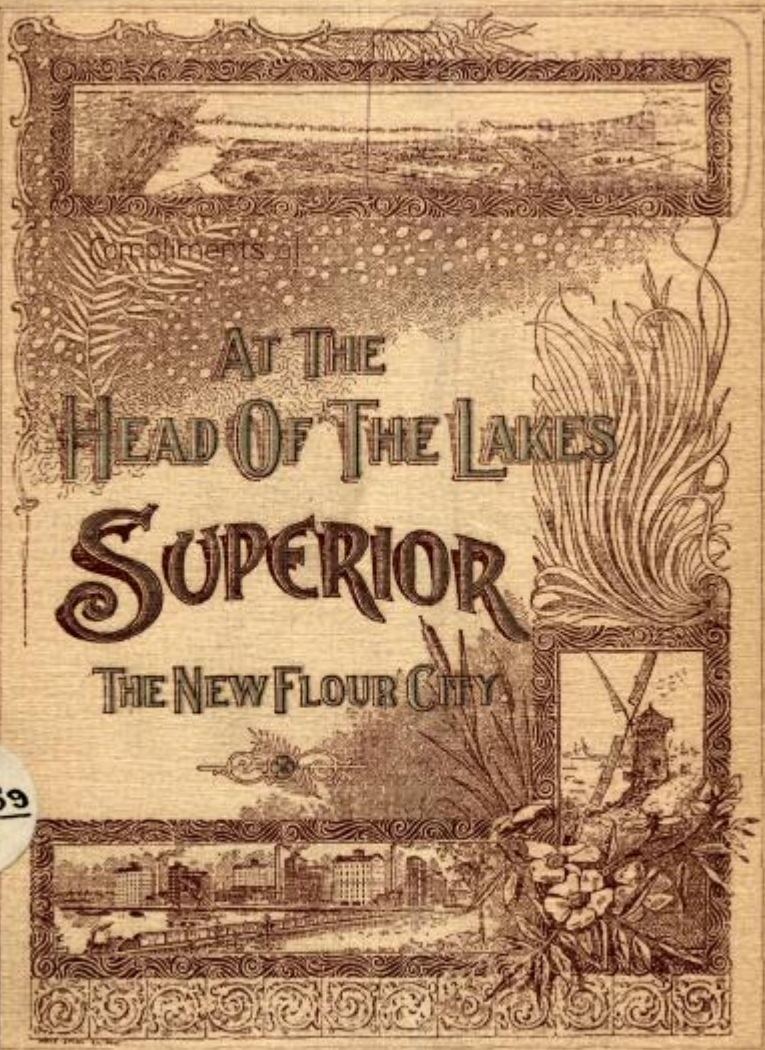


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AT

Pam 57-1659



Compliments of

AT THE
HEAD OF THE LAKES
SUPERIOR
THE NEW FLOUR CITY

F302S9

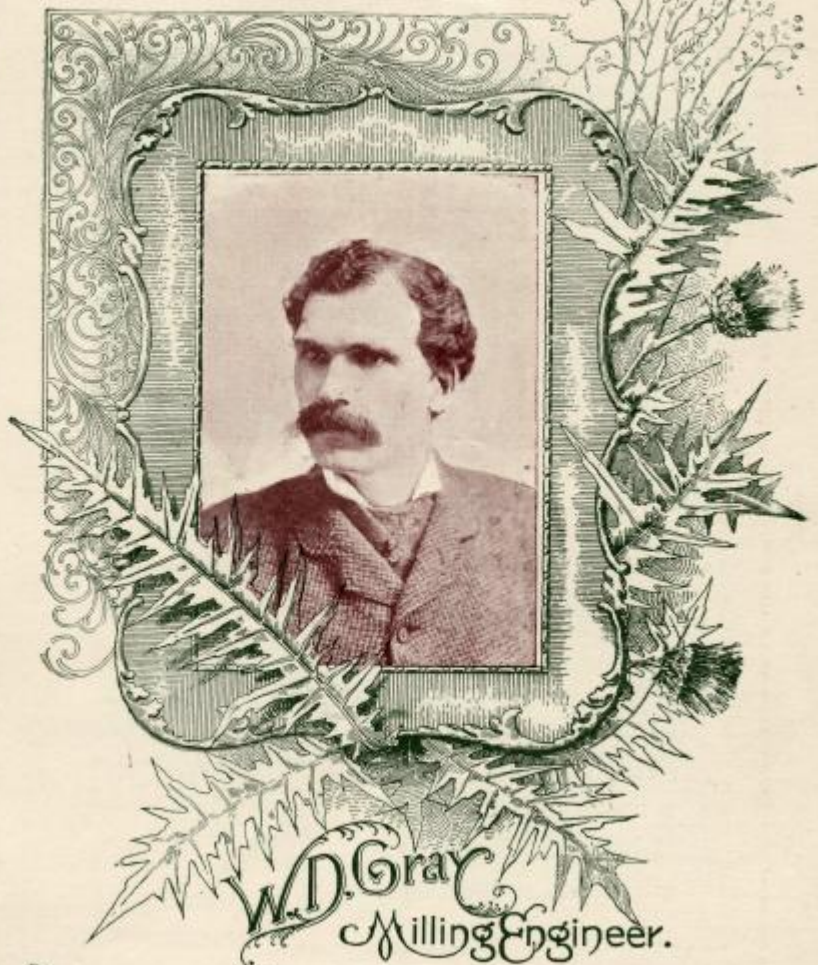
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Pam 57-1659



Designer of the mills shown in this book.

Published by
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1893.

Art-Work and Print by
THE HAKE-STIRN COMPANY,
Milwaukee, Wis., U. S. A.

AT THE HEAD



OF THE LAKES

THE NEW MILLS AND ELEVATORS



AT SUPERIOR, WIS.



IN MARCH 1892, the site now marked by the three splendid flouring Mills and their elevators and two mammoth grain elevators shown by the double page engraving (pp. 8 and 9) was a barren waste in the bay of Superior, covered by 10 or 12 feet of water, but steam pile drivers were not long in driving down some thousands of piles while steam dredges filled in tons upon tons of soil and gravel to form piers extending out lakeward upon which the buildings were erected. After the piles were driven for the walls of the buildings, the tops of same were sawed off below the water line, and heavy oak sills laid on top. Then commenced the stone work of the foundations, followed by the brick walls of the buildings. The total number of piles driven is estimated to be some thirty thousand. The Lake Superior Mill was the first to commence building operations, which were begun by the building of the Quebec Pier, which has a width of about 250 feet and a length of 1400 feet, being occupied solely by the Lake Superior Mill with its own grain elevator, mammoth ware-houses, engine and boiler room, railway switches and steamer docks.

