this year. The stone for the grist mill at Wapella, Assa, is all on the ground. SEVERAL new elevators are to be erected in the ancient city of Quebec. WOLFLEY MILLING CO., grist mill, Walsley, N.W.T., are applying for incorporation. HENRY WALTER is promoting a 100 barrel flour mill at New Westminster, B.C. SHAW & DOUGLAS'S grist mill, Halville, Ont., destroyed by fire; no insurance. A BONUS of \$4,500 has been granted for the erection of a flour mill at Killarney, Man. THE farmers are talking of putting up an elevator or mill this summer at Alexander, Man. CORSON BROS., of Miami, Man., claim to have erected the first mill in that province this year. W. B. McALLISTER, of Pembroke, Ont., is about to erect an elevator of 200,000 bus. capacity. SIXTY thousand dollars of stock has been subscribed for the new grain elevator at Kingston, Ont. WHEELER & BROS.' mill at Cataract, Ont., was totally destroyed by fire. Insurance \$20,000. THE high water has been causing inconvenience to those using Lake of the Woods water power. A FIFTY thousand bushel elevator is to be built by the Patrons of Industry at Boussevain, Man. THE by law to raise \$5,000 for a flour mill at Hartney, Man., was defeated by a small majority. B. FRASER is contemplating enlargements to the present capacity of his flour mill at Morden, Man. THE flour mill of Wm. Moore & Sons, Meaford, Ont., furnishes the power that supplies the town with electric light. THE new mill being built at Portage la Prairie, Man., by the Lake of the Woods Milling Co. is nearing completion. WORK has commenced on Bateman and Chapman's elevator, Hartney, Man., which will have a capacity of 30,000 bushels. STRALS of fall wheat five feet five inches are reported from Stanley, Ont. This class of items, like the egg stones, have their season. THE Board of Trade, of St. John, N.B., will ask the Government to erect a grain elevator at St. John, the terminus of the Intercolonial. SAMUEL MANN, of Smithville, Ont., proposes erecting an extensive grain elevator. Mr. Mann is shipping large quantities of oats to Montreal. ARMSTRONG'S grain warehouse, Oak River, Man., fell down recently, with 1,200 bushels of wheat. The warehouse is pretty badly wrecked. DURING the past three months Messrs. Pickford & Black, of Halifax, N.S., have earned over 12,000 barrels of Canadian flour to the West Indies. AN incident fire occurred at the Goldie mills, Guelph, Ont., a few weeks ago. Owing to their excellent facilities of fire protection it was quickly got under control. THERE is a grain blockade at Montreal, resulting from the absence of demand from England, where the people are too excited over the elections to attend to business. VIVOND & CO., who have just commenced a direct line of steamers between Montreal and Jamaica, report the space on the outward trip of the first steamer as already engaged. THE flour mill owned by Mr. Muir, of Shoal Lake, Man., will, it is said, be removed to Gladstone, providing a bonus is granted. Shoal Lake gave a bonus of \$5,000 a year ago. THE McKay Milling Co., at the Chaudiere, Ottawa, Ont., are increasing their capacity from 300 to 500 barrels per day and fitting up the mill with new and improved machinery. THE last Manitoba crop bulletin complains of the presence of weeds of the noxious variety in many parts of the country. The most serious cases are in the east, in older settled districts. It negotiations for the erection of a large cleaning, handling and storage elevator at Winnipeg, Man., are successfully carried through the Canadian Pacific Railway will give the site free.

