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CANADIAN MILLER

GRAIN TRADE REVIEW

NEW SERIES "MECHANICAL AND MILLING NEWS"

Old Series, Vol. X } NUMBER 2
New Series, Vol. II }

TORONTO, ONT., FEBRUARY, 1892

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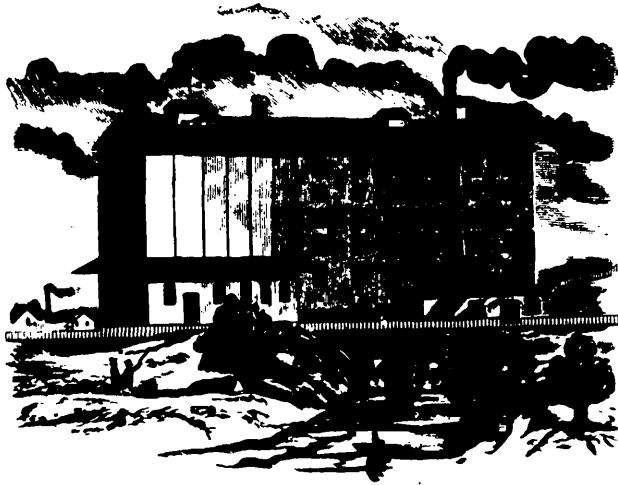
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MILLING IN RUSSIA.

SECOND ARTICLE. UPPER VOLGA DISTRICT.

THE industry in this centre is from days gone by, especially in Tver and Ribensk, somewhat later in Kazan, and last of all in Kostroma and Nijni-Novgorod. The last named place has now taken the first position as to production and quality, not only in this centre but also in the Volga provinces generally. The positions of the different points of this centre are not all alike as, for instance, in Tver we see a falling off, while in Nijni-Novgorod, on the other hand, there is a considerable increase.

In 1884 the development in this centre reached a normal production (in all the mills) of about 29,000,000 poods (36 lbs. each), while in 1887 the production was 25,000,000 poods, a reduction of nearly 15 per cent. This difference would be considerably more if we exclude Nijni-Novgorod, where the production is about 10,000,000 poods. The principal cause of this, according to the reports of millers, is the falling off in consumption and demand, especially of the lower sorts or qualities. According to verified reports of Jaroslaff millers, a considerable stock of lower qualities of flour made in 1885 were still remaining unsold in 1887. The mills are now mostly equipped with roller machinery and all the latest improvements. Movable power in the old mills is all water but many of the reconstructed and new mills are combined water and steam. In Nijni-Novgorod, where the larger mills have been built, the bulk have steam power only. In this district, as already mentioned, the grain is principally supplied from the lower Volga, though a trial was made at Tver in 1887 from wheat grown in the Donskoi basin. This trial was satisfactory, but for some reason has not been repeated. The wheat is usually bought by the millers themselves, or through their employees at the storage ports, on the lower Volga, generally in August and September of the current year's harvest, and is brought up the river just before the close of navigation.

The large millers buy for cash, but the smaller neighbors in Ribensk purchase at second hand, taking from six to twelve months' credit. The wheat used in these mills is all from the Volga valley, viz.: Perrerood (a hard spring); Rusak and Saxonka (mixed and red spring); but the proportion of mixing varies very much according to quality of grain and requirements of markets.

Flour produced in this centre goes exclusively to interior markets, and nowhere abroad, with the exception of Nijni-Novgorod, which exports a small quantity of the best grades.

The transit tariff naturally plays a very important part in the industry. Every miller, without exception, complains of the excessive railway rates, which are one of the principal causes of the present unsatisfactory state of the industry.

The cost of manufacture of flour in Russia seems a very difficult question to arrive at, and in many cases, it is said, the millers are very reluctant to give any figures. In other cases they themselves are not sufficiently well up in accounts to arrive at any satisfactory estimate. For instance, some millers took into consideration interest on capital and repairs, while others left these items out. To arrive, therefore, at any satisfactory normal figure was most difficult, and we are only able to give the cost in a few points of each centre, and those only from figures furnished by the millers themselves, to verify which is virtually impossible. As regards cost of power, water is naturally less than that of steam; against which, however, must be taken in many cases, the cost of haulage over long distances. In these cases the steam-power mills have often the advantage over water, as they have been constructed in the centres where land carriage

would be comparatively small. Those mills which have to haul their wheat over a distance of 20 versts (between 1 and 1/4 miles) cannot carry on business with any profit. As far as could be judged the cost of production in this centre was from 85 to 150 kopecks (viz.: about 56 to 75 cents) per chetwert of 10 poods (say 360 lbs.) of wheat.

It may be noted that in the majority of cases the miller can only turn over his capital about once a year, as credit ranges from three to five months after delivery. Wheat bought in August for cash is put on the market as flour about October, owing to slowness of transit, so that it is April or May of the year following before he can recoup himself.

It was only at the mill of Messrs. Romanoff, in Kazan, that any details could be obtained as to cost of production. This mill is situated 17 versts from the River Port of Kazan, on the Volga. The outturn is 600,000 poods per annum, and cost is calculated on 1,200 poods: hauling, 46 roubles 10 kopecks; rent, insurance, taxes, etc., 22 roubles 91 kopecks; lighting, heating, etc., nine roubles 57 kopecks; labour, 18 roubles 76 kopecks; administration, 19 roubles 20 kopecks, while nothing was allowed for repairs and interest on capital.

It may be noted here that as a rule five per cent. is generally charged in Russia on capital, before making any allowance for profit, which makes this omission somewhat unusual. Generally, as far as could be ascertained, the cost of production in the Kazan mills range from 125 to 140 kopecks by steam power, and from 85 to 98 kopecks by water power (per chetwert of 360 lbs.), the turnover as before named being practically only once in twelve months.

THE CHARACTER OF FLOUR.

THE character of flour is closely identified with that of color, from the bakers' point of view. It is nearly as important as that of strength, writes Prof. Wien in the British and Foreign Confectioner. One of the characteristics of flour produced by the modern methods in well equipped mills is, that it is of uniform quality throughout the year, and the other characteristic in a good flour is that when a handful is taken from a sack it will be noticed that the particles will run off the hand like fine sand. If the flour bought by the baker is found to be otherwise than of a uniform quality, it is best to close the account with such miller. However, if the flour is greasy and lies close together, the reason is because it has not been properly milled, and it can generally be put down to the fact that too much pressure has been employed in grinding by the careless handling of the machines, or forcing the capacity of the mill machinery above what it is capable of executing well, which means the loss of strength owing to the complete alteration in the structure of the flour particles, or to put it in plainer words, it means destroying the resisting power of the tissues of the gluten, but not altering the quantity of gluten. In Hungary and America the aim of the millers, as a body, is to reduce the wheat to flour in such a manner as to interfere as little as possible with the structure of the particles of the wheat berry, and only breaking it up sufficiently to remove all the bran and fibrous matter that discolors the flour, and that tends to produce only an inferior flavor in the bread.

It is not so much the degree of fineness of the particles that attention should be directed to, but the uniform size of the particles—a matter of the greatest importance. Although flour should somewhat resemble fine or coarse sand, it should not be like the two sorts mixed together, as particles of an unequal size have the effect of minimizing the power of absorbing water. In fact, flour resembling coars: and fine sand mixed together is a loss

to the baker, as he is unable to make the water penetrate to each particle by reason of the fine and coarse particles of flour forming a regular close mass, so that the dough produced is anything but a delicate spongy structure. The object to be considered in bread making is how to produce from certain kinds of flour a loaf that will be pleasing to the eye, agreeable to the taste, nutritious and easy of digestion, and for this purpose the flour used must consist of particles of the same size, and as near as possible the same in their structure, both in hardness and shape, in order that the baker will have the dough all ripe at a given time, and not one portion fit for the oven, another portion with particles not sufficiently developed, and other parts of the dough already spent.

To ascertain if the flour contains particles of a uniform size and hardness, three small hand sieves, about ten inches in diameter, covered with Swiss bolting silk, should be used, and each sieve should be of a different mesh. In practice it would be found that one sieve with a silk cover with 84 threads to the inch, another with 106 threads to the inch, and the third sieve with a silk with 124 threads to the inch, would be useful. When the sample of flour has been sifted through the three sieves—which would be made to fit tightly, one on the top of the other—the particles remaining on the three sieves, and the material that has passed through the last sieve can easily be compared with each other. When away from the bakehouse another simple method, which is much in vogue in France and in some parts of Germany, is to take a pinch of flour from the sample and throw it on to a piece of black cloth, or, if the person testing the sample is wearing a black coat, throw it on the sleeve of the coat. The size, shape and character of the various particles adhering to the cloth will be at once seen, as well as the extent of loose starch granules in the sample.

In the operation of washing the flour until only the gluten remained wrapped up in the silk, the starch passed off with the water into the basin. The starch, which is composed of 38.55 carbon, 6.13 hydrogen, and 55.32 oxygen, will settle at the bottom of the basin, and when the water has been removed by means of a small siphon, can be dried. Pure wheat starch is a white, pulverulent substance, without smell or taste, and if boiled in very diluted sulphuric acid, would turn into sugar. One hundred pounds of starch afford 110 pounds of sugar. Starch is easily dissolved in boiling water, and if exposed to a temperature of 600 or 700° F., becomes brown, swells up and exhales a peculiar odor, and is no longer insoluble in water. The production of the blue color by the action of iodine, is a distinguishing property of starch. By a careful study of the form that the starch cells take under the microscope, it is not only possible to tell what country the flour is imported from, but when a mixture of wheats from different countries is milled into a flour in one mill, the form of the starch cells in the sample of flour will enable an expert to say what wheats have been used to make the flour.

ANOTHER GREAT SEASON.

"THE export grain trade," said Wm. T. Lockhart, M.P., grain dealer, of Newcastle, Ont., is dull just now. Last fall was a splendid season for Canadian grain shippers. The old country market was open to large purchases on account of the threatened scarcity in the European output. The scarcity did not come, and in consequence the European market is overstocked at present. This state of affairs cannot continue, and I expect if our winter wheat turns out all right another great season for the Canadian farmer and grain man. A great deal depends, however, on the supply of grain which comes to England from India and Australia."

VIEWS AND INTERVIEWS.

Wine
Canals.

The president of the Winnipeg Board of Trade warns the farmers of Manitoba against biting off more than they can chew. They are falling into the mistake made, usually, wherever land is plentiful, of endeavouring to work more land than they can properly cultivate, and he draws attention to the known fact that much loss was sustained last season because the grain could not be all harvested for want of men or machines to handle it.

The Porridge Pot
Assailed.

Oatmeal porridge is proving a subject of discussion among English physicians. Recently Dr. Herchell of London, Eng., in a book on "Indigestion," stated that "the purgative influence of oatmeal porridge, which arises from the scrubbing and irritating action of the silicious material of the oatmeal upon the lower intestines, is gained at the expense of subsequent constipation, when the mucous membranes become accustomed to the abnormal irritation, and the stimulus of normal food is no longer sufficient to excite the peristaltic movement." The *Millers' Gazette*, of London, replies to this assault on the Scotchman's favorite diet by pointing to the robust health of the Highlander as a living proof that the doctor is wrong, at the same time admitting that it is not possible to remove what is known as the silicious matter of the meal. A United States milling journal, whose editor evidently don't go much on oatmeal, puts in a rejoinder by questioning whether it is not in spite of his use of oatmeal that the Highlander enjoys his robust health. Even the Highlander dies, we are told, and "those of them who have not yet died of oatmeal dissipation and constipation are, in temper and general make-up, not attractive advertisements of the value of oatmeal as a food."

Who Pays
the Duty?