To the left of the Quebec Pier and separated from it by about 100 ft. of deep water, was next built the Toledo Pier, upon which is located The Anchor Mill, The Listman Mill and The Cargill Elevator with its annex. The Anchor Mill occupies the lakeward end of this pier. The next pier to the left is occupied by The Belt Line Elevator and its annex. All the mills and elevators are amply provided with railway switches, cars passing both sides of the buildings, while ample shipping connections are also made with steamers lying alongside within a few feet of the doors, by which it is possible to ship away by lake to the eastern markets all the flour and cereals at minimum rates.

The Lake Superior Mill has a structural capacity of 6000 barrels of flour per twenty four hours, and its private grain elevator holds 300,000 bushels of wheat. The Listman and Anchor Mills have a capacity of 3500 barrels of flour each, and private grain elevators adjoining each mill hold 150,000 bushels. The Belt Line and Cargill Elevators with their annexes will store 2,500,000 bush. each. The aggregate capacity of the three mills is 13000 barrels daily and of the five elevators 5,600,000 bushels. The Listman Mill Co. also own and operate a fine 1000 barrel mill at La Crosse, Wis., while the owners of the Lake Superior Mill operate a 1500 barrel mill at Milwaukee, Wis.

The buildings for the flour mills have heavy brick walls, brick engine and boiler rooms and each have ornamental brick smokestacks. The Listman Mill is made conspicuous by reason of its red brick while the other two are of cream colored brick. The elevators are of the style of construction peculiar to this class of buildings and are covered outside with pressed steel. The power plants for same are enclosed within brick rooms and have brick stacks.