LIFE & WALTER, Doshwood, Ont. We could not do with of the CANADIAN MILLER. We see loads of good things in it. SAMUEL COLE, a Canadian miller working in the Pillsbury mill, Minneapolis, Minn., has been compelled to give up stone dressing owing to his wrist becoming lame from handling the peck. JOSEPH WOODRUFF, of Kingston, Ont., has left for Killarney, Manitoba, where he will build a flour mill with a seventy five barrel capacity. He has been granted a bonus to establish the mill. THE firm of Campbell & Stevens, millers and grain dealers, Chatham, Ont., has dissolved; H. H. Stevens retains the control of the business, to whom all the accounts due the late firm shall be payable. THE North American Mill Building Company, of Stratford, Ont., are refitting the flour mill of Mr. J. R. DeLoe, at Napanee, Ont., putting it in most thorough condition, including full roller process machinery. THE steam barge Mary H. Boyes, from Chicago, unloaded 45,000 bushels of corn, the schooner Hurt 28,501 bushels of oats, and the schooner L. B. Maxwell 25,000 bushels of corn at Midland, Ont., a week ago. W. W. WATSON, grain dealer, Winnipeg, Man., returned recently from a trip as far west as Virden. He reports the country as looking splendid. Plenty of threshers were at work between Winnipeg and Brandon. "WITH wheat at seventy five cents a bushel, the price of bread and other products keeps up pretty well. I had to pay eighty cents per hundred for bran," said a London man in the hearing of a Free Press reporter the other day. N. BAWLE, grain dealer, Winnipeg, Man., is erecting a fine block on his Princess Street property, the buildings upon which were recently burned. The Board of Trade and grain exchange will occupy handsome quarters in the proposed building. W. L. GRIFFITH, proprietor of the elevator at Emerson, Man., went to England during the early spring to make arrangements for direct exportation from his elevator to England. In this he was successful and is now making direct shipments on his own account. THE Laoga wheat growing on the side hill facing the south at the Brandon experimental farm, has a head already formed within the stalk, and Mr. Bedford, the superintendent, expects that it will head out early in July. This will be about as early as this variety headed last year. J. S. LARKE, commissioner of manufacturing exhibits from Canada at the World's Fair, has had an interview with the Executive Committee of the Dominion Millers' Association, who appointed a committee to consider the best means of securing a fair representation of flour, etc. TELEGRAMS have been received by the Department of Agriculture, at Winnipeg, Man., from Mr. McMillan, national Government agent at Liverpool, stating that Manitoba Red Eye wheat was awarded the championship gold medal at the International Millers' Exhibition, London, Eng. ALFRED BROWN, an employee of the Waterous engine works, Brantford, Ont., was almost instantly killed on the 7th inst. A belt slipped off and carried him up against the shafting, crushing his head so badly that he died in a few minutes. He was one of the foremen, and leaves a wife and three children. ROSS, HALL & BROWN, of Rat Portage, Ont., have put in a 500-horse power water wheel at their water power at Norman. Several inquiries have been received for power, which have led to this being done and arrangements have been made so that other large wheels can be put on as required. They expect at an early date to organize a stock company to erect a large flour mill on the property. HAY BROS., flouring mill, Listowel, Ont., was totally destroyed by fire on June 28; also the elevator which contained about 20,000 bushels of grain besides a large amount of flour in the elevator and mill ready for shipment. The fire was the work of an incendiary, the mill being fired in four places. Total loss on building and machinery, \$20,000; insurance, \$12,000. Total loss on stock, \$18,000; insurance, \$15,000. Regina Leader: "The excellence of the wheat raised on our prairies has been many times demonstrated, but fresh testimony has just come into our hands which will be read by settlers in Assiniboia with interest and gratification. Some time ago the business men of North Dakota, realizing the importance of having first-class seed, made a careful enquiry in order to find what part of the North American continent was capable of raising the most perfect seed wheat, the qualifications being a large percentage of gluten, freedom from rust, smut, weevil or any other disease that is liable to in Dakota, and that it be hardy and prolific. The wheat selected as the one pre-eminently possessing all those qualities was Assiniboia wheat.

THE Merchants line, consisting of the vessels Mignons and Arcolia, has been established on the lakes. The vessels are in the Canadian trade between Port Arthur and Montreal, but will visit Superior for export flour as soon as negotiations are finished. The vessels are of capacity to take 1,250 tons to Montreal without breaking bulk. It is hoped to get a fifteen cent rate to Montreal on flour and if this is secured there may be a decided boom in flour shipments through the Welland canal and Montreal. About a year ago F. J. Cole, of this city, contracted with Williams & Co., of Winnipeg, for the purchase of 5,000 bushels of No. 2 oats, delivery to be prompt. When the consignment was made, however, it was about a month late and lacked the inspector's certificate. On these grounds Cole refused to take the oats. After a long pending dispute the matter was submitted to arbitration. The arbitrators have just made their award, which is that Williams & Co. are not only not entitled to recovery from Cole, but that they must pay the costs, some \$47, besides. THE farmers and citizens of Portage la Prairie, Man., and vicinity have taken the preliminary steps to organize a cooperative milling company. It was reported that some 440 shares of \$25 each had been taken up and fifty more shares will be all that is required to be disposed of. The meeting elected the following as a board of directors who afterwards elected their own officers: Thomas Sissons, president; Thomas McCall, secretary; William Fulton, Colin McKay, Charles Cuthbert and Charles Green. It is proposed to erect a 100 barrel mill here. An effort will be made to unite with the Farmers' Elevator Co. GENERAL. H. M. PHILLIPS, grain merchant, London, Eng., has been declared a bankrupt. Liabilities \$415,810; assets \$73,985. SEVEN thousand acres of grain near Merced, California, were burned the other day, the loss being estimated at \$100,000. DURING the first six months of this year there were forty six flour mills of various sizes reported built in the Southern States. THE water power owner who closed his mill and put up the sign "DAM BEY, MILL CLOSED," has changed sign to read "DAM WEL, MILL CLOSED." WHILE the Anti-Opium Bill was under discussion Mr. Castle, of Minnesota, said he thought the bill should be entitled, "A bill to depress the value of all products raised by the farmers." JOHN F. SUSAN, whose hasty blow ended the life of Chris. Beblmeyer, a fellow employee in Dow & Sons' mill at Madison, Wis., pleaded guilty to manslaughter in the fourth degree and was sentenced to two years in the state prison at hard labor, with one day in each two months solitary confinement. WINDMILLS are of great antiquity, and are stated to be of Roman or Saracen invention. They are said to have been originally introduced into Europe by the Knights of St. John, who took the hint from what they had seen in the crusades. Windmills were first known in Spain, France and Germany in 1290. A BREAK in the shape of an ear of corn has been found in Georgia. The ear is like most ears of corn in length and size, but at the butt end there are six other little ears, resembling human fingers, giving the appearance of an ear of corn grasped in the hand of a man. The small ears are from two to six inches long. R. P. HUTCHINSON, commonly known to the grain trade as "Old Hutch," and who now deals in New York, has of late been devoting considerable of his attention to a restaurant which he has bought in that city. He proposes to institute radical changes in restaurant methods and prices, and his venture is being watched with interest. THE London (Eng.) correspondent of the Northwestern Miller writes: "American flour in London and Liverpool continues plentiful and by no means active of sale, in spite of the comparatively low prices, both of patents and bakers' grades. One result of the cheapness of American patents, however, is the almost entire exclusion of Hungarian flours, which are far too dear comparatively, and which meet so little demand for export that Budapest millers have for some time been working short hours." IN Great Britain there is an important movement of flouring mills from interior points to seaport points. The enormous railway freight charges makes it impossible for interior millers to bear the expense of moving imported wheat from the ports to their mills. By moving to the coast towns they avoid the expense of carrying the grain by rail, and that saving will carry the flour from the mills to the consumers. The English rail ways charge as much for moving a bushel of wheat 100 or 200 miles as it costs to move it from Duluth to Liverpool.



