

CARTER MARSH & Co.

SOME
EXCEPTIONAL
ENGLISH CLOCKS

Tho: Tompion. Londini Fecit

CARTER MARSH & CO.
FINE CLOCKS AND WATCHES

Some Exceptional English Clocks

by

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Some Exceptional English Clocks

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Edward East (1602-c.1695)

Edward East was the longest living of the important London clockmakers of the 17th Century and one of very few Londoners who served as Master to two Companies. East was baptised in 1602 in Southill, Bedfordshire and by 1618 was apprenticed to Richard Rogers of the Goldsmiths' Company. He was made free in 1627 and in the same year he married Anne Bull, the daughter of one of the leading London watchmakers, whose family business had started in the 1570s and in the previous generation had provided two royal makers, John and Randolph Bull, to two monarchs.

Edmund Bull (1585-1644) was an astute businessman, running workshops outside the jurisdiction of the city in Ram Alley as well as within and, by marriage, East became heir to one of the most important watchmaking dynasties in London. For practical reasons, it is likely that Bull encouraged East to join the newly incorporated Clockmakers' Company in 1632, whose success was initially uncertain. By then, East was running Bull's Ram Alley manufactory, employing the very *foreigners* the company was trying to control, despite this East became the youngest of the ten original Assistants. As the Clockmakers' influence and control grew East was to become Master twice in 1645 and 1653, however he never gave up his involvement with the more influential Goldsmiths' and eventually made Prime Warden, the equivalent of Master, in 1671.

In 1644, as the First Civil War (1642-1646) intensified, Edmund Bull died leaving East as the primary clockmaker in Fleet Street, but also increasingly prominent in the Goldsmiths' Company. It is often quoted that Edward East was a Royalist, but this has proved a somewhat simplistic view; the Goldsmiths' were key financiers of the Roundhead Army and had invested over £17,000 in the Parliamentary cause, not only is there no evidence of East's objection but he was later to take ownership of property in West Meath, Ireland, as repayment of a personal loan to Cromwell's army. In contrast to Fromanteel, it appears that East was more politically astute by avoiding vocal support of a Republic or the Commonwealth.

East remained in London during the First and Second (1648-1651) Civil Wars, expanding his business

and taking full advantage of opportunities. In the winter of 1648/9 he took what was perhaps his most poignant commission, an alarm watch for the imprisoned King, Charles I, which although dispatched via the Earl of Pembroke on 17th January went missing during delivery. By the time of the trial three days later, the watch could not be traced and the king remarked *Ah! Had he not told the officer it was for me, it would have probably been delivered: he well knew how short a time I would enjoy it.* Charles I was executed on 30th January 1649.

East's business was flourishing: as well as controlling the premises left by Edmund Bull, including *The Musical Clock* in Fleet Street, East had acquired a tenement and shop in St Clement Danes. In 1647 East was made 'Treasurer' of the Clockmakers', becoming its Master in 1653 for a second time. By 1657 East was also made 4th Warden of the Goldsmiths, and given his duties he required several managers working to his command. We know of his brothers, James and Jeremy (by now running Ram Alley and able to use foreign workers) and his son, also James, plus a small army of journeyman and apprentices.

In 1658, Ahasuerus Fromanteel pioneered the introduction of the pendulum in London, stealing a march on his competitors, but by the early 1660s East was also producing pendulum clocks. Initially, unlike his rival's, these evolved out of his traditional fare of horizontal table and lantern clocks; the wheel and pinion-work was heavy, the motionwork floating and the plates pinned to the rear. These were housed by English cabinetmakers, interpreting but not following the refinement of Fromanteel's architect designed, Southwark joiner-made, cases. These early pendulum clocks are often referred to as 'East school', which includes makers such as John Hilderson and Edward Stanton.

Having prospered conspicuously during the Commonwealth, with the restoration of Charles II in 1660, East moved seamlessly into prominence as clockmaker to the king. Although not a lucrative position, it bestowed royal approval at a time when status was highly important, and by 1662 another warrant was issued making his son James clockmaker to the Queen. Thus East cemented the reputation of his dynasty and by the mid 1660s the 'East school' had also caught up technically with the

'Fromanteel school' and were producing clocks of equal refinement to their rivals; with lighter wheel and pinion-work, bridged motionwork and lighter plates latched to the front (see East's miniature cocuswood longcase overleaf). Now in his 60s, East was able to supplement his workforce with apprentices taken through his own ex-apprenticed journeymen, while also continuing to take apprentices through both Companies, the most celebrated of these was Henry Jones (1642-1695), who gained his Clockmakers' freedom in 1663.

In 1665 London experienced the worst outbreak of bubonic plague that century and just as the city was recovering, the Great Fire took hold in September 1666. Two of East's properties, Ram Alley and *The Musical Clock* in Fleet Street, were destroyed and it appears East was forced to retreat to his property in St Clement Danes, which had escaped destruction.

Over the following years it appears East's son James became increasingly central to the business. As well as jointly holding the royal warrant, the accounts of Sir Thomas Clifford show payment on 26 August 1671 of *£34 for a pendal clock and watch to Mr East junior*. While James managed the business, Edward East was again made Prime Warden of the Goldsmiths' Company in 1671. Now almost 70, in that year the Clockmakers' applied for a coat of arms and in the application he was described as *Edward East, the only person now living of those mentioned in the said Letters Patent of Incorporation of 1631*.

