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GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

Old Series, Vol. X } NUMBER 9  
New Series, Vol. II }

TORONTO, ONT., SEPTEMBER, 1892

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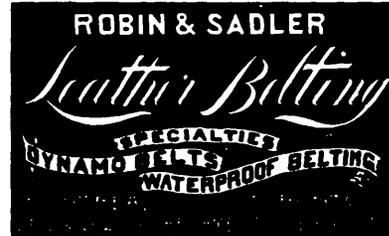
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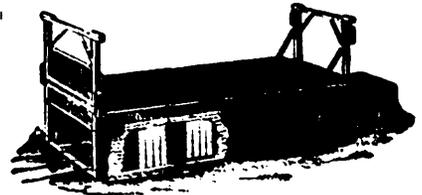
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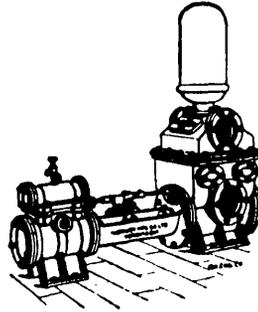
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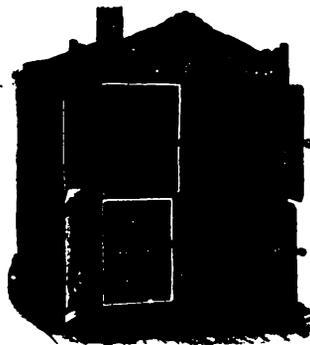
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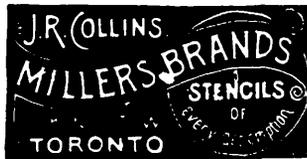
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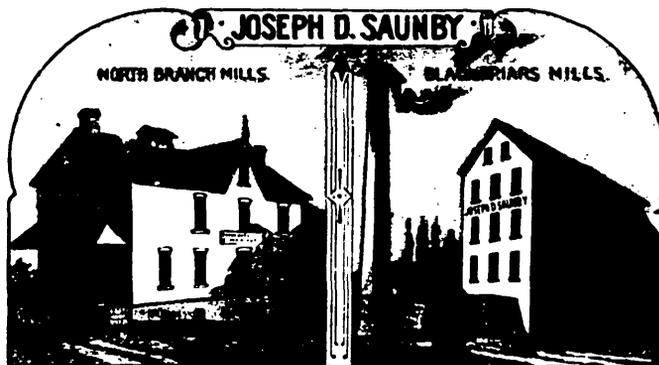
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OLD SERIES, VOL. X. | NUMBER 9  
NEW SERIES, VOL. II | NUMBER 9

TORONTO, ONT., SEPTEMBER, 1892

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## CHARACTER SKETCH.

THOMAS SHAW.

PROFESSOR OF AGRICULTURE IN ONTARIO AGRICULTURAL COLLEGE.

"Fillage and pasturage are the two breasts of the State." Sully.

It may be that in the earlier centuries of the world's history the same exact attention was not given to the cultivation of the soil that is the case in the present day. The history of every science and agriculture may properly take its place as one of the sciences of growth. Adam Smith is usually credited with having founded the science of political economy and yet, if we go back to the days of Aristotle, Plato and the early philosophers, we find that some of the leading principles of the author of the Wealth of Nations were grasped by these writers, and if somewhat crudely shaped, the essential principles were there. And we look beyond Adam Smith's day, and students of this science will grant, we think, that in the writings of Mills, Bastiat, Macleod, Walker, Ely, Perry and others, a clearer and more complete conception of what constitutes wealth, and the principles that govern its operation, is to be obtained. Evolution plays its part with science as it does with most of the conditions of life.

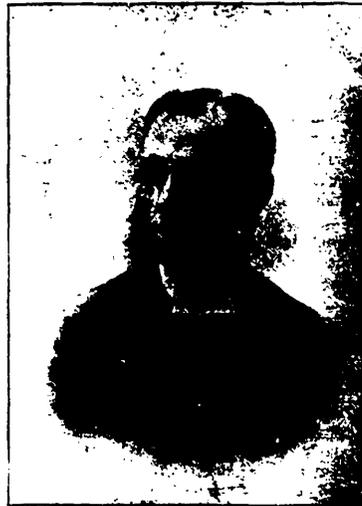
The importance that is attached to the pursuit of agriculture is forcibly expressed in the words of Sully, quoted at the head of this sketch, a French economic writer of the fifteenth century. Colbert, who won fame as Minister of Finance under Louis XIV., because of his prudent husbanding of the finances of France, shown in other ways by a marked reduction of the taxes, held it as a maxim that the nation "ought to encourage agriculture by directly lessening its burdens, by permitting the freest possible circulation of its produce within its realm." Bois-Guillebert, a provincial magistrate at Rouen wrote "When the cultivator of the soil, the basis of society, grows poorer his poverty involves the ruin of the rest." Adam Smith placed agriculture, in his judgment, over other forms of production. Perhaps no economic writer, of the past or present day, would jeopardize his reputation by other than placing the cultivation of the soil at the basis of all profitable sources of production. Even Carey, the foremost apostle, in the present day, of protection to manufactures, concedes to agriculture a first place.

A sketch of Thomas Shaw, Professor of Agriculture in the Ontario Agricultural College, Guelph, Ont., may fittingly find space in these pages, primarily, because of the close relationship that exists, an intimacy that grows closer each year, between the man who sows and harvests the grain and the miller who grinds it into flour for individual consumption, and further because of the interest that Prof. Shaw, and the institution of which he is one of the leaders, has ever shown in the work of the Dominion Millers' Association, being ready at all times to consult with the millers, and to influence the farmer to grow a grain that would be rightly adapted to the requirements of the miller.

Thomas Shaw was born in Niagara-on-the-Lake in 1843. His parents came from Ayrshire, Scotland, many years previous. It is worth much to be well born. The parents of Mr. Shaw were of the most exemplary character, and their helpful influence upon the son is shown in the character and life of Prof. Shaw to-day.

Soon after 1843 the family removed to Woodburn, a pretty little village in South Wentworth. The future teacher and professor had no direct educational advantages other than those afforded by the common school. He worked on the farm in summer and attended school in winter. How many men, known for their scholarly attainments, and occupying prominent positions in educational walks of life, owe a large part of this education to the old village library. Mr. Shaw in his boyhood days

had access to an old association library, and his winter schooling was largely supplemented by a careful and studious reading of the books secured in its shelves. These stimulated an awakening ambition, and no doubt helped to form the future character of the man. He selected his reading, on the principle, we suppose, that guides him in his agricultural pursuits to-day, that whatsoever a man sows that shall he also reap. He eschewed fiction in these early reading days, and devoured history and biography. We have the result in the well-stored mind of Prof. Shaw to-day. At the age of sixteen he had obtained a teacher's certificate, but failed to secure a school until seventeen, owing, he has facetiously remarked, to the lack of a beard. His first school brought him the munificent salary of \$220 per year, out of which he paid board and washing. What surplus he had aside for a rainy day we have never heard. For ten years he continued as a teacher of a rural school, and while doing so bought 100 acres of land, and later a second hundred, and supervised the working of it all the while. He kept adding to his first purchases until the farm consisted of 300 acres. He still retains this property, the farm being managed by a brother, John C.



PROF. THOMAS SHAW.

Shaw. Some years ago he built on it a barn, and many of the important features of the Guelph Experimental station are modelled therefrom.

In 1832, without any previous experience of newspaper work, Mr. Shaw entered the turbulent sea of journalism. Along with a brother he established the Canadian Live Stock and Farm Journal, in Hamilton. He took entire charge of the editorial work, did the travelling, and at the same time supervised the farm, fifteen miles distant. No better illustration of Mr. Shaw's capacity for work need be given than this. The Stock Journal was a success from the start, both financially and otherwise, and later, when Mr. Shaw took charge of the Government Experimental farm, its management was transferred to a company.

In 1883 Mr. Shaw competed in the provincial competition for the essay prize offered annually by the Agricultural and Arts Association of Ontario, on some farm topic. He won the prize that year and the five years following and then gave up competing for it.

In 1887 he assisted Mr. V. E. Fuller in calling the meeting of farmers in Toronto which resulted in the organization of the Central Farmers' Institute, and was

its first secretary, and held the office until appointed to his present position in 1888. This position calls for the management of the farm and the experiments conducted upon it, except in dairying. He has charge also of the mechanical department, and lectures on practical and theoretical agriculture both in the field and live stock departments. The growth of work on the Experimental Farm since 1888, when Prof. Shaw became connected with it, has been very marked. Then there were only 100 acres under experiment, now there are over 100. In 1888 but a few varieties of grain and grasses were grown; now nearly 1,000 varieties of grain, grasses, corn and field roots are grown. Some years ago, along with Mr. J. Mills, LL.D., president of the Ontario Agricultural College, Prof. Shaw wrote "First Principles of Agriculture," a text-book in use in the public schools of Ontario.

Personality, few men will be found who stand more popular with their associates in professional or private life. Kindness and consideration for others are unmistakable marks of the calm and clear-cut features that are to be observed from our portrait of Mr. Shaw. In many respects he is the beau ideal of a teacher, and it is not surprising that among the students of the Ontario Agricultural College he is a universal favorite. His high and broad forehead indicates, as the phrenologist would say, the intellectual and moral faculties largely developed. His whole history, from a boy attending the village school up to the present time, reaching one eminence and then another in the educational and literary world, and this amid difficulties that would have discouraged a less determined boy and man, bear all the testimony that is needed to the strength of his intellectual abilities. Though for many years in delicate health, yet through careful physical training and more or less out-door work, he has acquired great powers of endurance of work, mental and physical.

In religion he is a Presbyterian, and commenced teaching in the Sabbath school when sixteen years old. He has ever since taught in Sabbath school or Bible class, or been engaged on Sabbath in mission work.

A native to Canadian soil and an efficient workman of perhaps Canada's most important source of wealth and power, his friends look forward to still greater achievements as a result of his industrious labors in the field of farming, for which, to use his own words, "I have always had a passion."

## REGULATIONS FOR EXPORTERS.

CUSTOM laws of Great Britain require that all flour must be branded with the name of the village, township, city or province where the flour is made. Why this particularity of detail? some of our millers may be disposed to ask. We candidly say we do not know. We know it to be the law and exporters will save themselves and their customers more or less annoyance by acting accordingly. In Rome we must do as the Romans do. A removal of many of the detail regulations of the custom laws of all countries would save no little aggravation to business men of all classes. Custom regulations seem overloaded at every turn with stipulations that are a hindrance to the easy working of the wheels of trade. But such, we suppose, is the way custom laws are built. We must lay the annoyance at the door of the custom's architect or builder. After all, not a few of these regulations appear indigenous to the country and necessary to protect some important business interest.

