

### THE NEW RAPID CITY FLOUR MILL.

FROM a lengthy and interesting detailed description published by the *Rapid City Indicator*, of the new roller process flour mill lately put in operation at that place, we condense the following particulars:

The mill, which was built and furnished throughout by Messrs. Goldie & McCulloch, of Galt, Ont., from plans furnished by their milling expert, Mr. John E. Wilson, occupies a solid stone building, 42x42 feet, four stories high. The basement, second, and third stories are each twelve feet high; the fourth is eighteen feet. The foundation walls are four feet thick; the first story, three feet; the second, two feet, six inches, and the third and fourth two feet thick. The roof is covered with galvanized iron and has a pitch of three feet.

The motive power that drives the machinery is a Lefel turbine of 68 h. p., and an Archimedian turbine of 26 h. p., which are driven by an eight feet fall of water, from a dam across the Little Saskatchewan. In ordinary seasons, there will be sufficient water to run the mill eight or nine months in the year. As an auxiliary to the water power, an 80 h. p. Whelock steam engine and a 90 h. p. boiler will be used in the depth of winter and at other times when the water is low.

In the basement a line shaft extends the whole length of the building, being fitted with pulleys, from which power is transmitted by belts to the rolls and other machinery above.

The mill is fitted with a full complement of cleaning, grinding, and purifying machinery, and was fitted up under the superintendence of Mr. J. C. Miller, a thoroughly skilled mechanic, the proof of whose ability is the fact that the mill started up without a hitch or alteration. We are pleased to learn that the mill is turning out a first-class article in flour.

### THE CLEANING OF STEAM BOILERS.

A mechanical writer sums up the work of cleaning boilers as follows: 1. The frequency with which a boiler should be cleaned of incrustation and mud depends partly on the quality and quantity of water used and partly on the boiler type, and is best determined by experience. 2. Thin incrustations, up to the thickness of an egg-shell on the plates next to the furnace and up to 0.06 inches thick, the parts not exposed to the flames, are not harmful. Indeed, they are often useful, since they protect the boiler plates from the effect of injurious substances in the water. 3. If the incrustation is thicker than above specified, then it is best to remove it. In pressing cases it suffices to remove it from the surface next to the furnace. 4. If incrustation cakes and heaps of mud gather on the boiler over the fire, then they should be removed at least as often as once in fourteen days. 5. Boilers with narrow spaces inside, like tubular and portable boilers, must be cleaned especially early and carefully. 6. When a boiler is used for the first time with water whose qualities are not well known, it is wise to empty it after using two or four weeks and observe how much, in what form and in what places incrustation and mud have gathered. The same is true for every new boiler, or when changes have been made in an old boiler.

Of late years iron has taken the place of other kinds of material for railway bridges, because of the belief that it is stronger and more durable. The collapse of several iron bridges, however, with the consequent destruction of human life, has shown that long exposure to the atmosphere and the jarring motion of passing trains, causes the iron to crack. The public safety demands that iron railway bridges should be made as far as possible impervious to atmospheric influence, and should be subjected to careful inspection at short intervals.

We have received a letter from a correspondent in British Columbia, who has been a resident of that Province for twenty years, in which he says that there are excellent openings there for men of energy and push. According to his letter, the principal industries of that far off province are lumbering, fishing, and mining. The lumbering business is very extensive, and now that the railway passes through the Province, it is increasing every year. The fishing industry is, in his opinion, yet in its infancy, and will be one of the greatest industries in the Province. Mining is becoming more important every year, and the yield of gold from the quartz ledges gives prospect that British Columbia will soon be one of the great gold producing countries of the world. Our correspondent also says that there is a great want felt for artesian wells, and well-diggers would have good prospects there now. The soil in many districts requires irrigation to make it most productive of fruit and grain of all kinds. The wheat in the lower section of the Province is described as being of an especially fine grade. The climate is all that can be desired.



### THE OLD MILL.

Here from the brow of the hill I look  
Through a lattice of boughs and leaves  
On the old gray mill, with its gambrel roof,  
And the moss on its rotting eaves,  
I hear the clatter that jars its walls,  
And the rushing water's sound,  
And I see the black floats rise and fall  
As the wheel goes slowly round.

I rode there often when I was young,  
With my grist on the horse before,  
And talked with Nellie, the miller's girl,  
As I waited my turn at the door.  
And while she tossed her ringlets brown,  
And flirted and chatted so free,  
The wheel might stop or the wheel might go,  
It was all the same to me.

