



## The Cleveland Anglo-Hungarian Steam Flour Mills, Stockton on Tees

by Mildred Cookson, The Mills Archive, UK



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

**D**uring a committee meeting of the National Association of British and Irish Millers early in 1884, the then president Mr RH Appleton, of The Cleveland Steam Mill, suggested a convention (see *The Miller*, 7 July 1884). It was agreed and it proved to be the first of many to take place in future years around the country.

At the convention he passed on the presidency to Mr Soundy, of Reading Abbey Mills.

Mr Appleton's mill, situated in the large market town in County Durham, sat on the banks of the River Tees. As can be seen from the engraving, it was a large handsome building, built so that

grain could be unloaded from barges straight into the mill. As Stockton on Tees was also known as a port town, the site was convenient both for grain deliveries and the shipping of flour.

Convention delegates entered the mill by one of the side doors and saw the main line shaft from the engine room, 80 feet long and five inches in diameter, revolving at 150 rpm.

There were also three other line shafts the same length as the main one for driving the Seck system and several counter shafts, which drove the rolls and dismembrators of the Nagel and Kaemp's system. The shafting and pulleys which drove the Seck system were very neat in appearance and were supplied by Crossley of Cleckheaton.

The packing of all the flour was also done on this floor by six or seven posers driven by the mill. The drive to the Nagel and Kaemp system was by six cotton ropes, one and three quarter

The Seck four roller mill



Howes & Ewell Framed double acting cylinders

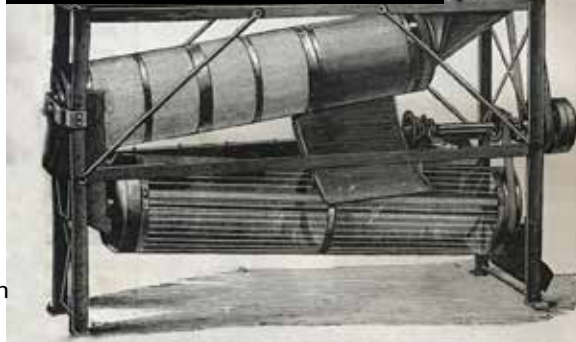
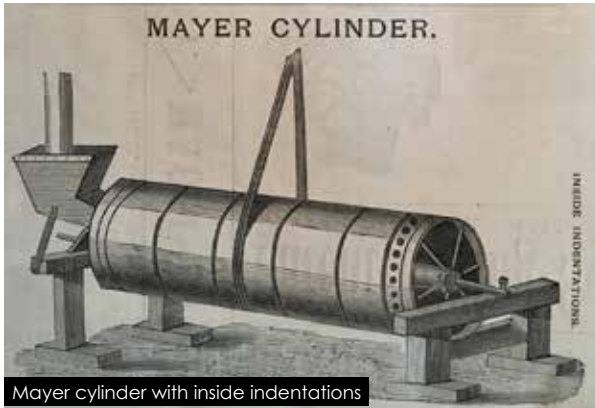


Fig. 2 illustrates our  
**DOUBLE ACTING CYLINDERS,**  
Built in Wood or Iron Frames,  
In set of 2, 3, 4, 6, & 8 of each.  
Barley Cylinder on top and Cattle  
Cylinder below.  
When used with our "EUREKA"  
system  
**ONLY HALF THE NUMBER  
ARE REQUIRED.**



Mayer cylinder with inside indentations



Victoria Cylinder with outside indentations

inches in diameter travelling at 4000ft per minute.

The drives to the Seck system were provided by a 22 inch, and four 12 inch double leather belts which travelled at 3000ft per minute. Underneath this floor was a cellar chiefly used for the storage of grain, with just the elevator bottoms and filters connected to the dismembrators.

### Long lines of roller mills

Ascending to the next floor you were immediately struck by the long lines of roller mills extending from end to end of the building. There were 24 sets of Seck four-roll mills, 24 x 9 inches, and 13 sets of Fiechter four-roll mills of the same size, 14 sets of Nagel & Kaemp's double roller mills, 24 x 15 inches, and four sets of Simon three high mills, 20 x 9 inches for the first breaks.

The cast iron bottoms of 12 large wheat bins were also on this floor, underneath which were 12 automatic wheat mixers, which supplied the wheat cleaning machinery. These mixers seemed to have attracted much attention and much admiration. The bins referred to ascended to the attic and contained 500 tons of wheat.

The third floor was chiefly occupied by a forest of spouting, which led to the roller mills below. A large number of collecting worms spanned from beam to beam for collecting semolina, middlings and offals, to convey to their destinations. The next floor contained a very extended line of purifiers, the greater number were of the air or gravity type.

The fifth floor had all the finishing: four centrifugals, three re-bolting reels, semolina and middlings sizing reels, and several Nagel & Kaemp air and sieve purifiers, as well as two Howarth dust collectors. The floor above had the intermediate reels and centrifugals of both systems, and two re-bolting reels.

The seventh floor was fitted out with scalping reels for the breaks, and scalping centrifugals for the reductions. In the attic were the heads of several sets of elevators, a semolina sizing reel and a line of chambers for containing the fibre from the purifiers. Here there were also the arrangements for automatically filling the wheat bins from the granary or ship.

## Smutters, separators, brushes, washers & dryers

The wheat cleaning machinery consisted of a Barnard and Leas' dustless separator, various Howes and Ewell's zig sag separators, Eureka smutters, 'Victor' and Throop brushes, as well as wheat washing and drying appliances.

There were also several Van Gelder barley cylinders; their advertisement at the time featured two oat, barley and cockle cylinders to clean the wheat, using either inside or outside indentations.

Howes and Ewell featured more complex, framed arrangements. In the warehouse the grain was collected by four lines of worm conveyors, elevated to the top and carried by two other worm conveyors to the bins in the mill.

Inside both the screen houses and the mill warehouse was an independent water supply piping system that had been laid in on every floor. It was fed from the fire engine on the wharf, quite independent of the water main up through the mill itself which was fed from the Darlington high pressure water.

There was an electric bell on each floor of the mill connected to the office, engine room and foreman's house to give alarm should a fire break out at any time day or night.

All employees were trained to use all the fire precautions should an alarm be given. It appears that on normal practices, which were run every Monday evening, by two and a half minutes the mill fire brigade was in full working order with a plentiful of supply of water.

The mill since its conversion to the gradual reduction system produced about 5500 sacks of flour per week, and for this large quantity comparatively few men were employed in the manufacture. They were under the direction of the foreman, Mr Richard Embleton; the mechanical side was in the charge of Mr

Howes & Ewell Cylinder with blower and rigger



Papp, and management with Mr Appleton, was assisted by Mr H Macdonnell.

In all of these articles I have found each mill owner adapted different versions of the various processes for creating the best system to work for them.

We are privileged at the Mills Archive to have these stories and to be able to bring them to light, delving into to the many catalogues showing us the machinery available at the time.

Times moves on and technology does not stand still, making it ever more important that we record the past. I hope you enjoy reading about your predecessors.



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