## THEIR NEW HOME.

THE Gutta Percha & Rubber Manufacturing Co., of Toronto, have recently removed into new premises at 59 and 61 Front Street, W. The commercial concerns of the Queen City can make claim to many handsome and perfectly equipped warehouses; few there are that will excel in any particular the new home of this well known rubber house.

## BY THE WAY.

UNDER date of Sept. 3 we have been pleased to receive a letter from Mr. D. R. Ross, oatmeal miller, Embro, Ont., enclosing bill of lading for box of clothing valued at \$200, on account CANADIAN MILLER Newfoundland Relief, and the information that additional to this sum of \$150 cash has already been forwarded to Newfoundland, all of which has been contributed by the ladies of Embro and neighboring district. The clothing at this season of the year will be exceedingly timely. There can be no doubt about the help of the cash contributions. It will be remembered that Mr. Ross and others had previously made a contribution of oatmeal and flour. Embro has indeed done nobly.

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An important milling change brought about by the death of the late George Hillard, ex-M.P., has just been consummated in Peterboro, Ont. What was familiarly known as the Blythe mills property, part of the estate of the deceased, has been purchased by a local syndicate composed of Mayor Kendry, James Stevenson, M.P., and H. A. Mulhern, proprietor of the Otonabee Roller Mills. The entire property consists of flour mill, saw mill and woolen mill, the water power of the Hillard dam and two or three houses. The new concern will enlarge the flour mill building, renew the machinery and increase the capacity to 500 barrels of flour per day. These proposed changes of themselves indicate a strong confidence in flour milling in Canada, and in the town of Peterboro as a desirable centre for large operations. The personal of the new company adds significance to this confidence. Mr. Mulhern is long since known to the milling trade as an experienced and successful miller, and who, in the heart of the proposed new operations, has already attained a pleasant measure of success. If not a practical miller, Mr. Stevenson is a practical business man of large capital and wide experience, and his active interest in the Commons last session in securing the adoption of the act incorporating the Dominion Millers' Association is proof of how near to milling his thoughts have in the past been. Mr. Kendry, Chief Magistrate of Peterboro, is one of its most enterprising citizens and will not spare in his efforts to make the Blythe Mills a profitable industry to the town. A price in the neighbourhood of \$36,000 was paid for the property.

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Excitement, if, indeed, any serious excitement existed, over the enforcement of President Harrison's retaliatory regulations to levy a toll of twenty cents per ton on Canadian freight passing through the St. Mary's canal, has in less than one month become a very tame affair. As regards the grain trade the most serious hurt will come to our railroad and steamboat companies by diverting shipments to American carriers rather than our own carrying concerns. President Van Horne says the canal proclamation will affect the Canadian Pacific lake steamship service but the injury will be made up in other ways. Manager Beatty, of the same steamship line, said the retaliatory move would but direct Manitoba grain to Buffalo instead of Montreal. Some disarrangement in traffic may, for a short time, be expected, but a great length of time will elapse until this is overcome. Our own Soo canal is, under instructions of the Government, being pushed along with redoubled energy, so that within a twelve month we will be free of the canal on the American side. Whatever extra cost will be chargeable to grain and other freight shipped by Canadian vessels, will not, unlikely, be recouped by the Dominion Government. On grain the charge does not amount to more than one half cent a bushel and the Canadian transportation and elevator companies have intimated a willingness to reduce their rates to nearly meet this cost. A reduction of harbor dues, along with these, would about level up the twenty cents for toll. Manitoba shippers will on this account be inconvenienced to little or no extent. The international question is in a measure one of different interpretations placed on certain sections of the Washington Treaty. No good results will be secured by dealing with this phase of the subject in a narrow, childish spirit, nor for the purpose in one country or the other of

making the worse appear the better cause to attain some political end. The operations of the waterways of the two countries are so interwoven one with the other, and hold so close a relationship to the commercial interests of the two countries, that only a broad and liberal interpretation of the whole question can be acceptable to the better Canadian or American citizenship.

## THE NECESSITY OF A STANDARD RULE FOR BELTING.

BY J. K. LOMAX, M. E.

THE question of the power that may be transmitted by leather belts has been so frequently discussed in the various mechanical and trade papers that it would seem as if some definite standard of value ought to have been established long ago. But still there seems to be as wide a difference of opinion between those who claim to be experts as ever. Each one seems to have his own theory, and sticks to it, whether correct or not.

One cause for this difference of opinion is in the amount of tension that a belt should be submitted to, for we are all well aware of the fact that the greater the tension the greater will be the frictional resistance upon the face of the pulley, but economy and durability in many cases are left out of the question altogether. It should not be a question of how much power can be transmitted by a belt of certain width, but rather how much power can be safely and economically transmitted by the same.

Here the main question arises upon which "doctors" disagree. One author says a belt one inch wide will resist a strain of 675 pounds, while another well known author says "A leather belt will safely and continuously resist a strain of 350 pounds per square inch of section." Now, while a good piece of leather belt one inch wide might support a weight of 350 pounds without breaking, this is no criterion to go by. A belt is never made of one solid piece of leather, but is formed by joining several pieces together by cement, rivet or lacing, and as the strength of all material is no greater than its weakest place, that point must be taken for the basis of all such calculations. Again, suppose a belt joined together by either process would stand a strain of 350 pounds to the inch in width without breaking, the question arises whether it is practical or economical to any belt at that tension. Take, for example, a belt 12 inches wide and subject it to that tension, the whole stress would be  $12 \times 350 = 4200$  pounds, or two and one tenth tons. Now, I submit to any practical mechanic how long would a belt of that width last under that stress, or what would be the effect upon the journals and box of a shaft three inches or less in diameter that are so frequently driven by belts of that width. The question of how much stress will a leather belt stand without breaking is not the question to be taken into consideration in practice, but rather what is the most practical stress for economy and durability. Now, it has been demonstrated by numerous tests made by the writer that an average belt one inch wide, when joined together by either of the methods referred to, parted at a stress of 210 pounds, and this being the case, and it is conceded by all mechanical experts that in practice no body should ever be subjected to a strain greater than one-half its ultimate strength, it follows that in practical use a leather belt should never be subjected to a stress greater than 100 pounds to the inch in width, which, in the case of a 12 inch belt, the standing stress would amount to 1,200 pounds, which is all that should be required of it, and if the conditions are such that a belt of that width will not transmit the required power at that tension, rather than to increase the tension and destroy the belt, it is better and more economical in the end to increase the size of the pulleys and thereby increase the speed of the belt, for the power of a belt in all cases is the speed multiplied by the stress.

The power given out by a belt under a certain stress is another question upon which there is a wide difference of opinion. But this question is so easily tested by any one who will take the trouble to do so, it would seem as if it should have been settled long ago, and a definite standard arrived at.

For the benefit of any who may desire to satisfy themselves, the following directions may be useful. Procure a pulley of any convenient size with sufficient width of face to accommodate two belts. It should be

perfectly flat on the face and smooth, and mounted upon a shaft perfectly round and smooth, which may rest upon a pair of balancing bars or centres, so that it will be free to move in any direction. Next procure a good average belt one inch wide and fasten one end to the floor, and pass the other end over the pulley, and to this end suspend a weight of 100 pounds. The belt should be so attached to the floor that when the weight is suspended the belt will embrace just one half the circumference of the pulley. Now, the power of a belt is simply the friction between the under side of the belt and the face of the pulley, governed by the stress to which the belt is submitted, for, according to the established laws of friction, the frictional resistance between any two bodies in intimate contact increases as the weight. Therefore, as we have submitted the belt in question to a stress of 100 pounds, and that being the weight pressing against the face of the pulley, it only remains to find the power necessary to overcome this frictional resistance and cause it to slip. For this purpose one end of a strap, about the same thickness as the belt, should be attached to the face of the pulley and passed over it, so as to draw in the opposite direction to the weight. Now, if sufficient weight be attached to the strap to overcome the friction of the belt and cause it to slip under this pressure of 100 pounds, that weight will represent the frictional power of the belt. With a smooth-faced iron pulley and a belt of average thickness, that weight will not vary materially from forty pounds. The writer has tested this at different times and under different conditions, and while belts that were strictly new have in most cases fallen a little short, old belts that were worn and greasy gave a trifle more, but the average belt that had been used but a short time gave near enough to forty to say that the frictional power of a leather belt is forty per cent. of the stress. Tests were also made in the same manner with belts two, three and four inches wide, with the same results, so that it is also quite safe to say that the frictional power of a belt is as the stress, regardless of width. That is to say, that with the same stress of 100 pounds, the four-inch belt slipped with the same force or weight of forty pounds, but with a stress of 400 pounds upon the four-inch belt it required a weight of 160 pounds upon the strap to cause it to slip, thus proving what has already been stated, that the frictional power of a leather belt under ordinary circumstances is equal to forty per cent. of its stress, regardless of width. That, consequently, the frictional power of a belt twelve inches wide under a standing stress of 1,200 pounds, would be no more than a six-inch belt under the same stress. But while the twelve-inch belt would only be required to stand a stress of 100 pounds to the inch in width, the six-inch belt would necessarily be subjected to a stress of 200 pounds to the inch. Therefore, it will be seen that if a stress of 1,200 pounds be required to transmit a given power, it will be more economical to use a belt twelve inches wide than one of six.

The following rule may be deduced from the foregoing tests. To find the power that may be safely transmitted by a leather belt, when the speed and stress are given, multiply the speed of the belt in feet per minute by forty per cent. of the whole stress and divide by 33,000. Assume the twelve-inch belt first referred to at a tension of 1,200 pounds to move at a velocity equal to 2,000 feet per minute. First, forty per cent. of 1,200 is  $12 \times 40 = 480 \times 2,000 = 960,000 \div 33,000 = 29$  horse-power.

The foregoing rule is based upon the supposition that the belt embraces just one-half the circumference of the pulley, but where it embraces more or less it has been found that the frictional power increases or decreases nearly in proportion to the square root of arc of contact.

## THE HUBBARD PORTABLE OVEN.

THE principles on which is established the superiority of the Hubbard oven, an advertisement of which will be found elsewhere in these pages, consists in the admission of a constant supply of pure fresh air into the oven while baking, and the continual circulation of the air in a current from the bottom to the top and thence down again. Efforts to secure these ends had been attempted before, but all had failed in practical operation until the discovery was made by the inventor of the Hubbard oven after years of study.