The London Gazette of 12 September 1672 records an advert from East *...whoever shall give notice of this Watch to Mr Styles the Goldsmith in Covent Garden, or to Mr East the Watch-maker at Temple bar, shall be extraordinary well satisfied for their pains...* indicating East was now trading at Temple Bar. With the business at the height of its fame and succession seemingly secure, tragedy struck as his eldest son James died in 1674. James's untimely death gives us a snapshot of the wealth the Easts had accumulated, and his estate was valued at the huge sum of *£2027 10s od*. He was owed over *£1350* by wealthy debtors; the King and Queen, the Duke of Richmond, the Earl of Craven, Mr Rosewell the Queen's apothecary, and the Chancellor of the Exchequer, Sir John Dunscombe. As was often the case at this time, the vast majority of

debt was from the Crown.

Now in his 70s, we see renewed evidence for Edward East at the helm of his business and he again took apprentices, whilst the influential post of Royal Clockmaker, held jointly by Edward and James, was offered in 1674 to Robert Seignior (1645-1686) in reversion on the death of Edward East. This might indicate that Seignior took over management of East's business, thus allowing East at some time after 1674, to move out to Hampton on the outskirts of London.

In the event, East was to outlive Seignior by nearly ten years, but his business continued most probably under management. It is clear that good relations continued with East's former apprentice Henry Jones and in 1693, East and Jones placed *£100* in trust with the Clockmakers' to pay five freemen or their widows, twenty shillings per annum. When the donation was recorded it was recommended that *...the Master and Wardens do go to Mr. East and give him hearty thanks for his charity*. This is the last record of Edward East alive and by now 91 years old, he was at an extraordinary age for the time. He died between that date and the proving of his will on 23 February 1696, most likely in late 1695.





Edward East, London
Circa 1668

*A fine and rare Charles II cocuswood-oyster
veneered and gilt-brass mounted miniature
architectural striking longcase clock*

Provenance:

Sir John Prestige Collection;

Sotheby's, London, The SE Prestige Collection, 29 April 1968,
lot 68 (£7,000) to Garrard;

Sir James Cayzer Bt., Kinpurnie Castle, Blairgowrie;

Christie's London, 23 May 2012, lot 350 (£323,000);

The Keith Roberts Collection, inventory no.7

This superb early architectural clock was produced within a few short years of the first conventional longcased clock, The Norfolk Fromanteel of c.1660-62. By this time East was producing verge movements of equal sophistication to his rival and, in this instance, he spared no expense, specifying the unusually small case to be veneered in exotic cocuswood from recently captured Jamaica, laid in oysters within eye-catching lozenge patterns.



CASE

The miniature architectural case with rising hood and a triangular pediment with a gilt-brass cartouche mount in the tympanum above the plain frieze, which is supported on multi-piece gilt-brass capped Corinthian columns with matching rear quarter columns. The sides of the hood are glazed, above a deep convex throat moulding and a full width rectangular fielded panel trunk door framed within elaborate mouldings with cocuswood oysters inlaid in lozenge patterns and a gilt-brass eagle-head escutcheon to the door lock. The trunk sides and base with conforming cocuswood inlays, the restored plinth supported on later bun feet.

Height: 5 foot 8 inches (173 cms)

*Although the term 'miniature' is not defined, it is generally used for longcase clocks under six feet high. Standing just 5 foot 8 inches high this clock is small even by the standards of the early architectural period in English pendulum clockmaking. See R. W. Symonds, *The Rare Grandmother Clock*, *Country Life Annual* 1955, on pages 112-115.*

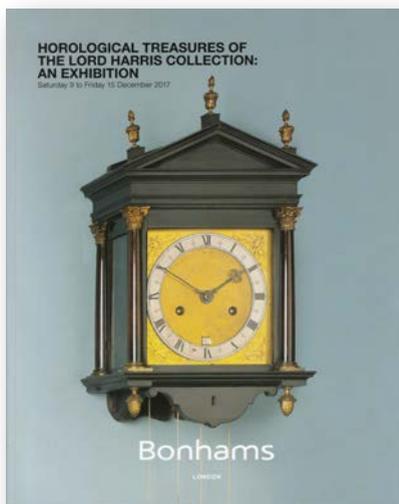




DIAL

The 8¼ inch square fire-gilded brass dial has four latched feet and is signed along the base *Eduardus East Londini* within profusely engraved tulips and foliage around the perimeter of the dial. The fine quality matting is centred by an engraved Tudor rose with a square date aperture above chapter VI, and enclosed by the narrow silvered chapter ring with Roman hours and *fleur-de-lys* half-hour markers, and Arabic outer minutes set within the division ring. The typical early blued steel hands are finely pierced, shaped and well sculpted.

