

# British and Irish Flour Mills

## No2 North Shore Mills Liverpool



### Milling journals of the past at The Mills Archive

by Mildred Cookson, The Mills Archive, UK



As with my last article, I have chosen accounts from The Miller and Milling describing the same mill a few years apart at the start of the 20th century. These two Victorian publications, but with some significant gaps, are held at the Mills Archive.

On 7 August 1899, The Miller reported on a visit to the North Shore Milling Company in Liverpool, run by Mill Manager Mr Edward Cooper and his assistant Mr John Westgate. The firm was established on Boundary Street in 1848 before any other flour-mill of this type had been installed in Liverpool. It was capable of 100 sacks (280lbs) per hour and was divided into three separate and distinct plants, all under the same roof. Along with new silos, the flour and offal warehouses, grain cleaning plant and workshops for millwrights and carpenters, the whole operation occupied a total ground area of 11,000 square yards. There were also cellars beneath the buildings and the mill yard, with a central warehouse used to store grain and the mill products. The mill was powered by a triple expansion engine, put in during 1895 by Messrs Yates and Thorn of Blackburn and was capable of exerting 1,400 imperial horsepower, the initial steam pressure being 200psi and on the second cylinder about 80psi. In 1898 Thomas Robinson put in new silos, fully equipped with conveyors, elevators and separators. By 1899 the mill had seven Haggemacher plansifters manufactured by Whitmore & Binyon in place. The large-scale grain cleaning department had machines for separating, aspirating, grading, seed extraction, washing, stoning, whizzing, conditioning and scouring and during 1899, they were putting in new machines to improve the condition of the wheat passing to the mill.



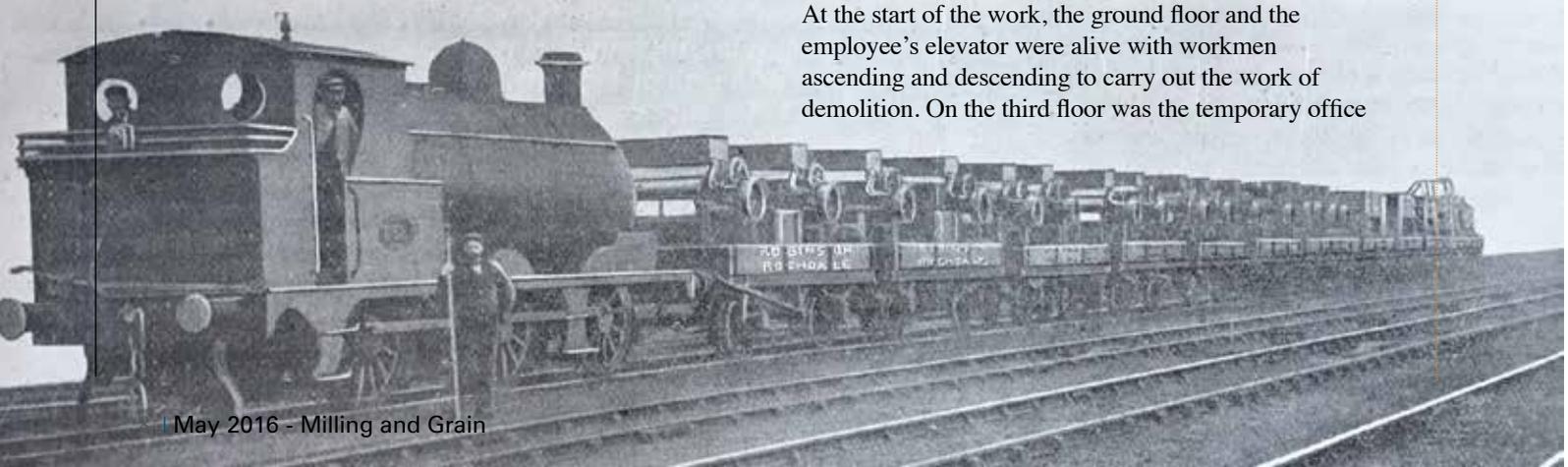
#### Reconstruction: Down time means loss of trade

Four years later (19 December 1903) Milling reported how the largest of the three plants was completely reconstructed to increase capacity in just four weeks. Competition was obviously fierce, as any down time could mean the loss of trade and there were ready competitors who would be quick to take advantage of any lapse to secure new customers.

As Milling pointed out, when a mill is destroyed by fire the loss of the plant is only one portion of the disaster. The owner had to keep his trade together somehow, as losing his customers for the time being meant he was never sure they would stay with him. This fear of customers walking away and never coming back explained the urgency and speed of the redesign at North Shore Mills.

The mill in question was manufacturing flour on the morning of 14 October and on the 16th the mill was clear of machinery. Skillful organisation and forethought by Mr John Westgate, assistant manager, ensured everything had been prepared in advance. Both the firm and the milling engineers Messrs Thomas Robinson & Son of Rochdale were ready to begin the work.

At the start of the work, the ground floor and the employee's elevator were alive with workmen ascending and descending to carry out the work of demolition. On the third floor was the temporary office





where plans were receiving their final touches. In the mill yard was an appliance put up by Messrs Robinson before the mill stopped work.

One hoist was especially useful, and also a power windlass for pulling the machines along the floor. Already new elevator bottoms were fitted, as well as the work for five lines of shafting under the rolls. On the fourth floor five new centrifugals were already in position with another 26 more to go.

Robinsons had 70 men doing the work, and with around 35 of the mill staff the whole mill was reported as being busy as bees. An illustration shows the goods train loaded with Robinson machinery as it entered the shunting yard from the siding of the Robinson Railway Works in Rochdale. The plans that had been drawn up had three colour sections; the 'Blue' portion of the flow was to fix the centrifugals, some purifiers and smooth rolls with all connections.

The 'Red' portion was to fix the elevators and spouting to and from 'Blue' and 'Brown'. 'Brown' was responsible for fixing the break rolls and scalpers and the remaining purifiers and all connections. The purifiers were to be fixed and flour worms in position as well as two lines of shafting.

By 5 December, which was the time when Robinsons contract finished, all the machinery had been installed, The following Monday, the 7th of December, all shafting and machines were running and the following day the rollers were being feed grain.

#### **Extracts of Milling's tour after the redesign:**

"We can take a tour of the mill starting on the first floor where the new mill had drives and five lines of shafting, one for each line of rolls. The elevator bottoms were also located here. On the second floor were the rolls, the break

rolls being 60 ins long and the reduction rolls 40 ins. These were Robinson's latest type with patent roller feed and gear driven with a shaker-feed to the last two breaks. It was noted that there was ample room between the rolls and around the machines, an important fact for the employee's who were in charge of them. Each line of rolls had an exhaust trunk. The purifiers were located on the third floor in two lines; exhaust trunking over each line cleared the air and kept the room clean and healthy. There was also an elaborate arrangement of flour worms to assist in the making the numerous divisions of flour.

On the fourth floor were wood framed centrifugals, each machine placed singly so as to allow a passage between each and all fitted with Mr John Westgate's patented ventilating fan for the prevention of condensation.

There was also an improved shutter arrangement for the inspection of the machines which prevented flour dropping on the floor.

The fifth floor had the centrifugals., two high and three tornados, making it five in all and a rotary for dividing the bran. There were also two aspirators for aspirating the wheat as it went on into the mill. All elevator bearings and worms were entirely self-lubricating. All electricity lighting the premises is generated on the premises. These new arrangement appeared to be very popular with the employees."

These articles only give a brief glimpse of the several million records held by the Mills Archive Trust. If you would like to know more please email me at mills @millsarchive.org .

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