The question is an ever-debatable one, and in the abstract the balance of argument will sometimes be made to lean to one side and again to the other. It is, however, when some one gets squeezed in his own purse that, regardless of political leanings, he will come out with a very bold piece of logic from the practical side. We have in the following story, as told by Mr. C. G. Cody, an implement agent in Victoria County, an illustration of the farmer who has been experiencing the untoward influence of the McKinley Bill on the price of barley. Mr. Cody says: "A few days ago I had occasion to renew a note amounting to ninety dollars for a farmer in this county (Victoria) as part payment for a binder that he bought off me a year or so ago, and of course had to charge him the usual rate of interest. In talking the matter over with him I found that he sold this year 350 bushels of barley and got 45c. a bushel for it, or \$157.50 for the 350 bushels. I had the last week's barley market report, as published in the *Empire*, in the office, which showed a difference of 40c. per bushel between Canada barley sold in Toronto and the same grade of the very same barley as sold in Oswego. We figured it up and the 30 cent duty on each bushel going to Oswego amounted to just \$105 clear loss to my farmer friend on his 350 bushels, or enough to pay his note in full and have \$15 to the good, which he could have given to his wife for her share."

Canada's
Canals.

A notable visitor to the city during the month of January was the veteran seaman, Capt. Alexander MacDougall, of Duluth, inventor of the whaleback, and actively identified with the big ship-building concern, the American Steel Barge Company. Mr. MacDougall talked freely to a reporter of our canal system which is an important factor in whaleback schemes. "The completion of your canal system," said the Captain, "is what your navigation interests most need at present. There now remains only the Beauharnois canals to be finished, and the Dominion will have a complete chain of waterways to the sea. You will see a revolution in the shipping trade then. The canals at Montreal won't be able to accommodate the vessels waiting to go through. Over this route in summer time most of the trade from the west and north-west will be carried. Instead of going by rail to Boston and New York it will be shipped from Milwaukee and Chicago to Montreal. There the lake vessel will trans-

fer its freight to the ocean steamer to be carried across the Atlantic. The tonnage of vessels in Canada will increase from the 1,000,000 it is now to 40,000,000 or 50,000,000. The Dominion needs this increase badly. My friend Mr. Marks, of Port Arthur, who ought to know, tells me that only one freight vessel is under construction at present in the whole of Canada. I should say complete and enlarge your canal system at all costs. Speaking of his own vessel, Capt. MacDougall says: "Three years ago we launched the first whaleback. Today there are 25 in actual commission. Twenty are on the inland lakes, four on the Atlantic and one on the Pacific. I have returned recently from both the Pacific and Atlantic coasts. One whaleback has left Boston for Yucatan, and to-day I got a telegram telling me of the departure of the Pacific coaster from Seattle with a cargo of coal for Santiago. A shipyard is now in course of completion on the Puget Sound for the construction of whalebacks. We have more than we can do at our yards in West Superior. Eight vessels are on the stocks now six of these being steamers, not one with a length of less than 322 feet. We intend building two more especially for the St. Lawrence canal trade."

THE EVOLUTION OF THE MILL.

FOLLOWING is an abstract of an article on mills, written by Mr. J. H. Cooper for the "Iconographic Encyclopaedia of the Arts and Sciences," which work is a translation, revision and enlargement of the German "Bilder-Atlas," a well known book of reference. Mr. Cooper says: "Of the various mechanical processes by which the condition of natural products is changed, that of pulverizing is the simplest; and the earliest human contrivances were doubtless of the nature of mills for crushing and grinding fruits and seeds. The term 'mill' was originally restricted to denote the various forms of apparatus by which grain is ground into flour and meal, and the equivalent word in the Latin and its allied languages still retains this signification—Lat. 'mola'; It. 'mulino'; Sp. 'molino'; Fr. 'moulin'. In modern English usage the term is applied to nearly all machines and combinations of machinery, which consists chiefly of wheel-work and its co-ordinate appliances, by which raw materials are changed into new forms and conditions; and the mill generally takes its name either from the principle of its action, as 'rolling mill' and 'sawmill' or from the materials upon which it acts, as 'cotton mill,' 'corn mill' and the like. . . . From the earliest historic periods to the present the edible grains have been ground between two stones. The original grinding implement was a fixed stone, in a hollowed-out portion of which the grain was pounded with a boulder in the hand. If such a crude device is worthy the name of 'mill,' then corn mills have the highest antiquity. Dr. Schliemann in his 'Ilios' makes mention of certain rudely-cut, nearly globular stone instruments which he found in great number in all the four lower prehistoric cities. They are of basaltic lava, granite, quartz, diorite, porphyry, or other hard and gritty stone, and in rare instances of siles. Similar implements are found in the cave-dwellings of France and are numerous in the most ancient Swiss lake-habitations. In the opinion of Prof. Lindenschmitt, these implements, which are of the simplest kind, were the most ancient mill-stones and were employed for bruising the grain on the slabs of sandstone which abound in the lake-habitations. . . . At Wauwyl, in the canton of Lucerne many corn crushers have been found in the villages of the Stone Age; these are balls of hard stone two or three inches in diameter. Round corn crushers were also found in the debris of the Stone Age of Egypt. Stone balls for bruising corn are utilized by the Indians of the Yosemite Valley, in California. Their squaws pounded acorns with round stone mullers on a granite rock, whose flat surface is worn into holes by the operation. These stationary mortars ('pot-holes') are abundant in other parts of the State. Dr. Schliemann, quoting Helbig, remarks that 'tradition has ever preserved a trace of the fact that there existed no proper apparatus for grinding at the time of the oldest Italic development, inasmuch as the 'mola versatilis,' the most perfect apparatus, whose upper part was turned by a handle above the lower one, was, according to Varro, an invention of the Volturnians. This tradition presupposed

an older epoch, during which people utilized other more imperfect means, possibly with two stones, such as were used by the ancient inhabitants of the 'terrane villages' for pounding the grains.' In Biblical history evidences are not wanting of the early existence of means for reducing the cereals to powder, and we may conclude that, when Abraham hastened into the presence of Sarah, saying, 'Make ready quickly three measures of fine meal, knead it and make cakes' (Genesis xviii. 6), there must have existed some sort of mill for rapidly grinding grain into flour, and to meet the demand for 'fine meal' it is evident that there was used a more efficient implement than the mill described above.

"Dr. C. C. Abbott, in his elaborate article on the 'Stone Age in New Jersey,' says: 'The Indian women, upon whom fell all the drudgery of aboriginal life, reduced the hard kernels of maize to coarse meal by pounding them in hollows of rocks, natural or artificial, with globular pebbles, or with long cylindrical stones, carefully chipped for the purpose and known as pestles. Wooden mortars and pestles were also used. In the northern section of the State, where rocks 'in situ' abound, deep basins hollowed in immovable rocks are very numerous, which is evidence that in the rocky section of the State the site of a village was chosen with reference to the 'mill,' while in the southern part, where rocks suitable for mills do not exist, stones weighing twenty or more pounds are found, which were brought from a distance; a receptacle was first chipped on one side, which gradually by use became both deep and smoothly worn.' The stationary mortars are generally larger in diameter and of a greater depth than the portable examples, and could be used only with the long pestles. The vast majority of these stationary mortars are natural 'pot-holes,' possibly in some cases deepened intentionally, or by long use in crushing corn. Such a pot-hole used as a mortar formerly existed in a large glacial boulder in Center street, Trenton, N. J. When excavations were made to remove this rock, several broken pestles were brought to light, besides a stone axe and several dozens of spear-heads and arrow-heads of various sizes. It is said that the present site of Trenton was the headquarters of a great chief; here the small portable corn-mills are abundant, and they were probably used solely in reducing grain to meal. Hereabouts have been found hundreds of pestles, many of which may be seen in private collections. They are cylindrical water-worn pebbles, such as abound in the bed of the Delaware river at that place.

The mortar (mortarium) used by the Romans was formed of a stone or other solid material hollowed into the shape of a shallow basin, in which ingredients were kneaded and mixed with a small pestle worked by one hand and in a roundabout direction. The 'pilum' was a large and powerful instrument for braying materials in a deep mortar. It was held in both hands, and the action employed when using it was that of pounding by repeated blows. The Roman 'pistor' literally means 'one who pounds corn in a mortar,' that is a miller; because in very early times, before the invention of mills for grinding, the corn was brayed into flour with a very heavy pestle. Subsequently the same word signified 'a baker,' because bakers ground the flour with which they made their bread. Pliny says that, in the estimation of some, bread made of broken grain is superior to that more finely ground in the better constructed mills; hence the inference that throughout the greater part of Italy grain for bread was pounded in a mortar with an iron-shod pestle. In course of time the mortar was ridged and the pestle notched, forming a machine which had a grating action on the grain. Dr. Tschudi describes four of the Peruvian mortars, which were carved in porphyry, basalt and granite.

Mortars, mostly made of hard sandstone, from five to 24 inches in diameter and from 2 to 12 inches in depth, of rude workmanship and without ornament, have been found in great numbers in graves in Santa Barbara, Cal. Specimens of the larger kind, found in graves at La Patera, are symmetrical in shape and have within and without a well-marked projecting rim, which served both to strengthen the utensil and to prevent the escape of the grain while being pounded. When broken, they were mended with asphaltum, which was also used to fasten ornaments to the rim. Many of the pestles found are simply smooth elongated boulders, while others show

a shaping for a purpose, the collar on the smaller end suggesting a provision for suspension, or to facilitate handling. . . . Hunter, in his 'Manners and Customs of Indian Tribes,' informs us that in some Indian villages visited by him there were employed for pounding corn one or two large stone mortars, which were public property. They were placed in the central part of the village, and were used in rotation by the different families. In the course of time the cavity of the stationary stone became deepened, and a handle was attached to the ball, whereby there resulted the mortar and pestle; so, again when the upper stone was enlarged and provided with a central hole and handle, by which the stone was rotated on a peg or pivot in the lower stone, there was produced the quern or hand-mill, which is the germ of the modern flour mill.

Wheel mills consist of a single pair of stones of similar form, with fitting surfaces, one of which, the upper stone or runner, is caused to revolve in near contact with the other, the nether or bed-stone, the grain being ground between the two while passing. . . . one direction from the centre to the circumference. By both ancient and modern writers the term 'corn mill' has been applied to the mortar-and-pestle mill as well as to a mill composed of a pair of stones, one of which is fixed while the other revolves. In connection with the earliest Scripture references to the 'mill' (Numbers xi. 8,) there is mention of the 'mortar,' both of which implements were employed for reducing manna to powder. We have no description of the form of the mill in which the manna was 'ground', but we may presume that revolving mill-stones were employed. At an earlier date the 'King of Salem brought forth bread and wine' (Genesis xiv. 18), from which we may infer that mills for grinding grain and machines for expressing the juice of grapes were employed in the earliest times. The Etruscans, 500 B. C., scored or furrowed the inside of their mortars, grooved the bottoms radially, gave to them a more cylindrical form and roughened the lower end of the pestle. The pestle was kept in the central position by an iron spike projecting from its lower end and entering a hole in the centre of the mortar, and it was rotated on its vertical axis by means of a handle projecting laterally."

GREAT DAM IN AUSTRALIA.

OFFICIAL details of the great dam at Beetaloo, Australia, correct some of the previously published statements and figures, and the immensity of such a piece of engineering work may well challenge a comparison with anything of the kind in that part of the world. The structure is of concrete, 110 feet high from the bed of the creek to the top of the dam, and 580 feet long, being curved in the plan of a radius of about 1,400 feet; the width of the top is fourteen feet, the profile of the section being designed in accordance with Rankine's rules, and the width of the section at the foundation 110 feet; the crest of the bywash, which is 200 feet wide, is five feet below the crest of the dam; and the reservoir behind the dam at its full one and one-fourth miles long, with an average width of eight chains. The capacity, under these conditions, is 800,000,000 gallons, for the supply of a district covering an area of 1,700 square miles, including eight separate townships, etc. The quantity of concrete used was 60,000 cubic yards, the net time occupied in construction being about two and one-half years. Special machinery was used for mixing the concrete and depositing it in place, and the whole work is regarded as a most creditable achievement.

FRANCE AND HER MILLING INTERESTS.