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**Advantages  
And Disadvantages**

On the introduction of improved machinery into milling it was expected that the miller would experience comparative immunity from fires. Recent returns published showing losses by fire in flour mills in England do not justify this expectation. From 1881 to 1888 the total was \$5,600,000. The number of fires in the latter year were twenty-nine, and the losses, classified according to the mills, were, millstone system, \$87,000; mixed system, \$70,000; roller system, \$500,000. It seems to be the general experience that the gains we anticipate from an advanced step in any special calling seldom materialize as brightly as we had pictured. Conversely, the difficulties of life are not often nearly as black as they appeared to one before they had a tually taken place. The much-coveted happy medium is more frequently attained than we are apt to suppose.

**A Curious Bit  
of History**

Mr. G. W. Copelena, of Lath, in the Puget Sound district, is this year tenderly nursing a couple of stalks of wheat which have a curious history. In the fall of 1890 a wild goose killed in one of the islands near the Straits of Fuca was found to contain seeds resembling wheat. These were planted and grew profusely. Mr. Copelena secured two sample grains where it had grown at Nelson, British Columbia. The grains are nearly twice the length of ordinary wheat, shaped something like a grain of rye, but not much thicker. The two grains germinated quickly, sent up thirty blades, and are growing well. The theory that the bird from which the original grains were taken must have found the plant in the remote north, and if no grain is now found cultivated in the known world like this, still further color will be given to the supposition that there is a polar sea with vegetable life on its shores.

**Exchange  
On Cheques.**

"A source of petty losses," says an exchange, "that aggregate to a considerable amount in a year's trade is the exchange on unaccepted checks payable at outside banks. This exchange is one-quarter of one per cent. for most banks outside the city, and the minimum charge is twenty-five cents. Hardly anyone who sends a cheque in payment of an obligation is ignorant that the cashing of it will cost the creditor from twenty-five cents upwards, and yet that way of remitting is very largely in favor, and is resorted to quite freely for small amounts, so that the commission for exchanging is material deduction from the profit on the transaction for which the money is paid. Some houses request payment to be made in currency, when the amount is small. That rule should be generally observed, and either cash or post-office order should be forwarded for small sums. The trader has been benefited by the credit and should bear the charge of transmitting the money."

**English and  
American View.**

W. T. Stead, the doughty and able editor of the English Review of Reviews does not view altogether favorably Lord Salisbury's suggestion that England might do worse than retaliate on foreign tariffs by clapping import duties on foreign manufactures. Mr. Stead's opinion is that "There is no doubt much force in the argument that you cannot fight hostile tariffs unless you have weapons in the shape of import duties to put on or to take off, but it is child's play to propose retaliation on principles of limited liability. War is not made, whether a war of tariffs or a war of campaigns, on limited liability principles. If Lord Salisbury really meant retaliation he would not limit his retort to the McKinley tariff to a trumpery duty on a few manufactures of luxury. He would, if he meant business, propose an import duty on American corn and on American cotton." The Northwestern Miller commenting on this opinion, and looking at it from the American point of view, says "Mr. Stead strikes the keynote of the situation. If England were to tax imports of American wheat and flour, she would at once have a club which would be adequate to batter down our McKinley-made wall. The farmer would rise and rebel against a high protective tariff, when he found the English gates shut against his wheat, and his howls and lamentations would

bring any party to terms. If the effect of the McKinley bill on English manufacturers is as serious as its supporters claim it is, it will not be long before the vague consideration of such a radical retaliatory measure becomes a threatening possibility. The condition of the wheat-growing and flour-making interests of America, should England actually enforce such a measure, would be so deplorable that the mere thought of it is panicky. The question resolves itself into this: Does England dare to impose such duties? Can she get along without our wheat and flour? Those who think she cannot should remember 1888. It is well not to push our advantages too far, nor to insist too strenuously on the enforcement of a policy calculated to drive buyers of our food products into a corner where stringent retaliatory measures are absolutely necessary to self-protection. The United States, in its efforts to corral the world's business, has gone as far, and perhaps farther, than is safe for the continued prosperity of all her people." The closing sentence is significant, and Uncle Sam may take it as a hint that it is possible even for the American eagle to overstretch itself.

**Candid.**

Not many people delight in the work of personal introspection. Even when they undertake the task the verdict is more frequently a sealed verdict than an open confession. It is, therefore, refreshing when we find anyone speaking out as openly as does the Australasian Miller, of Melbourne, in these words: "Nothing tries men's honesty so sharply as a descent from wealth to poverty. The man who in times of prosperity is honest enough, who is ready and willing to pay his way when he has plenty of money, does not always act up to a very high standard when money is scarce, and thus it is that in times of depression, such as Australia has been experiencing lately, so many cases occur of men falling away from the paths of rectitude, so many humiliating exposures of commercial immorality appear in the daily papers. We in Australia richly deserve the present dull times through which we are passing; they are really a blessing in disguise, and we have just got to worry through them. We have worried through the worst of them already, and the clouds are lifting close ahead."

**Flour  
Of Shavings.**

The man who would give us flour from sawdust is to be outdone by a cleverer chap, who promises us flour from shavings. The white beech trees are used, as the wood of the beech is colorless, flavorless, hard and dry. The bark is peeled off, the logs placed upon a carriage which forces them against a cutting machine shaped much like a pencil sharpener, except that it has five or six knives instead of one. These knives revolve at the rate of two hundred revolutions a minute, and the great log is soon a mass of fine shavings. After these shavings are thoroughly dried they are put into a hopper and ground the same as wheat or corn. The "flour" comes out as fine and fragrant as from the best wheat, and is put into sacks, without marking, and, bearing only an address upon an attached tag, are shipped to New York. The sawdust man believed he had in his mixture a scientific basis found in certain chemical properties, which sawdust is said to possess. The man of shavings tacitly admits, in the method of shipments adopted, that his flour is a straight fraud upon the public. But, as the great Showman has remarked, people will be humbugged, and perhaps enjoy the fun at the breakfast table as much as anywhere else.

**Earliest Steam  
Flour Mill.**

Who wrote Shakespeare? What land can claim the oldest mason? Who was first to introduce some important improvement in machinery? These are a class of questions that with almost everyone possess a peculiar interest, and that are seldom solved to the satisfaction of everyone. It has been claimed that one Charles Higgs, Gloucestre, England, was the first miller to grind with steam power. But the statement is now in dispute. It is recorded that, about the year 1774, a noted engineer, James Rennie, worked out the details of a plant that was devoted to a variety of purposes, then altogether novel, such as hoisting and lowering corn and flour, loading and unloading barges, and used as a motive power for

his outfit two fifty-horse power engines, which were designed and built by James Watt. These were the most complete and powerful yet produced, working under a pressure of five pounds to the superficial inch and, when acting together, exerting a power equivalent to 150 horses. They were installed in the Albion mills and drove twenty pairs of millstones, each four feet six inches in diameter, twelve of which were usually worked together, each pair grinding twelve bushels of wheat per hour by day and night if necessary, and when both engines were in action the mill was capable of drying and dressing 150 bushels an hour, by far the greatest performance achieved by any mill at that time. The mill was located on the banks of the Thames, near the end of Blackfriars' Bridge, in London, England, and ran only a few years, being destroyed by fire in 1791. As Mr. Higgs did not use steam until about 1820, the palm for using steam power seems to belong to the owner of the Albion mill.

**BUDAPEST'S MILLING CAPACITY.**

LIVERPOOL, England, Milling gives a correspondent's figures on the milling industry in Hungary as follows: There are now in this country 17,277 flour-mills, among which 910 are driven by steam, 12,520 by water power, and 3,877 by other mechanical power. The daily capacity is: By steam mills 90,694, water mills 68,653 and other mills 24,532 quintals of 100 kilos. As to the large Budapest steam mills, their development during the last twenty-two years is shown by the following figures, worked out in English figures:

	Sacks Flour 250 lbs.	Sacks Bran 250 lbs.
1870	1,883,000	1,128,000
1871	2,007,000	1,204,000
1872	1,667,000	1,092,000
1873	1,585,000	1,022,000
1874	1,502,000	1,020,000
1875	1,804,000	1,295,000
1876	1,880,000	1,111,000
1877	2,189,000	1,525,000
1878	2,456,000	1,687,000
1879	2,578,000	1,850,000
1880	2,203,000	1,457,000
1881	2,314,000	1,723,000
1882	2,803,000	1,966,000
1883	3,208,000	2,224,000
1884	3,185,000	2,232,000
1885	3,421,000	2,447,000
1886	2,990,000	2,078,000
1887	3,168,000	1,997,000
1888	3,745,000	2,510,000
1889	3,510,000	2,487,000
1890	3,010,000	2,498,000
1891	3,914,000	2,601,000

**THE UTILIZATION OF WIND POWER.**

THERE is a windmill in London perched high up on a timber tower erected on the top of a building on the City Road, not far outside the old "City" boundary. It has a sail of thirty feet diameter, and is quite a big affair when one climbs to the top of the tower. But what I specially wanted to note was the fact that this windmill is lighting the premises over which it stands.

Its upright shaft, which comes down from the mill, drives a horizontal shaft which carries a large belt pulley, and by this large pulley is driven a small dynamo. The dynamo generates a current which charges a battery of accumulator cells, and these in turn "drive" the lamps. At times, when the wind is low, the speed falls below what is proper for charging the secondary battery. To prevent this being charged at such low speed there is a cut-out held in by a magnet and kept out by a coiled spring.

When the magnet is weak the current is cut off from the accumulators, but when the dynamo is running at a fair speed the magnet is strong and pulls the switch into contact and the charging proceeds. The mill will run and charge all night and all day. In quiet weather it runs much of its time slowly, and, therefore, uselessly, but it also runs the night through, and I suppose would on an average do eight hours work in twenty-four.

**TALK TO THE FARMERS.**

ABUNDANT crops of good wheat cannot be grown for a succession of years unless care be taken to provide an equivalent for the substances carried off the land in the produce grown thereon. Urge your farmers to use fertilizers and thus uphold the quantity and quality of the wheat you mill and expect to mill.



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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 profession, and acting as an organ with 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 of the grain and flour trade.

WHEAT-GROWING IN ONTARIO.

A RECENT bulletin of the Ontario Agricultural College treats of experiments with winter wheat. Acting on the principle that it is always better to be forearmed against the uncertainties of the season, the recommendation is made to sow only those varieties of wheat possessed of sufficient vigor and hardiness to enable them to bear up well under adverse conditions. The relationship existing between the farmer and the miller is observed in the advice to seek a variety of wheat possessing good milling properties. To ignore this quality will prove a source of weakness to the farmer. He is also warned against a variety that is prone to rust. Although rust is, we are told, largely dependent on season, soil and location, some varieties have the power of resisting it in a marked degree.