The Lake Superior Mill is driven by a 750 h. p. compound condensing Reynolds Corliss engine, and a 300 h. p. compound condensing Reynolds Corliss engine is also installed for driving the grain elevator machinery, grain cleaners and electric lights. Steam for same is generated by four 96 in. by 20 ft. Reynolds patent vertical boilers. The Listman Mill will be driven by a 500 h. p. compound condensing Reynolds Corliss engine; and for the elevator and electric lights there is a high pressure 16x48 in. Reynolds Corliss engine. The steam generating plant consists of three 84x18 ft. Reynolds patent vertical boilers. The Anchor Mill has a 500 h. p. compound condensing Reynolds Corliss engine and two 96x20 ft. Reynolds patent vertical boilers. The general steam pressure will be 125 lbs. The boiler feeders, special fire pumps, condensers and air pumps and the private dynamos form the remainder of the engine room equipment.

All buildings will be heated with live steam. Incandescent electric lights are installed liberally in mills, elevators, warehouses and power rooms. For fire protection, the ceilings of the various floors are equipped with automatic sprinklers on an improved dry pipe system and supplied by a pressure tank. This work was put in by The General Fire Extinguisher Co. of Chicago, Ills. There is in addition a stand pipe in each mill with hose, rack and nozzle on each floor, connected with a fire pump in the engine room.

The Grain Cleaning Machinery is of the Eureka make and is located in the grain elevators and consists of large size receiving separators, milling separators, magnetic separators, horizontal scourers and wheat aspirators. These cleaners are all equipped with Reliance dust catchers, and there are rolls and bolts to dispose of the screenings.

The Listman Mill is the only one using 9-inch roller mills, the other two using the new 10 x 30 style. All the rolls in the three mills are of the W. D. Gray's patent noiseless belt style and are equipped with hot air and dust exhaust systems with Reliance dust catchers on the discharge of the fans. Over the first break rolls are Reliance Wheat Steamers, and on the floor above all rolls are auxiliary roll hoppers. Five breaks on wheat will be made in each of the three mills.

The scalpers are of the round reel style covered with perforated steel, with iron conveyors. Bolting will be done on Gray's patent flour dressers with revolving brushes and iron conveyors followed by Gray's improved centrifugal reels. The purifying system is peculiar to the late mills built by the Edward P. Allis Co. and is original with Mr. Gray, milling engineer for the firm, consisting of combined air and sieve purifiers each returning its air to itself. The middlings pass first through the air purifier and then descend to the sieve purifier for repurification, resulting in the elimination of all impurities and a thorough system for disposing of them, a freedom from dust and no disturbance to the air of the mill.

The flour packers are of the W. D. Gray patent, being designed especially for leading mills where rapidity of work and freedom from breakage is an important matter. These, as well as the bran packers, are equipped with Durant packer tallies.

The scales generally are of the Fairbanks pattern and those for weighing wheat carry a hopper which rivals in dimensions a modest sized house.

The Lake Superior Mill has a trade largely domestic and foreign, having agencies in Liverpool, Glasgow and Holland. The domestic trade is cared for by agencies in Boston, Washington, New York and Chicago. Their principal brands are "Perfecta" and "Wonder." The Wm. Listman Milling Co. has a large and increasing trade in its celebrated "Marvel" brand of flour, the sale of which is looked after by C. F. Listman & Co. of Chicago, Ill. The Anchor Mill Co's principal brand is "Anchor."

In conclusion a word or two must be said regarding the several firms who had a hand in the carrying out of the details of the erection of these mammoth enterprises. The planning and designing of the buildings and machinery for the flour mills and their elevators was done by the Edward P. Allis Co. under the direct supervision of Mr. W. D. Gray. One peculiar feature carried out in the plans every practical miller will admire and endorse. From the rolls the stock is carried direct to the scalpers located on the top floor. From there it descends by gravity to purifiers, flour dressers and centrifugals without unnecessary conveying or re-elevating, as all the reels, purifiers, etc. are directly over the rolls. The Barnett & Record Co. of Minneapolis, Minn., the well known elevator builders, erected the buildings, elevators, warehouses and docks. The Edward P. Allis Co. of Milwaukee, Wis. furnished the milling machinery and power plants and erected the same to completion ready to turn out flour. The Chicago Belting Co. furnished all the belting, and as the principal belts were made endless and without pegs or rivets, necessitating accurate measurements, this firm deserves much credit for the successful fulfilment of its contract.



