

A NOTE ON STOWELL MILL

Stephen Mills

Stowell Mill is one of a string of small water mills that were formerly strung out along the river Coln, and is fortunate in that it has not only survived intact, but is one of the few mills not to have been either demolished or converted to a dwelling. It belongs to the Stowell Park Estate of Lord Vesty, and is not normally accessible, however, in July 1990 I was fortunate enough to be able to examine the mill in some detail. Although its exact age is not known, there were a number of interesting features indicating that much was of a fairly early date.

According to the VCH, there were three mills on the Chedworth Manor at the time of the Domesday Survey, the present Stowell Mill being known as Burford's Mill in 1803, when it remained part of the manor estate. Little of its subsequent history seems to have been recorded, although doubtless the Estate records, were they available, would yield further details. In all probability, for most of its life, it may have ground grain exclusively for use on the estate, and as such, did not appear in trade directories of the time.

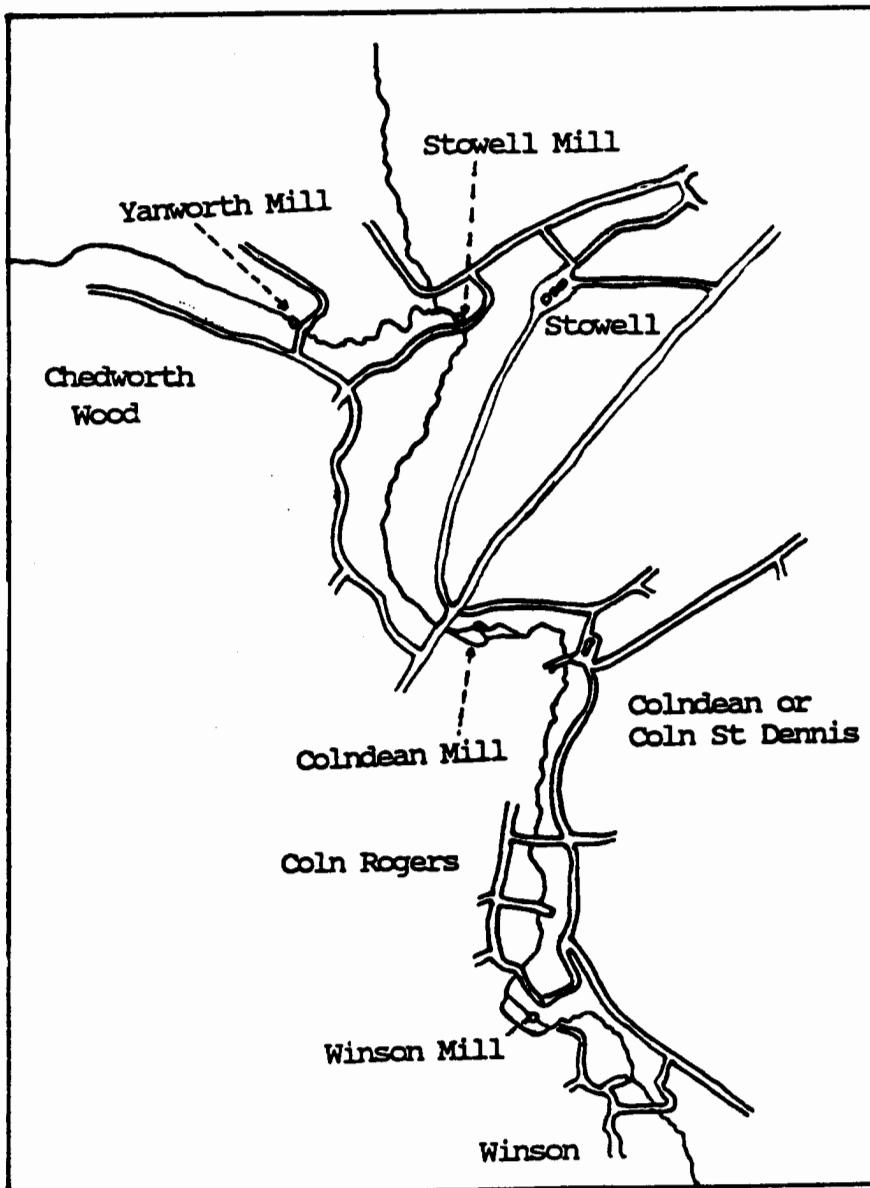
The Coln once provided a source of power for a succession of mills. Bryant's map of 1824 shows Syreford Mill as the highest, followed successively by Frog, Whithington, Compton Cas(s)ey, Yanworth, Stowell, Colndean, Winson, Ablington, Bibury, Coln St Aldwyns, and Hatherop Mills.

