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The Porrvis Clock of 1567 — The Earliest Surviving Domestic Clock Made in England

John Robey* & Leighton Gillibrand**

This article considers a Flemish-style Gothic clock, dated 1567, which is probably the earliest surviving domestic clock made in England. Details of the movement and its modifications, especially to the striking work, are described. The names of the clock's first owner and its maker are stamped on the dial in a very unusual manner and the type of punches that were used is discussed. The clock was made by James Porrvis, who has not yet been identified but was probably an immigrant clockmaker from Flanders, for John Webbe, a wealthy Catholic cloth merchant of Odstock Manor near Salisbury.

Introduction

The Elizabethan clock shown in Fig. 1 has been the subject of interest and discussion since an article on it was first published in 1967, exactly four centuries after it was made, and it has also featured in a recent book on lantern clocks.[1] It is an iron Gothic clock of modest proportions with transverse wheels and the uncommon feature for iron clocks of having a brass dial, stamped in a very unusual manner with names and a motto, along with an engraved date of 1567. One name is 'Jemes Porrvis', which has been regarded as that of an unrecorded clockmaker and as a result it is now known as the Porrvis or Purvis clock. The other name has been previously incorrectly interpreted as either 'John Were of Salisbire' or 'John Mere', but is now known to be 'John Webbe'. It has been postulated that it was made in Salisbury and to be the earliest known domestic clock made in England. If so it would be a very important link between the iron Gothic clock and the brass lantern clock, hence these claims need careful re-examination.

The clock has been in England for a very long time as testified by the English dates 'May 24th 1777', 'June 8th 1782' and 'Feb 29 1812' scratched in the same hand on the back of the dial. In the early twentieth century, and probably much earlier, it was in the Clement shop in Tring, Hertfordshire,[2] until it was sold in the middle of the century and taken to New Zealand. After the death of the owner it returned to England and was sold by auction in 1999.[3]

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1. G. Foster, 'An English Gothic Chamber Clock?', *Antiquarian Horology*, 5/9 (December 1967), 318–321; B. Loomes, *Lantern Clocks & Their Makers* (Ashbourne, 2008), pp. 10–12. It was also illustrated and briefly discussed in J. Darken and M. Hurst, *Time & Place* (AHS, 2006), p. 11.

2. John Clement 1770–80, Elizabeth Clement 1828, T. Clement & Co 1859, Clement & Sons 1866–74. The repair dates may have been made by the first of these clockmakers.

3. Christie's, South Kensington, sale Watches and Wristwatches, including 'The George Foster Collection' (lots 179–219), Wednesday 11 August 1999, lot 181.

Fig. 1. Front view of the Porrvis clock with the later pendulum escapement on the left-hand side. The bell and finial are probably later.

Fig. 2. Left-hand side showing the wheels of the going train at right angles to the dial, with the countwheel at the rear. Note the later escapewheel and pendulum crutch.

Fig. 3. Right-hand side showing the drive to the countwheel. The starwheel of the similar drive to the dial wheel is just visible.

As might be expected with a clock of this great age it has undergone much modification and loss of parts. Not only has it had the almost inevitable conversion of the original verge escapement with a balance or foliot to a pendulum and anchor pallets, but at some time the wedge holding the right-hand movement bar has fallen out allowing it and all the wheels of the striking train to be lost. Fortunately, since the countwheel, its drive pinion and starwheel as well as the strikework arbors were not pivoted in this bar, they survive. The frets, side doors, back plate and alarm that were once fitted are also missing. Despite this, enough remains to determine much of its original form.

In order to determine the origins of this clock it is necessary to discuss the stylistic features of its dial and frame, as well as the technicalities of the movement and its construction. Later modifications and missing parts do not make comparisons and conclusions straightforward, but it is hoped that these technical considerations are presented in a clear and logical manner.

The Movement

The frame of the movement (Figs 2–4) is comprised of four vertical corner pillars 6¾ in (174mm) tall set at 45 degrees to the sides, in the manner typical of iron Gothic clocks. Overall the clock is only 10½ in (265 mm) tall and 5¼ in (133 mm) square. The pillars have no decorative projections ('noses') in the centre but they swell out at the ends. There are no extensions to form finials, but while these may have been cut off at an early date there is no reason to suppose that this has been done. At the bottom is an open frame 4½ in (115 mm) square with vertical sides, and a sheet-iron top plate almost 5 in (125 mm) square. A dovetail slot at the bottom of each pillar hooks into the

Fig. 4. Rear view showing the countwheel with internal slots mounted inside the rear cruciform movement bar.

corners of the lower frame, while a small tenon near the top fits into a rectangular hole in the top plate and is held securely by a wedge (Figs 5–6). This construction, including the lack of, or only small, noses and standing on very short feet, is typical of Flemish and French Gothic clocks.[4] To avoid repetition subsequent references to Flemish clocks include those made in the adjoining areas of France.[5] Even without detailing the other differences between Flemish and Germanic Gothic clocks, the top plates with wedges (instead of open frames at both top and bottom) and the transverse wheels (which are not found on