THE enormous exportations of American flour this year so alarmed the millers of France that they succeeded in getting duties placed on imports of foreign flour ranging according to its qualities from \$1.25 per 220 pounds to \$2.00. On and after 1st June these duties will be raised up to \$1.60 to \$2.50. The highest rate is aimed especially at the patent flours of the States. The French industry thus protected is the manufacture of about 46 million sacks of flour yearly by native millers. This will be giving America a dose of McKinley physic over which she will pull a wry face.

CANADIAN MILLER, \$1.00 a year. Subscribe now.

DEATH OF THOMAS GOLDIE.

THERE will be few, who knew him, who will not realize in the death of Thomas Goldie, President of the Dominion Millers' Association, the full forcefulness of the oft-quoted saying, "In the midst of life we are in death." It seems only as yesterday since we were greeted with the hearty hand-shake and genial words of welcome that revealed to everyone the lovable character of the deceased. But it is too true that Thomas Goldie is dead. He had only been indisposed about ten days. Commencing with an ordinary cold, the latter part of January, his illness assumed the prevalent form of la grippe; some days before his death pneumonia supervened, and at one a.m., Thursday, February 4th, the lamp of life went out.

Thomas Goldie was the eldest son of Mr. and Mrs. James Goldie, who had come out from Scotland to the States, where, during a brief residence in Patterson, N.J., he was born in 1850. Ten years later the family moved to Guelph from Utica, N.Y., and Mr. James Goldie built the Speedvale mills, which he afterwards sold to the late John Pipe, and largely built the well-known People's mills, of Guelph, as they now stand. His education was obtained principally at the public and grammar schools of the Royal City, supplemented by a course in college at Montreal, Que., followed by a special course at a business college in Poughkeepsie, N.Y.



THE LATE THOMAS GOLDIE.

With this equipment he joined his father and brothers in the mill, there displaying those splendid business talents that have made the name of Goldie, the miller, known throughout the entire Dominion. He was active in anything he put his hand to. For the past four years he was president of the Liberal Conservative Association, of South Wellington, and for years before this he was perhaps the most energetic worker in their ranks. He was a prominent member of the Provincial Conservative Association, to use the words of a political opponent, "one of the ablest and most trusted of the provincial leaders, one of the men on whom depended the foundation work." He had the faculty in politics, as in all his other work, public or private, of enthusing others, and securing results where a man lacking his wonderful personal magnetism would frequently fail. It is feared that the cold which led to his short but fatal illness was contracted whilst working for Mr. Henderson in the contest in Halton.

He took an active part in all movements helping to build up the city of Guelph and its institutions. He was for years a member of the School Board and of the City Council, and in the elections of January, 1891, he was elected mayor by more than 500 majority over his opponent. In January of this year he was re-elected by acclamation.

He was a great lover of athletic sports. He was one of the directors of the old Maple Leaf baseball club, and for several years has been president of the Ontario

Cricket Association, cricket being his favorite sport. He was generally present at international matches, and accompanied the Canadian eleven to Philadelphia last year. He was also very fond of fishing.

He has been connected for many years with Knox church and took a most active interest in its affairs, being chairman of the Board of Managers and one of the trustees of the church, and occupied the chair at the last annual meeting. He was a charter member of Guelph Lodge, No. 163, A.O.U.W., and was in attendance only one or two meetings ago.

He was married in Nova Scotia in 1877, to Miss Emma Jane, daughter of the late John Mitchell, and sister to City Clerk Mitchell and Mr. Robert Mitchell, barrister, Guelph. Besides his wife, he leaves five children, two boys and three girls, all of tender years.

At the annual meeting of the Dominion Millers' Association in August of last year, he was unanimously elected president, and at once threw himself into the work of the Association with his well-known energy and ability. He entered enthusiastically into every project proposed for the advancement of the milling interests of the country. President Goldie was no figurehead. His prominent position in public affairs gave him a large influence in quarters where it was desirable to exercise this for the benefit of Canadian millers, and he was ready to interview statesman or banker, or any other representative class, if in so doing the ends desired could be achieved. It is as president of the Dominion Millers' Association that he will be most missed by readers of the CANADIAN MILLER.

The strong hold that he had on the hearts of the people of this country was shown in the immense numbers that gathered in the Royal City on Saturday, the 6th inst., to pay their last sad respects to the memory of the deceased. It is estimated that no fewer than 12,000 people viewed the remains of Thomas Goldie on that occasion. They came from the towns and cities, generally, of the province, nearly 300 citizens of Toronto, consisting largely of members of the Board of Trade and Ontario Cricket Association, going by special car from the city.

The chief mourners were the three brothers of the deceased, his sons Roswell and Lion; David and George Goldie, Ayr; Charles Turnbull, Galt; David Owen, Fred. Owen, Utica, N.Y.; Wm. Griffin, John Goldie, Galt; Dr. John Caven and Dr. Wm. Caven, Toronto; and Richard and Robert Mitchell, Guelph.

Resolutions of sympathy to the wife and family of the deceased were tendered from the many different bodies, public and private, with which he had been identified.

With all the work that he succeeded in crowding into a life, cut off at the early age of 47 years, and the tribute that is due his memory for the energy and self-denial that characterized the prosecution of this work, yet it is as a whole-souled, big-hearted, generous-acting friend that the remembrance of Thomas Goldie will be kept fresh in the minds of thousands.

A DUKE IN DISGUISE.

THE Grand Duke Sergius, governor of Moscow, Russia, disguised himself recently as a moujik, in order to discover the truth about certain allegations concerning the difficulty of buying small quantities of bread. He presented himself at a baker's shop and inquired the price of bread per pound, and was told 3½ copecks. He asked to be served with three copecks' worth, saying that it was all the money he possessed. The baker refused to sell less than a pound, but he insisted on his right to buy as much as the money he offered was worth. Believing he had to do with a peasant, the baker commenced abusing him and bade him leave the premises. This the Grand Duke declined to do, whereupon the baker called in the police, who, after severely hustling the pretended peasant, finally ejected him into the street, and proceeded to draw up a warrant prior to taking him in charge. When the document was written, the prisoner was invited to sign, which he did with his full name and title of governor, after which he threw off his disguise and revealed himself to the astonished crowd, all of whom recognized him at once. The same evening three police officials implicated in the affair committed suicide, and, with the closing of four baker's shops, the incident terminated.



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The CANADIAN MILLER AND GRAIN TRADE REVIEW cater 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 patrons, and unconnected as an organ with any manufacturing company, we will always be found honestly and cordially endeavoring to promote the interests of our subscribers.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or of the grain and flour trade.

TRADE WITH THE WEST INDIES.

THE West Indies, as a field for Canadian trade and enterprise, is receiving increased attention from business men here and also those of the Indies. The want of proper shipping facilities, enabling Canada to compete successfully for this trade with other countries, has probably been the largest difficulty we have had to encounter. The favor with which Canadian products, especially flour, have been received in Jamaica, has been referred to so often by the Canadian press that it becomes a case of unnecessary re-iteration to more than mention the fact in a discussion of the subject. Our products are all right. The important matter is to place them in the Indies at a price to compete with the products of other markets.

A recent visitor to this country has been Mr. James F. Spurr, representing the Pickford & Black West Indian Steamship Company. He has a thorough acquaintance with, and is seeking to develop, direct trade between Canada and the West Indies. The company are owners of two first-class steamers, "Falmouth Castle" and "Duart Castle," which form a regular line between Halifax, Bermuda and the West Indies. As the business grows other steamships are likely to be placed on the route. Mr. Spurr's aim is to encourage shipments over this line, in place of through the United States, the way a large portion of our business goes now; and this would seem the natural thing for Canadian merchants and manufacturers to do.

A good point is made by a Mr. W. T. Halstead, of Kingston, Jamaica, in a letter to the Globe recently. He says: "If Canada really wants to secure a West India trade there is only one way to do it—she must come right down here and take it. Americans do undoubtedly possess the advantages of proximity and splendid steam communication, but the great reason why they are more successful here than Canadians lies in the fact that American capitalists never think of waiting for their Government to take any measures, but come right down here and start a business. Then, when they have established a business of some proportions, is the time for the Government to step in and protect that trade."

He goes on to show that Canadians who have established themselves on the islands are doing fully as well as Americans. They are to be found engaged in various lines of business—ready-made clothing, carriages, furniture, etc.—while nearly all the fish consumed in Jamaica are imported from Canada and Newfoundland.

On the question of Canadian flour Mr. Halstead writes: "The bread trade in Jamaica is all but monopolized by one firm, the members of which have made fortunes out of the business. This firm uses on an average 1,000 barrels of flour a week. The freight per barrel from New York to Kingston is 40 cents, the duty 8s (\$2), and steam bread sells at six cents per pound loaf. The new tariff law, just passed by the Jamaica Legislature, does not provide for a reduction of duty on flour, but it does provide for a reduction in the duty on wheat. Here-

after wheat will be dutiable at the rate of sixpence per bushel. Now here, in my opinion, is a good opportunity for the investment of Canadian capital. Let a company come down here, build mills, import their wheat from Canada, make their own flour, and put a good, wholesome bread on the market, such as Adani Brown used to bake at the Canadian court at the Jamaica exhibition, and the company is an assured success. Everyone here buys their bread and everyone would buy a great deal more were it only cheaper and of a better quality."

This correspondent is particularly sanguine of the field for flour products. A stop need not be made with bread. There is not on the whole of the island an establishment where buns, biscuits, pastry or confectionery of any kind can be regularly bought, and at reasonable prices; and besides doing a big Jamaica trade, a milling company could, by purchasing a steamer, soon build up a large export trade.

These are the views of a friend of Canada who is on the spot. He admits, as we have already pointed out, that the 'miserable steam communication' is a difficulty in the way of such an undertaking, but it does seem that in this matter our Government must do something practical to overcome this difficulty, and do it soon. The rest may be safely left to Canadian enterprise.

ENGLISH MILLING MATTERS.

IT is quite a live question to what extent flour milling is likely to develop in European countries during the years to come—say within another decade. Great Britain is making conspicuous progress in milling operations, and other countries, even Russia, are not without growing ambitions in that direction.

A review of the British milling industry for 1891 has recently appeared in the Millers' Gazette, of London, Eng. The novelties in milling machinery have not been very numerous, our English dusties being satisfied, apparently, to give the innovations of previous years a further test before trying other new things. A new dustless purifier on the gravity principle has been introduced; a new sieve dustless purifier, and two or three specialties in dressing machinery about complete the list.

Larger quantities of wheat were brought from India and Persia to the United Kingdom in 1891 than in 1890, the figures standing thus: "1891, over 4,000,000 quarters of wheat, 1890, 2,500,000 quarters. The custom of stoning and washing wheats has been largely adopted by English millers; and English milling engineers, as a result of concentrated thought on the subject, have produced during the year a number of important improvements on the old system.

The milling capacity of the United Kingdom has been, and is being increased, despite the fact that foreign flours find an easy access to British markets. The following table shows the progress in this respect for the past five years:

	Four coars in U.K. sacks of 20 lb.	Imported Flour, Sacks	Home prod'n, Sacks
1887	31,800,000	7,323,000	24,577,000
1888	31,950,000	6,765,000	25,185,000
1889	32,100,000	5,880,000	26,220,000
1890	32,250,000	6,310,000	25,940,000
1891	32,400,000	6,500,000	25,900,000

The markets for the year were free from violent fluctuations, excepting probably in the month of December.

English millers are amalgamating and combining just as their brethren are doing on this side of the water, several important syndicates developing in 1891.

To the Canadian miller, who is looking abroad for the disposal of a good proportion of his yearly output, the situation in Britain, with its possibilities and probabilities, should not be barren of interest. We can hardly agree with some of our milling friends that the next few years will see so large a development in the milling industry in Britain, that our flour will no longer find a market there. That day, it seems to us, is a long way in the future. We have advantages and opportunities of pursuing milling in this newer country, with the wheat at our doors, that England does not possess, nor can possess. The foreign field is under any circumstances of immense dimensions, and much bread stuffs are needed to feed its millions. Canada will have her share in this trade for some time to come. The Canadian miller will at the same time intelligently watch what our relatives and friends in other lands are doing, and will yet do, in milling lines.