Mr. Mills, principal of the Ontario Agricultural College, was credited, in a speech made at a farmers' picnic during the past summer, with saying that farmers should sow no more wheat; that with a yield of sixteen or twenty bushels an acre it would not pay the labor of sowing and harvesting, and the advice tendered was to grow oats, peas, barley, and to devote their attention to dairy farming. Bulletin No. 79 of Mr. Mills' college does not give this advice to the farmers. The inclination to sow a less average of winter wheat, because of the low prices ruling, is deprecated. "This tendency," says the bulletin, "can easily be carried too far." We do well to remember that we have an excellent wheat-producing country, and that we want large quantities of straw for bedding which cannot be secured so efficiently in any other way. It is at least questionable as to whether this province should at any time grow less wheat than will suffice for home consumption. It may be that Principal Mills' summer remarks were wrongly reported, but as reported, they were somewhat freely quoted in the press of our own country and the United States. The official declaration of the college would seem to be the one that would more generally serve being put into practice. The profits of farmers in Ontario have for some years been light, and other callings have suffered in a similar manner, but we do not think that a broad and perfect examination of the causes that have led to this would justify an expenditure of wheat raising.

The bulletin gives particulars of forty-four Canadian and American varieties of wheat grown under exactly the same conditions. Of fifteen varieties sown during the past three years, the Surprise heads the list in point of yield, averaging 46.37 bushels per acre for the three years. It is referred to as possessing good milling qualities, as well as other desirable qualities. The Early Red Clawson follows closely with an annual yield of 45.70 bushels, the Rodgers is third, but does not stand high as a milling wheat.

Eight varieties have been grown for two years, the American Bronze leading, Egyptian second, and Garfield third. Jones Winter Eye is possessed of first-class mill-

ing properties, but is only medium as to yield and weight of grain. The Bulgarian, which bears considerable resemblance to the Democrat, is a rugged wheat and possessed of good milling qualities.

Twenty-one varieties of wheat were grown this year for the first time, and considerably more than one-half the number were imported from the United States. The best of them are Dawson's Golden Chaff, Mediterranean, Fulcaster and Red Wonder.

Summarizing the results of the various experiments the bulletin authors say: "We are justified in concluding that the wheat producing capabilities of Ontario are still of a high order. The average yields per acre of the white and red wheats have not been far different, being about one bushel per acre in favor of the white wheats, the red wheats have averaged from one to two pounds per bushel more than the white wheats."

RAILROAD DISCRIMINATIONS.

COMMENTING on the discussion at the annual meeting of the Dominion Millers' Association on the discrimination in railroad rates against flour in favor of grain, the Canadian Manufacturer says: "This is a repetition of a similar condition which prevailed a few years ago, when the duty upon American flour was actually less than the duty upon the quantity of wheat necessary to make the flour. In that instance the influence of the Canadian Manufacturers' Association was brought to bear upon the Government with the result that the duty upon flour was advanced from fifty cents per barrel to seventy-five cents. In the present instance we do not observe any great outcry on the part of so-called protection newspapers against the railroads. Perhaps it is because of a dislike to jeopardize the editorial passes. If the railroads do not correct this evil, and that very promptly, the sentiment will gain ground very rapidly that the Government should intervene. The milling interest should not be handicapped by such unjust discrimination."

We are pleased to find our contemporary speaking out plainly on this question. The railroads are not only tardy to move in the matter, but their treatment of the committee appointed to meet with a prominent official of one railway a few months ago does not inspire confidence in their desire to apply a solvent to the trouble. It is folly, however, to suppose that the question can be shirked. More than once the suggestion has been made in these columns that the Government appoint a Railway Commission, to which this and many other questions of dispute between business men and the railroads could be referred for settlement. We note that the Canadian Manufacturer favors Government interference. The Millers' Association has so far hesitated to move on these lines, though we have reason to know that not a few of its leading members are of opinion that the wrongs of which they justly complain will not be righted until a determined position of the kind is taken.

The influence of the Manufacturers' Association was with the millers in the duty fight of a few years ago, though it is assuming rather much to intimate that it was largely through this influence that the duty upon flour was increased. The heavy work was done, naturally and properly, of course, by the Dominion Millers' Association, led by Mr. M. McLaughlin, the chairman of the committee having the matter in hand. The opportunity is here again to do good work on behalf of an important Canadian industry, for we judge that the Canadian Manufacturer is not, as would seem to be the case with some of its protection contemporaries, afraid "to jeopardize the editorial passes."

BUSINESS COMBINATIONS.

CONSOLIDATION has taken hold of many of the commercial establishments of the present day, especially in manufacturing lines, where the advantages of concentration of effort and capital are more clearly seen. Recently in this country we have witnessed the formation of powerful combines among the implement men, paint manufacturers, cotton concerns and other interests. The flour millers have not made any movement in this direction, as yet, but across the border they are moving actively. More than three fourths of the immense flour-making capacity of Minneapolis is controlled by three companies. The big mills of New York and Brooklyn,

with an aggregate daily capacity of 9,000 barrels, passed recently into the hands of one corporation. More recently a combination, including, practically, all the prominent mills in California, was formed. By many it is thought that the mills of St. Louis will soon take a similar course. A smaller consolidation has just occurred in North Dakota, where a strong business association already disposes of the output of that State with signal economy. Buffalo, Rochester, Milwaukee, Duluth and West Superior have not yet been "heard from" in such a way, and may not be for years to come. Special conditions are necessary to the success of a consolidation of mills. It is not enough that they be in one city or district; they must also be grinding for the same general markets.

Taking a look over the commercial horizon generally it seems plain that this movement is more likely to gather strength than to recede. We see it in the absorption to a large extent of the small store-keeper by the larger dealer. The small miller, so far as Canada is concerned, has had immunity from these conditions in a greater degree probably than any other class of business men.

The coal combine in Canada and the United States where the cost of the indispensable black diamonds has advanced, and seems likely to further advance, causes everyone to taste of the hardship that a combination can inflict on a people. It is maintained, however, with a good deal of force, that in not a few cases a consolidation of commercial interests operates for the good of even those who have been squeezed at the time by the consolidation. The man who has been engaged in store-keeping in a small way, struggling against keen competition, and tasting the bitterness of doing business on a small capital, working hard and making little, improves his position often by withdrawing from business and accepting a clerkship under another. The same rule holds good in other lines of commerce.

The greed of the age, manifested not infrequently in the career of the rich monopolist, is to be decried and manfully opposed wherever and whenever its hydrahead is seen. But it would be a mistake to run away with the idea that justice and mercy have no part in the composition of all our greater business houses, and that an iron heel is ready in every case to be pressed upon the neck of those who are in subjection to them. Some recent reports of large business and manufacturing institutions, concluded on the profit-sharing plan, where the employee shares with the employer in the prosperity of the business, are happy illustrations of a brighter state of affairs. And if monopolistic combines are increasing in number so are the profit-sharing establishments.

AGAINST GAMBLING.

WHAT has been known as the Washburn Anti-Option Bill, which was specially aimed at the bucket shop business of the United States has been shelved for at least another term. Congress has adjourned and this measure is not among those that bear the official assent. From the first inception of the measure a vigorous and desperately determined assault was kept up against it. Every influence that could be tapped was utilized to help to down the bill. The Boards of Trade, in which are many reputable grain men, but which also contain a strong gambling element, did not escape the contamination that comes from standing in with a doubtful element.

It was alleged against the bill that some of its provisions would have operated to the prejudice of legitimate business. This may have been the case in, we opine, a very limited degree. And, if so, it would not have been a difficult matter to have eliminated the objectionable clauses. But it was the shallowest simulation for the opponents to make these objections the ground of their attack. The bill was not wanted because it was a square blow at gambling.

Measures of this character, however, can never be suppressed in this fashion. In fact, they don't down. The fight in Canada against this class of business was less difficult than will likely be the case in the neighboring country. But victory will ultimately come, and those concerned may better now, than later, perhaps, accept the defeated measure as a notice to quit.



"WE are not making the active preparations in connection with the barley crop as in former years," said Mr. W. D. Matthews. "The duty imposed by the United States last year has brought about some uncertainty in the trade; in addition, I am afraid that this year's crop is too light in weight and too dark in color for use by the English brewers. Its value, therefore, will depend entirely, if it is to go for export, upon what it will realize for feeding purposes. I think our barley will average two pounds to the bushel less than that of last year, and a large proportion of it is stained."

"The fixing of standards of Manitoba grains promises to be still a matter for controversy," said a local grain man. "Previous to last year the standards were fixed in the east. Then the Manitoba people raised an objection, and the Government allowed standards to be fixed in Winnipeg as well as in the east. This did not give satisfaction, as everybody in the trade knows, for stuff graded at Winnipeg often failed to come to the Toronto inspector's standard. As a result of the representations made to the Government, as you already know, it has been decreed that experts for fixing the standards shall be appointed by order-in-council. Now the farmers of Manitoba are demanding representation on the board of standard fixers, and I hope they'll succeed."

Mr. A. Moore, of the Royal Dominion Mills. Mr. Laughlin & Moore, who is travelling in the Northwest, writes his partner, President McLaughlin, of the Dominion Millers' Association, as follows. "I drove over some fine fields of wheat to-day, among them 2,300 acres of Sanderson's, which is one-half or more in the stack, not a heavy crop, but a very nice one. All was ripe and standing, clear of weeds or smut, excepting 100 acres, which is very smutty. All his seed was frozen seed that he bought at a low price. All was soaked in bluestone except that used in the 100 acres of smutty wheat. Most of the wheat will go No. 1 hard. There was a little frost last night and the night before, but none to hurt the grain." This is strong testimony for bluestone as a preventative of smut. It would not appear, at the time of Mr. Moore's writing, that any damage worth naming has been done by frost.

The Montreal correspondent of the Empire reports an interview of Mr. Robert Meighen, president of the Lake of the Woods Milling Co., with the Hon. Mr. Chapleau, Minister of Customs, with reference to the grinding of wheat in bond. It appears that the mode of procedure heretofore adopted has not been satisfactory to his company and he states that his directors are now quite decided in their views against the grinding of wheat in bond. They maintain that the intention was to provide for the entry of wheat for grinding in bond when the crop of the Dominion was not sufficient to supply the wants of the country, but Manitoba having become a very large producer of wheat, and Canada a large exporter of both wheat and flour, they, as supporters of the National Policy, are strongly against the importation of wheat for grinding in bond, and maintain that it operates against the Manitoba farmer, and, in fact, the wheat producers of the entire Dominion.