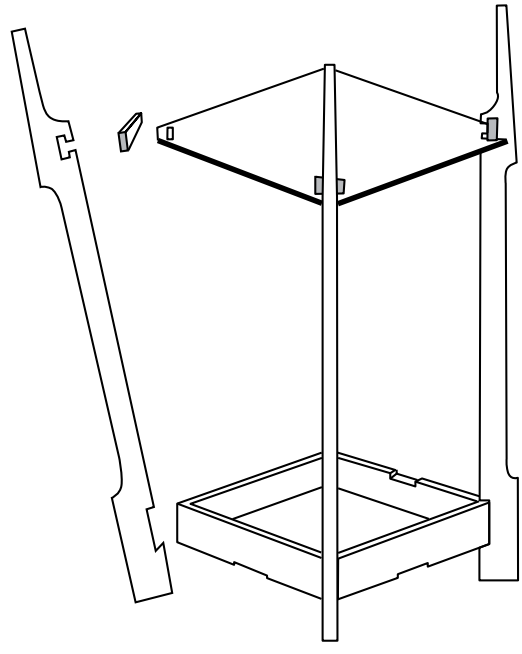


Fig. 5. The usual construction of Flemish-type Gothic clocks, with the corner posts held with dovetail joints to the lower frame and wedges on the top plate.

Germanic Gothic clocks) are sufficient to identify the Porrvis clock as being of the Flemish type.

The wheels of the trains are positioned at right angles to the dial and countwheel, with the going train on the left and the striking train on the right. The bottom of the central movement bar is fitted into a horizontal bar running from front to back. The side movement bars fit into dovetail slots on the lower frame. A bar for the countwheel and its starwheel drive from the striking greatwheel is hooked onto the lower frame in a similar manner to the corner pillars. It has cross arms with returns to support the arbor for the locking and countwheel detents. To allow room for the dial wheel and the now-missing alarm let-off disc the front movement bar sits back from the lower frame and is held on the

4. R. Schoppig, *L' horloge française à poids*, Part 1 (Paris, 1984), pp. 65–77. Of the twenty-eight clocks of a similar construction known to the authors, sixteen have transverse wheels and only eight have the wheels parallel to the dial, the remainder being either not determined or have had new wheel trains.

5. For a map of Flanders and the Burgundian Netherlands see E. Fraiture & P. van Rompay, 'Clock and Watchmaking in Belgium 1300–1830', *Antiquarian Horology* 33/1 (September 2011), 27.

Fig. 6. Top view showing the wedges holding the pillars to the top plate and the later anchor escapement. Empty holes indicate the location of the removed balance-wheel cock, frets and side doors. Note the broken horizontal hammer stop.

horizontal cross bar at the bottom. It is cranked forward at the top to support the dial and all five vertical bars are held to the top plate by wedges.

The rear bar also has a loop for hanging the clock on a wall. Slots on either side of the loop would allow a rear plate with a keyhole-shaped aperture to slip over it and be held in the slots. Spikes to hold the clock off the wall would have been fixed to the now missing backplate.[6] Small holes in the top plate and on the top edge of the lower frame indicate that doors (possibly of brass) once existed. There is strong evidence that these would have been fitted when the clock was first made as the surviving side movement bar is flush with the inner edge of the frame. This would have enabled the doors to close flush within the outer edges of both the top plate and the lower frame. This is not the usual construction of clocks with transverse wheels, where the lower part of each side movement bar sits outside the frame and would not allow a door to fit flush. Gothic clocks, either Germanic or Flemish, do not normally have side doors or a back plate.[7]

Pairs of holes, one larger than the other, near the front and side edges of the top plate (Fig. 6) indicate that decorative frets (again probably of brass) were once fitted with a rivet and a steady pin. Frets are not usual on Gothic clocks.

A hole at the top left of the dial indicates that an alarm was originally fitted. When the setting disc and its pipe were removed the large hole in the dial centre was bushed to support the smaller diameter of the hand arbor. As there is little room inside the frame for the alarm mechanism, it is likely to have been fitted on the outside of the backplate. The vertical alarm pallet and hammer arbor would have pivoted in blocks on the backplate and passed through a second smaller hole in the hanging hoop. Alarms were not often fitted to clocks with transverse wheels. On the few that are known the alarm is let off by a pin in one of twelve holes in the exposed hour wheel, the method used on Gothic clocks throughout Europe. However, a French Gothic clock by Mahiev dated 1596,[8] has a rotatable setting disk, but from the illustrations available it does not appear to be the same method as used on the Porrvis clock.

The Going Train

The wheels are of forged iron with separate rims and crossings, characteristic of iron clocks. The pinions are formed on the opposite ends of their arbors to the wheels, in contrast to most Gothic clocks, where they are usually at the same end of the

6. Two small chamfered slots on the inside top edge of the rear lower frame indicate where the rear plate was held at the bottom. An empty slot in the locking arbor indicates that there was once an arm that protruded below the frame at the rear to reset the strike sequence. This would have only been necessary with a movement enclosed by side doors and a backplate and is further evidence that these were fitted when the clock was first made.

7. Inevitably there is an exception. A special French Gothic clock with transverse wheels and the same frame construction as the Porrvis clock, made in 1596 by Mahiev of Coigny, Normandy, has painted iron doors with separate hinges. These doors overlap the top plate and lower frame. Offered at Christie's, King Street, London, 15 September 2009.