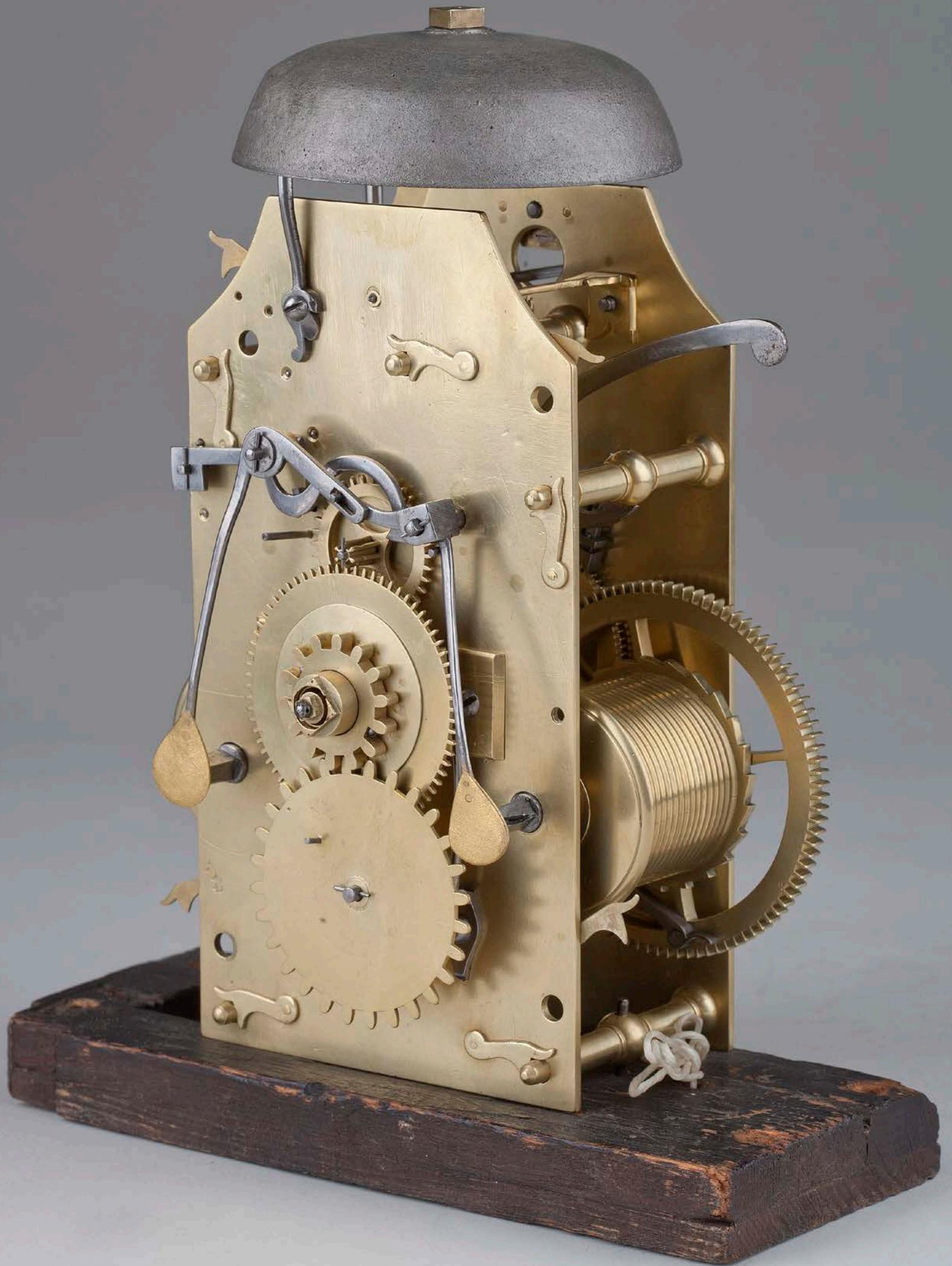
Illustrated in the exhibition catalogue, Horological Treasures of the Lord Harris Collection, 2017, pages 30 and 31, are two East clocks held at Belmont House. The first (Inv. H.0054) is a comparable architectural longcase of circa 1670 veneered in Central American cocobolo wood, the second (Inv. H.0052) is an ebony veneered architectural table clock. Both have fine dial plate engraving, similarly filling the corners and abutting the edges of the plate, and are comparable with the dial of the present East example.