"With regard to importations of flour," says a leading West Indian shipper, writing to a Montreal dealer, "it is almost the invariable custom here to obtain supplies through New York, and these are purchased and shipped by agents there. There has been some small trade with Canada in flour and other goods during the last few months, but the dates of arrival of the Canadian steamers lately have been so uncertain and the goods that were expected on board have been found shut out,

that merchants still depend for their regular supplies on New York. Can you not do anything to get us a better service? You should have a weekly one at least. The vessels need not necessarily be so large as those already on the route. Let them be say 500 tons. Those already on the route are between 1,000 and 1,200. People will not order goods from Canada while this slow communication exists. If I were to order flour from some point in Canada to-day I might not get it for two months, whereas ordering from New York I could count on getting it inside of twenty days."

C. A. Pillsbury, the big Minneapolis miller, has recently returned from a trip to England. Naturally he studied flour interests, and says the English flour importers were nearly all heavy losers by depreciation in the value of breadstuffs the past year, and that the heavier millers, even, did not escape loss. He cited one instance where an English flour man was dangerously ill about six months, and to that fact he owed his present solvency. Part of the time, just at the period when prices were at or near the top, he was not expected to live, and therefore could not be consulted as to business. Those in charge of his affairs simply bought from hand to mouth, and, when breadstuffs began to tumble, they had nothing upon which to lose. Mr. Pillsbury says that, while everything appeared of a roseate hue for the miller when he entered on the crop year now about closed, the losses later, sustained by shrinkage on stocks of wheat and flour necessarily held, have about wiped out whatever profits were made on the first half of the season.

Mr. Leon M. Carrier, commission merchant, Quebec, says, in reply to the remarks of Mr. E. S. Edmonson, at the annual meeting of the Dominion Millers' Association. "I must give credit to Mr. J. L. Spink for his reply to Mr. Edmonson. Mr. Spink understands the Quebec market thoroughly, having been doing business here for many years. In reply to Mr. Edmonson's charges I affirm here that the car of flour which he refers to was inspected by the Quebec inspector as musty wheat. If he thought the inspector was mistaken all he had to do was to make a survey on him, for he would be dealing with a perfectly reliable man. Let me say I have great confidence in our inspector's report as being correct. If Mr. Edmonson can prove what he said there is still \$50 which is at the disposal of some charitable institution. I feel contented when I see that there are only one or two out of 600 or 700 millers who have any complaint to make against Quebec dealers, and that these one or two millers who have made petty accusations cannot even prove them. I could make a similar accusation against one miller in Ontario who has taken advantage of some Quebec dealers, in having them protect his draft, and that they would make the difference good, but the same difference was never acknowledged."

Sir William P. Howland has for some years made it a custom to visit Manitoba in the interests of his grain and milling business. This year he reached Winnipeg about the end of August, a week later than in former years. "I was pleased," said he, "to see for the first time the vegetables and garden produce unharmed by frost. They have hitherto been all omens to me." From present indications he believed the crop would be a good one. He was glad that exaggerated reports of the harvest had become a thing of the past. They had done much harm to the country. Sir William had no little fault to find with the grading during the past season of the wheat for export. The grading at Winnipeg, he says, was all right, but at Fort William and Port Arthur caused much dissatisfaction, and this did no little harm to Manitoba wheat. The standards were lower than any previous year, and this, Sir William thinks, was a great mistake; the standards should be graded not in accordance with the year's crop, but with the usual and best samples. "Manitoba wheat," said Sir William, "was in very great demand in the east this year and probably ten times more was used than in any previous year. The wheat in the east from the land being over-cropped requires a strengthening mixture, and this you supply. Asked on the probable price of wheat when the market opens, Sir William replied that at present it was very hard to form

any opinion. Prices are ruling very low all over the world, and if it was not that transportation was remarkably cheap just now, the price would probably be lower than ever. Pressed as to the probable figure he said he thought No. 1 would be in the neighborhood of sixty cents.

Mr. D. Stewart, son of Mr. F. C. Stewart, ex-M.P.P. for Dufferin, Ont., who is up on business in Manitoba, writes from Pilot Mound, Man., as follows. "The crops look fine. I think in a three-mile track around here there is more grain than in any in the best township we have. I saw a ninety-acre field of oats that seeded itself from the seed that was dropped on the ground last year. The owner says he will have seventy-five bushels to the acre off it; I believe he will. You can buy the very best oats here for fourteen cents a bushel and wheat you can't give away. I was out for a drive and was shown a pile of wheat in a field, spread out on boards without any covering, which contained between three and four thousand bushels. The elevators all through the country are filled to the roof with wheat and they don't know what they are going to do with it. I walked out to some stacks about half a mile from town. They were all wheat stacks which they could not get threshed last fall. I counted from where I stood twenty-two stacks, and no matter where you drive there are dozens of stacks in sight."

Mr. Jerome K. Jerome, author of that variously criticised book, "Three Men in a Boat," and whose new magazine, The Idler, is one of the phenomenal successes of English journalism, has lately been interviewed by Mr. Raymond Blathwayt, who is sometimes referred to as the Napoleon of newspaper interviewers. Among other bright things Mr. Jerome said to Mr. Blathwayt was this "A fool's opinion is often more interesting than a wise man's comments on someone else's views. I always like to get a bus driver's opinions, for instance. Not that I mean for a moment to imply that they are fools, the very reverse, but because it is my opinion, pure and undiluted, not somebody else's watered down." The individual, personal opinions of another, given without restraint or studied effort, possess a charm that cannot be made part of the ablest essay from the ablest essayists, no matter how important the subject matter may be. Do you know, friends, that this is the special mission of this page? A free parliament, as I have sometimes said, where everyone can speak out with the most perfect freedom and candor. One view may be wholly opposite to that of another. But, never mind, each is, to quote again Mr. Jerome, "our opinion (yours, pure and undiluted, not somebody else's." The opinion may be contrary to the opinions of the editor. Never mind, it is your opinion, not somebody else's, and the editor wants it.

Much uneasiness is felt in grain circles concerning the steps that may be taken by the Frunk Lane Association in New York regarding the grading of Canadian grain shipped to that port for export. Mr. Miall, Commissioner of Inland Revenue, interviewed touching the resolution adopted by the Montreal Board of Trade that the Dominion Government be memorialized to request the United States Government to permit of the appointment of Canadian inspectors at New York to grade Canadian grain, said that he had only just seen the report in the papers and the memorial itself had not yet been received. He could not, therefore, express any opinion as to what course would be pursued. He said, however, that he thought it would have been better if the Board of Trade had appointed a small committee to visit New York and ascertain whether the proposed appointment of Canadian inspectors was possible and practicable. Even if the United States Government had no objection, there may be difficulties with the state inspectors to overcome, and possibly the elevator companies may not be willing to admit Canadian inspectors to their buildings. These and other points would have to be considered by the Government before any action could be taken in the direction asked by the Board of Trade, and if the Board has not possessed itself fully of all information on these points it will be necessary that they be enquired into before action can be taken.



The particular purpose of this department is to create an increased market for Canadian mill products. Flour, cornmeal, cruminals, ricklets, job barley, horse meal, split peas, etc., of home and abroad. The success of the miller who guards 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 products 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 MILLER each month covers very ably the field of flour millers and buyers of mill products, especially in the interests of the Canadian confederation, but in Great Britain, the West Indies, Great Britain and other foreign 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, or in the interests of the millers, shippers and buyers in any matter touching these important questions.

**PROFITS IN OFFAL**

WHEN in Boston, recently, President McLaughlin, of the Dominion Millers' Association, states he learned that bran was being largely and increasingly used by farmers for feeding cattle. It had been found that for all purposes this class of feed placed the cattle in better condition than much other food that is usually given them. The result was that bran was looking up in the States and would continue to look up as its value in this respect became more widely known.

Millers in Canada would find it to their interest to spread this information among the farming community in their several localities. Bran was not a source of profit to the miller to-day. He views it with somewhat cold indifference. But the opinion of experienced millers is that when anything approaching a generous price can be secured for the offal, then it is that there is a profit in flour milling.

**WEST INDIAN TRADE**

Our trade in mill products with the West Indies would be materially increased if more complete shipping facilities were furnished either as a result of government or individual enterprise. The Pickard & Black steamship company has in part met the needs of shippers. The quantity of flour that this company has carried within the past few months, and referred to in the August MILLER, is evidence on this point. But what is wanted is greater dispatch. As is pointed out by a West Indian shipper in the Scribe page of this issue of the MILLER, the means of communication between Canada and these Islands is too slow, making it necessary for dealers to order supplies from New York which they would rather receive from this country. A steamship service at least once a week is suggested as necessary to overcome the difficulty, and smaller vessels, say 500 tons, are recommended.

The present trade with the Indies, together with undoubted possibilities, ought to influence the Dominion Government to handle this question with greater definiteness and energy than has yet been the case.

**GROWTH OF FOREIGN MILLING**

It has been apparent to any one, who has studied the history of flour milling in Great Britain that, especially of recent years, this industry has been making marked progress. The mills in few important respects are behind the best equipped mills in this country, whilst it is the opinion of close observers from this side of the Atlantic that in not a few matters they are ahead of us here. Mr. Louis H. Gibson, a writer possessed of a very perfect knowledge of the milling situation in both America and Great Britain, points out in a recent article in the American monthly, Milling, that in the matter of mill construction millers across the sea have the lead. Specific reference is made to the Ure mill at Glasgow, Scotland, which Mr. Gibson says "is the best constructed mill building I ever saw." The French mills are said to be all splendid buildings, well and neatly kept. "Such things as shafting being out of line and requiring extra power to drive is not to be thought of." The American miller can make cheaper flour and get more money out of the wheat than foreign competi-

tors. This must, so long as it is the case, prove an invaluable source of strength to him in competing for foreign trade. It is possible, however, that the time may come when, as in some other respects, clever as we believe ourselves to be in this newer country, we may be distanced by the older land. Our contemporary, Milling, of Liverpool, England, declares very emphatically in a recent number that flour milling in Great Britain has more than recovered its old position and is still making rapid strides. "The trade once almost monopolized by American flour has gradually and surely passed to a large extent into the hands of our home millers, and the process still goes on. Even in Scotland, where imported flour finds perhaps its best British market, the development of home milling is still making progress." The general advantages in milling in this country over the foreign miller are many and, we would think, nearly insurmountable. We need not, however, be beyond taking the suggestion that is contained in this one condition alone—the steady growth of flour milling in Great Britain, France and Prussia. And if in mill construction, grain cleaning and other respects, as Mr. Gibson intimates, we are behind the foreign miller, why not apply the remedy and round up our milling methods in the spots they are weak?