AN IMMEDIATE QUESTION.

IN the last issue of the MILLER we wrote plainly on the Newfoundland flour trade. The question is one that cannot be allowed to rest. Whilst all who are concerned in the growth of flour milling in this country will leave no stone unturned to open out and extend this trade in the West Indies and other fields, we must make sure to hold the fields already secured; and this is especially the case with Newfoundland. The trade there has been made; it is sure of further growth; and no effort can be spared, by any one or other of the interests concerned, in seeing that immediate action in the direction indicated is taken.

The following circular letter from Stewart Munn & Co., shipping and commission merchants, of Montreal, Que., emphasises in vigorous terms what has already been said by the MILLER:—

"The time is now approaching when Newfoundland buyers will contract for the spring delivery of large quantities of all grades of flour. Montreal being the receiving point for at least three-fourths of all the flour shipped to Newfoundland, we deem it expedient to advise all Canadian millers how matters now stand between Canada and Newfoundland.

"We are exceedingly sorry to see that the difficulties between Canada and that country over the fishery question have brought about a differential tax on all Canadian flours entering Newfoundland. This tax is \$1.05 per barrel, while all United States flours are admitted on the former tariff—30 cents per barrel. This difference against us of 75 cents per barrel is simply prohibitory for the Canadian trade.

"We hear of no prospective settlement of the question, and consider it of the utmost importance that pressure should be brought to bear on our Government to induce them to endeavor to arrive at some understanding with our sister colony.

"Newfoundland requires every year 300,000 to 350,000 barrels of flour, and we are certain that there will be no difficulty in Canadian millers securing the bulk of this trade if we are placed on equal terms with our American competitors. For the first time for several years the prices of Canadian flours are on a level with, or a little below, those of American millers, and it would show a lack of enterprise (which we are certain is not the case) on the part of Canadian millers if they allow such a good opportunity to pass for disposing of part of a good harvest.

"Too much time has been wasted already, and the settlement seems to be farther off than ever. It therefore seems to be imperative that, in addition to our Board of Trade, the Dominion Millers' Association should at once move energetically in the matter. It is only by prompt action that we can hope to retain even a share of a trade which is so important to the Dominion.

"The matter is now before the Montreal Board of Trade, and that body will, we have no doubt, be glad to press the co-operation of all other trade associations in receiving the importance of the question upon the Dominion Government."

WIMAN ON BREAD.

ERASTUS WIMAN is nothing if not versatile. He says many good things among the many things he does say, and if everyone does not agree with him, as an old Canadian, though his home and his dollars are largely elsewhere, we are ready to give him at least an attentive and courteous hearing.

The February North American Review is out with an article from Mr. Wiman's pen: "The Flour of the Future." The discussion is on scientific lines. There can be no doubt, our reviewer thinks, that the bread of to-day, as compared with that of our forefathers, is whiter and better looking. It may be lighter, thanks to the influence of various baking powders; but Mr. Wiman questions if it is more wholesome, nutritious and digestible. We are generous in the use of science in almost all kinds of manufactures in this age; everybody consumes bread, and yet, according to Mr. Wiman, in the making of beer ten times as much science is employed as in the preparation of the staff of life. In Germany the man who would adulterate beer is sent to prison, but he may adulterate bread with impunity, so long as he does not actually introduce poisonous sub-

stances. This is in Germany. There will be those who will doubt how far the spirit of science enters into much of the beer brewed in this country; another spirit, that is not of science, does enter into it.

The burden of Mr. Wiman's article is an attack on the fashion of the times, which demands nice-looking things, even in bread, heedless of the physical consequences. He would lay the charge of this to the miller also, who has adapted his milling process to meet the request of the age, on the principle, we suppose, that razors are made to sell. A prominent English physician is quoted, who has reversed the old joke that the doctors are in league with the undertakers; it would appear rather that the millers and bakers were in the doctors' pay.

With the present milling process the conundrum is whether the best elements of the wheat berry are not sacrificed to the effort to securing a light-colored flour. 'It is well known that the germ of the wheat contains a high percentage of ash and phosphoric acid, and also fat: indeed, the germ contains almost all the fat of the grain, and it therefore becomes one of the most important elements of food. The slight discoloration of the flour, which is caused by its presence, has, however, condemned it, and in the modern system of dressing white flour, it is discarded. For much the same reason the cellulose and the cerealine, which are part of the bran, are also inadvisedly cast out.'

Fashion is irrepressible. Dyspeptics may grow and flourish like the pines of the forest, or, if the simile is more natural, they may droop and die as does the early spring flower; it matters not to fashion. She will give no place to bran foods nearer than the henery or rabbit hutch.

Mr. Wiman warms up as he gets into this phase of the question. The dyspeptic lives not only for to-day. The loss of mental and physical vitality will be confined not alone to the nervous, ill-natured, churlish and discontented individual to whom life is hardly worth the living. These weaknesses will be transplanted in coming generations; the iniquities of the fathers shall follow the children even unto the third and fourth generation. The miller and flour merchants come in for their full share of the maledictions of the well-known apostle of reciprocity. The panacea to these evils is the whole-wheat meal, the manufacture of which was commenced in London, Eng., in 1890, and the success of which is declared to be very remarkable.

But the old saying is wonderfully true in regard to this whole question of nutritious and non-nutritious foods, that doctors do differ. We are not so sure that they will not differ with Mr. Wiman. Probably all laymen will not hold with the Wiman view. In the meantime, despite a fair-sized army of dyspeptics, who keep the doctors and druggists fairly busy, there are some very decent specimens of white bread eaters, who do not look as if they were losing flesh or vitality—eating three square meals a day of this non-nutritious food.

THE WATER COURSES ACT.

THE case of Ellis vs. Clemens, in reference to which a resolution was passed at the last meeting of the Dominion Millers' Association, was before Justice Armour at Osgoode Hall on the 12th inst., on an appeal from the judgment of Street, J., in favour of the plaintiff. The particulars of the case are these. Ellis is the owner of part of lot 10, in the second concession in the lower block of Waterloo, through which a small natural stream of water flows. Upon this stream, a short distance above the boundary of the plaintiff's land, the defendant's predecessors in title had, prior to the year 1855, erected a dam and built a mill run by the power of the stream. The plaintiff complained that in the year 1883, and from thence continually down to 21st March, 1888, one Aaron Clemens (the defendant's father), then the owner of the mill, penned the water back by his dam and raceways and allowed it from time to time to escape in such small quantities that in the winter it became frozen in layers solidly from the bottom of the bed of the stream on the plaintiff's land to the top, and that the water, in the spring, being unable to escape through the channel by reason of the solid ice which filled it, spread over the plaintiff's land and destroyed his crops; and that the defendant, since his father's death in 1888,

carried on the same milling business and dealt with the water in the same way as his father had done, and caused similar damage; and the plaintiff claimed damages and a perpetual injunction. The defendant admitted that he and his predecessors in title had, since 1842, maintained the dam and mill, and claimed a prescriptive right to do so; he alleged that the use of the water by him and his predecessors had been lawful and reasonable and for a beneficial purpose, and he denied that any damage was caused to the defendant. The action was tried before Street, J., at Guelph, and he held that the defendant and his predecessor, by discontinuing the use of the water during hard frosts, although at a loss to themselves, might have prevented the damage complained of by the plaintiff, and, not having so discontinued, though requested to do so by the plaintiff, that they were making an unreasonable use of the water and were liable for the damage done. He also held that the mere fact that the defendant and his predecessors had maintained their dam and mill in the same position for upwards of forty years, and had during all that time used the water as the necessity of their business required, did not give the defendant a right to use the water to the prejudice of the plaintiff; that the defendant could not insist that he had gained a prescriptive right to injure the plaintiff without proving that he and his predecessors had for twenty years been making an unreasonable use of the water to the injury of the plaintiff.

By resolution of the Dominion Millers' Association a committee was appointed to prepare a draft of such amendments to the Streams and Water Courses Act as would prevent the occurrence of other troubles similar to that of the case now in court. The time is at hand for dealing with the question and no doubt the committee if they have not already moved in the matter will do so at once.

DISHONEST GRAIN MEN.

IT will be remembered that the Dominion Millers' Association at their meeting in December last entered a vigorous protest against the custom of certain millers of shipping flour short in weight, and a resolution was passed enjoining the officers of the Inland Revenue department to look sharply after any such cases. The step was timely and wise, for no body of business men can afford to have their integrity called into question, because of the dishonesty of individual members. And no legitimate form of punishment is too severe to levy on the guilty ones in cases of the kind.

Within the month the grain men of the Board of Trade have been forced to meet a similar class of rascality in their ranks, and they have acted with like promptness and determination. The case was brought before the Board by President Hugh N. Baird, through a letter received by him from Norris & Carruthers, which carries its own explanation:—

It has come to our knowledge that some dishonest grain dealers have been buying Manitoba frosted wheat and mixing some with good Ontario wheat and shipping it to exporters as Ontario wheat. We think this is a matter which the grain trade should take some active measures to stamp out, as not only does it deteriorate the value of the actual shipment, but through this mixing an entire cargo is liable to be rejected by buyers on the other side.

We have recently had a case in point at Forest where we brought ten cars of red winter wheat and shipped it to Portland. The shipper now admits that there was something over 500 bushels of Manitoba frosted wheat mixed in with this lot.

We enclose you a letter we have received from John Burton, G.F.A. of the G.T.R., in reference to this matter.

Here is the letter which Mr. Burton had officially forwarded to Toronto:—

I am advised by the Montreal Warehousing Co., here (Montreal) that the several cars of wheat shipped to you from Forest as red winter wheat, which was billed to order of Standard Bank, Liverpool, via Portland, are some of them mixed with frosted wheat. On the face of it this would appear to be a deliberate attempt to defraud, and if the mixing had not been detected on inspection here it might have caused serious loss to the carriers, to the warehousing company and to your firm. I do not know what view you will take of the matter, but I think it would be well to have legal advice with the view of bringing the consigner to justice.

The question was followed up by Mr. James Carruthers in a resolution that unanimously voiced the sentiments of the whole trade. The resolution reads:—

"Whereas, it has been reported by letter or by verbal representation that some shippers of grain are in the habit of bringing in inferior grades of wheat (frosted and otherwise damaged)

and mixing the same with good sound Ontario wheat, much to the detriment and injury of the trade of Ontario, it is hereby resolved:

"That this, the grain section of the Board of Trade, emphatically condemns this practice as being dishonest and fraudulent, and will take steps to prosecute and punish all parties guilty thereof, and further, that the public press be requested to give the utmost publicity both to those letters and to this resolution."

Mr. Carruthers in moving the resolution pointed out very plainly that unless immediate steps were taken to stamp out the evil our wheat would get into bad repute and the trade of the whole country would suffer.

The name of the culprit in this particular case was not divulged, though the call was vigorous for the publishing of his name. If what has been done should fail to secure a remedy there should be no hesitation in a future case of publicly holding up the guilty one to the scorn and contempt of the whole mercantile community.

EDITORIAL NOTES.

THIS is a pat way of putting a matter that not unfrequently comes before many millers: "The miller who began to work in a mill at the age of 15 years, and milled at one place 10 years, at another 20, another 15, another 25, another 9, another 11, and has been 5 years at his last place, until he ages up to 110 years old, and is "a young man yet," is entitled to just as good right for the truth of his claim as the one who calls himself a miller on three years experience."

THE Grand Trunk have notified the Board of Trade that the following rates will apply on grain in car loads, minimum 30,000 pounds or over to Montreal for export, exclusive of all terminals: North and West 16 cents per 100 pounds; west—14 cents 100 pounds; east of Toronto and Midland division—12½ cents per 100 pounds. The grain will be forwarded to Montreal at published tariff prices, and reduced by rebate upon proof of exportation. Loss by fire and water at owner's risk. The C.P.R. will also presumably adopt the same freight system.