8. See previous note.

Fig. 7. The hand and the 8-tooth right-angle starwheel drive to the countwheel.

arbor or separated by a relatively short distance. The three-wheel weight-driven going train has a duration of approximately twelve hours between winding, typical of iron clocks and balance-wheel lantern clocks. The brass winding click acts on the crossings, as used later on English lantern clocks and thirty-hour longcase clocks. This is another feature of Flemish Gothic clocks and is different to many Germanic clocks. The greatwheel has the remains of a pin to let off the hourly strike (see later).

The second wheel is original, but the crownwheel and the balance or foliot escapement have been replaced by a brass escapewheel and anchor pallets. There was no intermediate stage of conversion to a verge escapement and short pendulum. The crownwheel pinion on its steeply tapered arbor was utilised for the later escapement, and it pivots in the bridge through which the verge originally passed. This conversion to a pendulum took place at an early date, probably in the late seventeenth century or in the early eighteenth century at the latest.

The hour wheel is not driven directly by the usual four-pronged pinion-of-report cut into the end of the greatwheel arbor. Instead a six-leaf pinion on the arbor engages at right angles with a six-toothed starwheel, a four-pronged pinion then drives the hour wheel. This arrangement is necessitated by the transverse wheels.

The counts of the going train are:

Escapewheel	[?]— 6
2nd wheel	54 — 6
Greatwheel	60 — 4
Hour (dial) wheel	48

This is similar to a balance-wheel lantern clock, although the latter normally has a greatwheel of 56 and a second pinion of 7. Hence with a similar crownwheel the balance of the Porrvis clock would have swung a little faster.

The Striking Train and Strikework

Despite the fact that only the countwheel, its right-angle starwheel-and-pinion drive, and the striking arbors survive, careful examination has revealed a great deal of information about the missing components. The strike is currently let off by a starwheel behind the dial wheel and the clock has warning, which is very rarely found on Gothic or Renaissance clocks. A major part of this investigation has been to determine the originality of these features.

The hammer pivots on a support riveted to the inside of the front movement bar with its spring riveted below. The remains of a horizontal hammer stop is riveted to the upper surface of the top plate. To allow for the hammer to be drawn back the fly was pivoted in small offset arms and since the fly aperture is accurately positioned this must have been the hammer's original arrangement. On clocks with transverse wheels the hammer often hangs on the bell frame and falls by gravity. With this method the hammer tail is at the rear of the movement and pivoted on the lower part of the frame with a pull wire to the hammer. There is no evidence for this arrangement, despite the present unconventional fixture.[9] The plain bell strap may be original, but this is not confirmed.

The countwheel has 78 teeth driven by an 8-leaf pinion via a similar starwheel to that on the going train (Fig. 7). This 78/8 ratio is the same as a number of other

9. A small slot in the lower rear edge of the frame has grooves for a taper wedge but is not large enough for a hammer-tail support. It probably held a guide for the alarm rope and to prevent the weight jamming in the pulley.

Fig. 8. Rear movement bar with the countwheel pivoted on the inner face and the locking arbor pivoted between the end returns. The countwheel detent hangs down from the centre, the locking detent points upwards on the right, while the arm that once held the nag's head is on the left. Note the dovetailed hook at the bottom.

Gothic clocks with transverse wheels, compared to 39/4 for an English lantern clock. The greatwheel is likely to have had 64 teeth and eight hammer pins. There are several options for the locking wheel, including 64, 56 and 54 teeth, all with an 8-leaf pinion.

The countwheel pivots in the rear movement bar (Fig. 8), with the horizontal arbor carrying the locking and countwheel detents being pivoted at the ends of the cross arms. With transverse wheels the countwheel detent swings at right angles to drop sideways into the internal slots. Offset crossings on the countwheel, as found on iron clocks with the normal layout, are not necessary. A separate horizontal arbor at right angles to the locking arbor carries the lifting piece, warning detent and a link to raise the locking arbor. At the rear it is pivoted in a support hanging down from the top plate and at the front in a support riveted to the lower frame.

Fig. 9. The dial wheel and starwheel, which is probably a little later.

At present the lifting piece is raised by a twelve-pointed starwheel (Fig. 9), but clear evidence of a pin on the going greatwheel indicates that this was not the original arrangement. Detailed observations, which are summarised here, show that there have been two different systems for letting off the strike.

