

## Mill Isidoro Onos' Roller Mill at Sant Martí de Provençals, Barcelona (Turner's System)

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

by Mildred Cookson, The Mills Archive, UK



In 1895 Barcelona, besides being the leading mercantile centre of Spain, was also the principal milling centre. The suburb of Sant Martí de Provençals featured many substantial mills, not the least striking of which was the "handsome building" erected to Turners' design, for Isidoro Onos. Described in detail in the June 3,

1895 issue of *The Miller*, the complete roller plant had a design capacity of 30,000 kilos per diem. The mill building proper was a substantial three-storey erection, 22 and a half metres long by five metres wide, with an engine house, five metres wide by 13 metres long, added to one end, with a boiler house adjoining. The building was built with ample expansion room should trade justify such a course.

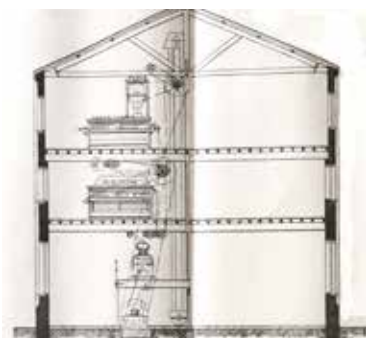
The wheat-cleaning department at the opposite end of the mill was five metres wide by 13 metres long and divided from the mill by a party wall. Occupying three floors, it held two bins, each having a capacity of 1,100 bushels, to which the dirty wheat was elevated on entering the building. From these bins the wheat passed by means of an elevator to a Zigzag separator on the top floor, after which it was treated on a machine for removing stones, and then passed to a system of cockle and barley cylinders, specially arranged for taking out the numerous seeds found in Spanish wheats.

The grading to the cylinders was accomplished by one of Turner's patent Vibromotor sieves, whose action was found to be effective for grading the wheat. From the cylinders, which were on the second floor, the wheat fell to a Eureka smutter and was then elevated to a Eureka brush machine. These two machines were placed on a platform on the ground floor in order to avoid

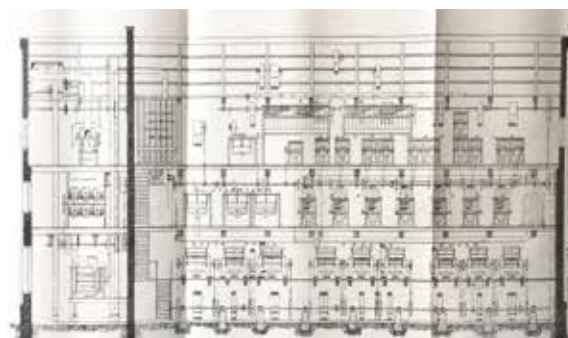
sinking the elevator bottoms below the floor level. The Zigzag, smutter, and brush machine were each connected to Turner's patent Whirl dust collectors. In the mill itself two bins received the clean wheat elevated from the brush machine in the wheat-cleaning department; each bin had a capacity of 600 bushels.

The machinery was arranged on three floors. The bottom floor provided a spacious platform on which all the roller mills were fixed. The mill was worked on a system of five breaks, these being accomplished on two 40 inch by 10 inch four-roller mills and one 30 inch by nine inch. The reductions were carried out on two 30 inch by nine inch four-roller mills and four 25 inch by nine inch rolls. Exhaust trunks from all the mills led into a main exhaust trunk fixed in the ceiling of the bottom floor and terminated in a Whirl dust collector on the floor above. On the first floor were the scalpers for the first three breaks. These were of the patent Vibromotor type; Turner's being the sole licensees and manufacturers. A row of seven Turner Dustless purifiers, with an exhaust arrangement for giving a final purifying touch to the wheat before it entered the first break mill, removed any dust which may have escaped the wheat cleaning.

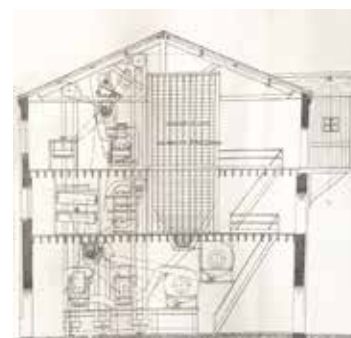
The second or top floor was a very lofty one, open to the roof to allow elevators of a considerable height, greatly facilitating the spouting arrangement to the various machines. Here the reporter noticed another Vibromotor scalper, dealing with the fourth break products, and an inter-elevator reel treating the product of the first reduction of semolina. This was followed by a row of 10 centrifugals, on top of which were placed two inter-elevator reels; one being used a chop-reel, and the other for dusting the break meal. On the top of this line of centrifugals an eleventh was also fixed. The elevators were arranged in a line down the centre of the mill. The sacking-off of the various products was performed on the bottom floor where the lower ends of the elevators and the main shaft driving the roller mill were situated. The plans shown



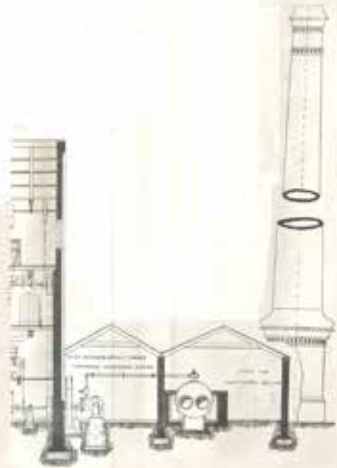
Cross Section of the Mill



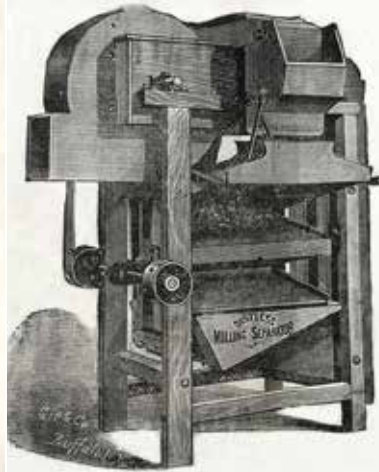
Longitudinal Section of the Mill



Cross Section of the Screening House



Engine Room and Boiler House



Eureka Zig-Zag separator



Turner Vibromotor advertisement (1895)



Turner four-roller mill advertisement

here should make this description easier to follow.

