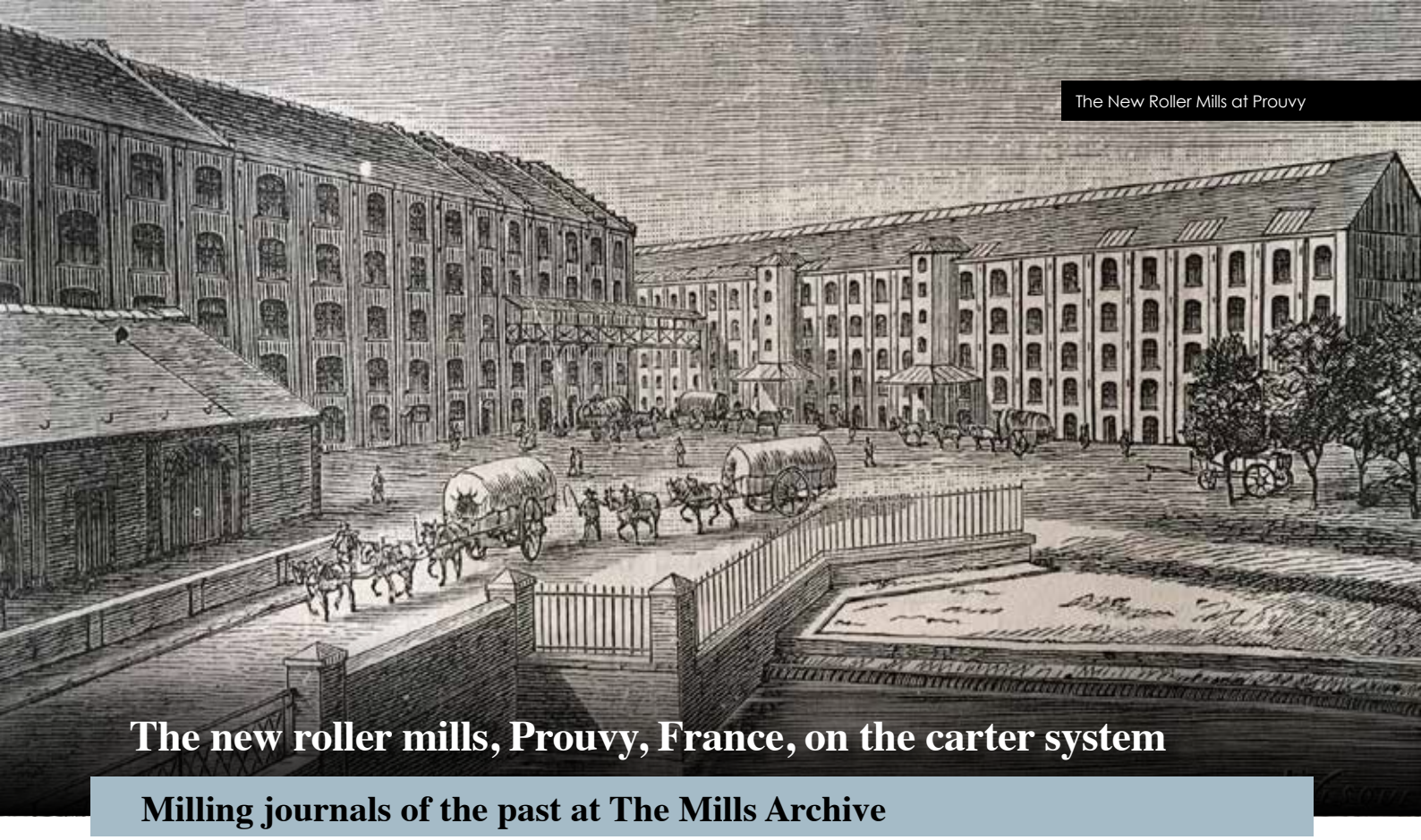


The New Roller Mills at Prouvy

The new roller mills, Prouvy, France, on the carter system

Milling journals of the past at The Mills Archive

by Mildred Cookson, The Mills Archive, UK

An account in "The Miller" in November 1886 described the opening of another mill risen from the ashes, this time in France. In July 1885 a disastrous fire claimed the mill belonging to the Société Nouvelle des Moulins de Prouvy, a company established in 1884 in the village five miles from Valenciennes.