A SUCCESSFUL Darlington farmer remarked to a local scribe the other day that for many years he had sold his grain as soon as he got it ready to market. He is one of the men who does not take any stock in the "hold your wheat" policy, and after many years experience in an opposite direction he is satisfied that the argument is profitably on his side. This season he sold in the fall when 95 cents and \$1.00 was being paid, where current figures are only in the vicinity of 85 cents. We are inclined to think our friend is a pretty level-headed fellow.

THE death of Thomas Goobie, of Guelph, to which fitting reference is made in another column, renders vacant the office of president of the Dominion Millers' Association. A number of important questions are before the millers of the country at the present time, which makes it desirable that the position should not remain vacant for any length of time, and that in selecting a successor to the late president that the choice fall on a man rightly fitted to follow up the work that had been pursued with energy and success by Mr. Goobie. We do not know of any reason why a general meeting of the association should not be held at an early day.

WHAT is doubtless a correct statement of the grain yield of Manitoba last season is found in the annual address of President Stephen Nairn, of the Winnipeg Board of Trade. The actual acreage under crop was 916,600 acres in wheat, from which was taken 23,190,000 bushels of that grain; 305,600 acres, yielding 14,000,000 bushels oats, and 89,800 acres in barley, yielding 3,200,000 bushels; a total of 1,312,000 acres in these three cereals, and a total yield of 40,300,000 bushels in all. The average product of wheat was thus 25.31 bushels per acre; of oats about 48 bushels, and of barley 35.63 bushels per acre. May we not excuse the people of the Prairie Province if they enthuse a good deal over the possibilities of their country. The possibilities are there and are great. The fact is one that may be taken note of by Mr. C. Wood Davis in his effort to find a near quarter to level up the shortage of grain yields, which is to take place shortly on his side of the lines.



EVEN in this matter-of-fact age the belief in premonitions of future events is strong in the minds of many. I would not like to say that there is nothing in this peculiar mental condition, and just now, at any rate, I am not going to enter into a philosophical discussion of the matter. These presentiments, we know, will assert themselves, and where one person may treat them with perfect nonchalance, others cannot throw them aside so easily. Whatever may be the views of my readers the following incident in the life of the late Thomas Goldie will, in the light of after events, be read with interest. It is told by the collector of Inland Revenue, J. B. Powell, who has for years been a neighbor of the deceased. In June of 1890, shortly after the last legislative elections, Mr. Goldie and his friend Mr. Powell were sitting on the beautiful lawn which slopes from the family residence of the deceased down to the river, when suddenly Mr. Goldie said, "Powell, I feel that I am not going to live very long, I don't know why, but I have an idea that I am not long for this world. What a pity to leave such a beautiful place as this! Now, if anything should happen me and I am carried from here to my grave, I want you and five others whom I named to carry me to my grave and act as pall-bearers." His wish was obeyed, and these six gentlemen, with two others, carried his body to the grave.

George Hill, of Ardoch, North Dakota, who was in the city a fortnight ago, says that last year's grain harvest in Dakota was abundant, but of very little use to the farmer. The drought and famine of the two preceding years had caused the removal of a great many reaping and threshing machines from the State. This year, though the harvest was fair, a large portion of the grain was rotting in the fields, owing to the scarcity of implements for its garnering. The grain that was cut could not all be threshed, owing to the limited supply of threshers, and as a result the poor Dakotan farmer was in almost as bad a plight as he was before. Mr. Hill is not surprised that there should be an exodus of Dakotans to our own North-West Territories.

It was Artemus Ward, I think, who once said that he was not much given to "reminiscing." The genial showman, notwithstanding, there is some interest in the occupation of recounting the battles of the past, even though some of them were a long way short of becoming victories. I have a correspondent who has sent me some cogitations along this line that furnish profitable reading. He tells how in the spring of 1859, when all Lyn was putting on her holiday attire, he laid the foundation stone of a flour mill. Everything incidental in the routine of an ordinary mill could be chronicled about it during the twenty-five or thirty years that it ground home or imported grain with Buhr stones. Many a customer has growled at the tollage. Many a woman, up to the elbows in sour dough, has silently uttered maledictions on the miller, and many a prize taken for home-made bread at agricultural shows made from its production has looked upon it as a family friend. It was changed like many others to the roller process, and equipped with the best machinery procurable by its owner, Mr. James Cumming, and since its change it has crept or struggled along like many of its competitors, trying to grind out a fair profit for its possessor. It is not the facts that the mill naturally has a magnificent water power to drive it, two competing railway sidings and the St. Lawrence River to assist it in freightage, nor its size, nor architectural structure, nor the beautiful natural scenery in its vicinity that we refer to in these columns. We have a different object. Mr. L. McKinnon, head miller, has sent us a sketch, drawn by himself, of the mill and the buildings in the annex, showing nicely the railway and river accommodation, his employer's

residence and other surroundings and written us a long pen sketch, too long for publication, from which we stole our ideas given above, and for which we tender him our hearty thanks. We wish to encourage this correspondence. If Mr. McKinnon can find the time to furnish us with topical descriptions of his mill, and we quote his concluding sentence, surely others can be induced, in the interests of their own daily bread and butter, to throw to one side diffidence, nonchalance and laziness and send us items of their locality for publication, descriptions of their mill, particularly its early history, when perhaps the original proprietor toughed it with pioneer settlers and bartered with the aborigines. There are many mills in Ontario and Quebec whose history ought to be recorded, and there is no more fitting place to contain the record than in the columns of the CANADIAN MILLER. "Difficulties," says our correspondent, "attended the getting up of the above, in that, while pursuing my duties as head miller I did the writing and sketching. Sometimes a line, again a sentence, and so on, was the progress; therefore you will kindly excuse it on the ground of disadvantages."

How best to meet the requirements of a rapidly growing business is one of the problems that most men are compelled to face in the early years of their business history. Beginning modestly, and often on limited capital, they find, with push and energy, that trade expands more rapidly than does their ability to meet its calls. Samuel Smiles tells us, in his interesting biography of George Moore, the prince of English lacemen, how sternly this difficulty confronted the young laceman. A Napoleon among travellers, he was able to outsell all competitors, and in a short time built up an enormous business. As might be expected he stirred up the jealousy of rival houses, who, acting on the lines that move the green-eyed monster, left no stone unturned to prejudice his credit, circulating the story, which was in a measure correct, that he was trading beyond his capital. However, Moore was big enough for the place, as he proved throughout his life big enough for any work the people pleased to give him. But everyone is not a George Moore, and with the strongest men the period named is surrounded by untold dangers, and calls for the most judicious management. A short step in a wrong direction may mean unremediable disaster. I have been led into this line of thought through reading the counsel of a writer in a milling journal on the point of overcrowding the mill. This writer says "Don't overcrowd. By this I mean don't overcrowd either a single machine or your mill as a whole. It is bad enough to overload, or overfeed, or overcrowd a machine, as that means unsatisfactory results, but it is far worse to overcrowd the floors of a mill. A mill that is so 'cluttered up' with extra machines, added as business grows, that the miller can't walk about without hitting or kicking some machine, or a pile of bags, or some other contraptions, is a mill that is sure to be badly managed. The extra machines take up room, exclude light, make passages narrow as well as dark, and render it almost impossible to keep the room clean. Extra dust will be left in the dark and narrow passages. That means bad air and increased dangers of fire. I often find mills overcrowded. In some cases the mill has been built for a certain capacity, for example, 75 barrels a day. The business has grown to a demand for 100 or 125 barrels a day. The owner tries to put in the extra machines without adding to the size of his building. He moves, bunches, huddles, crowds and 'clutters up' his place until he can hardly turn around in it. His formerly light and commodious plant becomes a gloomy one, in which he and his helpers move about like dusty ghosts in a sepulchral light. He has saved the expense of a new building, he thinks. He has really lost all the value of his plant, I think. I believe, in each case where there is the least probability of an increased business, that it is real economy to spend a few more dollars and make the building large enough to permit, without crowding, the addition of new machinery sufficient to cover the probable increase in demand." From the standpoint of the working miller the advice of our friend is sound. The advice of Punch is sound don't. Don't overcrowd your mill. But don't overcrowd your finances. Better put up with overcrowding somewhere else than at this point.

USEFUL INFORMATION

When the tubes of injectors become scaled, do not undertake to clean them with a file or scraper, as a very small enlargement of the area of the jet will interfere with the working of the instrument, but remove the tubes and place them in a solution of one part of muriatic acid to 10 or 12 parts of water. This will soften the scale, and the tube may then be washed.

Notwithstanding the line on line, article after article, that trade papers have printed on the management of steam boilers, explosions continue to occur with diabolical regularity and with about the usual percentage of fatalities. Is it possible that owners and operators of steam boilers do not read, or, reading, do not understand, or, understanding, do not heed? If they would read, understand and heed, it is certain that boiler explosions would be far less frequent.

The fact that steam piping methods have not kept pace with the demands of higher pressures and modern practice is evidenced by the increasing number of accidents from the failure of pipes and fittings. There has not been for the rapid increase of pressure used a proportionate increase in strength of flanges, number and size of bolts used, and more generous provision for expansion and contraction. When small bolts are used in flanges they are often put under an almost destructive initial tension by "the man with the monkey-wrench," and are in no condition to withstand the excessively high pressures to which piping is now subjected. Valves and fittings also require greater attention in their design, construction and manipulation.

The ability of a lubricator to feed heavy oil depends on the difference between the height of the water column and the connection from the lubricator into the steam pipe. A friend has one in which the water column extends for more than two feet above the body of the cup, but as the delivery is connected into the steam pipe nearly as high up as the top of the water column, the cup does not work in a satisfactory manner. The delivery connection should be lowered, and it is well to remember that if the pipe which is intended to supply the column with water is carried in a horizontal direction, while it may add to the capacity of the cup, or in other words enable it to feed out more oil in an hour, still it does not help it about feeding heavy oil, as the vertical height alone can do this.

To lag pulleys with paper a workman writes:— Scratch the face of the pulley with a rough file thoroughly, so that there are no bright or smooth places. Then swab the surface with a solution of nitric acid one part, water four parts, for fifteen minutes; then wash with boiling hot water. Having prepared a pot of the best tough glue that you can get, stir into the glue a half ounce of a strong solution of tannic acid, oak bark, or gall nuts, as convenient to obtain, to a quart of thick glue; stir quickly while hot and apply to the paper or pulley as convenient, and draw the paper as tightly as possible to the pulley, overlapping as many folds as may be required. By a little management and moistening of the paper it will bind very hard on the pulley when dry, and will not come off or get loose until it is worn out. Use strong hardware wrapping paper.

"What do you do with all the files?" This is the question which the "old man" usually asks when he receives an invitation to hand out a new file. More files are spoilt by laying them down where last used than by any other method. A new file is used once and then perhaps thrown down in the dirt, grease or water, and the dirt, dust and grease thus gathered convert a new file into an old one upon the spot. Keep a file clean at all times and begin when it is new. Before using a new file rub chalk into the teeth, then clean with a brush or wire card; rub in another dose of chalk and the tool is ready for use. The chalk slightly fills the cavities between the teeth and prevents metal filings and dust from collecting therein. Such filling renders the file more easily cleaned and to a certain extent neutralizes any acid that may find its way on to the file.

A mechanic recently learned a lesson about emery wheels by nearly getting killed by the bursting of one of them. The wheel was left running while he went out of the room on an errand. As he came back a piece of the wheel came to meet him, passing within a foot of his head. Luckily no damage was done except to a window, the sash and glass of which went out of doors in company with the broken wheel. There is no need of having such a thing happen. Let a man take an emery wheel in his hand, place the fore finger of his left hand in the mandrel hole of the wheel, with a small wooden mallet (never use a hammer) tap the wheel lightly and note the sound given forth by the blows. A crack can be quickly detected in this way, and if every wheel was thus tested when it came into the shop, and if the practice were followed up every time a wheel is placed upon the mandrel, there would be no accidents from broken emery wheels.

How it Tickles

— THAT —

LITTLE WONDER

REEL

Jas. Goldie, Guelph, orders two
 Rathbun Co., Deseronto,
 order one
 McDonald & Thomson,
 Woodstock, order one
 M. N. Stephens, Glencairn,
 orders two
 And still they go . . .



