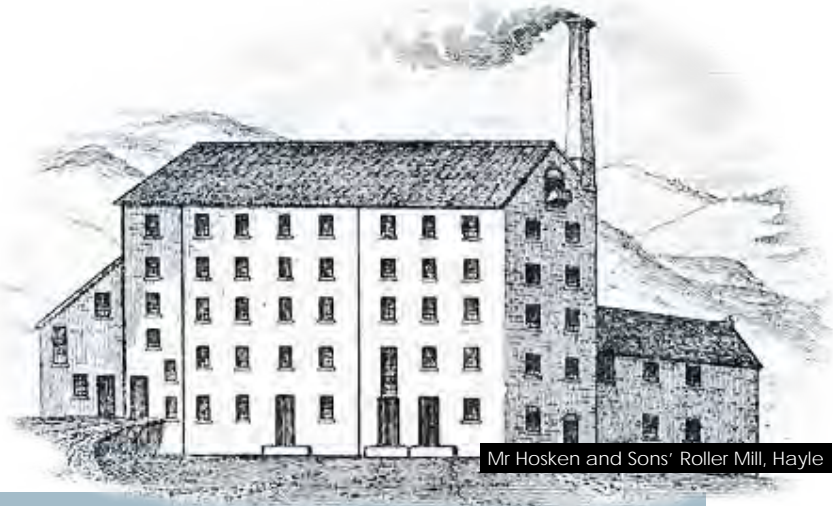


The 1888 Plymouth Milling Convention Part 2



Milling journals of the past at The Mills Archive

by Mildred Cookson, The Mills Archive, UK



My introduction last month to nabim’s Plymouth Milling Convention of 1888 was based on an extended article in The Miller of 2 July 1888, which covered intended trips to mills in Devon. Also on the tour were planned visits to Cornish mills, which will have excited

considerable interest.

These conventions and exhibitions in the late Victorian period enabled the milling profession to keep abreast of the latest developments in technology and milling practice. As is still the case, such a convention in the “West Country” would include significant social events in one of England’s premier holiday regions. It was probably no coincidence that 1888 was the year when the Great Western Railway achieved its ambition to move into Cornwall, having only arrived in Plymouth in 1876. Mills on the Cornish itinerary focused on Hayle, two of which are described below. Other mills of particular interest were those of Messrs John Lake & Sons in Truro (Robinson System) and Mr T Hitchens’ Trenance Mill in St Austell (Childs’ System).

Messrs Hosken & Son’s Loggans Mill in Hayle was promised to be one of the more interesting mills to visit. It was a substantial five storied stone building fitted with a roller plant by J Harrison Carter of 82 Mark Lane London.

The mill had just installed a system of pneumatic sorting which had been recently patented. The mill had a capacity of 10 sacks/hour; the only motive power mentioned was a horizontal compound condensing engine, disappointingly no details were given of the waterwheel which was still operating.

Many centuries of history

The history of the mill goes back many centuries, with several mills, built on the site. The present building, dated 1852, had been gradually growing since 1827 when Mr William Hosken, the head of the existing firm, took over “Loggans” mill. He had inherited it from his father, the family inheritance dating back to 1800. As with many local mills, ironwork such as waterwheels would come from local foundries. Bodley foundry in Exeter was such a foundry and one of our drawings shows their design dated 1894 for an 11ft 6in diameter undershot wheel with 30 floats.

Wheat was transported from Hayle’s wharves to the mill and the finished produce was conveyed to the railway station by traction engine. Another feature of the mill was that it was by then largely independent of millwrights and engineers, as they had established workshops in which they could cast, if necessary, their own brasses.