'Tis twenty years since last I stood  
On the spot where I stand to-day,  
And Nellie is wed and the miller is dead,  
And the mill and I are gray.  
But both, till we fall in ruin and wreck,  
To our fortune of toil are bound,  
And the man goes and the stream flows,  
And the wheel moves slowly round.

— *Boston Beacon.*

Millwood, Minn., bonused Mitchell & Bucknall's grist mill.

Minneapolis, Minn., proposes to bonus a roller mill to the extent of \$5000.

The roller mill at Crockstown was burned recently. The loss was very heavy.

65,000 bushels of corn and 28,000 bushels of wheat came into port at Owen Sound in one week.

The Ogilvie Co. have commenced making large shipments of flour from Winnipeg to England.

Lightning struck an elevator at Brandon, Man., a few days ago and burned it to the ground.

Indiana papers say that Indianapolis is losing her grain trade since the Inter-State law went into effect.

The firm of Jeremiah Harrison & Co., St. John, N. B., flour and West India merchants, have assigned.

The flour and grist mill at Burlington, under the management of Mr. W. H. Finckmore, is doing a large business.

W. H. Parsons & Co., commission merchants, Montreal, have assigned with liabilities amounting to \$50,000.

A flour mill in Oregon reduced its expenses for fuel from \$100 to \$50 a day by buying saw dust from an adjacent mill.

The municipality of Odanah proposes to aid Mr. J. Jermyn, Minnedosa, Man., to convert his grist mill to the roller system.

The value of St. Louis flour and grist milling for 1886 is estimated at \$1,025,000. This is the product of six establishments.

About 13,000 bushels of wheat and 1,600 bushels of oats were burned at Morris, North West Territory, in McKean Bros.' elevator.

A. Shepherd & Sons, Petrolia, are erecting a new grain elevator with a capacity of from 30 to 40 thousand bushels, opposite their mills.

Penetanguishene is endeavoring to recover from a grist miller who failed to keep the terms of his agreement \$800 granted him as bonus.

Flour milling in Bombay is overdone, from the fact that the output is greater than the demand and no foreign trade of any importance exists.

W. Barnard of Galt, Ont., has been granted a patent for improvement in machinery for feeding rollers and purifiers in roller flouring mills.

Mr. R. Cockburn, of Campbellford, has sold his storehouse to Mr. H. M. Loids, of Hastings, who purposes changing it into a steam elevator.

Mr. Alfred Watts warehouse at Brantford partially collapsed a week or two ago. A large number of barrels of flour were broken open and destroyed.

Ireland has 500 flour mills, and of these 50 are working on full time, while the others are forced to restrict or close down through foreign competition.

The farmers elevator at Portage la Prairie is progressing favorably, and much enthusiasm is exhibited by the directors in the success of the scheme.

Judge Ryan has set aside the by-law of the municipality of Portage la Prairie, granting \$6,000 to Mr. H. J. F. Rose to aid in the erection of a grist mill at High Bluff.

A despatch received from the Northwest early in June states that the mills and stores of the Otter Tail Mining Company have been destroyed by fire. The loss is heavy.

The Moncton, New Brunswick, steam flour mill is doing a large business. Hay being scarce in the surrounding country, the mill has to supply a great demand for fodder.

We understand the Canadian Pacific intend handling grain in the Northwest this year on its own account. A large flour mill will be erected at Keewatin and its buyers will be placed along the line of the railroad to purchase grain for through shipment or milling purposes.

Mr. Newton J. Kerr, of International Bridge, met with a very heavy loss by fire. The flouring and grist mills, which he has occupied for a short time, were totally destroyed a few days ago.

Millers who wish to keep up with the procession must keep up with the times. That is to say, they must put in their mills the best machines and operate them upon the best system of milling.

Wapella, Man., offers a bonus of \$1000 and a free site to any one who will erect and have in operation by the 1st of December next a roller process mill with a capacity of not less than 25 barrels.

Messrs. Meldrum, Davidson & Co., the Peterboro' millers, have commenced to build a 50,000 bushel elevator on the north side of their mill. The elevator is to be completed in time for the fall trade.

Delegates from Montreal, Toronto, Hamilton, London and Ottawa waited on the Government a week or two ago to urge the necessity of amending the Flour Inspection Act before the close of the session.

