

Engraving showing the front view of the mill

The Deseronto Flour Mills, Canada

by Mildred Cookson, The Mills Archive, UK



Milling journals of the past at The Mills Archive

by Mildred Cookson, Mills Archive Trust, UK

A previous article in “The Milling World” formed the basis for a description in “The Miller” of 1 August 1881 of the Deseronto roller mills, and I thought it of sufficient interest to summarise here.

The mill was in the then little-known village of Mill Point in Ontario on the site of a comparatively small sawmill. The sawmill, originally erected and operated by H B Rathburn and his son, had grown significantly, supplemented by machine shops, planning mills, cedar mills, and stave mills. Shipyards, extensive warehouses, substantially constructed docks, lines of sailing and steam vessels were also necessary for the expanding business which father and son were developing.

The flour mill, rebuilt and remodelled in 1880 by Mr Rathburn, was supplied with Manitoban wheat by an iron screw conveyor which passed into the mill on the third floor. About 65 feet west of the mill was a bran and flour warehouse, 40ft x 60ft, and 45ft high. The upper portion was used for the storage of bran, and had a capacity of 400 tons, whilst the lower portion was intended for a flour warehouse, with a capacity of 1,800 - 2,000 barrels.

The mill was a substantial stone structure 45ft by 70ft., four storeys in height, each ranging from 12 to 16 ft high. The engine house, also of stone, was 40ft x 40ft and situated at the north end

of the building. To the south or rear of the mill, on the waterfront, was the elevator entirely sheeted with iron 50 x 60ft and 45ft high. This was surmounted by a cupola 22 ft high.

On the first floor, which was level with the dock, a large room featured immense timbers supporting the heavy machinery above, and the main line shaft. This ran from the engine room with counter shafts extending and driving the twelve sets of corrugated and smooth rollers on the second floor as well as other machinery. There were two smut machines and two flour packers, the packing chest extended from the first to the fourth floor having a capacity of 120 barrels.

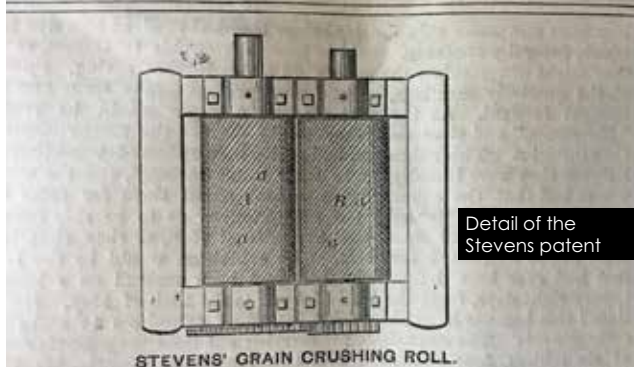
In the grinding room an elevated platform held twelve sets of rolls and three pairs of stones. Eight sets of rolls were of the ‘Stevens’ corrugated type, the remainder were smooth rolls. The first three sets of rolls had little wire scalping reels for removing what little flour was produced during these three breaks. These effected a perfect splitting of the berry lengthwise, through the crease. This liberated the germ whilst not cutting the bran; the second break reduced these halved portions of the berry in size, producing little flour but a considerable quantity of middlings. This product, like the first passed to a scalping reel, and the tailings passed on for further reduction to the third roller mill, the product of which was also scalped. The products from this were wholly bran, which was sent to the bran rolls where every particle of flour was loosened and could be readily bolted or scalped out. The middlings produced by the first three reductions

Millhead from Munson Bros, manufacturers of portable mills



NOVEMBER 1, 1880.]

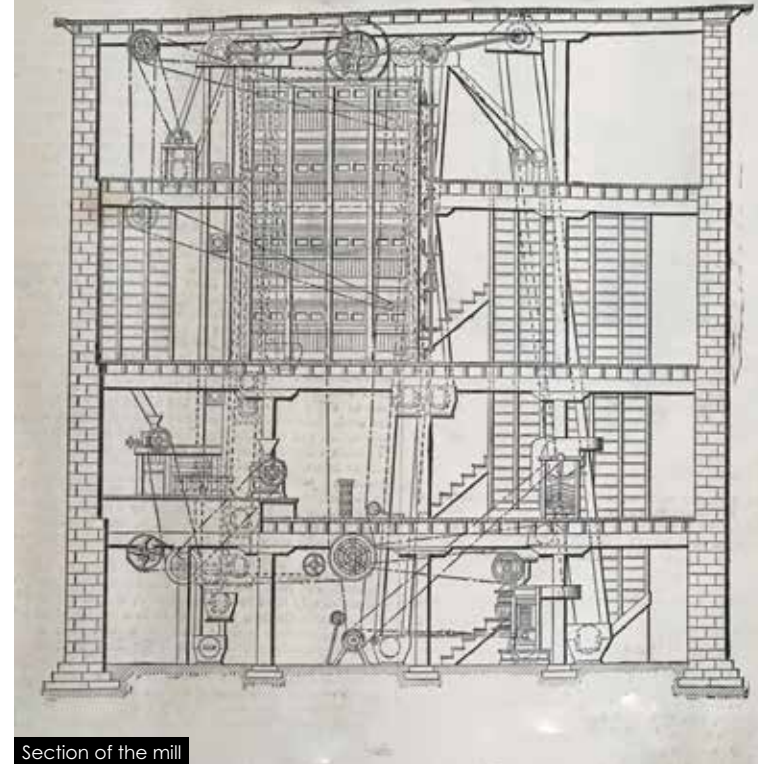
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Detail of the Stevens patent

