



## The Flour Mills of East Scotland Part five

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

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The final part of my series covering the mills involved in hosting the 1902 Edinburgh Convention is devoted to John F White's Dundee Flour Mills. A report in *Milling* (May 31st, 1902) describes the mill as being "on the coast".

The choice in 1876 for a new mill to be built in Dundee took into account the great advantages this would offer. The position chosen, at the east end of the city, was alongside two railway systems and the near modern docks on the River Tay suitable for large ocean-going steamers.

Between New York and Dundee, Dent and Company of Newcastle ran a regular line of steamers called the "Arrow Line". The two-way shipping of grain and flour between these ports was about the same volume as that between Hull and New York, which made the reporter comment that it was extraordinary that Yorkshire millers should try to sell flour in this part of Scotland!

John White's family had been in the milling trade for many generations, having for a long period worked a large millstone mill at Aberdeen known as Kettocks Mills as well as the Caledonia Mills at Montrose. Kettocks watermill had been driven by the waters of the Aberdeenshire River Don, famous as a salmon river. It eventually gave way to steam, and the flour it turned out was said to be second to none.

In 1876 the Dundee mills were erected as stylish and substantial buildings. They were first fitted out with a complete 14-pair stone plant, in conjunction with a number of well-made silk reels by Alexander Mather & Son of Edinburgh, the leading Scottish millwrights of the time.

The stones were fitted with Behren's exhaust and other devices for high-class work. When the mills started work in 1877 they



Robinson's Double Horizontal Roller Mill



GT Smith's Patent Purifier

were considered as model mills in every respect. Mr White quickly recognised the value of high grinding and in 1878 introduced into the mill, alongside the millstones, Wegmann's porcelain rolls with Fender and Cuthbertson's purifiers.

At that time, Wegmann's promotion of porcelain rollers emphasised their superiority over rollers of chilled iron and dismissed millstones with the comment, "No remarks need be made as to the superiority of porcelain rollers over millstones, as it is a recognised fact by all. Porcelain rollers are the only rollers that will entirely supersede millstones and metal rollers".

In 1887 the combination plant was cleared out and a complete 15-sack roller plant installed by Thomas Robinson and Son of Rockdale. The rolls were all driven from a line shaft in the basement, once used as the stone mill drive.



GT Smith's Purifier assembly workshop



GT Smith's Purifier finishing workshop

By 1902 only minor changes had been made to the Robinson plant as it was still running in perfect order. The alterations that were carried out on the system of milling rather than machinery itself. Use of a much larger roller surface resulted in increasing the yield of higher flour grades for which demand was high.

There were two lines of "Robinson" double horizontal roller mills arranged down one side of the mill and lengthwise the elevators were placed down the centre. In all there were 22 double mills, eight on the breaks and 14 on reductions.

The scalping of the first three breaks was done on three





Advert from 1902 for Mather and Son, Millwrights



Wegmann's Porcelain Roller Mill



John F White's Dundee Flour Mills

Robinson double rotary sieves, the fourth on a reel and the fifth on a centrifugal. The purification was done on two Koh-i-Nor machines and seven GT Smiths.

The dusting, grading and dressing was done on 16 centrifugals and six reels. The GT Smith purifiers were imported from their factory in Jackson, Michigan, USA, illustrated by images from our holdings of The Northwestern Miller. These show the size of the factory and the workshops in the mid-1880s.

The Dundee mill's wheat receiving house and silos occupied a separate building close to the railway. Half of its length was used as a flour warehouse, the other half covered four large silos which could hold 1,600 quarters each, and eight holding 600 quarters each.

The cleaning plant had the usual separators, graders, cockle and barley cylinders, scourer, washer and whizzer along with mixers and bins.

This building was detached from the mill by iron doors and on the top of the roof a large water tank was located for supplying

the Grinell sprinklers that were installed throughout the mill except for the silos.

The mill manager, WG Anderson, had been at the mill for 30 years, and was described as a practical miller with a full working knowledge of the technical aspects of his trade. The power plant for the mill was made up of a "McNaughten" beam engine with Corliss valves and jet condenser, together with a Lancashire boiler by Carmichael of Dundee which worked at 60lbs pressure. This was kept going as coal was cheap in the district.

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