- Originally there was a nag's head fitted on an arm that now only serves as a link piece. This is a one-arbor system with the lifting piece and its nag's head, locking detent and countwheel detent all on the same arbor.[10] Overlift would have been provided by the slope on the locking detent riding on the hoop. The arrangement with transverse wheels is shown in Fig 10.[11]

The nag's head could not have been lifted

10. J. Robey, 'Nag's Head Striking', *Horological Journal* November 2011, 494–97.

11. J. H. Leopold , *The Almanus Manuscript* (1971), p. 22.

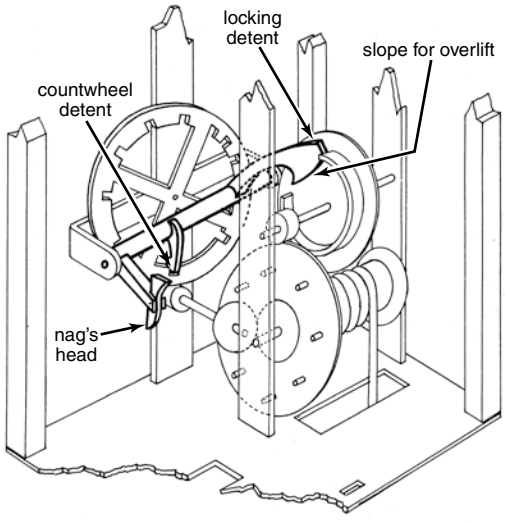


Fig. 10. Layout of the locking and countwheel detents and nag's head on a Gothic clock with transverse trains. The going greatwheel with a pin to let off the strike is not shown. (Based on *The Almanus Manuscript*)

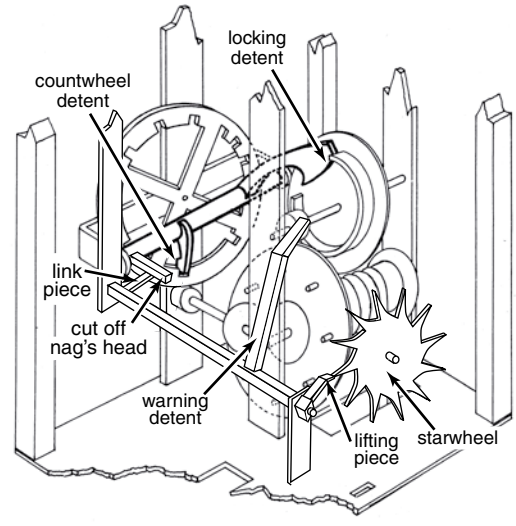


Fig. 11. Arrangement of the levers on the Porrvis clock after modification to warned striking and the addition of a starwheel to let-off the strike. Schematic only and the third (warning) wheel is not shown. (Based on *The Almanus Manuscript*)

by the present starwheel behind the dial, as not only are they on opposite sides of the movement, but the correct operation of a nag's head by a starwheel at right angles to it is not possible.

- The nag's head was cut off so that its arm now acted as a simple lifting piece via a link. A square-section warning arbor was added on the left-hand side of the movement, pivoted at the rear in a vertical support and at the front in a horizontal support riveted into a dovetailed notch in the front movement bar. At the rear a short arm lifted the link on the locking arbor while at the front a warning detent was positioned to intercept a pin on the third wheel.

As it was not practical to operate a lifting piece on the new warning arbor from the pin on the going greatwheel this was cut off and a twelve-pointed starwheel was added to the hand arbor. The dial wheel was now attached via a friction spring in the manner that became the norm for lantern clocks and other single-handed clocks. The starwheel raises a lifting piece at the front of the warning arbor. For some reason — perhaps it became loose in its dovetail fitting or a more convenient method of removing the arbor was needed — the horizontal support was replaced by a curved vertical one riveted to the front of the frame (Fig. 11). This support is rather flexible so that the arbor may be removed without disturbing the front movement bar. The new support necessitated moving the left-hand dial lug (see later). Whether the person making the modification was unused to the Continental nag's head system of striking or the convenience of a moveable hand was the overriding consideration is not known, but the latter may have been the main reason.[12] These changes were done at a very early date.

The Dial

The rectangular brass dial (Fig 12), 5¼ in (135 mm) by 4⅛ in (106 mm), sits neatly between the pillars, lower frame and top plate of the movement. It is held with a riveted brass lug passing through a rectangular hole near the top of the front movement bar and locked with a taper pin (Fig. 13). Two holes near the bottom edge of

12. For a discussion of the use of a fixed hand on early clocks see J. A. Robey, 'A Large European Iron Chamber Clock', *Antiquarian Horology* 33/3 (March 2012), 335–46.

Fig. 12. The dial showing the central bush to compensate for the removed alarm.

Fig. 13. Dial rear.

the dial indicate the position of the original fixings that would have hooked over the lower frame. The modified position of the front support for the warning arbor riveted to the front of the frame necessitated moving the left-hand iron lug further to the right to its present position. The right-hand insert is now missing, but a witness mark on the back of the dial shows where it once was. The lack of a similar mark on the left-hand hole indicates that its lug was removed at an early date. The single hour hand is probably original with no tail, but this may have been cut off when the alarm was removed.

The centre is engraved with a simple twelve-pointed star. The sloping lines of the star stop at a central circle, which may indicate the size of the original alarm disc. The corners are not decorated.

The very narrow chapter ring, only 7/16in (11 mm) wide, is delineated by a single inner circle and a double outer circle. There is no separate silvered chapter ring. Examination of the rear of the dial shows that the Roman hours have been stamped, not engraved, using just four different punches. One punch was used for I, II, III, etc, as well as the cross at 12 o'clock, two different punches with opposing serifs produced the sloping sides of the V, while a single punch with a shallow U produced the X. A further punch was used for the small five-pointed half-hour stars.