Doubtless the present Stowell Mill would have been rebuilt/altered on various occasions, the present building being constructed of Cotswold stone with a matching stone slated roof. The latter was apparently repaired around three decades ago, and little else seems to have been done to the mill since, however, structurally it appears to be in very good condition.

Apparently, the mill was last operated around the time of the Second World War, but doubtless its trade declined before this. It seems unlikely that it could ever be worked again, the low water level of the Coln precluding this. Water abstraction and upstream boreholes have been responsible for much of the current depletion.

The mill has lost much of its "movable" equipment over the years, and is now devoid of grain cleaners, dressing machines, etc. However it is substantially complete in every other respect. The overall layout is fairly conventional, water being supplied via a windlass/chain-operated sluice gate set into a channel of dressed masonry blocks. A rack and pinion gate regulates the flow onto the iron breast shot wheel of indeterminate age and manufacture. The tail-race emerges from a

The Stowell Area,
from Isaac Taylor's Map of 1777



The Stowell Area,
from Bryant's Map of 1824

stone arched tunnel, flowing back into the Coln just downstream of the adjacent road bridge. Power is taken from the pit wheel (of ca 10 ft diameter and of iron construction, with individual wooden teeth) and thence via a pinion gear to the 10 ft diameter all-wooden wallower. Off this, two 18 inch diameter wooden stone nuts take the drive to the two pairs of stones set on the upper floor. The nuts are taken out of gear by means of simple screw thread-operated iron jack ring assemblies.

On the upper (stone) floor are two pairs of stones; these were not easily accessible although they are thought to be French burrs, predominantly used for grinding corn. These were iron-banded and had been crudely balanced by pouring molten lead into recesses on the upper face of the runner stones. Later stones often used more sophisticated methods of adjustment, such as specially cast balance boxes. Wooden tuns surround the stones, feeding into appropriate chutes that direct the ground cereals into wooden arks on the ground floor. The "mill furniture" (hoppers, supports, etc) is exclusively of wooden construction, many years of continual adjustments of the crook strings having scored deep groves in the front support.

Grain was fed from the hoppers into inclined chutes that were continually agitated by means of unevenly-sided iron shafts (damsels), driven from the centre of the runner stones. The two damsels were different for each pair of stones, one using three raised ridges and the other, four. Their means of attachment to the runner stone also differed. Although much of the wooden equipment was riddled with woodworm and had clearly not been used for many years, it was still substantially complete and of considerable age,

Of the various adjustments made by the miller during the mill's operation, one of the most critical was the gap between the stones. The correct gap was essential for successful milling, and was adjusted by raising/lowering the runner stone by means of, in this case, a spanner-type control that was used to adjust the central drive shaft. Also of great importance was how even the gap between the stones was, the lower (bed) stone being carefully adjusted to ensure that it was perfectly level. Later mills frequently achieved this by means of threaded adjusters situated at 3 or 4 points around the stone's periphery, however the Stowell stones were simply adjusted by means of tapered wooden wedges, hammered in at various points under the stone. The levelling was monitored by means of what was essentially a large spirit-level, consisting of a shaped piece of wood, matching the diameter of the stones, with an upper extension housing a plumb line. This was laid across the stone and the wedges adjusted until it was level in all directions, and hence, parallel to the runner stone. Remarkably, the "spirit-level" still survives at the mill.