LUTON, Ont., Jan. 18, 1892.

WM. & J. G. GREEY, Toronto, Ont.

DEAR SIRS,—I send \$—— to pay for "Little Wonder," according to agreement with you. The Little Wonder is working fine. It has improved my mill wonderfully.

Yours truly,

E. B. HILL.

The Little Wonder
 Is a Money-Earner from the Start

✻ **Is Unequaled for Making Perfect Separations** ✻

NOTHING CAN TOUCH IT FOR
BOLTING OR RE-BOLTING ANY STOCK IN THE MILL

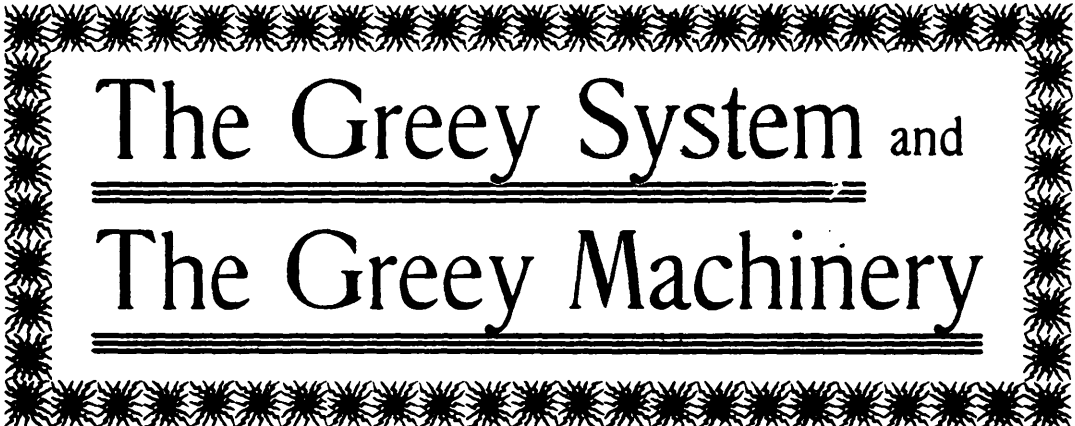
IMMENSE CAPACITY

So small it goes anywhere . . . Runs so easy, no trouble to drive

SOLE MANUFACTURERS:

WM. & J. G. GREEY 2 CHURCH ST.
 TORONTO, ONT.

We Challenge the World TO EQUAL



The Greey System and
The Greey Machinery

They
Can't
be
Beat

They are Reliable
Prices Reasonable
And give Satisfaction

Utopia Roller Mills, J. R. Bell and Bro., Proprietors

UTOPIA, Ont., February 15th, 1892.

WM. AND J. G. GREY, Toronto, Ont.

Gentlemen,—We have got our mill started again, and consider we now have the best short system mill in this country. The new set of rolls and Little Wonders materially increase our capacity and make a good finish. Will you please send us statement in full of our account and we will remit.

Yours truly,

J. R. BELL AND BRO.

We Lead the Times in Roller Machinery

Are Keen for Genuine Improvements

WM. & J. G. GREY

2 CHURCH
STREET

Toronto, Ontario

ORDERS, CORRESPONDENCE AND ENQUIRIES INVITED AND ATTENDED TO PROMPTLY



JNO. TODD, flour dealer, Toronto, has assigned.
T. M. & E. S. EDMONDSON, millers, Oshawa, are succeeded by E. S. Edmondson.

THE larger part of grain in the Northwest still unthreshed will be kept in the stacks until warmer weather comes.

BREAD is down in Toronto. The poor man's loaf can be had in some cases for nine cents; ten cents is the general price.

EDIE & WALPER run a successful 75 barrel mill at Dashwood, Ont., a point pleasantly located five miles from Lake Huron.

LARGE quantities of grain in the vicinity of Killarney, Man., are still unthreshed. A grist mill will likely be erected at an early day.

MCLAN & KEENE, owner of a ten horse power thresher, continued threshing at Killarney, Man., when the thermometer was 4 below zero.

THE grain exchange, of Winnipeg, Man., is discussing the matter of getting railway companies to carry seed grain between points in the province.

THE new town of Oxton, on the C.P.R. Souris branch, Man., boasts of four grain buyers on the market shipping from ten to twelve cars of wheat per week.

CARNUFFE, N.W.T., is agitating for the erection of a flour mill. A bonus of \$4,000 will be given to a good practical man who will undertake to erect a 100 barrel mill before the coming fall.

THE flour mill at Carberry, Man., has closed down. Rogers & Blacadder, owners, say that owing to the poor machinery with which the mill is equipped, they could not compete with other points.

THE Glenwood roller mill at Souris, Man., is 32x68 feet and four storeys high, with an engine room 28x32, and two storeys high. Attached to the mill is an elevator with a capacity of 20,000 bushels.

THE Lake of the Woods Milling Company have moved their Winnipeg offices to new premises on the corner of Main and James Streets, which have been fitted up in very comfortable and attractive style.

THE mill of J. B. Petheran, Dunrobin, Ont., known as Charlton Mills, is running full time on custom work. Mr. Petheran has added a Leonard Ball Automatic Engine to supplant the water power.

S. NAIRN, of the Winnipeg, Man., oatmeal mill, has completed some additions and improvements to his oatmeal mill. Amongst other things he has adopted machinery for making rolled oats by a new process.

THE new farmer's elevator at Regina, Assa., is securing a good share of business. Three eastern buyers have come in to compete with the local men, namely McMillan & Co., Lake of Woods Co., and S. P. Clark & Co.

HUGH McKAY, of Edmonton, Man., received a letter recently from Wm. Brown, of Lockerby Mills, Paisley, Ont., asking if there was an opening for an eighty barrel roller mill, as he is dissatisfied with his present location.

E. SEXAMITH, of Bridgewater, Ont., has purchased the flour and grist mills at Downey's Rapids, or, as latterly called, Glen Lewis, from a loan company at a very low figure, and will commence operations there at once. The price is understood to be \$2,000, which is only about one-quarter amount of mortgage.

THE town council, of Calgary, Man., in view of the increased acreage of wheat to be sown this year in the district, and along the line of the Calgary and Edmonton Railway, north and south, have decided that unless private parties accept the bonus offered for building the mill by the first of March, the corporation will proceed with the construction of a 150 barrel mill as a town investment. The offer is of \$3,000 bonus and exemption for ten years.

THE Committees of the Board of Trade, of Toronto, will be as follows for 1892: Call Board - Messrs. M. McLaughlin, J. L. Spink and John Carrick; J. L. Spink, chairman. House Committee - H. N. Baird, W. D. Matthews and D. R. Wilkie; H. N. Baird, chairman. Railway and Transportation - R. W. Elliott, W. Christie, Warring Kennedy, J. Donogh and A. A. Allan; J. Donogh, chairman. Legislation - Hugh Blain, S. F. McKinnon, W. R. Brock, George H. Bertram and A. B. Lee; Hugh Blain, chairman.

A FIRE took place at Tweed, Ont., the early part of the month, completely destroying the mill and elevator of George Easterbrook. The mill was one of the finest in that section of

the country, being fitted up some three years ago with a full roller process, new engine, etc. The elevator contained 25,000 bushels of wheat, most of which was owned by Richardson & Son, of Kingston. The loss will be about \$40,000; insurance only \$10,000. The property was jointly owned by George Easterbrook, his son John, and his brother William Easterbrook. The loss is a heavy one for Tweed.

TRACEY D. HULL, a Chicago man, is reported to have sued W. W. Ogilvie, the Canadian flour mill owner, for \$200,000. This sum covers \$132,000 commissions alleged to be due for work in arranging a sale of the defendant's plant and for damages for breach of the contract. Last year Mr. Ogilvie is said to have wished to sell the business, and commissioned Hull to arrange a deal with an English syndicate. Mr. Hull says he secured an option on the mills and responsible English capitalists who were willing to pay \$1,750,000 for the business. But he claims defendant refused to sell after the deal was planned. "He gave no good reason for his action," said Attorney David Campbell, representing plaintiff. "He simply refused to sell, and this suit is for commissions secured by Mr. Hull by his contract." Mr. Ogilvie was in Chicago recently, and the opportunity was taken for suing him there.

THE Grand Trunk, through their general freight agent at Toronto (Mr. John Earls), has notified the city grain men to the following effect: Some difficulty occasionally arises in consequence of alleged overcharges on Manitoba grain for milling in transit, and on enquiry find this is largely owing to the regulations being made by this company with the secretary of the Millers' Association are not being observed. The principal regulation is that Manitoba wheat via Chicago and G.T.R. for milling in transit, should all be consigned and filed "To Montreal for export to be held at Point Edward for orders." Consignments should now read "To Montreal for export to be held at Point Edward or Sarnia tunnel for orders." If this is not done and the grain is consigned to Point Edward or Sarnia only, other, or local, charges may arise beyond the terminus of the G.T.R., and for which the company cannot be responsible.

A BOARD of Trade arbitration in the case of Alexander Brown & Co., of the Citizens' Milling Company vs. A. Cavanaugh and J. L. Spink, all of Toronto, has resulted as follows: The dispute occurred over the purchase of a car of No. 1 hard wheat sold on the open call board at Toronto as No. 1 hard, Winnipeg inspection on track here, and the point at issue was whether a bill of lading with inspection certificate stamped upon its face as follows: "According to inspector's certificate, which I hold, the wheat in this car is No. 1 hard, Winnipeg inspection." (signed by the agent of the G.T.R.) was a good delivery on the sale of a car of No. 1 hard wheat, Winnipeg inspection. The arbitrators ascertained that Cavanaugh and Spink's delivery was a good one, they having presented the bill of lading stamped on as above. Alexander Brown & Co., must therefore pay for the wheat. James Stark and Charles R. Watts (central wheat lawyer), were the arbitrators, with J. H. G. Haggarty as referee.

THE mystery surrounding the disappearance of John Payne, of Stratford, Ont., early in January, and his whereabouts since then was partially cleared up by the receipt of a telegram from the medical health officer of Houston, Tex., announcing his death at that city. Mr. Payne was a prominent grain buyer, and had been engaged in business there for some years. He had been fairly successful and was looked upon as a thoroughly upright and honest citizen. He left Stratford for Buffalo, January 11th, and there for some time with full play of him was lost. It was feared that he had met with foul play, but through the efforts of Hon. Thomas Ballantyne, M.P.P., and Mr. J. F. Palmer, who went to Buffalo to prosecute the search for him, assisted by the police, it was finally learned that he had gone to New York and there taken a steamer for Galveston, Texas. From letters received by his family, the contents of which have just been made public, it appears that Mr. Payne had lost rather heavily in wheat speculations, and that when he left it was with the hope that he would be able to tide over his financial difficulties, but as the market continued to decline he seems to have lost all hope, and, according to his own statement, boarded a steamer in New York without knowing where it was going. He finally found himself in Galveston, Texas, from which place he wrote that he was ill and had suffered intensely from mental worry. He said that he expected to leave Galveston and would send his address later on. He was next heard from at Houston, Texas, but he again intimated that they should not write to him there, as he would soon leave. Nothing further was heard from him until the telegram announcing his death, was received. His flight to Texas and death there are generally looked upon as the outcome of his sensitive nature, and from the despondent though affectionate letters which he wrote to his family it would seem as though he virtually died of a broken heart. The remains were embalmed and sent home for interment.

A SHIPMENT of 70,000 sacks of flour has just been made from St. Louis, Mo., to Great Britain.

THE wheat receipts at Chicago during 1891 were 43,000,000 bushels, against 13,307,000 bushels for 1890.

THE flour production in Milwaukee for January, 1892, was 210,000 lbs., against 155,700 in January, 1891.

E. GODFARD & SONS, flour milling men, of St. Louis, Mo., have assigned. Liabilities \$130,000, assets \$97,000.

IT is said that British millers find spices mixed with Indian wheat, and extreme difficulty is met with in separating the grain from the spice.