**BILLS OF LADING.**

There is nothing new in an agitation for better methods of transportation in flour between this country and Great Britain. There is some encouragement, however, in a certain measure of interest and activity that is being indicated in circles where one does not always look for these things. The trouble is one that concerns the millers on this side of the Atlantic and his customer across the sea, and in both countries efforts are being made to secure reform.

Mr. W. J. Stockman, a well-known commission merchant, of Leith, Scotland, who does a large trade with the millers of America, has received a letter from the steamship agents of the Arrow Line in these words: "A feeling exists among consigners of flour from New York to Leith that, notwithstanding the shipowners' exemption from liability for short weight by bills of lading, they should undertake some degree of responsibility. The owners of the regular steamers, therefore, have agreed, as a trial, to allow claims exceeding twenty-five shillings on any one bill of lading on consignment on all their arrivals after August 1. This is entirely without prejudice and may be withdrawn at any time. Claims will only be allowed on the signature of our dock checkers, and all shortages consequently must be passed by them." This is hopeful, as in some measure the action of the Arrow Line is voluntary.

Perhaps the greatest source of worry to consignors and consignee interested in the foreign trade is the delays in shipment and the difficulties of securing redress from the loss incurred in this way. The London (Eng.) flour trade association undertook, some time ago, to draft a bill of lading that would, they had hoped, prove a remedy. Having completed the bill a committee from the association met the leading shipowners and presented them with a draft of it. The matter for the time being ended there. Becoming anxious, the flour men pressed the companies for an answer, and were told that their bill had been sent to New York for consideration by the carrying trade there. "As a matter of course," says the London Miller, "this reply was little calculated to satisfy the association, who thereupon advised their American correspondents of the steps they had taken in London. The chief bone of contention between the flour trade of London and the ship-owners seems to be a claim advanced by the former for compensation in cases of delayed transit. The proposed bill contains the following clause: 'It is further agreed that the goods shall be forwarded with all reasonable despatch, and shall be put on board the ocean steamer within six weeks from the date of this bill of lading, failing which the above-mentioned freight shall be reduced five cents per 100 pounds for each and every month or portion of a month after the expiry of the said weeks from the date of this bill of lading.' That such a clause would under any circumstances be accepted by the carriers of the United States, or for the matter of that, of Canadian flour, seems out of the question." Here in the meantime this matter is

standing. What will be the outcome of any further negotiations it may be difficult to say, but the question having been opened between the trade and the ship-owners it is reasonable to expect that ultimately it will produce some satisfactory results.

A United States milling journal, discussing the subject of bills of lading, has made the remark that the trouble is not at all times with the steamship companies. Steamship agents complain bitterly, says our contemporary, and with reason, of the manner in which many western millers ignore their rights in the matter of prompt shipments. "A line has, for instance, a certain number of vessels sailing in June. It books cargoes, expecting the same to be on hand during the month. The miller neglects to ship and spot freight must be secured to take the place of this shipment. This is frequently done at a loss by the steamship agent. In July the delayed flour arrives, the miller not having shipped it promptly, but, inasmuch as other freight has necessarily been booked for July sailings, the flour must perforce lie over until August. Here ensues a delay for which the miller is alone responsible, as, had he shipped promptly, as agreed, his flour would have gone forward sixty days earlier. Such occurrences as these are not infrequent. Steamships carrying western flour are frequently so uncertain as to what cargo will be on hand in time that, although they may not desire to overbook, they are forced to do so or run the risk of having their steamers sail a thousand tons or more short of cargo."

The charge here is against United States millers. Canadian millers, who are as anxious as they to secure improved transportation methods, are not, we trust, also blameworthy.

**MARKET CONDITIONS.**

Millers are hoping to buy wheat at a price this season that will leave a decent margin of profit for milling. As prices have been running the past season has been far from a money-making one. Trade during the month has maintained the average slowness of the preceding months of the year. Hopes are built on an improved trade with Newfoundland this fall, and these will, in a reasonable measure, no doubt, be realized. Consignments to Great Britain are not many. The London correspondent of the Northwestern Miller states in a late letter: "American flour is evidently not of the high quality which it was some years ago, and this fact will account for bakers turning to the home-made product." And he urges American millers, above all things else, to maintain a high standard of quality if they want to retain a profitable trade in England. In another column we have something to say of flour milling in Great Britain, and alongside of this the remark we have here quoted has considerable significance. Best American spring patent, extra store, is quoted by this London writer at 26s. 6d. and 27s. 6d. per 280 lbs., while London-made patents fetch 29s. and sell more freely than American. New American wheat is reported by millers to make a fine quality of flour, with greater strength than the old crop had, though requiring more pounds to make a barrel.

**PRICES OF FLOUR AND MEALS.**

Prices at the leading market centres at the time of closing this report are as follows:

Toronto: Car prices are. Flour (Toronto freights), Manitoba patents, \$4.60 to \$4.65; Manitoba strong bakers', \$4.20 to \$4.30; Ontario patents, \$3.90 to \$4.10; straight roller, \$3.50 to \$3.65; extra, \$3.15 to \$3.25; low grades, per bag, \$1 to \$1.50. Bran, \$11.50 to \$12.50. Shorts, \$13 to \$14.

Montreal: W. W. Ogilvie exported 20,000 sacks of flour during August. We quote prices as follows: Patent spring, \$4.60 to \$4.70; patent winter, \$4.25 to \$4.50; straight roller, \$3.90 to \$4.10; extra, \$3.40 to \$3.50; superfine, \$3 to \$3.15; fine, \$2.60 to \$2.75; strong bakers', \$4.10 to \$4.25. A fair turn-over for local wakers is noted in meal, outside of which demand is slow. Prices range as follows: Granulated, bbls., \$4.10 to \$4.25; rolled, bbls., \$4.10 to \$4.25; standard, bbls., \$3.95 to \$4.05; granulated, in bags, \$2 to \$2.10; rolled, in bags, \$2 to \$2.10; standard, in bags, \$1.90 to \$2. Bran, per ton, \$13 to \$13.50; shorts, per ton, \$14 to \$15; mouillie, per ton, \$19 to \$22.

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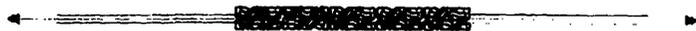
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**TORONTO**

## This is how it works in the West :

Guelph, August 27th, 1892.

MESSRS. WM. & J. G. GREY, 2 Church St., Toronto, Ont.

Gentlemen,—I have had the Little Wonder Reel working now some weeks. I am well pleased with it. It is the best bolter I have ever seen, and is three or four times the capacity of the centrifugal which it displaced, although it has considerable less cloth surface. I can endorse it in the strongest terms.

Yours truly,

E. J. PRESENT.

## And here is a Voice from the East :

Cornwall, June 16th, 1892.

WM. & J. G. GREY, Toronto.

Dear Sirs, It is now about two months since I put in operation the Little Wonder Reel purchased from you, and am glad to say it has given me entire satisfaction. I would not part with the machine for \$1,000 if I could not get another. The same is doing much more and far better work than the hexagon I displaced, and I cheerfully say that your Little Wonder Reels are the best I ever used and all you represent them to be. Wishing you the success you deserve,

I remain yours truly,

JOHN MUNROE.

## What the Little Wonder will do

It will take all the flour out of your shorts and leave it ready to go to flour bin.

It will bolt any stock that is difficult to handle on any other reel.

It will redress all your flours from the other reels, improving its dress and color.

It will thoroughly dust your middlings, and the flour will be fit to go to flour bin.

It will do any kind of bolting or scalping better than any reel in the market.

It will show you where you were losing money and where you can save it.

Try one on your worst stock and you will use no other machines. Sent out on thirty days trial. Satisfaction guaranteed or no sale.

**WM. & J. G. GREY**



Office of the CANADIAN MILLER,  
September 15, 1892.

THE GENERAL SURVEY.

THE logic of the statisticians, who, for the past few years, have been minimizing the wheat-producing capacity of this North American continent, is, to apply the language of the sporting ring, being somewhat badly bruised just now. When the crop of last year in the United States reached the phenomenal figure of 612,000,000 bushels, and that in Canada was, relatively, as large, we were told that the conditions were phenomenal, and could not be fairly taken as a basis of argument. Perhaps not; but 1892 is here, and if the yield in Canada and the States does not reach the figures of a year ago, they are approaching very closely to them. Clearly there will be, for another year at least, no lack of breadstuffs for home consumption in America, and after these multitudes have been fed there will still remain, to use a scriptural term, many basketfuls of surplus.

What to do with this surplus is a problem of serious import in grain circles at the present time. The surplus of 1891 is not yet disposed of, and, added to the assured surplus of this year, it tells of an immense quantity of wheat to find, if possible, a market somewhere. These conditions become a matter of yet deeper concern to many in the trade because of the great losses that were made in not a few quarters last year. A writer in the New York Bankers' Magazine is disposed to reproach his own people for their lack of foresight in sizing up the situation as they did a year ago. "From being the best informed people in the trade," he says, "they have been the worst deceived, the past year, as to Europe's deficit and the world's supply; and they have anticipated wants that have not been found to exist, and are left with a larger surplus of old crop on hand at the beginning of the new, than since old times, before the grain carrying trade of the world was done by steam, requiring the carriage of large stocks." Disaster has not been confined to American speculators. It is an open secret that a number of those engaged in the trade in Canada, in different parts, have suffered heavy losses. A Montreal newspaper correspondent makes the statement that big losses have been made by several grain speculators of the eastern metropolis. "The steady drop in prices having given them no chance to get even, they have simply bought and lost regularly. One is said to have dropped \$30,000. A grain man remarked: 'There is nothing I can ship to the old country and get my money back.' Several exporters are dropping out until times mend." European importers, it is well known, have in many cases become so severely crippled by their losses, and loaded down with heavy stocks on hand, that had cost them much higher prices, that they are not likely to be an active force in the market for some time to come.

The one great blessing of an abundant crop, which is the universal prayer of preacher and people the world over, has been vouchsafed to people the world over. But, like the white elephant of history, there are those who are asking: What shall we do with the animal? Certain economic principles will, in all these cases, despite bull or bear, prevail. However much our desire may be for high prices or low prices, where conditions are against one, these cannot legitimately, nor are they ultimately, altered. As we view the situation to-day there would not appear to be any good or sufficient reason for predicting high prices for wheat anywhere in the near future.

