

## PRISTON MILL

Owen Ward

Priston Mill is today an integral part of Priston Mill Farm, a mixed dairy and arable farm of nearly 300 acres situated south of Bath in the Parish of Priston, (ST 695 615) and half a mile from the centre of the village.

The water supply to the mill comes from the Conygre Brook but at some time a channel was cut from the Newton Brook which runs through Priston village in the next valley, and led half a mile round Pensdown Hill into the mill stream. The course of this old leat can just be distinguished along the side of the Hill, but it is no longer in use. The extra water supply was obviously badly needed, since today's experience shows that a very few hours milling is all that is usually possible even after the pond has been allowed to fill up overnight. On the other hand there are occasional floods, and one of the four sluice gates or hatches which could be raised to let water out of the pond is still occasionally needed.

### History of the mill

A Mill at Priston is listed in the Domesday Book as part of the lands of the Church of Bath (the present Abbey), at which time it was worth seven shillings and sixpence per annum. (By way of comparison the great Abbey Mill itself at Pulteney Weir was worth 20 shillings per annum). It is believed that there was some major rebuilding of the main fabric of the mill early in the eighteenth century although this would certainly have been on earlier foundations.

It is possible that the iron gear wheels replaced wooden ones at the same time as the present water-wheel was installed in about 1850, but it is much more difficult to put an age on the remainder of the machinery, as a few records were kept of when a working mill had repairs or renewals carried out. One can only say with a degree of certainty that little has-been touched in the last hundred years, and the mill seems to have been always commercially working.

### The layout of the mill

The water is taken in from the mill-pond through a grill in the wall of the mill and then fed onto the wheel from an opening in the side of an enclosed iron pentrough, because the pitchback wheel is sideways on to the stream. The tail race runs for nearly a quarter of a mile underground before it rejoins the main river. The wheel revolves about four times a minute.

Through the centre of the big water-wheel is the iron shaft

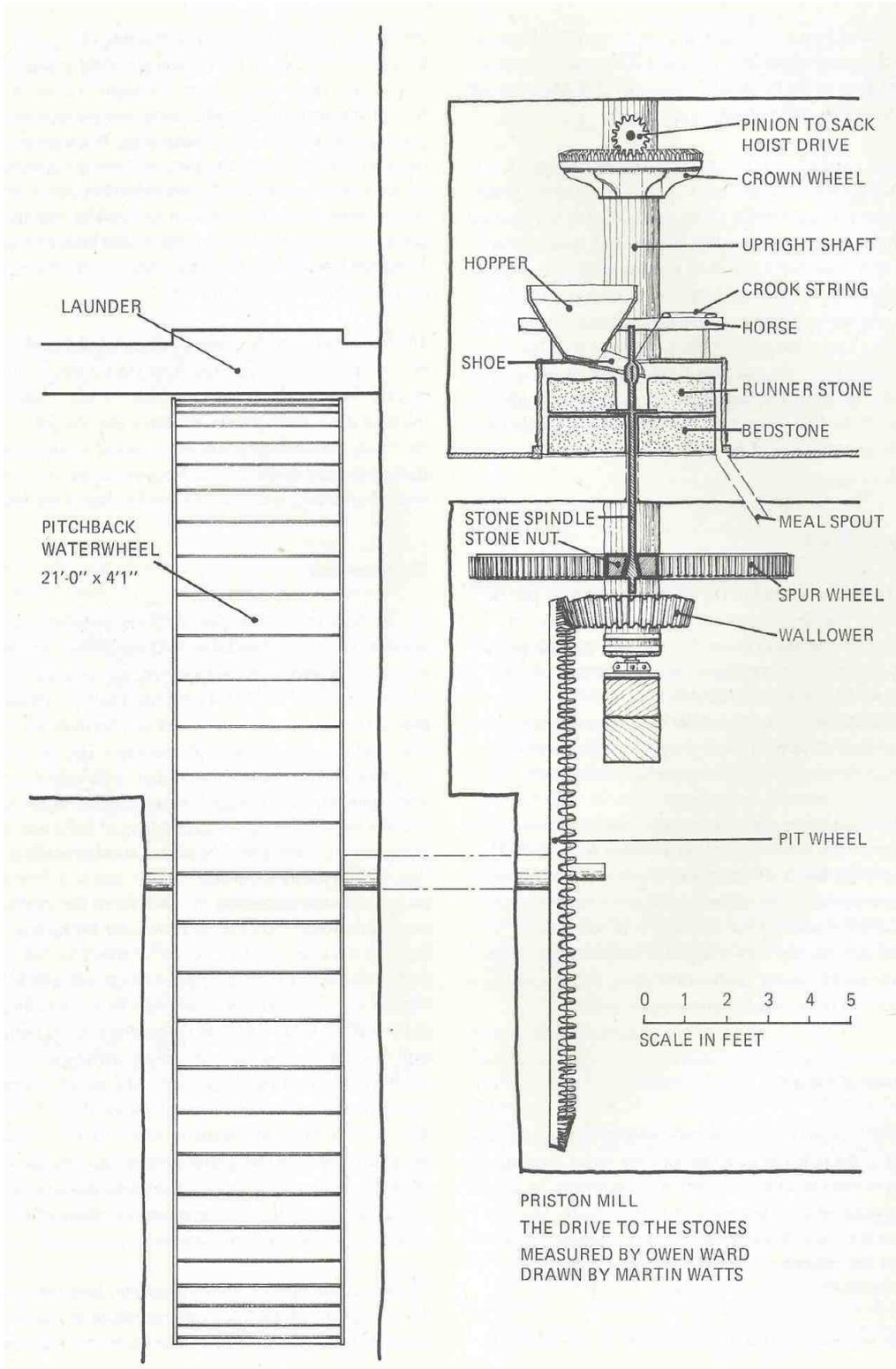
which, at its opposite end inside the mill, carries the iron pit-wheel. The cogs on the vertical pit-wheel engage the horizontal iron wallower which is wedged in place near the foot of the vertical oak shaft. Just above the wallower is the great spur wheel with apple-wood cogs. This engages with two iron stone-nuts, which drive, via the stone-spindles, the stones on the floor above. In this mill either stone-nut can be disengaged by raising it out of mesh on its own spindle, using a two-pronged fork with chains and hooks on the ends. These can be caught in loops built on the top of the stone-nuts, which have to be stationary.