THE Detroit Chamber of Commerce proposes to erect a building suitable for its purposes at a cost of \$100,000, a small sum for so wealthy a city.

IN 1891 Chicago's flour receipts amounted to 4,602,000 barrels, against 4,358,000 barrels for the year 1890. The shipments were 4,100,000 barrels, against 4,134,000 barrels in 1890. The exports of medium and low-grade flour were liberal, while most of the patents were sent direct from the mills.

A BERLIN dispatch says: *Can bread be being extensively experimented with, not only in the army, but among the people.* In some mining districts in upper Silesia, two parts of corn flour were mixed with three parts of rye flour, and baked as bread. Five pounds of this bread are selling for 17c. or 35c. a pound, which is 5c. less than clear rye bread.

AN exchange calls attention to the fact that the freight annually carried through the Detroit River has for some time past exceeded the total exports and imports of the whole country. The growing popularity of this water route is sufficiently shown in the fact that the net capacity of all the vessels employed on the great lakes increased from 634,652 tons in 1886 to 826,360 tons in 1890, or a trifle over 30 per cent. The value of the freight earners increased even more than that - from \$30,597,450 to \$58,128,500, or about 90 per cent.

BUDAPEST milling companies had a good year in 1891, judging from the market price of their shares, which show a decided improvement all around, as the following quotations of shares at the end of the past two years show:

Concordia	1891	1892
Elizabeth	497 1/2	584 1/2
Louise	370	463
Müller and Bakers	370	315
Roller Millers	450	470
Victoria	530	555
Offen Pester	248	255
Pannonia	1,065	1,240
	865	990

MR. CHARLES MURPHY, who is commissioned by the United States Minister of Agriculture to introduce maize into Europe as the basis of breadstuffs, arrived in Berlin and was received by the Minister of Agriculture, to whom he submitted samples of bread. It is reported Mr. Murphy had loaves baked out of one pound of maize flour and one pound of rye meal which weighed four pounds. This is something like a water absorbing flour. If we had it in this country there would be no short weight bread; but what a disaster to the policeman who seeks promotion by prosecuting bakers. The expense of these loaves, including import duty on the corn, will not be more than two-pence, while rye bread of the same weight now costs seven-pence. It is asserted that the maize flour cannot be tasted in this new bread.

THEY grains under the burden of taxation imposed by her rulers. The most onerous of all the taxes are the octroi duties on flour, a tax collected at the gates of towns and cities. Here it pays two cents a pound, and the retail price is from eighteen to twenty cents. Salted meats sell at from fifteen to twenty cents a pound, and the octroi tax is three cents. Wheat flour sells at six to nine cents a pound, and the tax is one-half cent; macaroni seven cents, and the tax is three-quarters of a cent; eggs eighteen to forty cents a dozen, and the tax is ten cents. This will give some idea of the octroi tax and cost of living. Meat is almost unknown among the laboring classes, and, although Italy is the land of macaroni, it is seldom used by the working classes, owing to its high price. They generally use an article called paste, composed of inferior wheat flour mixed with flour of chestnuts. Beans are also one of the staple articles of food. Two meals a day are the rule among the working people. Soup is the chief dish at the evening meal. Tea and coffee are unknown to them, but cheap wine is common.



Office of the CANADIAN MILLER,
February 15, 1892.

THE GENERAL SURVEY.

UNSETTLEDNESS and uncertainty have been features of the market for the month. Prices have not ruled high, nor has the volume of trade been large. The past few days have seen a slight advance in wheat, but it has not imparted any lasting strength to the market.

The situation in Chicago has been rendered further uncertain by a report started, moving by the Tribune of that city, which states that the wheat market is being manipulated by a syndicate at the back of which are J. D. Rockefeller, of the Standard Oil Company; James T. North, "the Nitrate King;" and John W. Mackay, the bonanza millionaire. The paper claims that sales of wheat on the Chicago Board of Trade alone aggregate 70,000,000 to 80,000,000 bushels, whereas there are less than 40,000,000 bushels of actual wheat in the West, leaving about 40,000,000 bushels which are really "wind" sales, and must be covered at whatever price the market touches. But this is not all. Similar short sales have been made in all of the principal markets in this country and Liverpool. It is asserted that the alleged combination of millionaires sent agents abroad and secured accurate information as to the real shortage of the crop, and as early as the middle of December began to quietly pick up all the wheat offered, working through comparatively unknown brokers, traders who were accustomed to deal in small lots, and that they thus, without attracting attention, secured absolute control of the market. Whether or not the price will be put to a higher figure is known only to the clique.

Total receipts at the four principal United States spring wheat points, since August 1, the beginning of the crop year foot up Minneapolis, 41,510,852 bushels; Duluth, 34,652,547 bushels; Chicago, 34,267,212 bushels; Milwaukee, 7,984,814 bushels, making a total of 118,420,425 bushels, against 60,357,649 bushels during the same time last year and 67,268,034 bushels in 1890. The total receipts of wheat at the four principal winter wheat points, Toledo, St. Louis, Detroit and Kansas City from July 1 to date are 55,166,870 bushels, against 21,068,654 bushels in 1891, and 25,318,050 bushels in 1890.

Of the British grain trade the Mark Lane Express in its review for the current week says: "The prices of English wheats have recovered 6d. Trade at the rise is slow. Foreign wheats are less depressed. The Continent is buying freely of Californian, Argentine and Indian at 6d. advance. Californian sold at 39s. 6d., and American red winter at 37s. 9d. Flour is quiet. The supplies are abundant. American is in fair demand, and prices are 6d. per sack better. Corn is weak. New American sold at 20s. 9d. Barley and oats are firm."

The Liverpool Corn Trade News figures the outlook as follows: Requirements of wheat importing countries for the crop year, 52,300,000 quarters. Foreign wheat now in stock or on hand for Europe, 11,000,000 quarters, including flour. Portion of requirements for the crop year already supplied, 24,000,000 quarters. Requirements yet to be filled during the seven months to the first of August the end of the crop year: 25,000,000 quarters, or about 850,000 quarters per week. The Corn Trade News thinks, however, that with present large reserve stocks, Europe can get along to the end of the crop year with an additional of 20,000,000 quarters. About 7,000,000 quarters of this may be obtainable from India, Australasia, South America, Eastern Europe, etc., and the balance of 13,000,000 quarters, equal to 104,000,000 bushels, must come from America. The Liverpool journal seems to doubt the ability of America to supply this amount, but we believe the United States and Canada can easily make up the quantity, and more, too, if

wanted. The Cincinnati Price Current estimates that the United States alone had a surplus of 125,000,000 bushels of wheat on January 1st.

In our own country deliveries are light and prices are not tempting the farmer. Manitoba deliveries are being interfered with by the continued cold and stormy weather. The Winnipeg Commercial says: "Deliveries have certainly fallen very flat ever since the first of the year, and the quantity of grain coming in has been greatly under expectations. This is due to three causes, namely: considerable rough weather, lower prices than farmers care to sell for, and the large quantity of wheat still unthreshed. There is no doubt but that a good deal of wheat is held by farmers, on account of prices being below their expectations. In some sections of the country, particularly southwest and west, a very large portion of the crop is in stack. Travellers who have been through these districts recently, say that the stacks appear to be as thick about the country, as they were last fall." The Commercial strongly advises holding the unthreshed grain in stack until summer, rather than run the risk of threshing even when an occasional mild day shows itself.

Put in the fewest possible words there is nothing to indicate a remarkable scarcity of wheat anywhere. Even in Russia the distress there is due largely to the difficulties of transportation. The stocks on hand, apparently, in both continents are large. Something may develop to change these conditions, but this something is not visible now. The outlook for the growing grain in European countries, as well as in America, is at this period hopeful of a good crop for another year.

WHEAT.

The market has partaken largely of quietude for a month back. It has had its fluctuations and changes, sometimes the bull element being on top and again the bears having their turn. News from Chicago tells of conditions being slightly disturbed because of the anti-option bill now before Congress. So long as this measure is in the way it is likely to prove a menace to higher values.

The English market is a little sluggish, the stocks being equal, if, indeed, not ahead of demands. The London Eng. Miller expresses the opinion that within the month "wheat will probably recover firmness, though we fear that in any case buoyancy is hardly to be looked for. The markets may be inspired by firmer holding in America, but the days of the 'corners' appear to be past; at all events a yield which exceeds 70,000,000 quarters is too big to be manipulated."

Markets at date are as follows: Liverpool: Spring, 7s. 10½d.; Red Winter, 7s. 8½d. to 7s. 9d.; No. 1 California, 7s. 11d. to 8s. Futures: No. 1 California, 7s. 10½d. February and March; 7s. 11d. April; 7s. 11½d. May; 7s. 11½d. June. American: Chicago, February, 87½c.; May, 91c. Oswego: white state, \$1.01; red, \$1.02. St. Louis, 92½c. for May. Duluth: No. 1 hard 86½c. for cash; No. 1 Northern, 85c. for cash; No. 1 Northern, on track, 86½c. for cash; No. 1 hard, 86½c. for February; No. 1 Northern, 85½c. for February; No. 1 hard, 92c. bid for May; No. 1 Northern, 90½c. bid for May. Canada: Ontario, standard, fall, 80c. Manitoba, 1 hard, \$1.02; No. 2 hard, 99c.; No. 3 hard, 91c.; No. 1 regular, 80c.; No. 2 regular, 79c. delivered from North Bay.

BARLEY.

The assault of Representative Fitch, of New York City, on the McKinley Bill, is giving increased interest to the subject of barley. In this he is backed up by the Buffalo and Oswego maltsters and grain men. This measure failed just where it was supposed it would be strongest. The farmers of New York state helped by their influence to carry the bill, expecting that when Canadian barley was ousted from the field that prices for the home grown grain would at once increase in price. But the experience of a twelvemonth has shown how badly out they were in their calculations. American barley did not advance in price. The increased tariff has precluded the purchase of Canadian barley; with their own product they cannot secure the satisfaction for malting purposes that is an absolute essential to success in their business. In a word, the American maltster says he must have our barley; and the exclusion during the past season of 12,000,000 bushels has para-

lyzed trade in Buffalo and Oswego in so large a degree that their elevators are doing nothing, and business generally in these lines is at a standstill. The proposition of Mr. Fitch is to reduce the duty to ten cents, as before, and the indications are that the measure will become law. The effect of the McKinley Bill on the Ontario farmer is shown in the decrease in the growth of barley. The average barley acreage for the years 1882 to 1890 was 764,365. In 1891 this had decreased to 553,166 acres, and it is likely that for 1892 there will be a further decline. It simply will not pay our farmers to grow barley at the prices that have prevailed lately. A reversion to the old order would give a boom again to the cultivation of this cereal.

Prices have not changed materially during the month, and the market has been quiet. Toronto: No. 3, 41c.; Manitoba, 43c. at North Bay. Buffalo: Fancy Western, 70 to 71c.; choice, 68c.; No. 2 Western, 65 to 65½c.; poor Western, 50 to 55c.; State, 65 to 70c.; Michigan, fair to choice, 58 to 64c.; No. 2 Canada, dull, 84½ to 85c. At Oswego and Albany the markets are nominally unchanged. Milwaukee reports a very quiet market, with No. 2 quoted at 54c.; sample, 45 to 60c. Chicago: Dull: No. 2, 56 to 58c.; No. 3, f.o.b., 58 to 55c.; No. 4, do., 34 to 40c.

OATS.

An indication of greater firmness has been noticeable during the month, though prices have not varied to any material extent. Sales were made on the track at 32c., and outside sales were closed at 28c.

PEAS.

Prices are perhaps a cent or two lower than they were a month ago with a fair market. Sellers are asking 57c. with buyers at 56c.

RYE.

Nothing much doing in the rye market. No. 2 has sold in Buffalo at 92c. on track. There has been a somewhat firm demand in local markets at 80c., f.o.b., at points of shipment.

FLOUR.