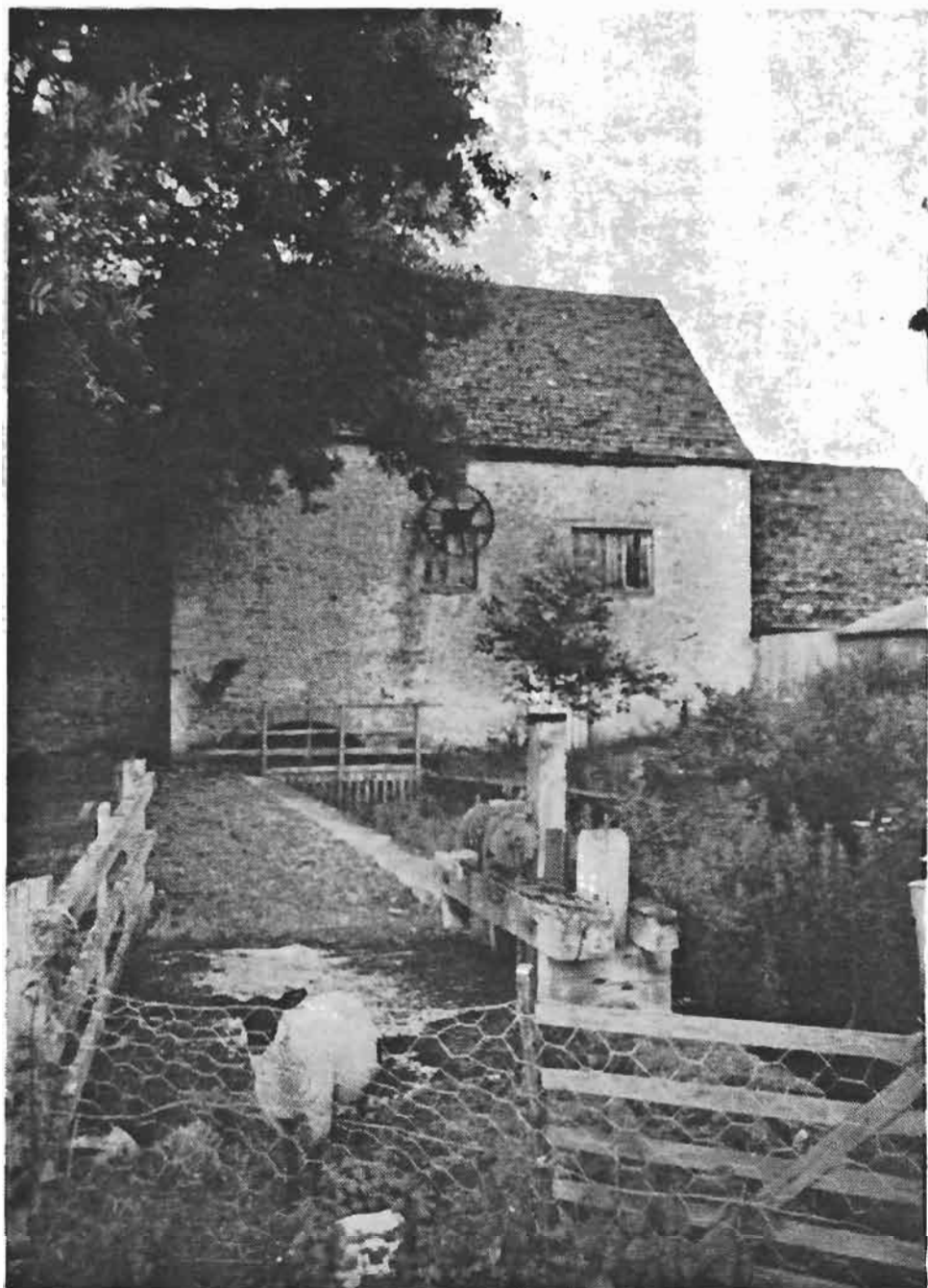
Other items of particular interest include a large iron/wood sack hoist, and a portable grind stone set that was originally

powered by a leather belt operated from a 3ft diameter iron belt wheel driven off the iron/wood crown wheel on the upper floor. The same wheel also drove a long belt that passed through a slot cut between the floor beams, and out through an elongated hole cut in the adjacent wall, into the left-hand extension of the mill. Here, it formerly operated a long-departed crusher, used for breaking up oil cake, etc., primarily for cattle feed. At the point where the belt passed through the upper floor, it was supported by a well-worn wooden roller system, almost certainly made by the Estate's carpenters. They, over the years, were also responsible for any of the simpler repairs, such as the manufacture of replacement gear teeth, that did not necessitate bringing in a millwright.