The particular purpose of this department is to create an increased market for Canadian mill products—flour, oatmeal, cornmeal, rolled oats, pea barley, house meal, split peas, etc.—at home and abroad. The interests of the miller who grinds the grain will have thoughtful consideration. Any matter that is likely to lead to an improvement of conditions in the local market of any of the various provinces of the Dominion will be carefully considered in this department. A close study will be made of the foreign markets with the aim of further developing the Canadian export trade. The Bulletin each month covers very effectively the field of flour handlers and buyers of mill products, not only within the borders of the Canadian Confederation, but in West India, the West Indies, Great Britain and other European centres. This department will be made valuable to them in discussions of the conditions of the market in this country, reliable market data, the manufacture of mill products, methods of transportation and shipping intelligence in its bearings and relationship to the milling industry. We receive a correspondence from millers, shippers and buyers on any matter involving these important questions.

#### MILLERS AND RAILROAD RATES.

THE Dominion Millers' Association, when in convention next month, might find a profitable subject for discussion, and action, in the methods of shipment and the uncertain character of freight rates charged by our railroads on grain and flour shipped over their respective roads. We cannot illustrate our meaning better than to cite a case that came under our notice within the past month. A miller doing business a short distance east of Toronto bought Manitoba wheat shipped from Port Arthur and paid for freight at the rate of nine cents per bushel. He learned that had the same wheat been billed to Montreal for export, carried at least two hundred miles further east, the rate would have been only six cents; on the other hand the miller whose abode should happen to be west of Toronto, perhaps London, would be charged at the rate of eight cents per bushel. Here are three different rates prevailing for carrying the same class of merchandise over the one road with the remarkable contradiction of ordinary business rules, that the greater the labor the less the cost. By what system of business metaphysics this basis is reached is beyond the ken of ordinary mortals. Some years ago, when millers were making a profit of forty and fifty cents on a barrel of flour, they would hardly trouble about a matter of two or three cents freight charges, indulging in nothing worse than an inward laugh at the absurdities of railroad methods, but in this day when the closest economy and prudent management is needed to work out a profit of any kind cents are cents, and even the railroads have to be watched.

The difference of three cents per bushel on wheat is large enough under present circumstances to operate measurably against the export trade in flour to Great Britain. The English miller can buy his wheat in Canada as cheap as the Canadian miller, and with the cost of carriage in his favor he finds in a depressed market that he can make flour of Canadian wheat in his own mill and compete quite successfully with his importer-neighbor, who has flour made in Canada to offer against the home product.

The grain and milling trades have a large interest in railroad methods however the question is viewed. Look at the matter as it appears in another light. The railroads have all along drawn a fine distinction between wheat shipped in its natural state and wheat shipped as flour. When a calculation is made for statistical purposes of the exportations of wheat we talk of wheat and wheat and flour together as one. But when it is a case of fixing rates on the two commodities an absurd difference is made. The ratio of twelve to nineteen as against flour is the rate in one case that comes before us at this moment. What is the philosophy of the distinction? We doubt if the answer can be made any more comprehensible to the lay mind, not conversant with the intricacies of railroading, than the recent magnanimous regulation of the Grand Trunk agreeing to carry wheat through to Montreal at the same rate as they are carrying it to Boston. Distance in certain cases would appear to be no object with railroad corporations, though at other times it is everything.

The suggestion has been made on other occasions

that a Railway Commission, appointed by the Dominion Government, to whom matters of dispute and doubt could be referred, would remedy not a few of the absurd regulations which exist in railroading in Canada, and which calls for so much effort on the part of millers and the business community generally. Our millers when in convention in August might do worse perhaps than move along these lines.

#### ONE YEAR'S WORK.

The Millers' Tracing Bureau of the United States has accomplished during the first year of its existence everything, and even more, we opine, than its most optimistic promoters expected. Its operations date from July 13, 1891. Up to the 1st of May, 1892, the receipts of the Bureau were \$1,763.76, and the expenses \$1,644.18, showing a cash balance on hand of \$119.58, besides \$352.50 of a guarantee fund untouchable. During this period flour shipments equivalent in the aggregate to 1,145,753 sacks of 140 pounds had been traced, which is at the rate of nearly a million and a half of sacks a year. In nine days, recently, orders for tracing between seventy-five and eighty thousand sacks were received by the Bureau. The membership is steadily increasing including the addition lately of the big Imperial mill, of Duluth.

Canadian millers are interested in whatever scheme can be shown to have been effectual in remedying in any reasonable degree the unfortunate delays at the seaboard that do so much to hinder a satisfactory export trade in flour, and it is for this reason that we chronicle occasionally the workings of the Tracing Bureau of the American Millers' Association, which is making a record for itself that is not devoid of many elements of practical success.