BIRDS EYE VIEW OF SUPERIOR GROUP OF MILLS.

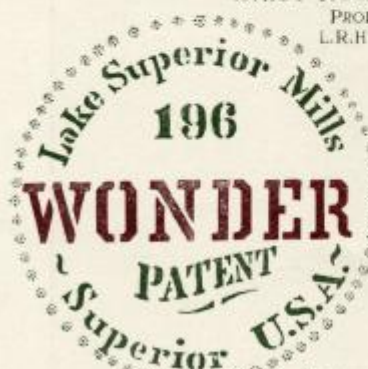


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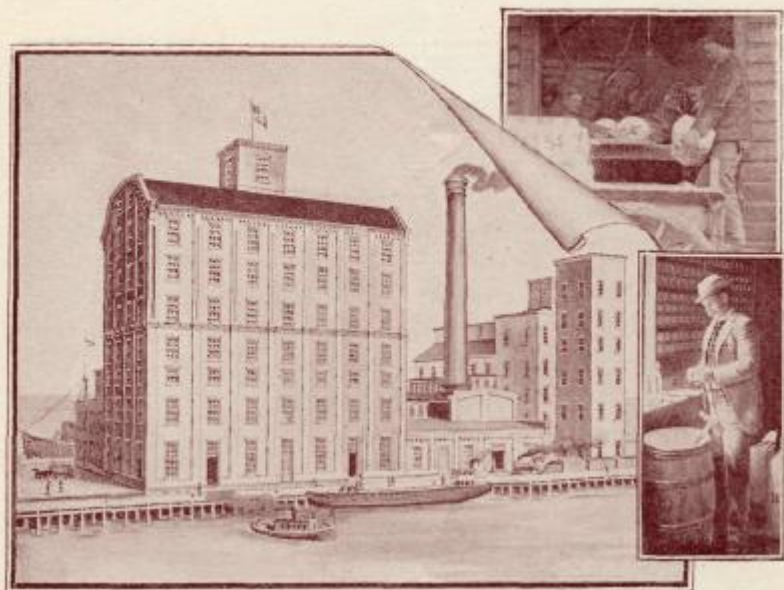
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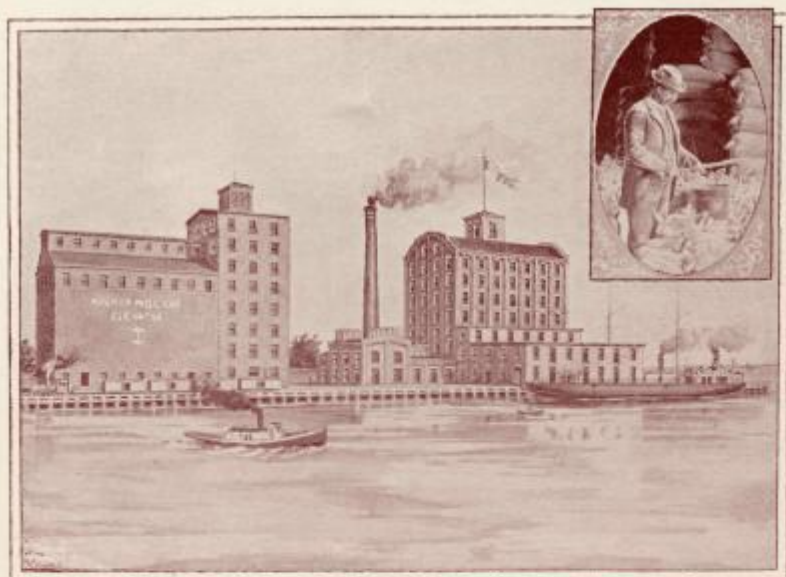
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