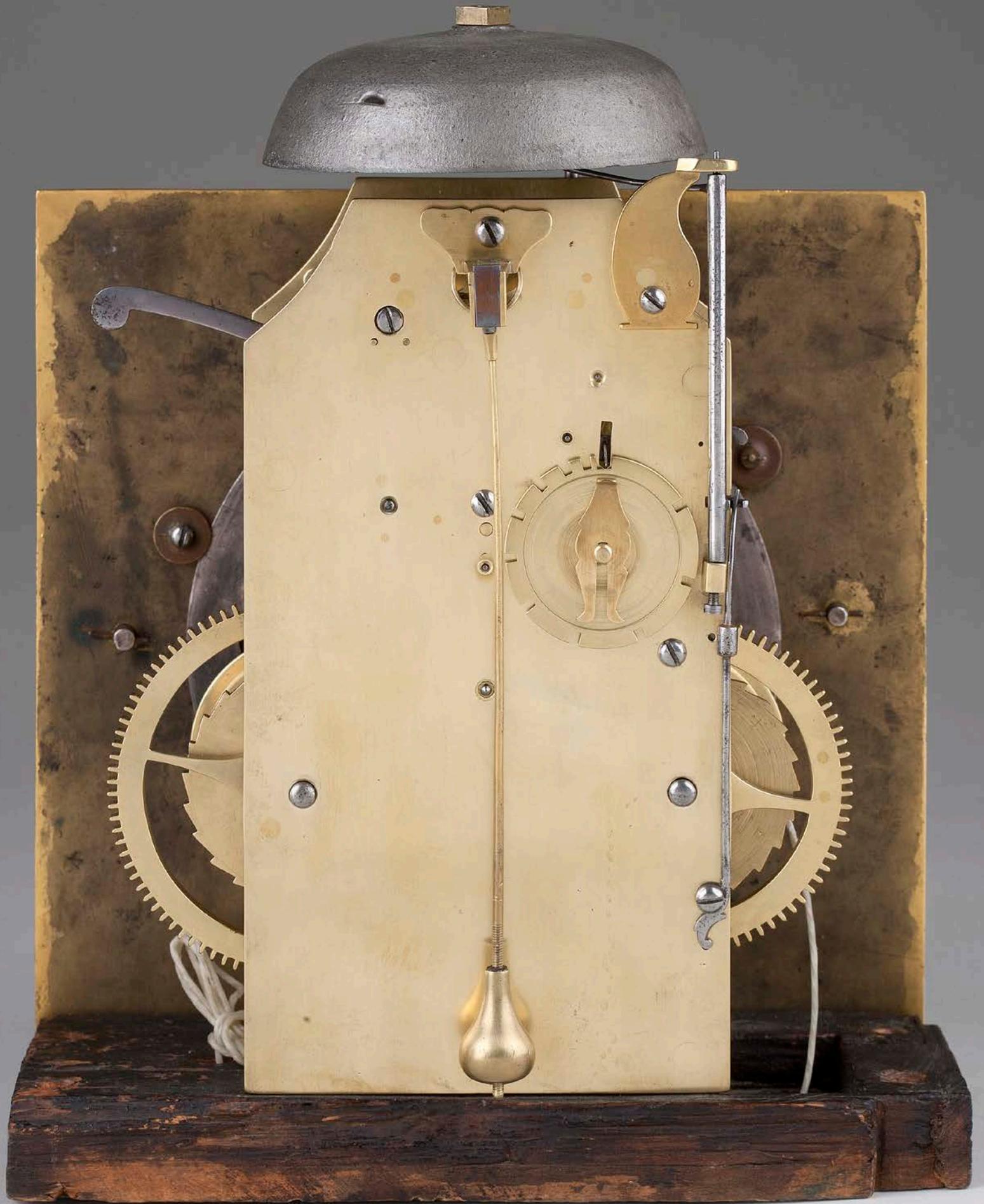


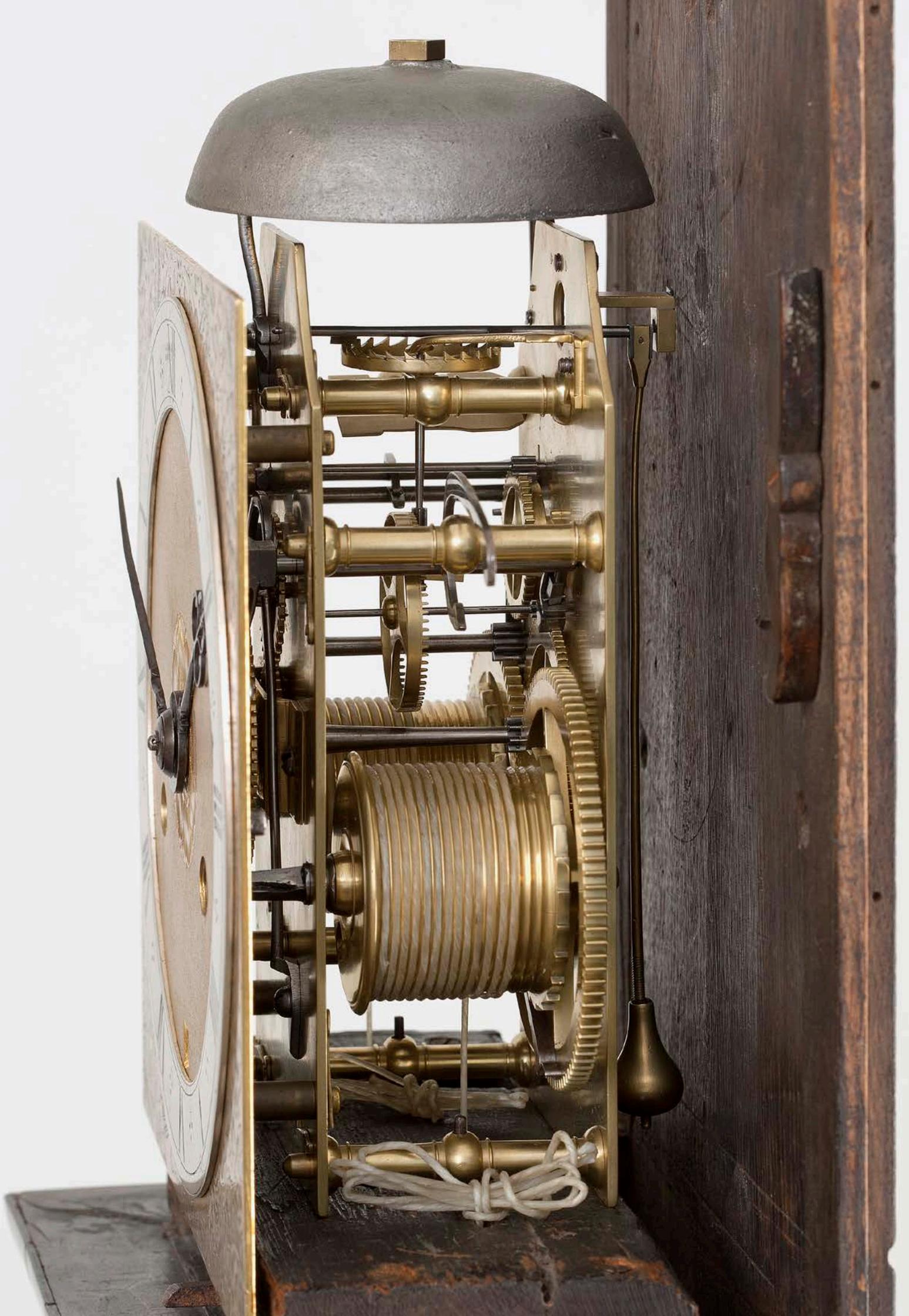
MOVEMENT

The early shaped brass plates with concave shoulders are held by six latched and finned baluster pillars. The going train has a reinstated knife-edge verge escapement with short bob pendulum and bolt-and-shutter maintaining power. The strike train is governed by a small brass outside countwheel with a detent slotted through the backplate, lifting to set off the train and striking the hours on a bell above via a vertical steel hammer arbor. The movement is supported on the original seatboard and secured in the early manner, by two iron taper pins into the base pillars.

With tall, concave shouldered, 'bottle-neck' plates and pillars latched to the frontplate, this is an archetypal early London weight-driven pattern movement, with a verge escapement and short bob pendulum, striking on the Renaissance system with a long vertical hammer arbor, pivoted and cocked, to engage with the bell above - all of which was first set by Fromanteel's workshops in the early 1660s. This pattern of manufacture was soon adopted by other clockmakers outside his circle, in this instance the leader of the 'East School' and royal clockmaker, Edward East himself.







English Colonial Cocuswood

Although ebony and ebonised fruitwood veneers are most commonly associated with early architectural longcase clocks, other exotic veneers were used. Dr. Adam Bowett observed in his *Woods in British Furniture Making*, 2012, *Cocus is one of the most important of the early cabinet woods, but its role has long been obscured in the antique trade and many furniture historians by such misnomers as 'lignum vitae' or 'laburnum.' An ostensibly authoritative essay on laburnum in F Lewis Hinkley's A Directory of Antique Furniture has done much to propagate this error. In fact, cocus was probably the most commonly used West Indian timber in English cabinet work between 1660 and 1700.*