Above and below the chapter ring are punched names and a motto as well as an engraved date (Figs 14 & 15). These are the most intriguing and puzzling features of this clock.

At the top is

MR IOHN WEBBE OF SALSBIRE

which transcribes as:

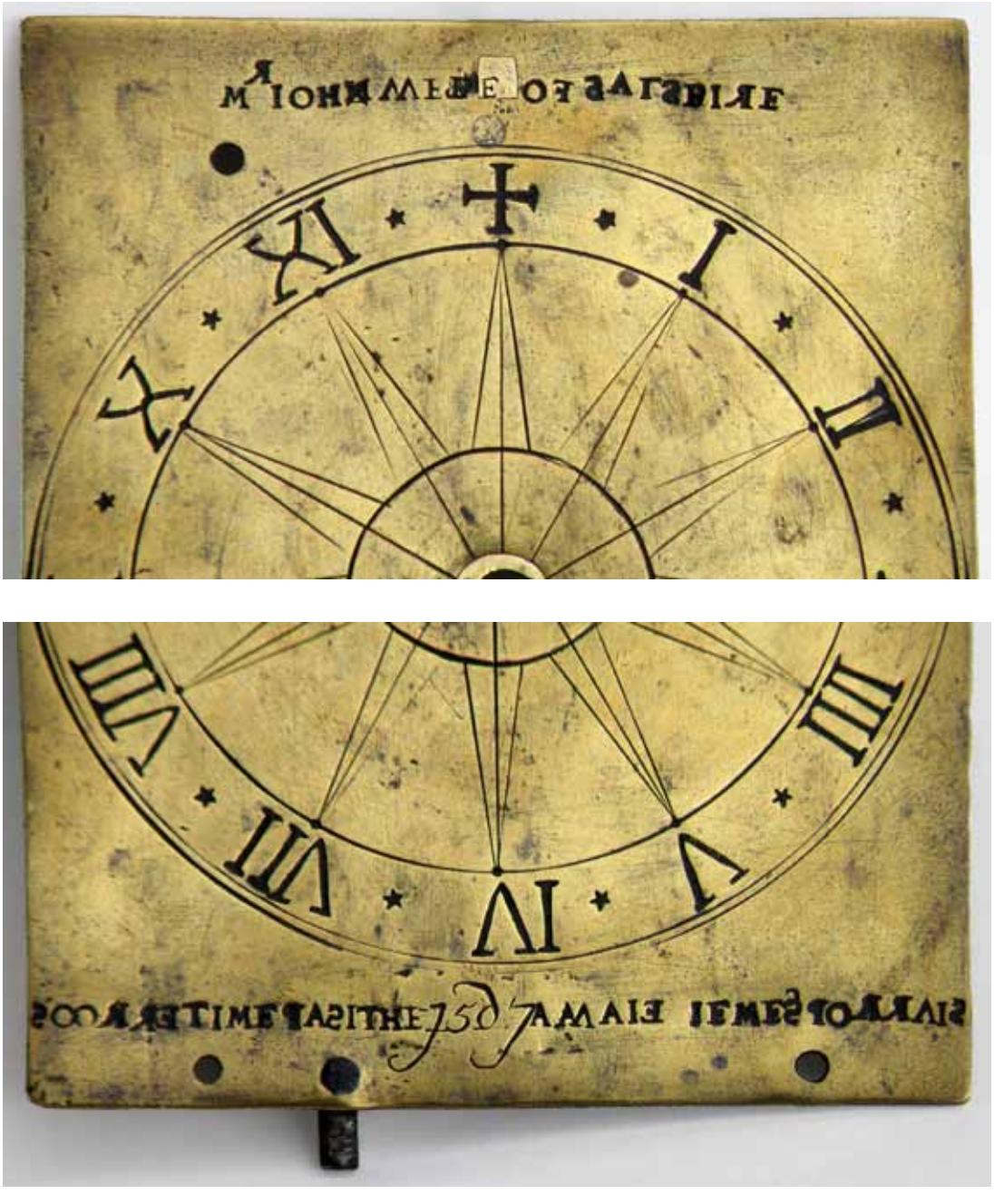
MR IOHN WEBBE OF SALSBIRE [Salisbury].

Near the bottom is

SOO ARE TIME PASITHE AWAIE IEMES PORRVIS

which transcribes as:

SOO ARE TIME PASITHE AWAIE IEMES PORRVIS



Figs 14 & 15 Details of the punched inscriptions, the punched chapter ring and the engraved date 1567.

While the letter forms are correct for the period of the dial, they have not been stamped with conventional punches having 'wrong-reading' raised letters to give correct 'right-reading' indented characters. Instead, right-reading punches were used to produce wrong-reading letters. This type of punch has a specialist use in die sinking, where, confusingly, they are called reverse punches. Die sinking is the craft of making

13. Information from Dave Greenhalgh of Grunal Moneta, who makes replica historic coins using traditional methods.

Figs 16-18 Typical lead wool seals. (Photos: D. Powell)

the dies, moulds or punches to produce objects with raised letters, numbers and decoration, such as wax seals, coins, tokens, buttons, etc.[13] The dies would be engraved and the letters and number punched into the end of a steel bar which was then hardened and tempered. These dies were also used for stamping the lead seals that were used extensively on bales of cloth, wool, etc, as part of a quality-control system (alnage) to indicate ownership, length and that dues and taxes had been paid.[14] Figs 16–18 show typical lead wool seals stamped with dies which were probably made with the type of reverse punches used on the Porrvis dial.