Coming directly to figures that would furnish in part grounds for the conclusions suggested, we find the total wheat crop of Ontario placed at 33,000,000 bushels, as against 31,500,000 bushels last year. In Manitoba and the Northwest the yield may be safely placed at 20,000,000, though the more sanguine ones place it much higher. Other provinces may be counted at 2,000,000 bushels. Roughly stated, the total yield for Canada

will be 55,000,000 bushels. For local uses and seeding perhaps 35,000,000 bushels will be required, leaving an exportable surplus of 20,000,000, to which add wheat in farmers hands or elevators, and we will have in Canada a surplus for export of 30,000,000.

The situation in the United States was given quite fully in a previous review in this journal, the wheat crop being calculated at 550,000,000 bushels. Nothing has transpired during the past month to materially alter these figures. We hear from some quarters of the grain being under weight, and the statement has been made that this will reduce the first figures to perhaps 515,000,000 bushels. Taking all conditions, however, into account, it is very problematical if the yield will go below 550,000,000 bushels. So that counting the surplus of some 70,000,000 from 1891, the States will have anything from 240,000,000 to 250,000,000 bushels for export.

Naturally the situation on this side of the Atlantic is affected by the requirements in Europe. These are given in a calculation, apparently made with much care, by the Austro-Hungarian Government, a country, by the way, that occupies an important position in crop calculations this year. Its figures are: Great Britain has produced from 23,000,000 to 25,000,000 hectolitres (65,275,000 to 70,950,000 bushels), and will import from 56,000,000 to 58,000,000 hectolitres (158,928,000 to 164,604,000 bushels). France has produced 105,000,000 hectolitres (297,990,000 bushels), and will import 15,000,000 hectolitres (42,570,000 bushels). Germany has produced from 34,000,000 to 35,000,000 hectolitres (96,492,000 to 99,330,000 bushels), and will import 5,000,000 to 6,000,000 hectolitres (14,190,000 to 17,028,000 bushels). Italy's crop is placed at 40,000,000 hectolitres (113,520,000 bushels), and imports at 9,000,000 to 12,000,000 hectolitres (25,542,000 to 34,056,000 bushels). Austria's crop 17,000,000 to 18,000,000 hectolitres (48,246,000 to 51,084,000 bushels), and imports 8,000,000 to 10,000,000 hectolitres (22,704,000 to 28,380,000 bushels). The wheat harvest of all European countries requiring to import the grain is placed at 266,800,000 to 270,800,000 hectolitres (757,178,000 to 768,530,000 bushels), and total imports required by them 114,600,000 to 123,100,000 hectolitres (325,235,000 to 349,358,000 bushels). Such is the situation to-day, whatever changes the future may create.

WHEAT.

The local wheat market is quiet. White has sold at 71c.; red rules about the same. Spring is offered at 68c., and 65c. bid. Manitoba, No. 2 hard, 66c. west; and No. 3 hard, 71c. Montreal: No. 2 hard, Manitoba, 85 to 86c.; No. 3 do., 77 to 78c. Chicago: September, 73½c.; October, 74½c.; December, 76¼c. Buffalo: Spring wheat—Fairly active; frequent trades in small lots; No. 1 northern (Minneapolis), 81½c.; No. 1 northern (Duluth), 81½c.; Minneapolis, No. 1 hard, 84½c.; No. 2 northern, 77½c. Winter wheat—Dull and weak; No. 2 white sold at 75c.; other grades neglected. St. Louis: 68½c. for cash; 68½c. for September; 70c. for October; 73½c. for December; 79½c. for May. Milwaukee: 68½c. for cash; 72c. for December. Duluth: No. 1 hard, 76½c. for September; 78c. for December; No. 1 northern, 74c. for December; 75½c. for December. European markets: London—Beer-bohm says: Floating cargoes—Wheat steady. Cargoes on passage—Wheat, more enquiry. Mark Lane, Spot, good No. 2 club Calcutta wheat, 30s. 6d., was 30s. 6d.; present and following month, 30s. 3d. was 30s. 3d.; good cargoes of No. 1 California wheat, off coast, 32s. was 32s. 3d.; do. Australian, off coast, 32s. 6d., was 32s. 9d.; present and following months, 33s. was 33s. 3d.; do., Chilean, off coast, 30s. 6d., was 31s. 3d.; present and following months, 31s. 9d. was 32s. London—Good shipping No. 1 California, prompt sail, 32s. 6d. was 32s. 6d.; nearly due, 32s. was 32s. 3d. French country markets—Mostly a turn dealer. Weather in England—Cool but fine. Liverpool—Spot wheat, steadier.

BARLEY.

In the Scribe page Mr. W. D. Matthews, who is one of the largest barley handlers in Ontario, and than whom there is perhaps none better posted, does not hold hopes of a very important barley trade this year. The McKinley bill has discouraged growers, so that the yield will be the smallest for a number of years. Exports last year were only a trifle over 3,000,000 bushels, and

of this about 1,000,000 bushels went to Britain. Prior to 1890 the annual exports of barley were from 9,000,000 to 12,000,000 bushels. Mr. Matthews is also apprehensive of the quality. The present market is of course about nil. Little is being offered or asked for. The Oswego report is that market for Canada barley is wanting alike in sales, receipts and shipments.

OATS.

The trade in oats has been exceedingly slow throughout the month. Locally, old are worth about 33c., and new 32c. on track. Buffalo: No. 2 white, 38½c.; No. 3 white, 36¼c.; No. 2 mixed, 35½c.; No. 2 white, clipped, 34c. Oswego: extra, No. 1 white, 43c.

PEAS.

Oats dull, prices from 59 to 61c. The new crop is said to be of a very various character.

RYE.

Rye nominal at about 58c.

FACTS ABOUT HIGH MILLING.

HIGH or gradual-reduction milling, called also Vienna, Austrian, Hungarian, Prague and Savon milling, had its origin, and has reached its fullest development in Austria.

In the year 1800, flour mills in that country and elsewhere were of primitive description, consisting of hopper, millstones, and a rude grading sieve. The wheat was usually damped before grinding, and the grinding was as fine as possible, only the coarser particles being separated by means of a sieve. The bran was in many cases picked off with a small shovel, leaving behind tolerably fine clean middlings, known commercially as Vienna middlings. As the demand for middlings increased, reduction by grinding was performed less abruptly.

About 1810, Ignaz Paur, a millowner of Leobersdorf, simplified the troublesome process of sifting middlings on dishes by inventing a rude purifier. He thus produced the first fine purified-middlings flour, or patent flour, and so became the father of high milling. His purifier was built by N. Winter, cabinet-maker, in Leobersdorf, and duplicates were sold to Huppman, of Baden, near Vienna, and Spuller, of Gutmarsdorf.

The Baden flour and bakery soon became celebrated, and when, in 1811 or 1812, the master baker, Gerber, moved to Vienna, his kippel and buns drew such crowds that the police were required to keep order before his shop. Thus the demand for strong white glutinous flour grew rapidly.

In 1826 Paur built a mill at Lichtenwerth, the purifying department of which served as a model in the Vienna district. About the same time Mittermueller introduced dusters for cleaning wheat. Geo. Volk was the first to use elevators in Austria.

Between 1830 and 1840 Vienna milling, which had meanwhile been introduced in Switzerland, was greatly improved by the use of cast iron in hursts and gears. Between 1840 and 1850 the size of millstones was increased and the grinding surface extended to the circumference. Flour reels also came in, and steam power began to be employed. The period 1850 to 1860 was marked by the transition from damp to dry milling, a change which yielded whiter flour and added to the durability of its strength. Between 1860 the roller mill of iron, steel or porcelain came into prominence, and its use increased so rapidly that now it is almost universal among merchant mills throughout the world.

THE GRAIN WEIGHT.

THE grain, the smallest weight in use, was thus called from being originally the weight of a grain of wheat. A statute passed in 1266 ordained that 32 grains of wheat taken from the middle of the ear or head and well dried, should make a pennyweight, 20 of which should make an ounce, while 12 ounces were to make a pound. The pound, therefore, consisted of 7,680 grains. Some centuries later the pennyweight was divided into 24 grains, which makes the Troy pound, as now used, 5,760 grains.

TRADE NOTE.

The Watrous Engine Works Co. (Ltd.) of Beaufort, Ont., report a large order from Isaac Warren, miller, Oakville, Ont., for grip gears, pulleys and couplings; also an order from the Royal Electric Co., Montreal, Que., for a 93221 pulley, 300-h.p., and pulleys for dynamo. Evidently the grip pulley is on top.



## CANADA.

A NEW farmers' elevator is being built in Holland, Man.

A LARGE barley crop is expected in the Prince Albert district, Man.

W. D. MACK, of Tamworth, Ont., is about to add a set of rollers to his mill.

THE annex elevator at Fort William, Ont., will hereafter be known as elevator "C."

THE construction of A. McLaren's flour mill at Cobden, Ont., is being pushed forward.

J. E. WISS has bought an interest in the oatmeal mill of T. F. Quinn at Westminster, B.C.

THE Farmers' Elevator and Milling Co., Ltd., Alexander, Man., has applied for incorporation.

THE flour mill at Carberry, Man., has been remodelled and is now being operated by Rogers & Co.

THE new flour mill and grain elevator of Geo. Esterbrook, Tweed, Ont., is now completed and in running order.

THE Wolverson Milling Co., Wolverson, Ont., have made an addition three stories high by twenty-four feet wide to their mill.

C. N. BROWN, for the past two years manager of Hilliard & Peplow's flour store, Peterboro, Ont., has purchased the business on his own account.

A FARMERS' elevator will be built at Indian Head, Man., and another at Sintaluta, each to have a capacity of 30,000 bushels, at a total cost of \$14,000.

MESSRS. HAY BROS., of Listowel, Ont., do not intend to rebuild the flouring mill burned down recently, but will enlarge their elevator for the grain business.

CHARLES ARMSTRONG, Guelph, Ont.—The CANADIAN MILLER fills a long-felt want as a paper devoted alone to the interests of Canadian millers and grain merchants.

THE larns of Samuel McMaster, of Glenwilliams, Ont., containing all this year's crop and a quantity of last year's wheat, was destroyed by fire a few weeks ago. The loss is heavy.

J. L. WAIN, flour merchant, Hull, Que., is in financial difficulties and has left the town. Messrs. Warnock & Martin, of Ottawa, and Durocher, of Hull, have taken possession of his premises.

AN Ontario miller has offered to build a 125-barrel mill at Napinka, Man., if the municipality will grant him a bonus of \$5,000. At a meeting of citizens recently held the proposition met with general favor.