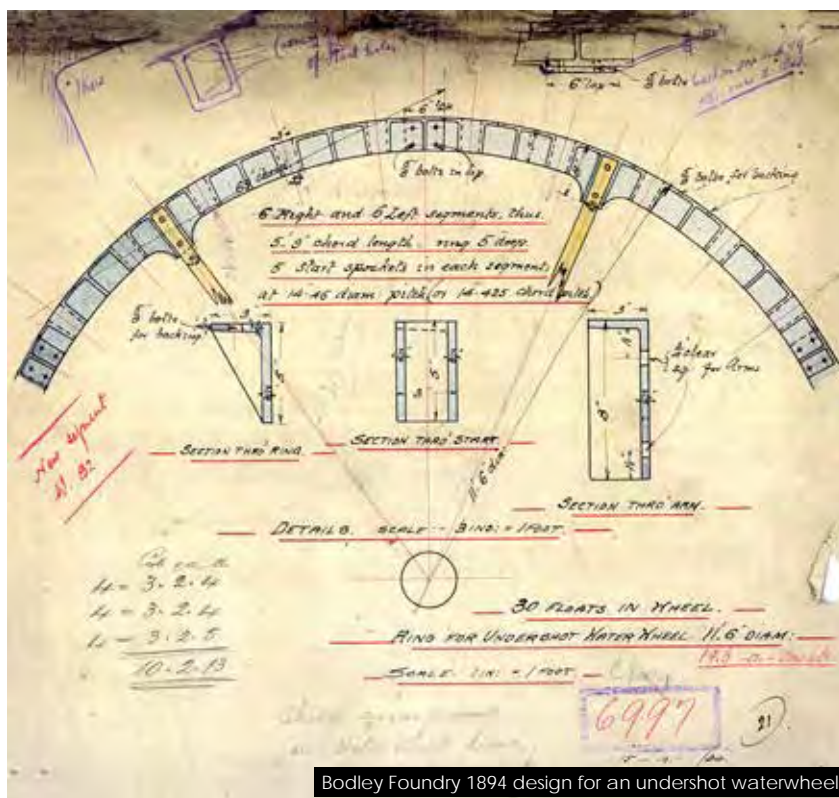
The wheat bins were all ventilated by perforated zinc plates which let in on each side to allow fresh air to play upon the grain, keeping it much sweeter. On each floor



Contemporary advertisement for a Staniar bran cleaner



A Daverio Improved Patent Roller Mill



Bodley Foundry 1894 design for an undershot waterwheel

Messrs John Lake and Son's Roller Mill, Truro



Mr Thomas Hitchins' Roller Mill, St Austell



Messrs JH Trevithick & Sons' Roller Mill, Hayle



in addition to the customary range of fire buckets, was a "Merryweather Fire Queen" hand engine which all of the staff had been carefully trained to use. The wheat cleaning department was separated from the mill by iron doors and was fitted out with a Barnard & Leas' separator, two cockle cylinders and a 'Eureka' smutter along with a 'Victor' brush.

Carter's three-high roller mills

The ground floor had the usual line of shafting and elevator bottoms, the flour and offals were also packed on this floor. A friction clutch and pulley was fixed on this floor so that, if needed, the waterwheel could be disconnected from the engine. The first floor had various roller mills for reducing the wheat on the system of six breaks, and flouring the semolina, middlings and dunst.

The first break used Carter's four grooved chilled iron rolls 20in by 9in. The second four grooved rolls 30ins by 9ins and the third used two rolls, 30in by 9in and 20in by 9in. The fourth, fifth and sixth breaks were done on the four roll type with grooved rolls 30ins by 9ins. The flouring of the middlings and semolina were done on thirteen of Carter's three-high roller mills.

The second floor was equipped with semolina purifiers, two centrifugals for treating the bran, a wheat grader and two Comerford dust catchers. The third floor had ten centrifugals, and a small gravity purifier; the fourth floor had a hexagonal silk reel 22ft long, along with six scalpers and four centrifugals, a sifting sieve and two more centrifugals for redressing the flour. The fifth floor was fitted with the elevator heads and four Carter & Zimmer pneumatic sorters.

Messrs JH Trevithick & Sons steam flour mill was situated close to Hayle railway station. It was fitted out with a 12 sack/hr roller plant by Henry Simon. A large part of the present mill was built by the owner who was descended

from the great engineer, Richard Trevithick.

The mill also had a bakery attached which allowed the testing of the flour daily and satisfied the demand of local shops. The mill was powered by a high and low pressure beam engine of about 180hp, with a surface condenser and a 4ft stroke. The fly wheel was 20ft in diameter and weighed 15 tons.

On the first floor were six Simon three-high roller mills, grooved for breaking the wheat on the system of six breaks, and six roller mills fitted with smooth rolls for converting a portion of the semolina and middlings into flour, the remainder of the smooth rolls were on the floor above. The second floor had three Simon gravity purifiers, a Whitmore sieve purifier, a Staniar's bran duster and four of Ince's dust collectors.

The third floor, had two Simon large size double gravity purifiers, a sieve purifier, a middlings sizer containing three sieves in one frame, and two Whitmore and Binyon silk reels, 22ft long and 44ins diameter. There was also a "Zigzag" wheat separator, a No 3 "Eureka" scourer and seven roller mills for the remainder of the 13 reductions. The seventh reduction was done on a Seck roller mill and the eighth to the eleventh done on four of Simon's three high roller mills, with smooth rolls 20in by 10in. The twelfth reduction was done a "Victoria" porcelain roller mill with rolls 18in by 9in, and the thirteenth reduction done on a Daverio roller mill with smooth rolls 15in by 9in. The top floor had a long sieve semolina grader fitted with an aspirating arrangement for the last two separations. 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. Similarly, if you would like to receive my regular newsletter on our progress in building the world's first public roller flour mill archive and library, please email me.