Although these seals are common, examples of both the master punches and the intermediate dies are very rare and none from this period are known. In the sixteenth century Salisbury was rich from the wool trade and there may have been specialist craftsmen making these dies for the wool merchants to stamp their lead seals. It is likely that a set of reversed letter punches was acquired by the person making the dial, but he was clearly not experienced in their use and in an attempt to make the words appear more readable almost the opposite has occurred.

The symmetrical letters A, H, I, O, M, T and V look quite normal. The others all appear as 'mirror writing', but in order to achieve greater realism E and B are also upside down. V (representing U) is upside down when it would have been better not inverted, and while L has been inverted it looks odd whichever way it is presented. S is sometimes inverted, sometimes not. W has been formed from two Vs rather than from a single punch — in any event it has been inverted, making it look more like an M than W, yet there is already an M. In the lower inscription the inverted double V is clearly intended to be W, which would make the name at the top start with W not M. Careful examination reveals that what appears to be R stamped twice in this name is actually B, stamped once normal then overstamped inverted. The name is thus John Webbe, not Mere or Were.

In the centre of the lower inscription is engraved the date 1567. This implies that number punches were not available, but close inspection reveals that an attempt had been made to use the same punches that have been used to form the Roman numerals of the chapter ring to signify the date. However, this has been aborted, probably due to it occupying too much space. The back of the dial was punched out to remove what had been started, the smaller engraved date added and the punched inscription continued. During the stamping of the motto once the date had been reached and it was realised that this now had to be done by hand, there was no going back and replacing what had already

14. D. Powell, *Lead Token Telegraph*, Issue 15, June 2006, pp. 1–2 (available online). These seals are regularly found by metal detectorists and date from medieval times to the nineteenth century.

been done with a fully engraved inscription, apart from scrapping the whole dial. Brass, which at this period had to be imported from the Low Countries, was very expensive and even a rich woollen merchant may have baulked at further expense, particularly as (as we shall see) he was already spending a large sum building a new manor house. There is very strong evidence, both circumstantial and actual, to confirm not only that this date was the clock's year of making, but also that the engraving and punched letters were done at the same time. While it might be thought that the dial originally had only the engraved date and the punched inscription was added later, very careful examination of both the front and rear of the dial confirms that the engraving and punching were done contemporaneously,

But why use these punches in the first place? Can the naïvety be explained by an illiterate clockmaker[15] copying a written message using stamps that did not correspond to what was written down? The dial is usually the most important visual element in any clock, so why skimp on such an important feature? Clocks were so rare and expensive at this early date that they would only be owned by the wealthy — and the owner of this clock is known to have been very prosperous — who would have expected better work than this. There are many questions, but few answers.

James Porrvis and John Webbe

Iron clocks are rarely signed or dated so the inclusion of names, a place and a date is of special significance, especially at such an early date and with an English name and town.

While there is no Jemes Porrvis (James Purvis?) recorded in Salisbury at this time, variants of this surname, such as Pourbus, Porvis and Pourvis are known Flemish names.[16] Since this clock has many typical Flemish features, as well as some which were used later on English clocks, it is reasonable to speculate that James Porrvis was an immigrant Flemish clockmaker working in Salisbury and with an anglicised surname. While no Flemish craftsmen are recorded in Salisbury at that time, a French mason carved chimneypieces at Longleat House in the 1560s, so foreign craftsmen were not unknown in the region. A William Purves, clockmaker and repairer (but probably primarily the latter), working in Edinburgh, Stirling and Dundee in 1539–48 who probably died before 1560,[17] is unlikely to be related or connected with the maker of this clock.

Of John Webbe, the clock's first owner, a great deal more information is known as he was a politician, businessman and land-owner. He was born about 1530 into a very wealthy and influential family of Salisbury cloth traders with property in Hampshire, Cornwall and Wiltshire. His father, William, was appointed Mayor of Salisbury three times (1533, 1534 and 1553) and served as Member of Parliament in 1529 and 1536. As a staunch Catholic it is likely that the tension felt after the appointment of the reforming Bishop Nicholas Shaxton in 1535 motivated William Webbe to consider relocating beyond the city walls. In 1540 he purchased the Manor of Odstock, lying approximately 2½ miles south of Salisbury.

John Webbe, who remained in Salisbury, married a daughter of John Towerson. They had a child who died in infancy and it is likely that his wife died soon after as there is no mention of her when he inherited Odstock in 1553. In 1555 he married Anne Wylford and set about rebuilding the manor house. Anne produced an heir who they named John in 1556, followed by his

15. At this period literacy rates were very low. For example in parts of northeast England about 80 per cent of tradesmen were illiterate, although literacy was much higher further south. See David Cressy, 'Social status and literacy in North East England', *Local Population Studies* 21 (Autumn 1978), 19–23. A relatively high status tradesman such as James Porrvis is likely to have been semi-literate, able to read but struggling to write.