#### TRANSPORTATION TOPICS.

A knotty customs question has arisen in the case of the Canadian steamer Clinton which arrived in Chicago a few weeks ago. The Chicago Journal explains the situation thus: "The Clinton left Duluth about two weeks ago with 18,000 bushels of wheat for Europe via Kingston and Montreal. In coming down St. Mary's river the steamer struck a rock at Topsail Island and was beached to save her from sinking in deep water. The underwriters at Sault Ste. Marie now became the owners of the wet grain, and sold it to Armour & Co., of this city. But that lot of wet wheat is now very much like grain without a country. It could not be sold to Canadian distillers without paying the Canadian duty, and it now seems as if it can not be bought in the United States without paying a duty here. The only way it could have escaped the barbed wire fence of customs duties would be to have continued on its way to Europe, but by that time there would have been 18,000 bushels of fermented grain, which would have killed by its stench everyone on board the ocean steamer. It would not be surprising if the treasury department was called upon to make the ruling on the question, to come up here.

In discussing the important question of tolls on the St. Lawrence route, a matter vital to the grain shipping interests of this country, Mr. Thos. C. Keefer, who is a high authority on a subject like this, says: "The most dignified, as well as politic course for us in meeting foreign complaints of discrimination is to abolish all tolls upon the St. Lawrence route and make this river free not only to the United States but to all nations. This course should have been taken when the Erie canal was freed from toll, or when the Sault canal in Michigan was freed to Canadian vessels, and this course we intend to take with our own Sault canal when completed. The whole amount involved is less than half that which we pay to keep open the International railway, and, judging from all precedent, there is every reason to believe that in a very short time the increase of commerce by the St. Lawrence route, which would be produced by this removal of all restrictions, would more than cover any loss of tolls." The Montreal Gazette is outspoken on this question, contending for "the concession of a rebate of tolls to all grain passing down canals to Montreal, no matter where transhipped."

The Monetary Times, discussing the canal question, points out that the conditions are now favorable for

direct and continuous navigation between Europe and Chicago, by the aid of the Canadian Canals. "The Norwegian steamship, Wergeland, has passed through our canals on her return passage, on her way to Christiania. Captain Weise reports that the financial result of the venture is fairly profitable. Owing to the incompleteness of the enlargement of the St. Lawrence canals, his steamer had to lighten part of her cargo at Kingston. It is expected that in 1894 the enlargement will be finished, and an expense of this kind will no longer have to be incurred. Part of the loss was in the delay which the lightening occasioned. The possibility of direct trade in future will depend upon the cost relative to that of other modes of conveyance. The enlargement of our canals alters the conditions of the problem. Already there is a call for still further enlargement, beyond the capacity to which our canals are now being carried. Before going any further in the direction it will be desirable to see our way clear, and whether there would be any profit in the enterprise for the country, which would have to pay the cost. No rival to the St. Lawrence route is possible; what nature has here done on a grand scale it is not in the power of art to imitate."

#### MARKET CONDITIONS.

One cannot say that the demand for flour is to any large extent on the increase, and yet the situation is an improvement over that of a month ago. Greater confidence in the future is manifest among leading men in the trade even though prices remain practically unchanged. Enquiries from Newfoundland are coming in, mainly for the lower grades, and a few shipments have been made. There is reason to expect a lively business with the ancient colony later in the year. W. W. Ogilvie, of Montreal, has made considerable shipments to Great Britain and the continent within the month, and other mills have not been altogether without an export trade. Recent reports from Minneapolis are not very cheering. The weekly output of the mills is much in excess of the demand and mills are being kept running in hope of the situation improving shortly and thus prevent the necessity for shutting down. Prices generally are on the decline, certainly not as firm as the trade would hope for. This is the most discouraging feature of the situation.

#### PRICES OF FLOUR AND MEALS.

Quotations at leading market centres at time of closing this report are as follows:—

Toronto: Car prices (Toronto freights), Manitoba patents, \$4.95 to \$5; Manitoba strong bakers', \$4.45 to \$4.60; Ontario patents, \$4 to \$4.25; straight roller, \$3.50 to \$3.75; extra, \$3.35 to \$3.40; low grades, roller, \$1 to \$1.50. The Millers' Bulletin says: "Sales—Straight grade at \$3.85 and \$3.90 per barrel; patents at \$3.85, \$3.90, \$3.95, \$4 and \$4.10 per barrel, c.o.b. for lower provinces; latter for choice brands. Bran, \$10.50 and \$11 per ton, c.o.b. Good demand for bran for shipment to the United States during July, August and September." Oatmeal is, if anything, lower. Sales in car lots have been made at \$3.40, and for smaller lots \$3.50 to \$3.55 has been paid.

Montreal Flour Prices as follows: Patent spring, \$4.85 to \$4.95; patent winter, \$4.80 to \$4.90; straight roller, \$4.20 to \$4.35; extra, \$3.80 to \$3.95; superfine, \$3.25 to \$3.50; fine, \$3.10 to \$3.35; strong bakers', \$4.45 to \$4.65. Oatmeal quiet, prices steady. We quote: Granulated, bbls., \$3.90 to \$4; rolled, bbls., \$3.80 to \$3.90; standard, bbls., \$3.75 to \$3.85; granulated, in bags, \$1.90 to \$2; rolled, in bags, \$1.90 to \$2; standard, in bags, \$1.75 to \$1.80. In bran and shorts a quiet local trade is reported. Quotations as follows: Bran, \$14 to \$14.50; shorts, \$15 to \$17; moullie, \$20 to \$23.