Cocuswood is a West Indian species indigenous to Cuba and Jamaica. In 1654, Oliver Cromwell launched an attack on Spain's colonies in the Caribbean. General Venables initially laid siege to the fortified port of Santo Domingo on Hispaniola, but his forces were unsuccessful and soon decimated by disease. Looking for an easy victory following their defeat, Venables sailed for Jamaica, the only Spanish West Indian island that did not have new defensive works. In May

1655, approximately 7,000 English troops landed near Jamaica's capital, Spanish Town, and as the island's entire population was only around 2,500, victory was assured.

To set this in context, the Navigation Act of 1651 had ensured that all trade between England and its colonies was restricted to English or colonial shipping, while other European powers imposed similar rules to their own colonies - so that it was not easy for London craftsmen to obtain raw materials from parts of the world not within England's direct control. At this time, apart from the export of small quantities of exotic woods, Jamaica was a possession of little economic value and it was not until the introduction of sugarcane plantations later in 17th century that it truly prospered. However, for England, Jamaica was to be *the dagger pointed at the heart of the Spanish Empire* and in the following years, Spain repeatedly attempted to recapture it but without success. In 1670, through the Treaty of Madrid, England formerly took possession from Spain and the ensuing period of peace served as an incentive for the expansion of planting.



Map of Jamaica
Published 1671 by Richard Blome,
engraved by Wenceslas Hollar

Literature:

Dawson, Drover and Parkes, *Early English Clocks*, Woodbridge, 1982, p. 243, plate 327

Exceptional English Clockwork, The Keith Roberts Collection, 2015, p. 66-75

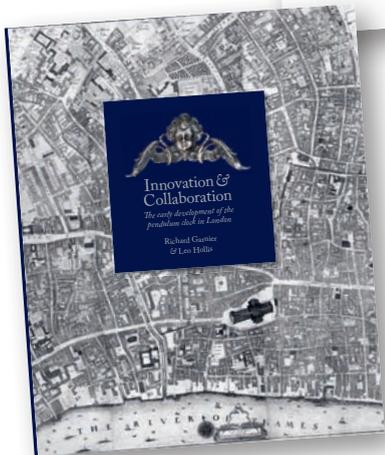
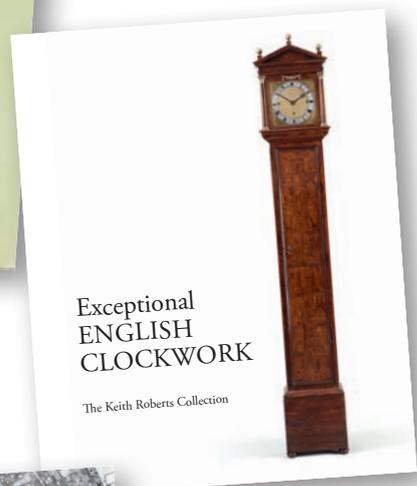
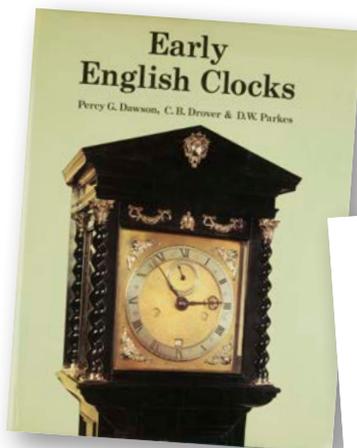
Garnier & Hollis, *Innovation & Collaboration*, 2018, p. 234-235