after purification went to the two pair of 4ft millstones for final reduction. A third run used a 3ft Munson mill for grinding corn. The mill at the time of the article had the capacity for turning out 250 barrels of flour every 24 hours.

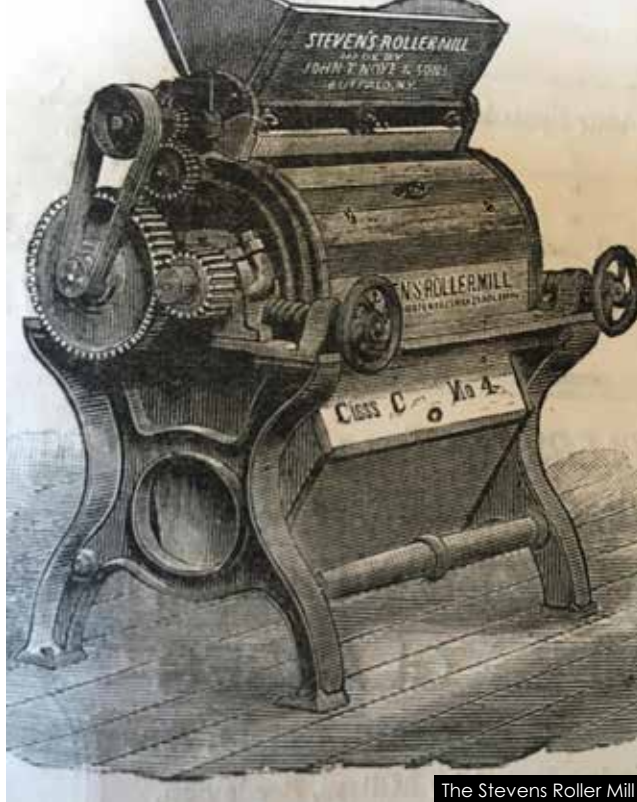
A series of elevators passed up through various parts of the building and the main drive belt, 13 inches wide, enclosed in a neat box on each floor, extended through the various floors to a



Section of the mill

counter shaft on the fourth and drove three lines of shafting which ran the whole length of the mill.

On the third floor there were three bolting chests running from the third up through the fourth floor. The three chests contained 24 reels. On this floor were also two large middling purifiers. The wheat was received into bins on this floor by means of an iron conveyor from the elevator. On the fourth floor were four



The Stevens Roller Mill

middlings purifiers, the bolting chests and two Sturtevant fans. The fans blew the fine and coarse bran through a five-inch iron pipe into the bran house. On the top of the mill was a dust room 33ft x 16ft. into which the dust from the mill was gathered, brought back into the reels and the flour separated from the bran.

The walls throughout the whole mill were plastered and calcimined. (a wash of white or pale blue suitable for walls and ceilings). All spouts and woodwork were painted a pure white

with blue relief lines, whilst all the iron work was well painted or polished.

As everything depended upon the reliability of the motive power, the engine room was well described. Its polished and burnished fittings and clean appearance indicated that the person in charge had a pride in his work and surroundings. The steam was generated in two steel boilers, 14ft long by 5ft diameter. The engine was of the ordinary slide valve type, with an 18 x 30 inches cylinder, and could develop 175 horse power. The fly wheel was 12ft diameter, making 96 revolutions per minute and transmitted its motion to an 8ft wheel on the main shaft by means of a 24inch belt. Steadiness of motion was essential for a uniform product and the main shaft was fitted with a motion indicator which at once notified the engineer if an increase or decrease in speed was needed.

Direct communication by rail with the outer world was assured by means of a 3-mile branch line, which made direct connection with the operators of the Grand Trunk Railway. The article credited Messrs. Jno. T. Noye & Sons and Mr. Ira Westcott, their superintending millwright for this successful mill using the Stevens system. John Stevens was born in Wales in 1840 before moving to Canada at an early age. In 1859 he began work in flour mills. In 1874 he developed the roller mill process on which his patent was issued in 1880.



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