Winnipeg, Man. Flour Prices to local trade in small lots per 100 pounds: Patents \$2.30; strong bakers', \$2.10; XXXX, \$1.10 to \$1.20. Bran, \$9 to \$10 per ton, and shorts, \$11 to \$12. Oatmeal: Granulated and rolled, \$2 to \$2.05. Cornmeal, \$1.60 to \$1.75 per 100 pounds. Split peas, \$2.60 to \$2.65 per 100 pounds. Pot barley, \$2.60 to \$2.64 per 100 pounds. Pearl barley, \$4.20.

Jon. W. Kilgour, Mount Forest, Ont.: "I cannot get along without the MILLER."



Office of the CANADIAN MILLER, }  
July 15, 1892. }

**THE GENERAL SURVEY.**

**A**CTIVITY in grain circles is not an expected condition of the midsummer season. In a very significant sense it is the off season. What conditions will be later in the year rather than what they are now is the concern of any who are giving thought these days to business.

What is in the future? Are we to have a repetition of the wonderful yield of 1891? If so, what will be the effect of so large a yield added to the surplus grain still on hand? Prices to-day would seem to have touched bottom, unless the bottom itself is to give out; how will prices rule when the element of the new crop becomes a leading factor? What is the outlook abroad? How is the crop coming along in Great Britain, India, Russia, Australia? We are no seer and do not presume to possess any mysterious knowledge of the future. With all the influences that have been evolved from the science of hypnotism we have yet to learn of its magic touch holding sway over the elements of wind and rain, blinch bug or rust.

All the wisest can do is to patiently wait, hold to what we do know and apply to conditions as they develop from week to week a liberal supply of business common sense. Once all the main conditions gathered together it may be possible, if one's judgment does not become warped by the prognostications of some farmers' alliance, or by other crazy fad, to reach a fairly intelligent view of the situation. The "hold your wheat" experience of the farmers both of the United States and Canada has, we imagine, been of a kind to discourage any work along these lines in the future. All over the country trade is suffering because of the grain harvested in barns and elevators that ought to have been turned into gold six months ago and the money placed in circulation. The loss has not ended here. Within this time the grain has depreciated in value and quality to an extent that is to many in the business a matter of serious alarm.

**BRADSTREET'S VIEW.**

We do not know that Bradstreet's, in their recent summing up of conditions, have attempted any more than is here suggested. Quite likely circumstances will arise that will necessitate a revision in part of what is stated by this authority. Circumstances are uncertain enough to expect this. Yet as things are at this period their diagnosis will merit careful study.

It is taken for granted that the very favorable report as to acreage sown with wheat and the condition of the plant, which does not seem to have been seriously affected by so much rain, is a complete surprise to the trade. An evidence of this is indicated by the continued low prices that prevail, though Chicago grain men attribute the demoralization to the anti-option bill before Congress, which is an element of doubt at this writing.

Taking the United States Government totals of exports of wheat and flour as wheat for eleven months of the fiscal year, and estimating shipments for the month ending July 1, Bradstreet's places the aggregate exports of wheat for the twelve months at about 220,000,000 bushels.

"This total is by far the largest in the history of the country, the next heaviest year's shipment having been twelve years ago, in 1879-80, a total of 186,321,000 bushels, or 34,000,000 bushels less than the probable aggregate in 1891-92. The average annual exports of wheat for the decade of 1880-89 was only 126,615,000 bushels, and from 1882 to 1891 the annual average was only 117,300,000 bushels annually, while for the ten years ending with the current cereal year the average yearly exportation of wheat is apparently equal to nearly 125,000,000 bushels, owing to the unprecedented shipment of the past twelve months.

"The statistical position of domestic wheat for the current year, based on the usual estimates as to rate of consumption per capita per annum, etc., may therefore be presented as follows:

	Bushels
Wheat on hand, visible and invisible, July 1, 1891.....	32,000,000
Crop of 1891, as per Government report.....	612,000,000
Total supplies for 1891-92.....	644,000,000
Exports for 1891-92.....	220,000,000
Retained for use at home.....	424,000,000
Required for food and seed at home.....	362,000,000
Indicated reserved July 1, 1892.....	62,000,000

"The last total given in the foregoing table may be regarded as a minimum estimate, for it is quite likely that visible and invisible wheat in the country on the 1st inst. will aggregate fully 70,000,000 bushels.

**PRICE OF WHEAT FOR A YEAR TO COME.**

"Now that the Agricultural Department has put itself on record as pointing to a probable yield of wheat this year larger than in any preceding year except 1891, so far as may be inferred from the percentages given, perhaps 550,000,000 bushels—a question arises as to the probable supply of and demand for wheat here in the cereal year 1892-93. The preceding tabular exhibit contains one item, that of exports, which it is difficult to believe will be equalled in 1892-93, notwithstanding lately cabled reports from St. Petersburg that prospects in the Russian famine-stricken regions are worse than they were one year ago. But so far as may be judged in advance the outlook appears to be about as follows:

	Bushels
Reserves, visible and invisible, (estimated) July 1, 1892.....	70,000,000
Crop, 1892, estimated as per latest government report.....	550,000,000
Total probable supply July 1, 1892.....	620,000,000
Required for food and seed, 1892-93.....	368,000,000
Remaining for exports and reserves.....	252,000,000

"It may be seen, therefore, that if required, from such a crop as the government report has just indicated, together with reserves twice as large as they were a year ago, the United States promise to be able to export 200,000,000 bushels of wheat in 1892-93, or, at a pinch, as much as they have shipped abroad in the cereal year just ending, and still be able to carry over reserves as large as we possessed on July 1, 1891. The question therefore naturally arises: Are we likely to be called upon to export 200,000,000 bushels of wheat in the next twelve months, in the face of an average annual export of less than 125,000,000 bushels for ten years just ended, which includes 220,000,000 bushels sent abroad within the past twelve months? Within the answer lies that which may make the price of wheat for a year to come."