Comparative Literature:

V, A & A Finch, *Edward East (1602–c. 1695), Parts 1 and 2*, 2017, *Antiquarian Horology* vol. 38.

Exhibited:

London 2018, *Innovation & Collaboration*, exhibit no.57





Tho: Tompion. Automatopæus

*Thomas Tompion,
Fleet Street, London*

Thomas Tompion (1639 – 1713)

The eldest son of Thomas Tompion, blacksmith of Northill Bedfordshire. Despite justifiable speculation of a connection with Ahasuerus Fromanteel, there is no actual record of under whom he was apprenticed or subsequently trained. However, by 1671, he was in London and was admitted to the Clockmakers' Company as a 'Great' (turret) clockmaker.

In March 1674, Robert Hooke had claimed to the fellows of the Royal Society that he could produce an accurate quadrant for less than £10, and set about finding a craftsman who could perform to his exacting standards, finally settling on Tompion in Water Lane. Over the next months Hooke visited repeatedly, revising plans, discussing mechanisms and sharing details from *founding shrinking and swelling of metal, bells, screws etc* to *dividing compasses screw upon a rule*. Together Hooke and Tompion worked on the quadrant, which was completed in July 1674 and a plan of it appeared in Hooke's *Animadversions*, published the same year.

They then turned their attention to a new balance spring watch. That January, news had arrived at the Society that the pendulum pioneer, Christiaan Huygens, had also devised a spring to regulate watch movements and was looking for a patent, with the backing of some within the society. Hooke questioned the priority of Huygen's innovation, claiming he had been working on such devices for decades and reminded the Society that seven years before he had *lately contrived a new way of wheel-work for clocks, watches etc. which I think does much excel all the ways yet known*. He had not produced any clear designs and, distracted by other pursuits, had abandoned the work; nonetheless he now demanded his due. When Hooke went back to the Society records to prove he had already presented his ideas, he found that they were missing. As the Society Secretary and President were promoting Huygens's right to the patent, he became convinced of a conspiracy. Hooke noted that the debate reached the king, who refused to acknowledge Huygens's suit but demanded a demonstration of the watch itself was necessary to gain the proof, as theories were not enough.

On March 8, 1675, Hooke sat with Tompion in Garraway's coffee house sketching out a new balance

spring: *I shewd my way of fixing double springs to the inside of the Ballance spring*. On April 7, they presented their designs to Charles II who was *most graciously pleas'd with it and commended it far beyond* [Huygens] but still the king insisted that they had to complete the watch itself. A month after, they were working with different types of springs and balances and by 17 May, they had a watch to show to the king, which was *locked up in his closet*. On the 18th, the king *affirmed it very good* but the next day Hooke was obliged to take the watch back, most probably for adjustments. Meanwhile, Huygens was trying to gain attention with his own watch, which arrived in London in June. However, it had no minute or seconds hands and was not wholly reliable. Hooke returned their improved timepiece to the king in August 1675 and it was later reported to work to within a minute a day, although the arrangement of the balance and spring is still debated. It also had a second's hand, which outplayed Huygens for good.

In 1674 Charles II was surprised to hear that the French were getting close to solving the longitude problem. In response the king appointed his own Astronomer Royal, John Flamsteed, and alongside Sir Jonas Moore, they set about plans for constructing a new observatory on the hill above the recently abandoned royal rebuilding project of Greenwich Palace. The task was to create *tables of the motions of the heavens, and the Places of fixed stars, so as to find out the much-desired longitude at sea*. Swiftly, Moore brought in Christopher Wren, Hooke and Tompion to design, build and furnish the new observatory, all done at great speed. There was little money to pay for the building, indeed bricks had to be purloined from the abandoned site nearby, but nonetheless the main structure was completed in July 1676. Flamsteed was also informed that there was no spare cash beyond his salary for equipment, so he came begging to the Royal Society to borrow Hooke's quadrant. Two clocks were commissioned at Sir Jonas Moore's expense from Tompion with 13ft pendulums that *make each single vibration in two seconds of time; and their weights need only to be drawn up once in twelve months*. The Octagon room at Greenwich was designed with the

clock dials framed in the paneling at eye level and a third clock was added later.