The mill already had an international pedigree, with elements uniting France, England and Belgium. Representatives of each country attended the opening ceremony including, from England, Bryan Corcoran, Gilbert Gilkes and William Marriage.

The original mill had been erected around 1874, taken over in May 1984 by the Société and fitted with 36 pairs of stones. By the end of 1884 12 pairs of stones were thrown out and replaced in early 1885 by a roller plant capable of producing twenty 280lb sacks of flour per hour.

A spectator of the fire in July reported "(the mills) were brick built and slated, worked by water and steam, having four large waterwheels inside the mill. The engine and boilers were in separate compartments, having a window one foot square only to communicate by. The mills were lofty, well built, clean, well lit with large windows and lighted by gas at night."

Undaunted by the disaster, the company resolved to rebuild the mill and to replace the Carter roller plant, destroyed in the fire, by another of like capacity. Mr Carter completed the work in the last days of September 1885. The mill was well connected with the town of Prouvy by rail, tramway and the River Escaut and thus with the greater part of France and Belgium.

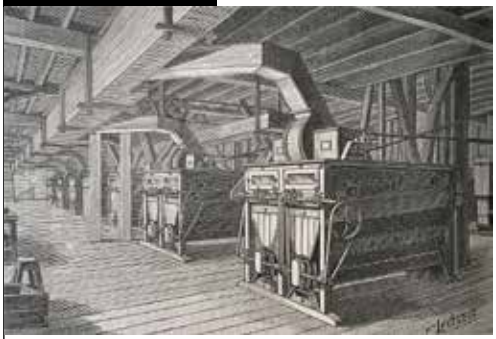
The calculated capacity of the mill (18 sacks/hour) was rapidly exceeded and on the opening day reached nearly 20 sacks/hour followed later by 21 sacks/hour.

The motive power for the mill, screen room and warehouse came from a pair of twin engines and four water-powered four turbines. The River Escaut was connected to the mill by means of a headrace, which took the water above one of the locks.

After passing through the turbines and under the mill, the water rejoined the river about half a mile below the lock. The resultant fall was around 7ft with the supply of water about 16,000 -20,000 cubic feet/minute. Sir Frederick Bramwall, Past President of the Institute of Civil Engineers, had advised the use of the "Vortex Turbine" made by Gilbert Gilkes & Co of Kendal. They ordered four 60 hp turbines to be placed immediately below the main drive. The power was transmitted by means of morticed bevel gearing, so arranged that any of the turbines could be thrown in or out of gear

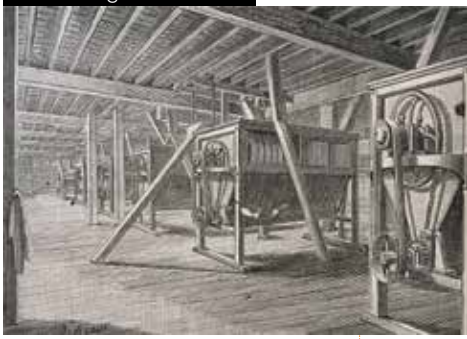
The Wegmann Victoria Porcelain Roller Mill

The Purifier or First Floor



The Roller or Ground Floor

The Dressing or Fourth Floor



without stopping the mill.

The roller mill itself was a substantial brick building of four floors, ground floor and basement. The basement had the usual shafting by which the machinery on the floors above was put into motion.

The four rows of roller mills on the floor above were driven by means of belts from two shafts, each shaft driving two lines of machinery and two shafts being connected together by four cotton ropes. The mill had 37 elevators for conveying the various products to the different machines on the several floors.

On the ground floor 24 double rollers were placed in four rows of six machines each, for the reduction of the wheat and the flouring of the middlings. These roller mills comprised 10 Carter grooved chilled iron four-roller mills for the breaks, 10 Carter smooth chilled iron four-roller mills and four Wegmann porcelain roller mills.