16. Information from Lode Goukens, Antwerp. For instance Pieter Pourbus (1523–84) was a noted painter working in Bruges.

17. D. Whyte, Clockmakers & Watchmakers of Scotland (Mayfield Books, 2005), p. 240.

brother, William, in 1557. The marriage went on to produce four further children (denoted by six subsidiary figures on their monumental brass), however it is not clear if they survived beyond childhood.

Shortly after the accession of Elizabeth I to the throne in 1558 laws of Religious Supremacy and Uniformity were introduced which made it compulsory for all to attend Protestant services; those who refused were labelled recusants and were liable to fines. Initially there appears to have been a degree of tolerance towards Catholics, who were still left to practice their faith relatively freely as long as they attended official services and were discreet. It was at this time that openly recusant John Webbe was permitted to serve as both Member of Parliament for Salisbury in 1559 and Mayor in 1560. However, as bloody hostilities broke out in France, and Philip II moved to quash the Calvinist conversion of the Netherlands, tolerance towards Catholic recusants at home worsened. By the time John Webbe completed the rebuilding of Odstock, the situation was such that the house was becoming an important local refuge for the survival of the Catholic faith.

A stone plaque inscribed 1567 beneath the monogram for John and Anne Webbe is still attached to the surviving wing of the original manor house at Odstock. A document from the same year also survives[18] which records John Webbe's residence there (land taxed at £40) as well as his recusancy. This date probably marks the completion of the rebuilding of the house and is the same as that on the clock. This suggests that it was commissioned by John Webbe for the house on completion of the building work.

The reason why John Webbe went to the trouble and expense of having a clock made for his newly completed manor house is probably closely connected to the fact that the house needed to function as a place of worship; indeed the building is believed to have been built incorporating a chapel for use by the family and other Catholics.[19] In order for the daily Liturgy of Hours to be maintained knowledge of the time throughout the day would have been necessary. As Odstock is too far from the city for the public clocks to be heard, a domestic clock would have been required. The clock dial itself perhaps holds a clue as to its original purpose in that the XII numeral has been replaced by a cross. This serves to symbolise the time of the sixth-hour prayer (Sext) which is recited immediately after the Angelus at noon, termed 'Gods hour', and traditionally recalls the time of the crucifixion of Christ.

Fig. 19 Memorial brass of John Webbe in St Thomas' Church, Salisbury, who died in 1571. The complete brass includes his wife and their six children.

John Webbe was not able to enjoy either his newly rebuilt manor house or his clock for long, as he died only four years later in 1571 in London, aged just forty-one years of age. His body was returned to Salisbury

18. Raleigh St Laurence, 'The Fortunes of a Recusant Family: the Webbs at Oddstock', *The Hatcher Review* Vol. 4 (1995), Issue 39, p. 4.

19. As suggested online http://www.salisburycatholics.org/osmundhistory.php.

for burial in St Thomas' Church, where he lies beneath a memorial brass in the nave (Fig. 19).

In his long will he left Odstock and his fortune to his heir of the same name,[20] but although there are several pages devoted to granting numerous named people lengths of cloth to make mourning clothes to wear at his funeral, there is no specific mention of either his clock or his clockmaker. The survival rate for probate inventories of this period is not high and one for John Webbe is not known.[21] Whether the clock appears in any later inventories has not yet been pursued.

Over the next 200 years the clock would have been witness to the extraordinary plight of a wealthy family of Catholic recusants. The strike train was perhaps modified to incorporate warning during the time of John Webbe II (1556–1625), who continued the family's staunch support of the Catholic cause and was knighted by James I in 1604. However his marriage to Catherine Tresham (of Rushton) led to the family being effectively put under house arrest in response to the Tresham family's implication in the Gunpowder Plot the following year.

By the outbreak of the Civil War the manor of Odstock had become a substantial Catholic refuge, known to harbour both secular and Jesuit priests who conducted Mass in a chapel built adjacent to the manor house disguised as a barn. Naturally John Webbe III (died 1680) pledged his allegiance to the King and was subsequently created Baronet in 1644 'as reward of his family's having both shed their blood in the King's cause and contributed as far as they were able with their purse in his defence'.[22] This would have been little consolation when his land interests in Wiltshire were sequestered in 1646. The Restoration brought better times for the Webbe family, who managed to regain some of their property lost during the Commonwealth and maintain their status. It was perhaps at this time that the clock was upgraded from balance and foliot regulation to the newly introduced anchor and long pendulum.

During the eighteenth century the clock would have witnessed a period of prolonged pressure on the Webbe family, mainly from powerful neighbouring Protestant landowners. In order to retain their wealth and position three generations of heirs sought to marry wealthy heiresses and co-heiresses, however by the end of the 1760s the family was in crisis with four of the 5th Baronet's children dying in infancy, leaving him with no male heir. His daughter Barbara (the only surviving issue and heir) moved away from Odstock and subsequently married Anthony Ashley Cooper the 5th Earl of Shaftsbury. In 1780 Odstock Manor was purchased by the Protestant Earl of Radnor and absorbed into his substantial Longford Castle estate. The house itself was demolished leaving only one wing standing, presumably to provide accommodation for tenant farmers.