After his work at Greenwich, Tompion concentrated on building his clockmaking business for the growing luxury market and by March 1677, he had moved premises to the corner of Fleet Street and Water Lane, where he was joined by his case maker, Jasper Braem (fl.1661 – d.1696), see p.38. On the 24th June 1677, there is an intriguing entry in Hooke's diary *Tompion here instructed him about the Kings striking clock about bells and about the striking by the help of a spring instead of a pendulum, as also the ground and use of the fly and of the swash teeth*. This is significant, not only as it is the first reference of a royal clock commission to Tompion, but also the use of a *swash* rack for striking, which allowed a clock to repeat for the very first time. The only contender for this accolade is the first of his complicated repeating two-train grande sonnerie clocks, The Silver Tompion, whose commissioning by Charles II seemingly corresponded with another royal clock by Joseph Knibb, dated 1677. That these two clocks were equivalently decorated, in silver and ebony with velvet dials, seems beyond coincidence and was likely the king's own choice (see page 105).

By 1680, Tompion was already viewed as *the clockmaker most recommended in England* and he began to number his work (watches from c.1681 and clocks from c.1682) to facilitate batch production and stock control, but also to avoid counterfeiting; particularly of cheap watches from the continent. While never named the royal clockmaker, he repeatedly executed commissions for successive monarchs, including the year-going Mostyn clock, and when William III died, Tompion had to petition for unpaid receipts of £564.15.0. By the new century his reputation was unassailable and he was without peer; according to one later testimony *Mr Tompion...may be looked upon as the first British Mechanic in this art; he is called excellent ... and ought to have been called so by every man else who is a judge, and has seen his work*.

In 1700, as Christopher Wren was attempting to finalise the west front of St Paul's Cathedral, he sought to have a clock installed in the south tower. Such was Tompion's reputation that newspapers announced *the famous watchmaker in Fleet Street, is making a clock... which it is said will go one hundred years without winding*

up...far finer than the famous clock at Strasburg, sadly, this sensational clock was never made.

By now Tompion had large premises in Fleet Street on the corner of Water Lane, where he was employing a plethora of apprentices, journeymen and other workmen. Having become a Freeman of the Clockmakers' in 1674, he was made an Assistant in 1691 and Master in 1703. He took 23 apprentices between 1673 and 1699, one of whom was Edward Banger, who finished his apprenticeship in April 1694. Banger married Tompion's niece and was taken into partnership in about 1701/2. The partnership broke up with considerable rancor and in c.1707 Banger was dismissed and specifically excluded from any benefit in Tompion's will. By 1712, he had taken George Graham into partnership; he was married to another niece and succeeded to the business. Tompion died in 1713 and, by now much feted, he was buried in Westminster Abbey. During his lifetime he set standards of clockmaking that, arguably, were never surpassed and his extraordinary failsafe repeat-work on his standard clocks is testimony to this (see the Bradby Tompion, no.391, below and page 60).



The Roman-Striking Tompion Circa 1680

A highly important Charles II ebony and gilt-brass mounted special Type 1 Roman striking month-going longcase clock by Thomas Tompion, the case attributed to Jasper Braem (fl.1661 – d.1696)

Provenance:

Sydney Exshaw (and sold by order of his executors Christie's, London, 23rd June 1960, lot 22 to Partridge);

The Samuel Messer collection (and sold by order of his executors Christie's, London. 5th December 1991, lot 36);

The Tom Scott collection, inventory no.90;

The Keith Roberts collection, inventory no.7

This unique clock was specially commissioned and made prior to the start of Tompion's serial numbering. Tompion went on to use Roman striking on only one other special longcase, the Boxwood Tompion Night Clock, which also has the only other known skeletonised chapter ring in his oeuvre.

Although the case, movement and dial share distinct resemblance to the work of the Knibb family, the execution and finishing of each element is typical of Tompion's own productions. Close study of the case in comparison with other special examples, reveals that this too was made by Tompion's own casemaker. At this time, the royal cabinetmaker, Jasper Braem, was his co-tenant in Water Lane and, in similarity to other examples, the individual nature and handling of this case makes it most likely to have been produced in-house by Braem. As well as distinctive mouldings, it is impressively adorned with mounts which Tompion used on a small number of other special longcases, that were also commissions: the Astrolabe, the Royal Exchange and the Drayton Tompions.

For the past 60 years, this clock has formed a part of three of the most significant private collections of the late 20th and early 21st Centuries.





CASE

The ebony veneered special Type 1 case, attributed to Jasper Braem, with convex throat mouldings, panelled sides and trunk door with brass-framed oval lenticle, an eagle head escutcheon and foliate cast acanthus spandrels. There is a beautiful cast and chased gilt-brass fruiting swag to the convex moulding below the hood, which has applied Doric columns and smaller swags to its front and sides beneath a gilt-brass interlaced foliate frieze with winged cupid heads applied to the corners. The rising hood has a shallow domed top with five brass finials and retains its original spoon locking catch and latch spring. The plinth has cavetto/ovolo mouldings and four substantial gilt-metal bun feet.

Height: 6 foot 10 inches (209 cms)

From surviving examples, as well as contemporary references (see page 77), this general style of case is nowadays more usually associated with Joseph Knibb, however the detailing and moulding patterns reveal Tompion's own take on the design, arguably executed by his co-tenant, Jasper Braem, but in a finish specified by this particular patron.