An article has appeared in the Montreal Trade Bulletin recently that in its way is quite suggestive. Flour trade in Montreal has decreased and dwindled away to such proportions that at the present time the fees derivable from inspection of flour are not even enough to pay a deputy. These conditions are contrasted with the time when the position of flour inspector was sought after by such men as the Hon. John Young. In those days the flour trade of the city extended into the millions in value annually. There are many causes to account for this decadence, but the principle of these is believed to be the high standard of inspection, which it seemed to be a tradition among successive Montreal inspectors to maintain. The inspection in Toronto, it is alleged, was just as "easy" as the one in Montreal was "hard"; "and though buyers knew they could implicitly depend on the Montreal inspection, that the quality, soundness and weight, was absolutely correct, they also found that all their guarantees made the cost of the flour a little higher than other places where they were not so particular; so trade gradually went to the cheapest market. In corroboration of these remarks, flour bought in Toronto, having been inspected there, has time and again been brought down to Montreal and cut down a grade by our inspector here. All these are changed now, and millers find it more to their advantage to ship their flour untrammelled by any inspection whatever." The situation is serious enough to render it extremely possible, the Bulletin thinks, of Montreal being in the immediate future without a flour inspector. What is the remedy? Attention is drawn to the fact that cases have come before the Dominion Millers' Association, showing that flour has been shipped from Ontario short weight. This evil is attributed to what is charged as the faulty system, or want of any system, of inspection in this province. But the vigorous manner in which the D.M.A. grappled with this matter, when it was brought to their notice, may be taken as an assurance that this particular evil will be speedily stamped out. We give, however, the proposition of our contemporary: "Our friends in Ontario want to know how to stop this short weight business. It can only be done in one way, and that is by making inspection compulsory. This is quite feasible; inspection is compulsory on other articles of commerce

now; it would protect the public who are being cheated, and would put traders on a footing of equality. The charge need not be more than one-half cent per barrel which would pinch nobody. This is the proper solution of all these difficulties and the sooner it is put into practice the better."

The business in flour throughout the month has been quiet. Local trade has about held its own; any movement outside of this has been slow. Some satisfactory orders, however, have been reported from the Lower Provinces. The secretary of the Dominion Millers' Association reports for export, "Some sales of straight grade at \$1.84 per hundred pounds."

The Minneapolis market has shown increased strength within the past week. Freer buying was observable from foreign markets. The direct exports of flour from this point were 62,520 barrels, against 53,000 barrels the week previous.

Quotations at date are as follows. Toronto: Ontario patents \$4.50 to \$4.90; straight roller \$3.95 to \$4.00; extra \$3.80 to \$3.85; low grades, per bag, \$1.25 to \$1.75. Quebec: Flour is dull and depressed, with very little demand. During the past week a few cars of straight roller in bags were sold at \$2.05 to \$2.07 1/2, and some low grades by sample at low figures. Quotations are as follows: Strong bakers' \$4.80 to \$4.90; patents \$4.70 to \$4.90; straight rollers, \$4.40 to \$4.50; extras, \$4.10 to \$4.20; superfines, \$3.50 to \$3.90. Montreal: There is a fair enquiry for flour for local consumption, but the volume of business continues very small at unchanged prices. Patent spring, \$5 to \$5.25; patent winter, \$5 to \$5.25; straight roller, \$4.65 to \$4.70; extra, \$4.20 to \$4.30; superfine, \$4 to \$4.10; city strong bakers', \$5; strong bakers', \$4.75 to \$4.90. Winnipeg. Wholesale quotations to the local trade in broken lots are as follows, per hundred pounds: Patents, \$2.35; strong bakers', \$2.15; second, do \$1.70 to \$2.00; XXXX, \$1.20 to \$1.30; superfine, \$1.10 to \$1.15. The prices are for well-known brands. Some brands selling under quotations.

PERSONAL.

A. M. Robertson, vessel owner, Hamilton, Ont., is dead.
Mr. W. W. Ogilvie, of Montreal, Que., has donated \$1,000 to the proposed Y.M.C.A. building at Winnipeg.
J. E. Stein, editor of the Commercial, of Winnipeg, Man., has been elected president of the Winnipeg Board of Trade.
E. W. Thompson, manager at Winnipeg, Man., for the Ogilvie Milling Co., is in Florida, where he will remain for two or three months.

The Toronto Board of Trade will be represented at the Imperial Conference of British boards of trade and chambers of commerce, which is to be convened in London in June, by W. D. Matthews, the large grain merchant, and Phineas Burton, wholesale dry goods.

Simon Howes, of Silver Creek, N.Y., died on the 28th ult., aged 76 years. He was one of the best-known manufacturers of milling machinery in the United States. Personally he took rank as a man of untiring industry and was the soul of honor in all his business transactions.

I. W. Sandison, who is known in Manitoba as the wheat king of the Brandon district, has sailed for Glasgow, Scotland, accompanied by his wife. Before departing Mr. Sandison ordered thirteen new Massey-Harris binders, and paid the land commissioner of the Canadian Pacific \$22,000 for land which he proposes to add to his extensive farm. Eight years ago Mr. Sandison came to Manitoba as a farm laborer.

Mr. Charles H. Waterous, senior partner of the Waterous Engine Works Co., died at his home in Brantford, Ont., on the 10th inst. He was born in Vermont and came to Brantford in 1848. He at first managed the machine shop of Mr. Van Brocklin, but in 1855 bought out his employer, and from that time until 1877 had the concern under his direct supervision. The business assumed large proportions, and in 1877 it was formed into a company, the sons of deceased sharing the control with him. Mr. Waterous was born in 1814, and was therefore 78 years of age at the time of his death. He was married in 1839. Mrs. Waterous and one son pre-deceased him. There are six children now living, J. E. Waterous, Ald. C. H. Waterous, David Waterous, of Brantford; Mrs. Agnew, Montreal, and Fred and Frank, who are connected with the branch works at St. Paul, Minn.

CHAFF FOR THE DUSTIES.

"Where are you going, my pretty flour?"
"I'm going to Liverpool, this very hour."
"When will you get there?" then said he,
"Heaven only knows, ur, don't ask me."

Never kick an electric wire when it is down.
Bread is the staff of life, and pie is the stumbling-block.
Don't pray too long in church on a cold day if your horse is standing outside in the storm without a blanket.
Some real nice business men don't believe in advertising, and some very nice red apples decay from the centre.

TRADE NOTES.

The Northey Manufacturing Company, of this city, whose steam and water power pumps have given them an enviable reputation in all parts of the Dominion have incorporated as a limited liability company with a capital stock of \$100,000. Messrs. Pell, Northey, Leys and Lee, of Toronto, are the main promoters of the concern—a strong quartette of shrewd and capable business men.

The Dodge Wood Split Pulley Co., of Toronto, directs the attention of our readers to a letter published by them in their advertisement of this month. The letter being one of praise and hearty endorsement of the Dodge Company's patent system for transmitting power to a distance, the power being in this case carried some 125 feet; and as to the manner in which the work is done, Messrs. McCulloch & Herriot's letter speaks for itself.

THE case recently brought against the Province of Quebec Lottery by one Richardson has been dismissed with costs. It is said that certain individuals have made a determined attempt to lay their hands on the funds of this concern, which is legalized by the government of the province of Quebec, in the hope of striking a rich mine, but in this they have evidently been mistaken. This lottery has drawings twice a month, and extensive prizes are awarded. The management announce that all patrons and agents can rest assured that drawings will take place as usual and all prizes will be paid immediately on presentation of the winning tickets.

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WRITE FOR CATALOGUE AND REFERENCES

The GOSMOPOLITAN Bolt

Is at home in any work you can put it to. Away ahead of anything on the continent for
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Pays its cost in a few days. It has
NO RIVAL

"There is more money for the Miller in the Cosmopolitan than in the Purifier. We like it well."

HEWSON BROS.
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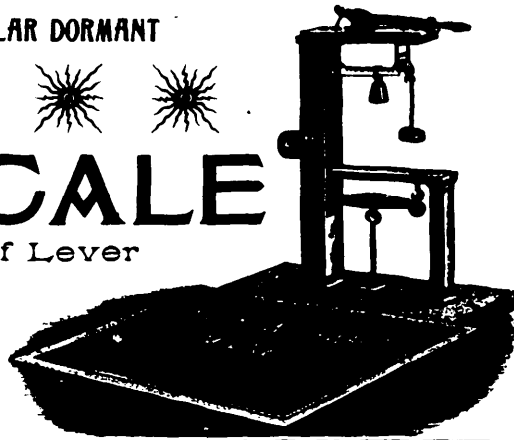
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SCALE
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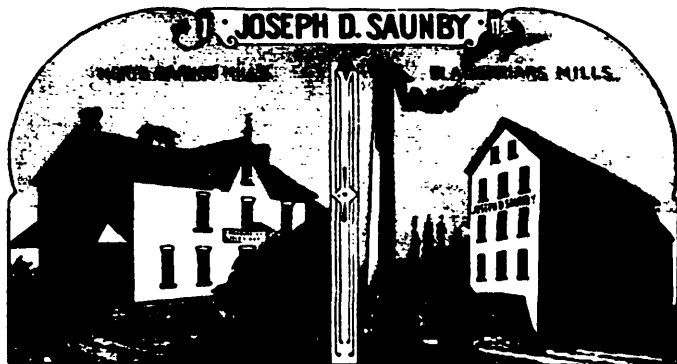
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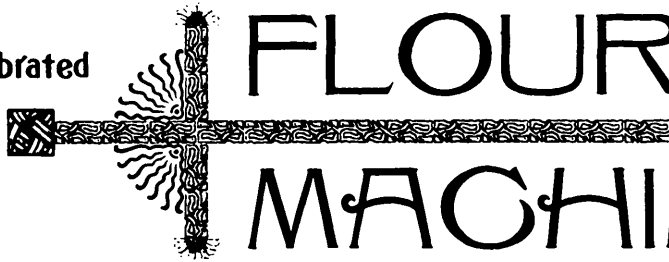
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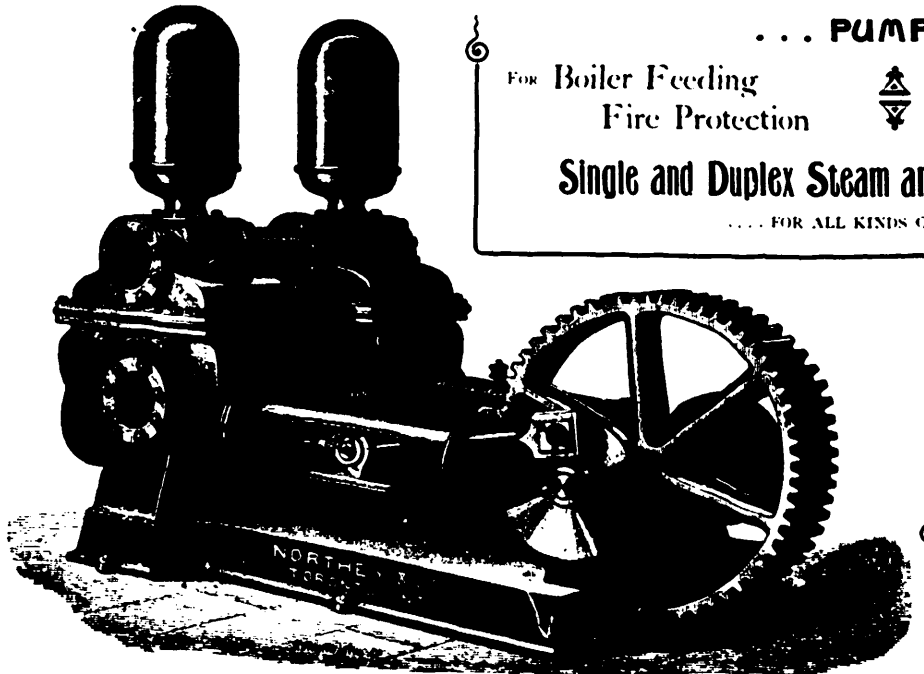
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WORKS: COR. FRONT AND PARLIAMENT STREETS