The motive power for the installation came from Turner's well-known tandem compound condensing engine and Lancashire boiler. Three line shafts drove the whole of the machinery.

The first, being the roller shaft, which was fixed on substantial piers of masonry in the basement and received its drive direct from the engine fly wheel by means of a double leather belt. From this shaft the power was transmitted to a shaft on the first floor, driving all the dressing machinery and purifiers, apart from two reels, and extending to the wheat-cleaning department. The drive for this was taken off by means of a fast and loose pulley on the shaft in the bottom of the wheat-cleaning department.

On the top floor of the mill the second shaft drove the elevators and the two inter elevator reels. The third shaft, in the roof of

the wheat-cleaning department, drove the wheat elevators and a portion of the wheat cleaning machinery.

This is the only record of the mill I can find, so I would be very interested if anyone in Spain or elsewhere remembers the mill or what happened to it so I can bring our Archive up to date on this mill.

The geographical and historical spread of our holdings at the Mills Archive mean that I can only provide snapshots; if you would like to know more please email me at [mills@millsarchive.org](mailto:mills@millsarchive.org).





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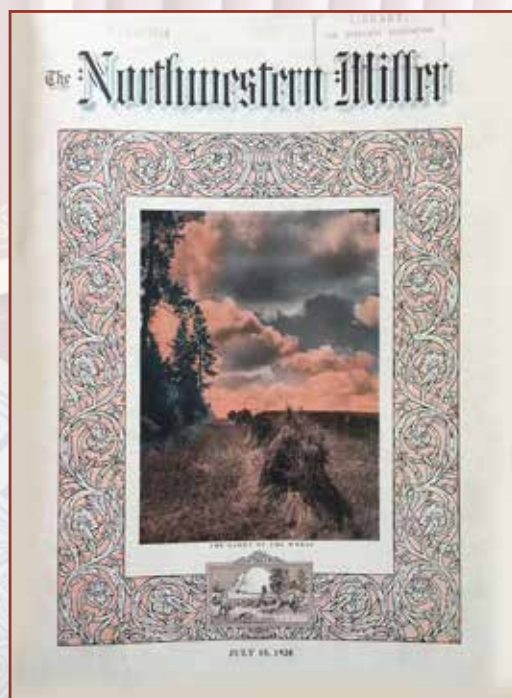
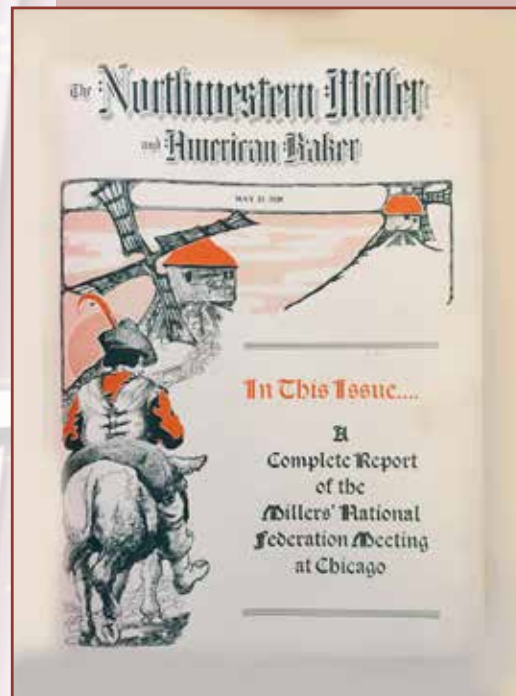
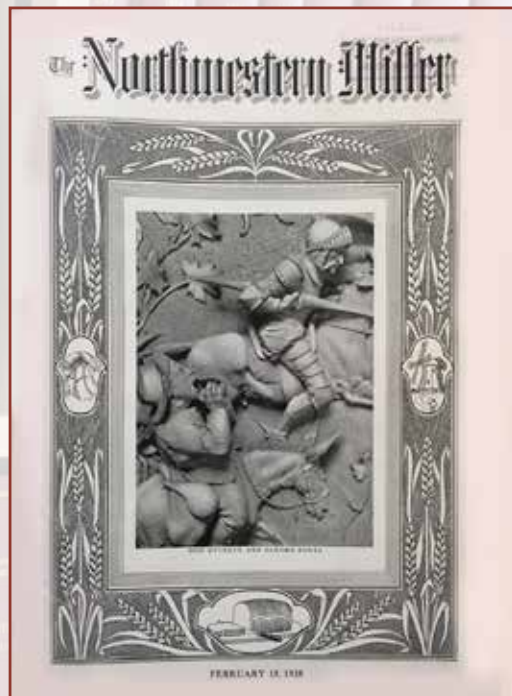
For well over 100 years milling technology has been global with many magazines serving or having served our industry from flour and food to feed and oilseed processing and now to fish feeds.

A most recent contribution to the Trust's collection is a complete century of past edition of the now out-of-print 'North-Western Miller' from the United States.

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