The *Vancouver News* says Manitoba flour is obtaining a very strong hold on the market in that city. Carloads are arriving every week, principally from McMillan's Winnipeg mills, which seem to be the favorite brands.

Flour costs \$16 per one hundred pounds in the Peace River country, the charges being made up thus: Cost at Calgary, \$3.50; freight to Edmonton, \$3.50; Edmonton to Athabaska Landing, \$1.50; thence to Peace River Landing, \$5.50.

Chicago is to have the largest elevator in the world. It will be situated on the Chicago, Milwaukee and St. Paul tracks on Goose Island, and will have a capacity of 4,500,000 bushels. It is being built by the railway company and Mr. P. D. Armour.

The average yield of wheat in Australia this year is estimated at about 12 bushels per acre, giving a total of 12,000,000 bushels. From this yield about 5,000,000 bushels will be available for export, while the export from all the Australian colonies will amount to about 8,200,000 bushels.

The first crop bulletin of the Manitoba Department of Agriculture, just issued, shows an increase in the wheat area over last year of 47,693 acres, while oats and barley show decreases of 5,854 and 13,455 acres respectively. The reports of the condition of the crops are most favourable.

The *Chicago Tribune* says. Nearly half of the wheat now in store at Duluth is reported to be under charter to go over Canadian roads to the seaboard for export to the Continent of Europe. It is presumably going to Belgium, which is able to import wheat free of duty, grind and make it into bread, and sell the latter over the French frontier, while the French miller or baker is obliged to pay the custom house officer for material received direct from abroad.

The celebrated elevator at the deep water terminus at Halifax, about which so much has been said in connection with the Inter-colonial railway expenditure, passed through its stores nearly one and one-quarter millions of grain between July, 1885, and May, 1887. Though in comparison with Montreal elevators this does not look large, yet it is a business that is bound to grow, and when the short line railway is completed Halifax will be able as a shipping port to compete with Portland and Boston for the trade of the west.

On the morning of the 24th ult., Mr. B. F. Reesor's flouring mill—among the finest in Ontario—was totally destroyed by fire. The proprietor had just had the mill remodeled to the roller process, at a cost of about \$7,000. Between \$14,000 and \$15,000 worth of flour and wheat were consumed, as also were the books and documents of the firm. The insurance in the Gore District Waterloo Mutual, Hand-in-Hand, and Millers' and Manufacturers' Insurance companies on the building and machinery is \$13,000, and on the stock \$9,000. The loss above insurance will probably reach \$10,000.

The Punjab in 1886 yielded 100,000,000 bushels of wheat, and this year the crop is estimated at 75,000,000 bushels. The Central Provinces will yield this year 16,000,000 bushels, against 32,000,000 bushels last year. The Bengal crop is reduced from twelve to nine million bushels. These figures indicate the total reduction of yield in these three Indian provinces from 144,200,000 to 100,000,000 bushels, a very large falling off. Should the decrease be equally large in the other portions of India, there will be an important decrease in Indian exports to Europe and a probable increase in price.

At a meeting of millers and wheat merchants held in Dublin, April 26, the question of protection was fully discussed. It was asserted that the millers of the United Kingdom were unable to compete with the American product in quantity or price, although they could produce as good flour as the better brands imported. The Americans were extending their agriculture, the great prairies were becoming one vast wheat field, and the overplus of production was sent across the sea, and sold under cost price. A resolution was introduced providing for a protection duty of \$5 a ton, or 62½ cents a sack on imported flour, which was amended by making the duty \$1.25 a sack, and carried. The feeling among the millers was very strongly in opposition to foreign competition in any branch of industry.

The Owen Sound correspondent of the *Daily Mail* says. About five years ago Middleton-Crawford, a young man living in Warton, finding himself possessed of inventive powers, went to reside in the States. There he first produced a flour purifier, which was taken up by capitalists, and after being thoroughly tested, Crawford sold his patent for a snug sum in the thousands. Crawford has now several working patents, the best of which is a machine for cleaning cotton seed. Formerly the seed was allowed to go to waste, as owing to the combustible nature of the fluffy covering, it could not be carried to the Old Country. Two companies operating Crawford's machine, with a combined capital of two and one-half million dollars, now buy the seed at about \$5 per ton, and after operating it, sell it for \$15. Mr. Crawford, it is said, has been offered two million dollars for his right to the machine.