**WHEAT.**

Exceptionally wet weather the past two months has given rise to many anxious thoughts among those interested in the growing grain; and who is not? Whilst in some sections we hear of damage done, principally on low land, reports generally do not point to the crops having been seriously injured. Unless there is a prolonged continuance of moist weather beyond the present the probabilities indicate a large wheat yield. In Manitoba, as we have pointed out elsewhere in this issue, the wheat acreage is about 47,000 acres less than last year, but the amount of unthreshed grain on hand is so large that the general crop will not be affected by the decrease. The acreage for other cereals has been increased. Official returns in the United States tell of an anticipated yield of wheat not far short of a year ago. In Great Britain the reports are favorable to a good crop. Prospects are improving in France and Germany. Austro-Hungarian authorities complain of rust and mildew. It is difficult to arrive at safe conclusions of the outlook in Russia, reports being contradictory. The report of the Indian Agricultural department is the least cheering of any. In Bombay the acreage under wheat in 1891-92 was 2,620,000 acres, against 2,864,000 in 1890-91. The total out-turn is placed at 543,500 tons, compared with 750,200 tons a year ago. In the Punjab the area under wheat this year is set down at 6,223,600 acres and the yield at 1,392,100 tons, as against 7,074,000 acres and 2,071,200 tons in 1890-91. This year's yield is the lowest for the last seven years, with the exception

of 1886-87, when the out-turn was 1,361,900 tons. Prices at time of writing are as follows: American: Chicago: July, 77 3/4 c.; August, 77 c.; September, 77 1/2 c. New York: No. 2 red, 88 1/4 c. in store and elevator; No. 3 red, 85 1/4 c.; ungraded red, 75 1/4 c. to 82 1/2 c.; No. 1 northern, 80 1/4 c. to 87 1/2 c.; No. 1 hard, 90 1/4 c. to 91 1/4 c.; No. 2 northern, 80 c. to 81 c.; No. 2 Chicago, 85 1/4 c. to 86 1/4 c.; No. 2 Milwaukee, 82 1/4 c.; No. 3 spring, 79 1/4 c.; No. 2 red, July, 85 1/4 c.; August, 85 c.; September, 85 1/2 c.; December, 88 1/2 c. Milwaukee: July, 74 1/2 c.; September, 75 1/2 c. St. Louis: July, 76 1/2 c.; August, 75 c.; September, 76 c.; December, 79 1/2 c. Duluth: No. 1 hard, 80 1/4 c. for July; 80 1/4 c. for September; No. 1 northern, 78 1/2 c. for July; 78 c. for September; No. 1 northern, 78 1/2 c. for cash. Canada: Toronto: Fall, 76 1/2 c. to 77 c.; No. 1 hard Manitoba, \$1.01 to No. 2 hard, 92 c.

**BARLEY.**

Very quiet; enquiries for No. 3 extra, and 40c. offered outside: Montreal 50 to 55c. Oswego reports: Market for Canadian barley unchanged; prices nominal; no sales, receipts, or shipments.

**OATS.**

Somewhat easier, but hardly any business doing. Thirty-one cents has been offered here; Montreal 33 to 35c.; United States, 36 1/2 to 38 1/4 c.

**PLAS.**

A quiet market. Fifty-eight and 59 cents are local figures as far as figures are being talked; Montreal quotes 73 to 75 c.

**RYE.**

Trade almost nil. Montreal quotations, 82c. to 84c.; United States, No. 2, 82 1/2 c.

**PERSONAL.**

General Bidwell, of California, the Prohibitionist nominee for the presidency, is a wealthy man who includes a flour mill among his possessions.

Daniel Smith, of Annap, Bury & Smith, grain merchants, St. Louis, Mo., is making an extended trip through the east and northeast, and will include Canada.

Mr. William Wright, of the milling firm of J. Wright & Sons, Owen Sound, Ont., is a subject of congratulation, being united in marriage within the past fortnight to Miss Annie Maud Douglass, of the same town. Brother duties unite in congratulations.

Thos. A. Bellow has been admitted a partner in the firm of Sachse & Howard, flour merchants, of London, Eng. Prior to this he held a responsible position with D. & C. Macleiver, ship-owners and merchants, of Liverpool, and Carl F. Solemman, who for some time has taken an active part in the conduct of the firm's business.

Joseph Williams, late head miller for Finley & Martin, of Lindsay, Ont., who died on June 2 last, aged forty-seven years, was a miller from his youth, and had held different positions of trust and importance in milling. He had been with Finley & Martin as first man for ten years. The deceased will be remembered by all friends of Whitley & Pickering.

John Brown, of the Citizens Milling Co., is just now in Manitoba. The current issue of the Winnipeg Commercial publishes an interview with Toronto's well-known citizen in which he is reported to have said: "He had expected that the Manitoba trade would be opposed to the eastern millers in their efforts to change our system of inspection, but he was gratified to find that such was not the case, as the Winnipeg Grain exchange had already passed a resolution calling for reform in the same direction as that asked for by the millers. The millers asked that the system of inspection at Fort William should provide that what should go out of the elevator according to grade as it went in." Mr. Brown expects to spend a couple of months in the west looking over the country.

