



The Don Mills of Mexborough

by Mildred Cookson, The Mills Archive, UK



Milling journals of the past at The Mills Archive

My attention was attracted recently to a well-illustrated article on the Don Mills of Mexborough, a town near Doncaster in Yorkshire. The item from *The Miller* (December 2nd, 1912) relates to the time when the mills were owned and worked by Frederick White. They were conveniently situated on the bank of Sheffield and South Yorkshire Canal, allowing the easy import of foreign grain from the port at Hull and fuel direct from the Yorkshire coal pits.

The late James White, father of the owner, had worked the mills for many years and when the roller system superseded stones in the early 1880s he erected an entirely new building to install the new

process. This was completed in 1884 and he retired some years later, handing over the business to his son.

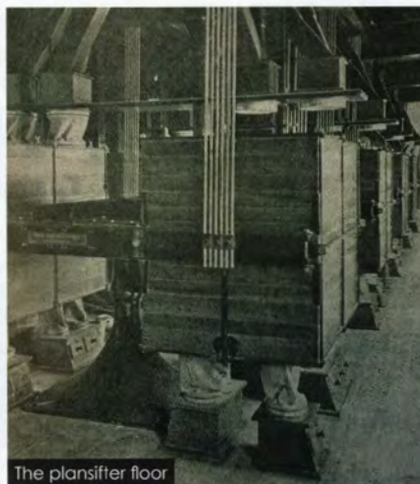
Frederick built a new screen room around 1904 as well as a warehouse adjoining the old stone mill. He then replaced the old roller plant with an entirely new plansifter mill on the Ageka system. Finding this satisfactory he turned his attention to the wheat cleaning and conditioning plant, and around 1911 gave the order for a complete new outfit to German contractors AGK, Amme, Giesecke and Konegen, (AGK) of 59 Mark Lane, London and Braunschweig, also known as Brunswick. The firm described themselves as the biggest milling construction engineers on the Continent with their works occupying 96,000 square metres (more than one million square feet).

The hoppers bottoms of the dirty wheat bins were on the ground floor of the silo house. Each bin had four outlets, enabling the wheat to be drawn evenly from all parts of the bin and each spout converged to a wheat mixer. These mixers allowed any percentage of wheat, from 5-100 percent to be drawn through each mixer by simply adjusting a series of slides marked with the percentage of wheat which it controlled.

The collecting worms above the mixers were mounted in wrought iron troughs complete with dust-proof iron lids. The bevel gears on



The roller floor



The plansifter floor

the worms were enclosed in iron cases, worked in oil like all the other gears throughout the mill.

On the ground floor of the screen room the washer and whizzer were fixed in a concrete tank; the waste water was raised by a centrifugal pump to the effluent recovery plant. On the top floor of the screen room an Ageka milling separator “did splendid work” in removing the ordinary loose impurities. The sieves of this machine cleaned by a novel arrangement of travelling brushes, enabling finer meshes to be used and closer separations to be made.

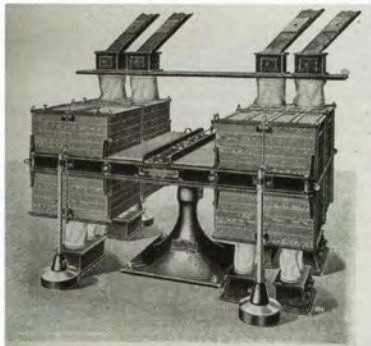
Four cockle and four barley cylinders, together with a re-cockle and re-barley cylinder thoroughly removed troublesome impurities.



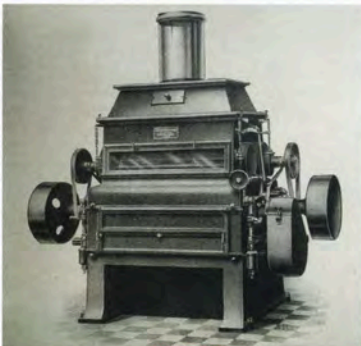
The cylinders were driven with bevel gearing and were all exhausted. The air exhaust spouts were connected with the feed spouts as the latter entered the head of the cylinders.

After the wheat had been conditioned and mixed in the desired proportions, it was scoured on an ‘Ageka’ emery scourer. This had a long, revolving emery casing and a strong air current over the whole length of the scouring case, so that all particles scoured off were instantly removed from the wheat. The grain was aspirated as it entered the scourer and again at the outlet so it left the machine thoroughly cleaned. Specially constructed expansion chambers in the scourer separated the heavier particles of the aspiration, saving the dust collector considerable work. An Ageka brush machine corresponding to the scourer gave a finishing polish to the grain which was then sent to the clean wheat bins.

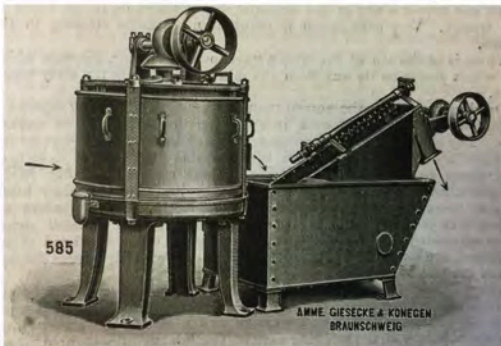
The ground floor of the mill proper held a line of Star detachers and the main line shaft running through from the engine house. On the first floor a double row of Ageka four roller mills, gave four breaks. The rolls benefitted from careful arrangement of the air flow. Air from the feed hoppers was drawn in with the feed, and was circulated round both the feed rolls and the grinding rolls



An Ageka plansifter



An Ageka roller mill



AGK wet scourer and rinsing worm

and passed out of the roll frame with the ground product and then separated from the stock in the specially constructed spouts. This kept all parts of the rolls absolutely free from dust and remarkably cool and, with the double lining inside the roller frame, ensured an entire absence of sweating.

The double feed rolls gave a thin regular feed right into the nip of the rolls, and the massive casing of the roller mills, which were almost entirely all in one piece, ensured perfect rigidity. The adjustment to the rolls was done with a simple accurate ratchet at either end, connected by a hand wheel to set the movable roller closer or otherwise without altering the alignment. The rolls were thrown out of gear by depressing a small lever and this also stopped the feed. The large diameter glass spouts let the roller man see at a glance whether the stock was coming down properly to the whole of the rolls.

On the floor above, a line of Ageka sieve purifiers could be changed instantly. The fans were large and slow running and fitted

with two pulleys so that the speed could be varied if needed. On the top floor five Ageka plansifters did all the scalping, grading and flour dressing in this 8 sack plant. The plansifters were all of the suspended type, the frame supported by cane rods from trimmers attached to the roof timbers.

The sieves in the plansifters were kept clean by automatic travelling brushes which started working at the same time as the sifters. In addition to these there was a dusting reel and aspirator through which the clean wheat passed on its way to the first break. An automatic wheat damper was arranged so that wheat could be passed from one clean wheat bin to another and damped en route.



Mills
Archive

www.millsarchive.org



ACCREDITED
ARCHIVE SERVICE