

RECESSED SECONDS

Another horological puzzle

by **John Robey**, UK

In a perfect world the escapewheel arbor of a longcase clock should be exactly perpendicular to the front plate

of the movement and to the dial. This assumes that the dial feet and those of any falseplate, if it is a painted dial, are all accurately made. But with a clock that is likely to have been running for two centuries or more, there may have been rebushing which, if not done correctly, could make the front extension to the escapewheel arbor be off the true perpendicular.

The consequence of this is that the seconds hand, which is fitted to this extension will not be the same distance from the dial as it rotates. And a further consequence is that there is more chance that as the hour hand comes up to the 12 o'clock position it catches on the seconds hand and stops the clock.

The seconds hand is fitted on a relatively long pipe with a tapered hole that is a friction fit on the taper of the arbor extension, and if the tapers do not match, or the pipe is

split or distorted, as it often is, then the tip of the seconds hand wobbles even more. To ensure that the correct time can be

read from the dial without a lot of parallax error, the hands need to be as close to the dial as practically possible, while not catching on each other.

This is one of the final jobs to do when restoring a clock. It is worthwhile spending time getting it right to avoid a customer complaining that the clock has stopped and it is only the hands that are catching on each other. Clocks with hands for the hour, minute, sweep centre seconds and a centre calendar can be particularly troublesome in this respect. The dial that is the subject of this article appears to be an attempt to avoid the seconds



Figure 1. The Walker & Finnemore dial signed 'Edwd Winstanley, Holywell.

hand catching on the hour hand.

Recently I was sent photographs of a clock signed for Edward Winstanley



Figure 2. The clock in a case probably made in Uttoxeter.

of Holywell in Flintshire, North Wales, with an unusual painted dial. The owner, Ron Lester, has a special interest in the Winstanley family, having a number of their clocks in his collection.

William Linnard in his book *Wales, Clocks & Clockmakers*, published in 2003 by Mayfield Books, records 12 Winstanleys working as clockmakers and watchmakers in Holywell in the eighteenth and nineteenth centuries. He notes that they were a 'large and complicated Roman Catholic family of clock- and watchmakers, whose members worked also at Wrexham, Mold, Flint, and in England'. There were two Edwards and this clock was probably by Edward II, who was apprenticed in 1781 to his father,

