

The British Engineering Works of Mr Charles Hopkinson at Retford in Nottinghamshire

Milling journals of the past at The Mills Archive

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The August 3rd 1885 issue of the Miller reports a visit to the Bee Hive Works of Mr Charles Hopkinson, millwright and engineer. The workshops covered nearly four acres with a spacious courtyard in the middle. They were entirely self-sufficient and within their walls their roller mill plants were made

and finished, "providing all that was needed for every part of a modern flour mill".

Passing through the main entrance and the cluster of offices one would walk into the courtyard which featured a railway line allowing the pig iron and other raw materials to enter the works, leaving later as highly finished machinery. This workshop railway siding linked directly with both the Great Northern and Midland, Sheffield and Lincoln lines, allowing railway trucks to be run right into the works. As they passed in and out, all trucks were weighed with their loads on a weigh-bridge, which stood at the very end of the works shown in the engraving.

The pig iron delivered from the trucks was first broken for smelting; the fragments were then hoisted up to a landing at the mouth of a cupola to start their treatment. Beside the cupola stood a receiver, into which the molten metal was drained whilst hot. Adjacent to the cupola, the foundry was entered by a small

side door, giving access to a building of imposing proportions. Here the manufacturing process for every kind of metal casting that would be required in a modern flourmill could be observed.

In this shop were cast pulleys of every description, the metallic parts of centrifugals, scalpels, bran dusters and rollers of every size. At one end of the foundry was the drying furnace, in which the sand moulds were dried for use after they had been shaped. To ensure accurate work Mr Hopkinson employed, as far as possible, only cast iron patterns, for both small as well as large castings.

Separate from the foundry was the engine room where a steam engine served the double purpose of supplying power to the blower, which stood by its side and as well as to a sand mill, located on the other side of the wall in the yard. Next to the engine room, the castings were trimmed, cleaned and stocked the in the fettling shop in preparation for the finishing work in the fitting shop. The various stores separated smaller castings, such as elevator and other pulleys, the smaller parts of centrifugals and similar machines from other stores containing wrought iron and a shed containing all sizes of shafting neatly packed away.

The fitting shop provided one of the most interesting sights to be seen in the works. Here, in a spacious and well-lit building, endless rows of lathes and other machinery were busy at work finishing rollers and other components of flour milling machinery. At the lower end of the shop rollers underwent every part of the process of turning, with lathes cutting off the ends and boring out rough rolls. Of special interest was a lathe called a horizontal borer, for boring out the brasses used in various machines.



Part of saw mill showing wood-working machinery



Foundry - Chilled Roll department



Special machine tool shop for chilled rolls



General Machine Shop



Erecting and finishing shop for centrifugals



Roller mill erecting and finishing shop