It is not known what happened to the contents of the house at this time, but it is probable that they were dispersed to other properties belonging to the family. Remarkably, it appears that John Webbe's clock (which would have been 200 years old at this time) was in still in a serviceable condition. Repairer's marks to the rear of the dial indicate that it was regularly maintained in the same workshop from 1777 up to at least 1812.

The Porrvis Clock and the Development of English Clockmaking

While the first clocks made in Britain were, as might be expected, installed in major cathedrals and royal palaces, they were often made by immigrant clockmakers from the near Continent, where their skills had been developed at an early date. Even by the sixteenth century clocks were primarily only made for the Church and Royalty and

20. The National Archives, available online.

21. No inventory exists in either The National Archives or the Wiltshire and Swindon Archives.

22. Arthur Collins, *The English baronetage: containing a genealogical and historical account …*, (London, 1741) Vol. 2, p. 158 (available online).

there is very little documented evidence for English makers of domestic clocks, most of which were still largely imported. One exception occurs in 1526 when William More, the Prior of Worcester, who had previously owned a domestic clock that had had to be sent to London for repairs, bought a new one:

> At Worcester — Item to Walter Smyth for ye makyng of a new lytull clock to convey to our manere … 41s, ye case 4d.

The case may not have been to display the clock, but rather for its safe transport (from London?) 'to our manere [manor]'. Walter Smyth was also referred to as 'Walter Marsshe ye clockemaker', and he even did surgery and applied plaster to the Prior's arm. The clock was still known in 1534 as 'my litel clocke' when it was at Crowle Court just outside Worcester, the Prior's private moated manor house.[23] Other very early domestic clocks may have been made by indigenous Englishmen, but there are either no records or the clocks have not survived and most of those that have been claimed as English are more likely to have been imported. Hence the Porrvis clock with its mixture of Flemish and 'English' features is an important survival. It is reasonable to deduce that this clock was made in England by an immigrant Flemish clockmaker working in Salisbury. To put it in an historical time frame it was made in the same year that Mary Queen of Scots was imprisoned, when Queen Elizabeth I had been ruling Britain for just nine years, William Shakespeare was only an infant, and when the threat of the Spanish Armada was still twenty years away.

What was produced was a typical Flemish weight-driven iron Gothic clock, albeit of small size, but incorporating features that were being introduced in the more fashionable Renaissance spring clocks of the period and eventually adopted by indigenous English clockmakers in the new brass lantern clocks. These features include:

- a brass dial instead of painted iron, held close to the frame instead of on supports riveted to the front movement bar
- side doors hinged within the frame and frets (possibly both of brass) and a rear cover plate
- an alarm with a setting disc instead of a pin in one of twelve holes in the hour wheel
- wheels and pinions at opposite ends of the arbors instead of closer together
- the hammer striking the inside of the bell rather than a hammer pivoted on the bell-frame and operated by a wire link as often, but not exclusively, used on clocks with transverse wheels. An internal hammer is usually necessary with an enclosed movement.[24] The hammer stop on the top plate is found on a few lantern clocks.
- the counts of the going train are similar to those used later on English lantern clocks, especially the 48-tooth hour wheel driven by a 4-pronged pinion of report. Flemish Gothic clocks commonly have an hour wheel of 72 driven by a pinion of 6. Not surprisingly, since the countwheel is of a different construction to that of a lantern clock, the counts are different.

At a very early date it was converted to warned striking, which was slowly starting to become more widely used following its introduction in Italy about 1490.[25] When English clockmakers, most of whom worked in London, began to make their own domestic weight-driven clocks they adopted and adapted the best designs that were available to them. The basic wheel arrangement was used, but without the unnecessary complications of the transverse layout. Brass replaced iron for frames, movement bars, wheels, dial, doors, frets and bell straps, with decoration in the form of engraving, turned pillars, finials and feet. By the time the earliest lantern clocks came along around the end of the sixteenth century, warning was well established and

23. C. F. C. Beeson, 'Some Tudor Clockowners', *Antiquarian Horology*, 4/3 (June 1963), 86–88; p. 87.

24. An alternative, only occasionally found on Gothic clocks, is a vertical pivoted hammer shaft.

25. J. A. Robey, 'Leonardo da Vinci and the Earliest Known Clocks with Warned Striking', *Antiquarian Horology* 33/6 (December 2012),775–85.

it was used almost exclusively (apart from the much later flirt) in preference to the nag's head. The latter continued to be used in the Germanic states and the Netherlands for another couple of centuries.

The Porrvis clock is the only surviving domestic Gothic clock that can be said to have been made in England, albeit by an immigrant Flemish clockmaker, and hence it is an important link in the development of English clockmaking. It is clocks like this one and those by Nicholas Vallin, who was also from Flanders but working in London at the end of the sixteenth century, that provided the inspiration for the characteristically English style of clock that was eventually developed here. The Porrvis and Vallin clocks cannot be perhaps regarded as transitional lantern clocks, but they do include some elements that were adopted by the makers of the earliest English domestic clocks.

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