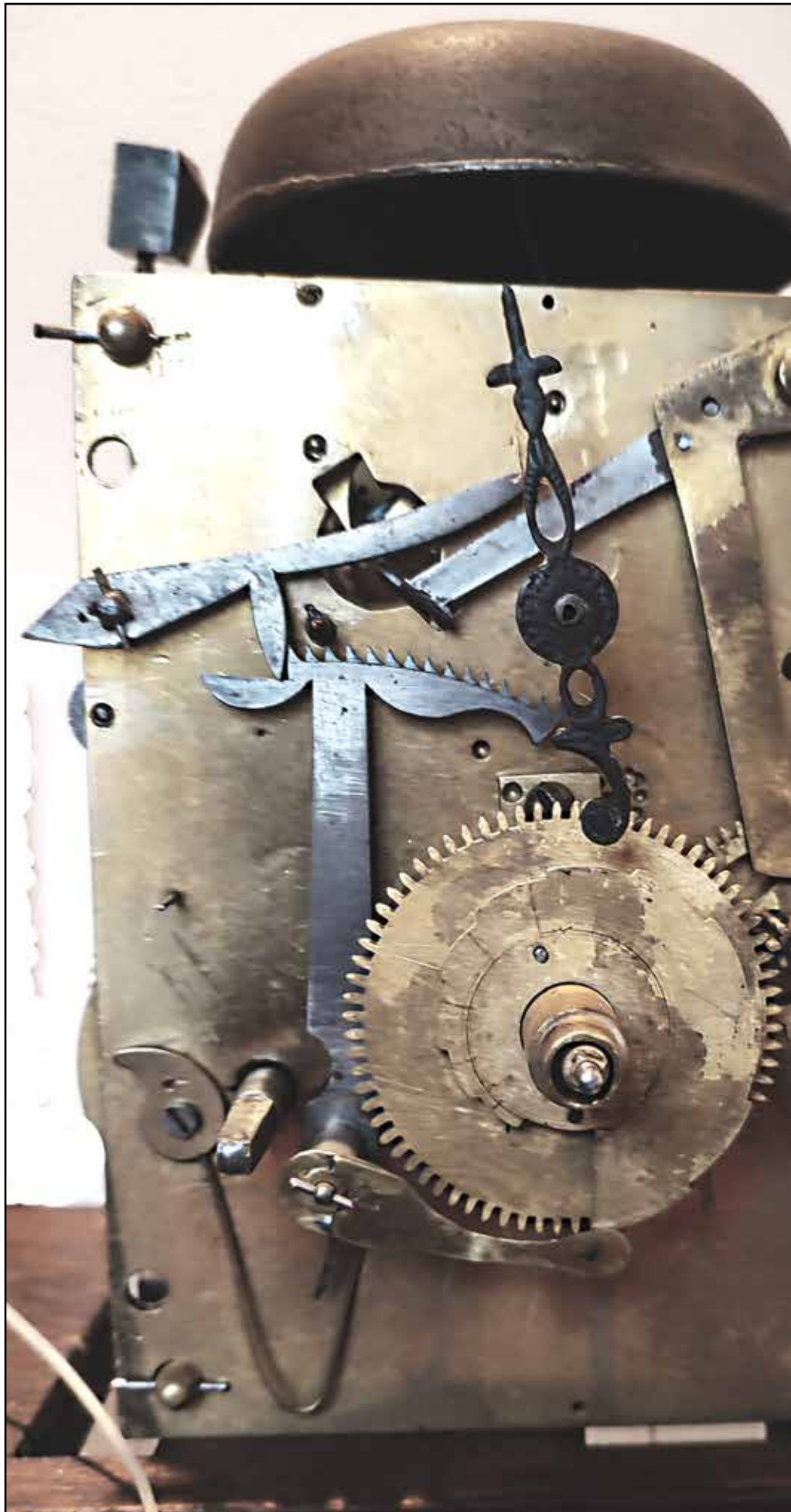




Figure 3 (left). The movement with a shaped rack.