The miller can stop the water by dropping the guillotine gate at the end of the pentrough, or start it again quite quickly, from two positions, one near the spout which lets the meal down from the stones above, and the other near the stones on the floor above (probably of more use when starting the mill turning). Hand-screws just beside each meal-spout are turned to adjust the fineness of the meal.

### The stone floor

On this floor are the two pairs of stones encased in their wooden 'hurstles' (often called vats elsewhere). The left-hand pair, as seen from the sack trap, are composition stones installed in 1963; the right hand pair are Derbyshire peak stones, very similar in quality and texture, but much older, perhaps put in place 100 years ago. The top stones, or runners, revolve supported on iron rynds attached to the stone spindles. Each spindle fits into a socket in the rynd, which is let into the eye or central hole of the stone. The miller can raise and lower the runner stone according to how much grain he is putting through, and how finely he wants it ground, by turning the hand screw just beside each meal-spout. This raises or lowers the bridge tree which supports the stone spindle. The miller stands by the meal spout because this is the only place he can see, and more especially feel, the quality of the meal he is producing, and therefore, make sure that everything is going right with the process. The most immediate warning of trouble is over-heating of the machinery, which the miller discovers through feeling the temperature of the warm meal as it comes down the spout; when trouble is brewing he can quickly raise the runner stone by turning the hand-wheel on the screw by his side, then drop the gate of the pentrough and so stop the water and the whole of the machinery in the mill from turning.

The funnel-like hoppers above the stones feed the grain to the stones through the eye in the middle of the runner-stone. A wooden shoe directs the meal from the bottom of



the hopper and into the eye of the runner; since it could quickly become clogged it is shaken constantly and noisily by a clapper on the stone spindle which revolves (with the stone) at about 120 times a minute; this chattering gadget is known here as the damsel. The angle of the shoe determines the rate at which grain is fed to the stones, so it can be altered by a string (the crook-string) which can be run down through the floor to hang by the meal-spout.

The many-faceted vertical shaft carries a crown-wheel just below ceiling level which drives two lay shafts. Several pulleys have been installed to run ancillary machines of various kinds, and one can still be used to drive a cleaner on the second floor, and another a sack hoist in the roof.

## **The sack-hoist**

Sacks of wheat were once delivered to the ground floor, and then lifted up to the huge storage bins which take up most of the third floor. The sack-hoist is only used today for moving occasional sacks from floor to floor as most of the intake of wheat is handled by the modern belt and bucket elevator, but the original ingenious contrivance is still in place at the top of the mill. Every water-powered mill had some such mechanism, but although the purpose was the same the actual mechanism seems to be triumphantly different in every case.

## **Disused Stones**

Outside the mill are three disused stones. One pair of composite flintstones was used until very recently to grind grain for animal food, until they were replaced by the new pair of composition stones. The single stone is a much older one, which was found amongst the roots of an ash-tree in the bed of the brook during 1972. It is in one piece, and cut out of quartz conglomerate, a natural rock with hard, shiny pebbles in it. This type of millstone is found in the South West and is a cheaper, local substitute for stones which the miller would have had to buy from Derbyshire, or even from the continent, and pay the heavy cost of transporting them. The source is uncertain, but could have been the Quantocks or Monmouthshire. This particular stone was a runner stone, and has had at least

two different patterns cut in it to accommodate different rynds.

## **The cleaner**

The third floor is the dressing floor. At present all the grain is cleaned in an "Oat Clipper" made by Armfield's in the late nineteenth century and recently renovated by them. Although it can be driven by water-power an electric motor is normally used. Inside the cleaner the grain, as it falls into the machine from the floor above, is shaken on oscillating and revolving sieves, so that the dust falls out. At the same time an aspirator draws off the superfluous husks and straw so that only sound grain is fed through the sacking chute into the hopper one floor beneath.

## **The mill in operation today**

Some of the corn ground is still obtained locally, a large proportion of it coming from Wiltshire. Maintenance within the mill is a constant chore; stones have to be dressed, and other working parts and the watercourses have to be kept in repair. At Priston two former millwrights, now engineers in a more general way, sometimes come in to help service the machinery but the stones are dressed by a member of the farm staff, Charlie Fry, who also works the mill, largely single-handed. Some of the maintenance is undertaken by Armfields of Ringwood, a firm of millwrights founded in 1875. Even so the provision of spare parts which cannot be fabricated, especially stones, is going to be more of a problem particularly when those lying around on disused premises have been acquired and worn out by working mills.

However, for the time being the going is good, and the demand for Priston Mill flour is keeping the mill working as a commercial proposition and the farm shop encourages other local crafts, besides that of the miller. The mill welcomes visitors almost every afternoon of the year.

## **ACKNOWLEDGMENT**

The willing and courteous help of the present farmer at Priston, Mr. Jim Hopwood, is gratefully acknowledged.