



JW Aizlewood's Crown Mills Sheffield Part 1

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Milling journals of the past at The Mills Archive

As two articles separated by the First World War were written about this mill in 1906 and 1928, I thought I would cover the subject in two parts. This month I summarise the state of the mill in July 1906 as described in *Milling* and next month, I will move forward to 1928 to describe what The Miller reported in June of that year.

The mill in 1906 was running on the Thomas Robinson system and it was suggested that the famous Yorkshire steel city could probably claim that it had more smart flour mills than any other inland town in the country.

As former British prime Minister Benjamin Disraeli had said, what Lancashire thinks today, all England will think tomorrow and millers might also have said the same of their Sheffield people. They had invariably been pioneers in all movements to improve the quality of flour and they ensured that their mills ran very efficiently.

In 1906, Sheffield had six flour mills within its city boundary, all more or less of the same size, each producing from ten to twenty sacks per hour. Mr Aizlewood's mill stood close to Victoria Station, where alongside the mill the railway connected with the Great Central system, and it was also not far from a canal that connected with Hull.

John Aizlewood built his Crown Flour Mills in 1878, having previously worked at the Albion Corn Mills for about 17 years. Before that he had the mill at Masborough, near Rotherham, where he started in 1857. The Crown Mills had 14 pairs of millstones, but in the early 1880's he replaced these with a complete roller plant by Robinson & Son from Rochdale, Lancashire.

The mill had been modernised many times but in 1905 a complete new plant was installed by the Rochdale firm. There were three lines of Robinson's double diagonal mills on the

first floor and the smooth sets of these ran at equal speeds. The differential periphery speed was obtained by having 13-inch diameter rolls running against others of 10-inch diameter. These mills had as their chief features the feeding device and the size of the rolls.

The feed was spread out by a pair of rollers set vertically, the bottom one running fast in fixed bearings and the top one, of smaller diameter, revolving very slowly in moveable bearings. The latter were attached by a lever motion to an automatic hopper that raised or lowered the top roll of the twin feeders according to the volume of the feed passing to the mill.

Thus, the feed was automatically and evenly spread over the full width of the mill. The advantage of this was that small foreign bodies, such as lumps of floury matter or moths could not obstruct the feeding, as they were automatically passed between the twin feeding rolls.

The system in the mill was of four breaks and ten reductions. The breaks being done on Robinson horizontal rollers that produced 75 percent of clear, broad bran, over No 8 wire. The smooth mills all had rolls of 40 inches in length and with three pairs of scratch rolls, the surface was ample.

The first break was heavy and the chops were graded to the other breaks into two sizes for each. Excepting the last break, the rolls were never allowed to run more than 3000 hours. The tailings were cleaned by scratch rolls, so there was no branny stock being treated by smooth rolls. The capacity of the plant was around 12 sacks per hour.

The purifiers were on the two floors above the rollers, all being single machines, except one, which had double sieves. The dressing and dusting was done on Robinson centrifugals arranged in a single line upon the two top floors.

The scalping and grading was done by five double ended



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The Titan automatic sprinkler



Mr John Aizlewood



Robinson's aspirator, wheat scourer and brush machine

centrifugals and two reels. An Avery automatic scale weighed the wheat after passing through an aspirator and before it entered the first break.

The flour before being packed was treated by the “Alsop” process and this was said to greatly improve the colour. The Alsop patent for the “improvements in conditioning or improving the quality of recently ground flour, semolina, or the like” had been put by a competitor before the House of Lords in 1901 for revocation. However, in 1908 the appeal was dismissed, and the Patent held to be valid.

Reaching Sheffield by canal boat and railway carriage

The cleaning plant was in a separate section at one end of the mill and consisted of hard and soft wheat washer, whizzers, dryers, separators, scourer and brush. Grain storage was located at the other end of the mill building and had silos capable of holding nearly 4000 quarters.

There were two intakes, road and rail. A large proportion of

grain reached Sheffield by canal boats where it was then carted to the mill by lorries. This was then shot into the hoppers on the first floor and then elevated to the silos. The railway grain was shot into hoppers by the side of the truck and then elevated to silos.

Power for the mill was provided by two Lancashire boilers working with short fires and with a pressure of 100psi. The engine was a horizontal compound condensing type that had all the latest improvements in valve gear etc. The mill was protected by the “Titan” sprinkler system.

There was said to be air of prosperity about the whole place. John Aizlewood was ably assisted in the mill by his two sons, George Henry and John William Aizlewood. The family name looked like being a familiar one in Yorkshire milling circles for generations to come as Mr George Aizlewood was the happy father of a promising lad of 11 years of age. That of course provides the link to next month's article, when the scene moves forward some 22 years.