**PROTECTION TO A LOTTERY.**

The Quebec authorities are still fighting the several lotteries that have recently endeavored to do business in that province. The only one that is able to carry on business unmolested is what is known as the Province of Quebec Lottery, and which has been doing, so its many patrons affirm, a square business for years. This particular lottery is carried on not simply without the protests, but it has the legislative sanction, of the Legislature of Quebec. The case of the poor girl, Mary Donovan, of Montreal, who a month or so ago won the capital prize of \$15,000, is one of the many instances referred to as evidence of the straightforward manner in which all promises made by this concern are kept. The drawings take place twice a month.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion.

WANTED.

A FIRST-CLASS MILLER AND MANAGER, to manage joint use company mill (large capacity); also to take two or three hundred shares (shares \$25), ten per cent. of shares called up.

For further particulars apply to J. J. SADDLER, Chairman, Gainsboro Milling Co., Gainsboro.

WANTED TO RENT

A FULL ROLLER FLOUR MILL, WATER power preferred. Address: MILLER, Box 59, Castledore, Ont.

SITUATION WANTED

BY A STONE MILLER OF THREE YEARS' experience, in a roller mill of from fifty to two hundred barrels, where he could learn the business, with the chance of a steady position if both parties agree suited.

WM. J. SHARPE, Columbus, Ont.

FLOUR MILL FOR SALE

THE COOKSTOWN FLOUR AND GRIST Mill for sale at a bargain. Established ten years. Reasons for selling, ill-health. First-class trade being done.

J. SPINDLOE, Cookstown, Ont.

ROLLER MILLER WANTS OFFER. HAS worked in job-lots mills of various sizes. Is accustomed to milling for the principal Canadian markets. Highest yield guaranteed.

"ROLLS," Office of the CANADIAN MILLER, Toronto.

ROLLER MILL FOR SALE

ONE HUNDRED BARREL ROLLER MILL for sale, or partner wanted with few thousand dollars capital, in a splendid section of Manitoba.

Address: X, care CANADIAN MILLER.

MILL DWELLING-HOUSE, LAND, ETC. FOR SALE.

FIRST-CLASS POT AND PEARL BARLEY Mills, Rock-heat Flour (topping), etc., kiln for split peas; good water power.

There is good business done for years. A portion of purchase money can be left on mortgage for a term of years.

Reasons for selling, want to retire from business. Apply to: A. G. MORTIMER, CANADIAN MILLER

ONLY \$2,000 FOR A Steam Grist Mill (TWO RUN STONE)

Which is less than price of boiler and engine. All in good running order. The nearest opposition being Pelton, seven miles. Owns no other mill and has other business.

R. WEATHERILL, General Merchant, Oil City, Ont.

FLOUR CORRESPONDENT WANTED.

FLOUR IMPORTING FIRM IN EAST OF Scotland wishes to open business with first-class firm of Canadian millers.

Apply - IMPORTER, care CANADIAN MILLER.

INSURANCE-FIRE AND MARINE. MILLS, manufacturers and merchandise a specialty. Telephone at my expense.

R. CUNNINGHAM, Guelph.

FLOUR MILL ON WELLSAND CANAL-FULL roller power, water power; capacity two barrels daily; good locality for custom of merchants' business.

D. DE. POTTER, Real Estate Agent, St. Catharines.

Judicial Sale

THERE WILL BE SOLD BY PUBLIC AUCTION on Wednesday, the 6th day of July, 1892, at 10 o'clock, at the Post Office in the County of LYNCHBURST, in the County of Leeds, a first-class

New Roller Mill and a Sawmill

with never-failing water power, belonging to the Estate of late Henry Green.

The Village of Lynchburg is situated within 1 mile of a station on the Lockville, Westport and Sault Ste. Marie Railway.

For particulars apply to WOOD & WEINSTER or FRASER & KEYNOLDS, Barristers, 1 Rockville, or JOHN HOSKIN, Q.C., Toronto.

ESTABLISHED 1885

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The system adopted has been to inspect all risks before acceptance, and fix the rate to be exacted equitably in accordance with the hazard assumed.

The very small ratio of Fire Losses referred to by the President is attributable in a marked degree to care, order and cleanliness, the most important factors to obviate fire, and which must prevail in all risks assumed by this Company.

The President in moving the adoption of the report, February, 1891, said:-

"I have, however, much pleasure in drawing your attention to the fact that the commission income alone, as you will see by referring to the Revenue Account, exceeded the total claims for fire losses, a record, I believe, unprecedented in the history of any other fire insurance company of their size or in the another country."

The assureds with this Company, since it was established in 1885, have already saved on the current exacted rates, upwards of forty thousand dollars.

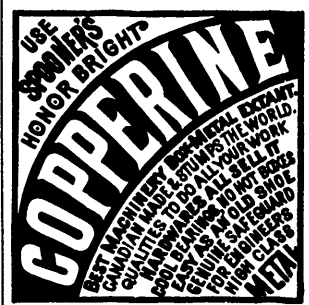
As no canvassers are employed, dealing directly with the assured, those desiring to avail themselves of the advantages offered by this Company will please address:

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Millers are invited to send samples by mail of their Bran. We buy it every day in the year and make a specialty of handling Bran from Ontario. Will be glad to hear from you. We always pay sight drafts with bills lading attached.