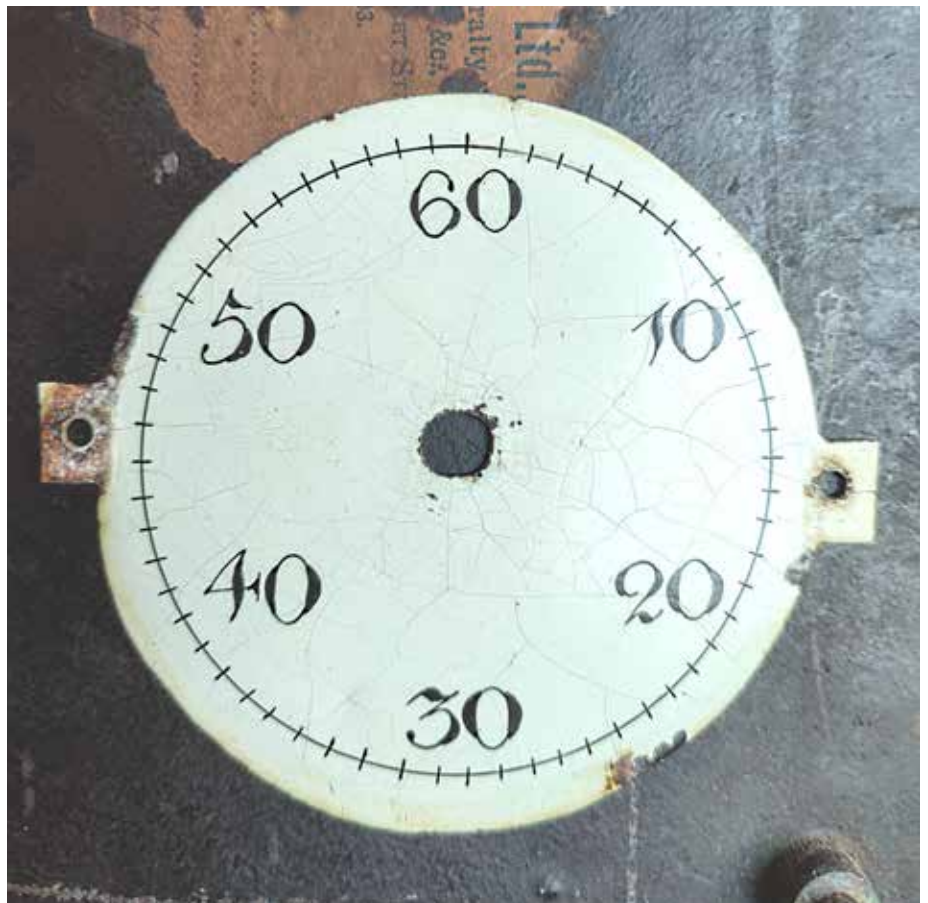


Figure 4 (above). The separate seconds dial fitted to the dial sheet.

Figure 5 (right). The seconds dial with tabs at the sides.



Figure 7 (above). Detail of a fixing post and taper pin.

Figure 6 (left). Aperture for the seconds dial from the rear.

Edward I, and worked as a watchmaker until about 1835.

The complete clock is shown in **figure 1**, housed in an oak and mahogany case with a swan-necked pediment. This was probably made in the East Staffordshire market town of Uttoxeter, where there were many cabinetmakers, with a number of them specialising in making clock cases, which were sold to retailers who would add the dial and movement, which were also bought from specialist manufacturers.

The dial of this clock, made by Walker & Finmore of Birmingham, dates from about 1810 and has upright Arabic hour numerals and Arabic minutes every quarter hour, with a rolling moon in the arch, **figure 2**. The dial is signed 'Edw^d Winstanley, Holywell' below the centre where a calendar was usually positioned. It is very similar to one illustrated on page 154 of *THE ART OF THE PAINTED CLOCK DIAL* by M F Tennant (2009, Mayfield Books). In particular the corner spandrels are of a high quality and show the Four Continents.

The eight-day movement, **figure 3**, has a standard layout typical of the early nineteenth century. The most noticeable feature is the attractive curved shape of the rack, and though it is quite distinctive who actually made the movement is not known.

So far it appears that we have an attractive clock with a high quality painted dial and a good movement that is not particularly noteworthy from a technical point of view. But when we look at the dial more closely it becomes clear that there is a very unusual feature, even unique for a painted dial, in the form of a separate recessed seconds dial. When looking at the clock from the front the separate seconds dial is not immediately apparent, **figure 4**, but when it is taken off its true nature is revealed, **figure 5**. It is a disc that sits behind a slightly smaller circular aperture in the main dial sheet, **figure 6**. Tabs either side of the disc fit over very small dial feet riveted to the main dial sheet and are held by taper pins, **figure 7**.

This separate seconds disc is now recessed by the thickness of the main dial, about 1.5mm or 2mm at the most. White paint around the rear edges of the disc and aperture show that the two components were painted separately, as might be expected. This type of seconds dial occurs on brass dials after the middle of the eighteenth century, but has never been recorded before on a painted dial. The brass dial examples were probably a design feature when the traditional seconds ring became regarded as old fashioned. The brass disc was silvered for clarity and to make it contrast with the matted or engraved dial centre, rather

than for the practical purpose of avoiding the hands catching.

But why was Winstanley's dial made like this, as it would have been more expensive to make? The only logical explanation is so that the seconds hand can be set back slightly to avoid it catching on the hour hand when it reaches the 12 o'clock position. If so why was this thought to be necessary? No other painted dials have this feature. It is unlikely to have been an innovation by the dialmaker, who would be more concerned with keeping unnecessary extra costs down, rather than increasing them for a dubious advantage.

The conclusion is that it was something that Edward Winstanley requested. Had he been having problems of hands catching on customers' clocks, or was he trying to set the hour and minute hands closer to the dial in an attempt to reduce parallax so the time could be seen more precisely? That said, the hands seem no closer to the dial than usual, so that explanation has to be disregarded. We may never know the actual reason, but it has given us another horological puzzle to ponder over. It appears to be unique, but like all such claims of uniqueness this will only be until another one is discovered.

Grateful thanks are due to Ron Lester for information on this dial and for the images reproduced here. 📷