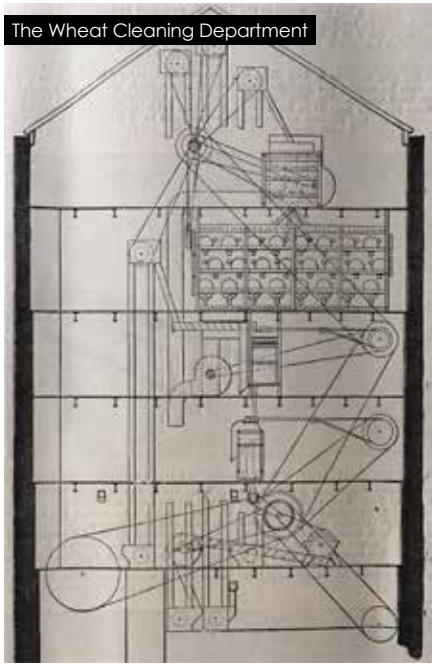
The wheat before the first break machine was graded into three sizes, after which it was broken on a Carter grooved roller mill, grooved for the first break. The product of the first break was then elevated to the first break scalper, the tailings of which were broken on the second break machines. The rest of the breaks were done in the same way.

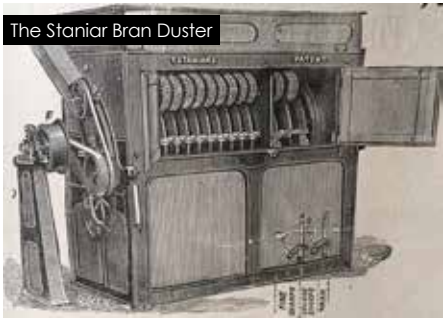
The reduction of the middlings were done on 10 Carter smooth chilled iron four-roller mills and the extra purified semolina on four Wegmann porcelain two-roller mills.

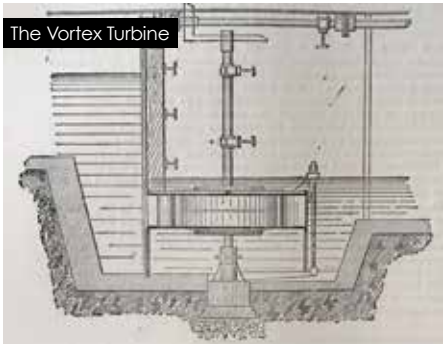
The first or purifier floor had two Stanniar bran dusters and the Van Gelder grader for sizing the wheat before going to the first break machine on the floor below. There were three Carter gravity purifiers, two of which were fed from the tail sheet and tailing of the chop reel. The purified middlings were reduced on the four Wegmann roller mills for patent flour.

10 silk reels about 20ft long were on the next floor. Two were used as chop reels for dressing the products from the second, third and fourth break scalpers. The dressing from the tail sheets and tailings of the two chop reels went to the gravity purifiers and the product was dusted on two long silk reels on this floor.

Four of these reels were used for re dressing the flour, and the remaining one graded the middlings obtained from the reduced semolina from the gravity purifiers, after it had been dressed by a centrifugal and the flour taken away. On this floor were also


The Wheat Cleaning Department


The Staniar Bran Duster


The Vortex Turbine

possers or jiggers and sack valves for packing the flour and offals.

On the next floor the, while the products of the second, third and fourth scalpers were dressed by reels. the products of the fifth and sixth break scalpers were dressed by a centrifugal. This floor also held six more centrifugals driven by means of one quarter twist belts from the shafting on the fourth floor, and a line of shafting which drove the scalpers and the centrifugals on the floor above.

On the fourth floor was a long silk reel, 12 Carter centrifugals placed in two rows, and a single leg purifier. One row of centrifugals was driven by means of a quarter twist belt from the shafting on the third floor and the remaining row of centrifugals and elevators driven by belting from a line shaft on this floor.

In all, 18 centrifugals, two for dressing and re dressing the product from the fifth and sixth breaks, two for dressing the reduced semolina from the first reduction rolls and one used for dressing the tailings of the flour re-bolting reels, the product of which was flour and the tailings were then reduced again for the second reduction.

Two centrifugals were used for the dressing of the product from the four Wegmann porcelain roller mills on the first middlings reduction, the rest were used for dressing the various reductions.

After the opening ceremony and tour of the mill there was a reception held in Valenciennes, where Mr Carter said he felt that in erecting this plant his task had been a pleasant one from first to last, and it gave him special pleasure to thank the directors of the Prouvy Milling Company for all the kindness he had received at their hands.

He had felt an additional interest in building this mill from the fact that the gentleman under whom he had served his apprenticeship in the art of milling had himself done some very remarkable work as an erector of flour mills in France.