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FISHER'S GRAIN TABLES

The book contains more valuable information and useful tables for Farmers, Millers, Traders and others than any similar book of its kind ever published, besides being a complete Ready Reckoner showing the value of articles or lbs. from one to 500; from a quarter of a cent to \$5.00. Also tables for Grain, Hay, Rent, Board, Wages, Interest, etc.

Write for sample copy. THE CANADIAN MILLER, Toronto, Ont.



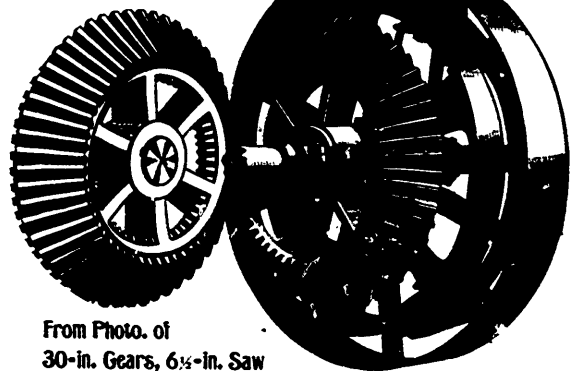
Millers . . .

Your business is helped by .

Advertising IN CANADIAN MILLER

Write for particulars

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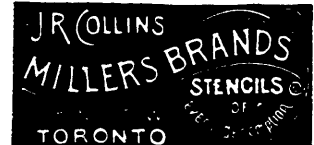
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WE furnished C. B. WRIGHT & SON, Hull, Quebec, three pairs Grip Gears like those illustrated. They write April 30th, 1892:

"The Grip Gears are working splendidly."

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CLYDE MILLS  
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Unsurpassed for Uniform Quality

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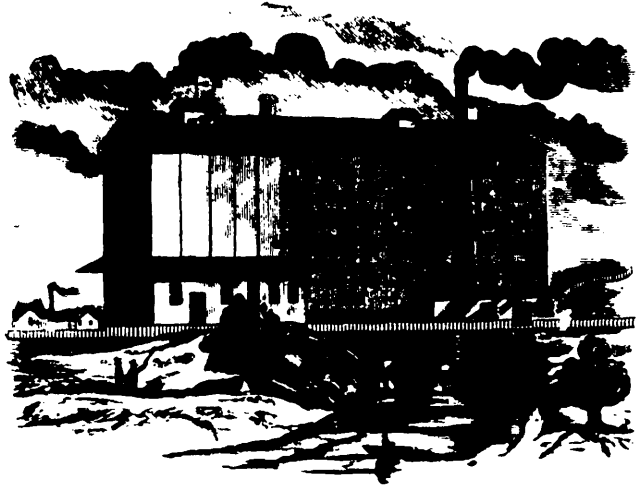
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HUNGARIAN  
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When any mill can be shown completely equipped with any device yet known to the trade, whether imported from Europe or made in America, which can show better results than the mills above mentioned we shall find a way to keep to the front. Until such a mill can be shown, we shall hold fast to what we know to be good, and rest our claims on what is **NOW** accomplished, rather than on what **MAY BE** accomplished.

We stand ready to contract for flour mills of any capacity on the Allis system, using Gray's unequalled Flour Dressers, Centrifugal Reels and Dustless Purifiers, under a broad guarantee to produce **BETTER RESULTS** than can be produced by any other system whatever, using any machine or combination of machines, new or old. Our past work stands in evidence of our ability to fill this guarantee. On winter wheat as well as spring wheat Allis mills are producing results heretofore unequalled.

The Allis system is **NOT AN EXPERIMENT**. Better investigate it pretty carefully if you intend to build.

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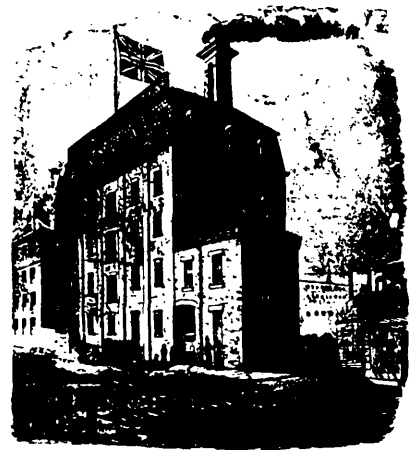
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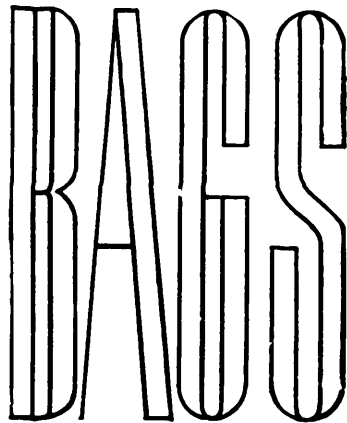
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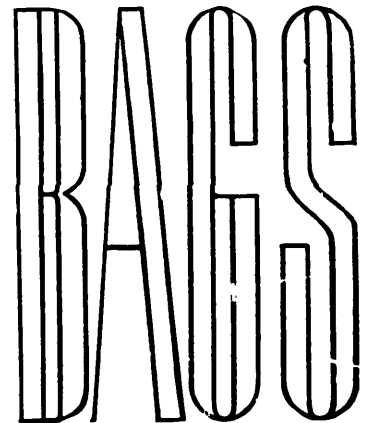
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