COMPLAINT is made by millers in British Columbia that the farmers of the coast are playing the trick of putting indifferent oats at the bottom and good ones at the top of the bags of grain sold to the millers.

MR. PERKINS, of Kimberly, Ont., has purchased the machinery of the Fairmount mill, which has only been in use a few winters, and will place it in his own mill, besides making other important additions.

A SHIPMENT of 25,000 bushels of Manitoba wheat was received at Martin & Warnock's elevators, Ottawa, Ont., a fortnight ago. This firm is shipping large quantities of flour daily to Montreal and St. Henri, Que.

A CONSIGNMENT of choice two hard wheat has been sent from Emerson, Man., to England via Montreal. This wheat was grown in the vicinity of Emerson, and is shipped directly to millers, who will test its merits.

AN examination of the papers of G. H. Lee, the ascending St. John, N.B., lawyer, showed that he had speculated extensively in the New York, Chicago and Boston markets. His shortage will not well up to \$90,000.

THE partnership heretofore existing under the firm name of Beckle & May, millers, Petrolia, Ont., has been dissolved by mutual consent, and Mr. Samuel May will go it alone in the future under the firm name of Samuel May & Co.

MR. POLAKOFF, of Corey, Ont., has a crop of Egyptian oats that is a marvel as far as growth and promise are concerned. Out of a sample five heads were counted 107, 109, 118, 129 and 134 grains respectively. The heads average nearly ten inches in length.

THE J. C. McLaren Baking Co., of Montreal and Toronto, have just completed a belt 50 inches wide by 120 feet long, made of English oak-tanned leather, to be used by the Electric Railway Co., of Victoria, B.C. This, we understand, is the largest belt of the kind this firm has ever manufactured.

A. W. HASTINGS, of the Lake of the Woods Milling Co., Montreal, Que., is in Manitoba in the interests of his firm, which will buy wheat largely now that its Portage mill is finished, as its orders on hand will keep both it and the Keewatin mill going for some time.

APPLICATION for letters patent of incorporation has been made by the Patrons' Elevator, Milling and Supply Co. for the purpose of establishing an elevator, mill and various other industries at Boissevain, Man. The amount of the capital stock of the company is to be \$48,000, divided into 1,920 of \$25 each.

FINLAY SMITH, of Hong Kong, China, is visiting Winnipeg, Man., endeavoring to interest local merchants in the question of reciprocal trade with China and Japan. American flour now holds the market in those countries, but Mr. Smith says there is no reason why Canada should not possess the trade.

THE milling industry of Manitoba, says the Winnipeg Commercial, is immense. There are a good many small mills in the smaller towns and in Winnipeg, Keewatin (or Lake of the Woods) and Portage la Prairie the mills are very fine, ranging in capacity from 500 to 2,000 barrels per day. These larger mills are all roller, and built on the plan known as the long system. The spring wheat is very hard and flinty, and mills better on the long than the short system.

C. H. McLAUGHLIN, of Toronto, is suing the Canadian Pacific for \$2,352 for loss and damages caused by the violation of an agreement in the transhipment of five cars of barley. When they reached American territory they were forwarded over the West Shore instead of the New York Central, as per contract, and reached New York too late for the outgoing steamer to England. This delay caused serious loss through depreciation in values in the English market.

THE Brackman & Kerr Milling Co., Ltd., of Victoria, B.C., has purchased the produce and commission business of Mathers & Milligan, New Westminster, together with the extensive warehouses and wharves, which the new owners opened on 1st September. They will sell flour, the produce of their own mills, as well as grain, hay and feed. The Westminster branch will be looked after by Mr. W. J. Mathers, of the late firm, and Mr. W. H. Kerr, a brother of the managing director of the company.

THE council of the Toronto board of trade has passed the following resolution: "That in the opinion of this board it would be in the best interests of the grain trade and country generally if all terminal elevators at lake and seaboard were on and after the first of September, 1892, declared and made regular elevators; that no mixing of grades of Manitoba wheat shall be allowed in such elevators, and that in case of shipment of any mixed cargo inspection certificates shall show the composition of such cargo." The Winnipeg grain exchange had previously passed a similar resolution and asked eastern boards to concur therein.

THE Great Western flour and oatmeal mills, Woodstock, Ont., were totally destroyed by fire a few weeks since. The fire broke out shortly after midnight, and before the firemen arrived the flames had gained such headway that it was impossible to save the building. The fire started in the oatmeal department, but its origin is a mystery. The Great Western mills, with a daily capacity of 500 barrels, was one of the best oatmeal and flour mills in Ontario. It was built over thirty years ago by Mr. John Watson, and was estimated to be worth \$65,000. It is altogether likely that the proprietors, Messrs. McDonald & Thomson, will not rebuild. The total insurance is \$30,000. The stock was worth between \$5,000 and \$6,000, and was a total loss.

THOMAS STRACKY, Lansdowne, Ont., has experienced an unusual development of grain crop. He sowed six acres of wheat and it came up vigorously. On 12th July the field was looked over by some of his neighbors, who pronounced it to be as fine a crop of wheat as could be seen in that locality. Now there is no sign of wheat, but a thick crop of oats on the land. The explanation given of the phenomenon is that the wheat was partially or altogether killed out by rust, and the oats sprung up from seed left in the ground last harvest when a crop of oats was taken from the field. Mr. J. A. Webster, just across the road from Mr. Stracky, has a similar change on one of his fields, but not to as great an extent. He sowed barley and the crop is nearly all oats.

THE jurors of the seed wheats and flours exhibited at the International Milling and Baking Exhibition have this to say of a splendid sample of No. 1 Hard Fife wheat amongst other Canadian wheats entered but not for competition—by Sir Charles Tupper, K.G.C.M.G., C.B., High Commissioner for Canada, and Mr. Arthur Baker, the European Traffic Agent of the Canadian Pacific Railway Co.: "That the wheat shown in the large glass vessel, No. 1 Hard Fife, would be most valuable to the British millers for mixing with English wheat, as

when milled together it would give a flour of great strength and good flavor. A large produce in baking would be the result; and we only hope that in future a good bulk of it will find its way to this country. The No. 1 Hard Fife wheat also recommends itself of great value, from a millers' point of view, not only in the above-named points, but also on account of its clean condition and uniformity." Had these samples been in the competition they would have secured the championship prize; as it is the champion prize was awarded to a Canadian-grown Red Fife entered by the Government of Manitoba.

## GENERAL.

THE wheat harvest of France is an av. average.

THE Minister of Agriculture estimates the wheat crop in Italy for 1892 at 13,900,000 quarters, against 17,190,000 quarters last year.

REPORTS from Kansas say that out of 106 counties in the state seventy show corn condition about seventy-five per cent. of a crop and wheat yield the largest on record.

IT is said that C. P. Huntington will furnish heavy financial backing for an inter-oceanic railway in Honduras, which will provide a short route across the Isthmus of Panama.

FOR the year ending June 30, 1892, the exports of wheat from the United States were 157,280,351 bushels, and of flour 15,196,769 barrels, the total representing 225,666,311 bushels.

NATAL, South Africa, imported in the fiscal year of 1890-91 flour and bran valued at £106,010, of which £95,579 worth came from Australia, £3,084 from the East Indies, and £2,511 from Cape Colony.

THERE are many millers looking toward Duluth, anticipating that here will be the great flour city of the country. Duluth and Buffalo, it is conceded, will be the great rivals for the first position, with advantages decidedly in favor of the former.

INDIA, with the exchange rate of silver much degraded, is now able to offer wheat at 30s. where a year ago 33s. only gave the same return to growers. But it would seem that already India shippers have largely entrenched on the export surplus available, and future shipments are likely to be on a very moderate scale.

THE Central Elevator company system of elevators consisting of about fifty grain elevators along the Memphis & Minneapolis & St. Louis railroad, has been purchased by F. H. Veavey, the well-known elevator man. The deal is the largest that has ever occurred in this section for years, the cash consideration being \$1,160,000.

THE Eureka Transportation company, which has nearly 5,000 cars leased to millers and grain dealers, has issued a circular to those in the Southwest announcing that all cars must be unloaded within twenty-four hours or demurrage will be charged at two dollars per day. The large movement of grain in the Southwest has necessitated radical action on the part of carriers.

ACCORDING to the Liverpool Mercury, the first grain cargo to enter the Manchester canal, or rather that portion of it which is finished, was brought by the Francesco Gotuzzi from the River Plate, and was discharged at a point eleven miles up the canal, that is to say, at the extreme end of the section open for traffic. The description of the grain is not given, but the cargo is said to have been consigned to a firm of Warrington millers.

THE Austro-Hungarian consul-general at Barcelona reports that the flour imports of Spain are an ever-diminishing quantity. In 1888, he says, 38,000 tons of flour were imported; in 1889, but 10,000 tons; while 1890 and 1891 are respectively credited with the moderate items of 500 and 244 tons. A dissection of the latter figures showed 198 tons of French and 46 tons of Hungarian flour. On the other hand the export flour trade of Spain was reckoned at 41,948 tons for 1891, being an increase of about 4,000 tons on 1890. The bulk of this flour was doubtless taken by the Spanish colonies.

IT looks as if the whaleback is to pass beyond the condition of mere experiment and to become an active reality in the near future. The names of the promoters of the Whaleback Steamship Company, Ltd., are alone a sufficient guarantee that the purpose for which it is formed will be carried out. Wm. Johnston & Co., of Liverpool, whose motto is "more and more," and whose steamers are almost as well known as the "clan" liners, will be the managers; two of the partners of Ross T. Smyth & Co., Liverpool, also sign the memorandum of association, giving four English supporters, to which are added two New York bankers, A. McDougall, ship-builder, of Duluth (on the American shores of Lake Superior), and Chas. W. Wetmore, after whom the first whaleback was named. The company acquires the patents taken out in America, England and elsewhere by Mr. McDougall for the construction of vessels of this type, and the capital is a quarter of a million sterling in shares of £10 each, which amount will be easily raised by the names above given.



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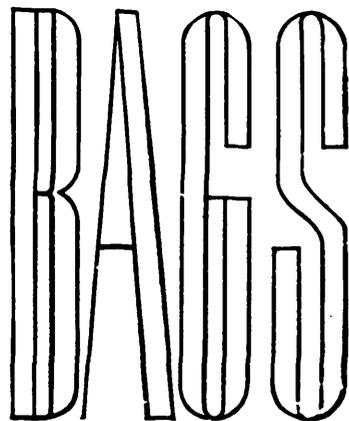
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