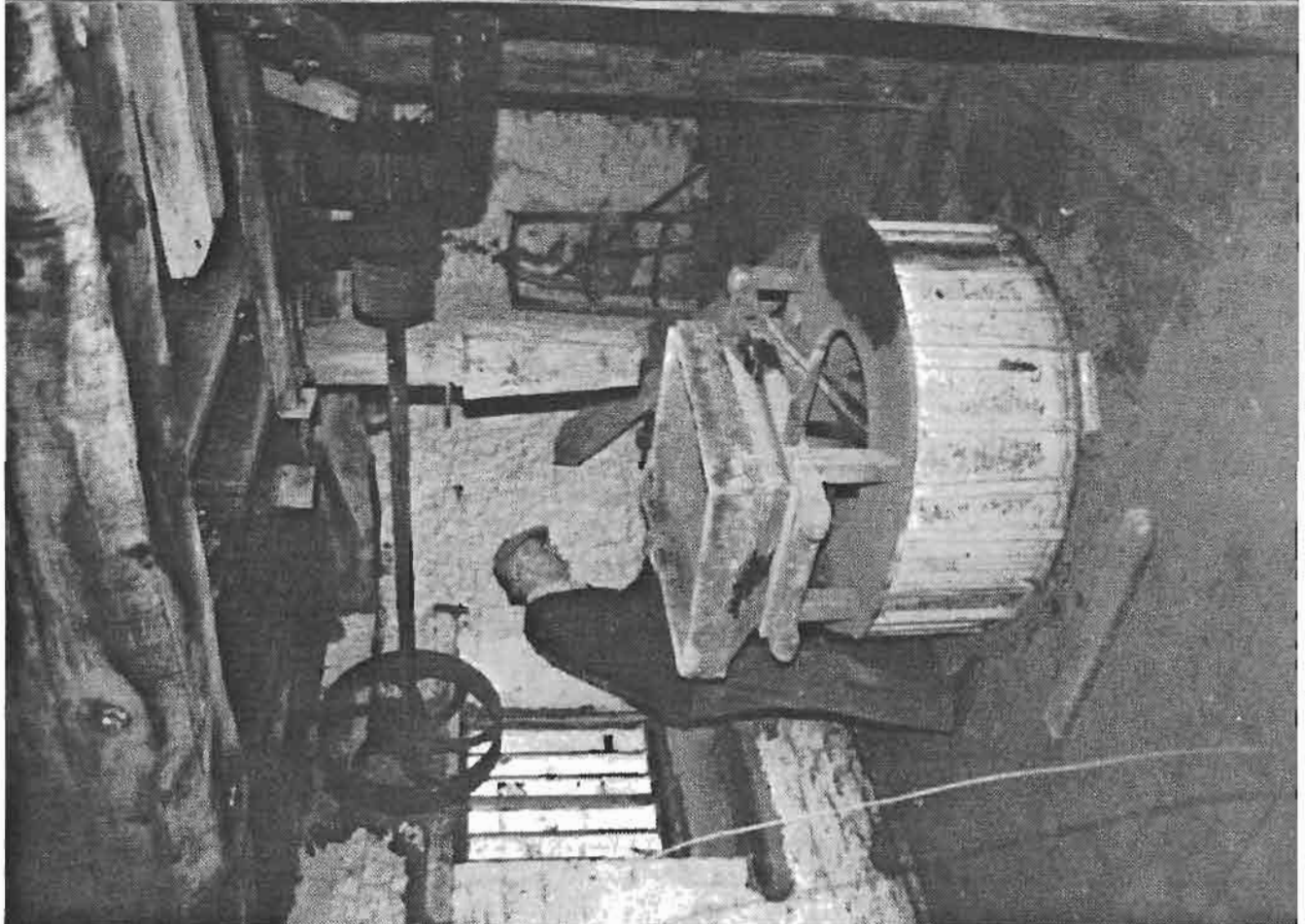
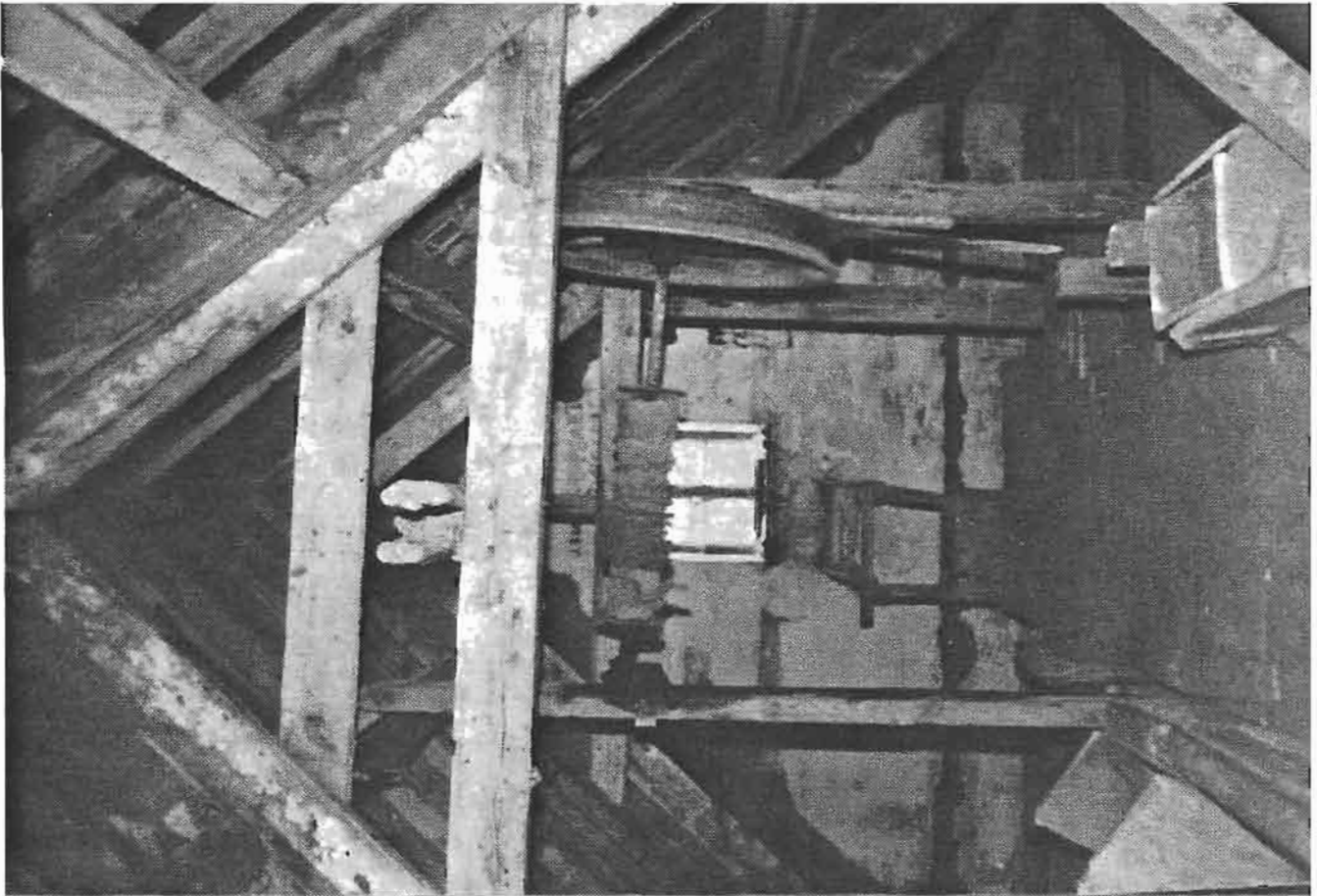
The upper (bin) floor situated in the roof space, houses six grain bins of similar size, various wooden chutes directing the grain into the appropriate locations, such as cleaning machines or directly onto the stones. Simple wooden slide valves regulated the flow. The sack hoist still survives, this being of the windlass variety, operated by a drive taken off the mill's main shaft. The upper walls are covered with a collection of graffiti, in the form of, presumably, the names of former millers and mill hands. Among them are J.S. Smith & C. Peart - 1881 and 1882, Clifford, Dennis and Wilfred Coates - 1909, D.W. Coates - October 1918, N. Coates - August 1915, and W. Legg - 1920 and 1921. The latter were related to Ted Legg, currently one of the Estate's most skilled carpenters, who in earlier years, made a number of parts for the mill.

Although Stowell Mill is not particularly unusual in its overall layout, it is interesting in that it has managed to survive in the form that it probably operated in for much of the past century, if not longer. Although its portable equipment has been lost, it retains all of its gearing, water wheel, mill furniture, storage bins, etc and as such, gives an insight to what the operation and maintenance of a small country mill must have entailed. It is now one of the few such mills in the area to have escaped demolition or conversion to a dwelling, and as such, forms an important site.

I would like to acknowledge the kind assistance of Ted Legg in the preparation of this article.



STOWELL MILL: EXTERIOR



STOWELL MILL: INTERIOR