*The fruiting swags to the front and sides can also be found on other special Tompion longcases (see overleaf), but the gilt foliate frieze mounts are apparently singular to this clock, while Joseph Knibb's walnut longcase made for John Maitland, 1st Duke of Lauderdale, shares the fine double swag mount to the throat moulding (Lee, *The Knibb Family, Clockmakers, 1964, colour plate III*).*





The Temple London Feet



As well as archetypal moulding and construction details, the present case displays Tompion's substantial, crisply detailed, Doric pillar capitals and bases, while also sharing the same hood swag mounts that are seen on the contemporary special Type 1 Astrolabe longcase, c.1680, but also the later special Type 2 longcases: the Royal Exchange no 131, c.1688-90, and the Drayton year-going astronomical clock, c.1692. The Drayton case also has the same cherub angle mounts to the frieze corners, that remained in use on Tompion's special longcases as late as c.1700, on the Type 3 Mostyn and Neville Tompion longcases (all illustrated in Evans, Carter & Wright, Thomas Tompion 300 Years, 2013).



Tho: Tompion Londini Fecit

DIAL

The 10 inch square gilt-brass dial is enclosed by an archetypal double-wheat ear engraved border and signed *Tho=Tompion Londini Fecit* in a rectangular reserve along the base. The fine matting extends to the outer minute ring of the skeletonised chapter-ring which has small finely fretted *fleur-de-lys* half-hour markers, with subsidiary seconds ring, date aperture to the centre and dot-marked winged-cherub spandrels to the corners. The typical Tompion blued-steel hands are well pierced and sculpted, and the dial is fixed using four latched dial feet.

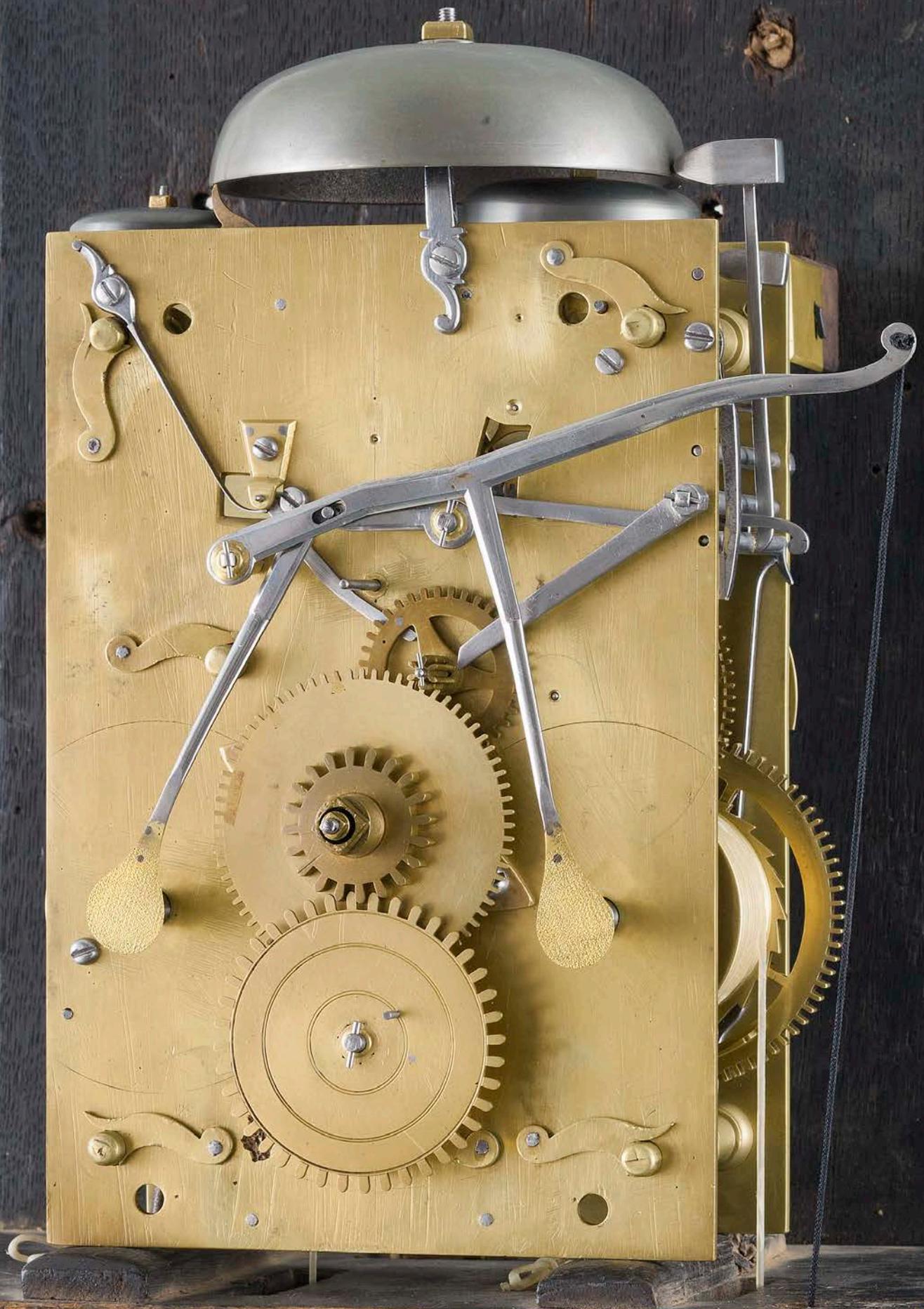


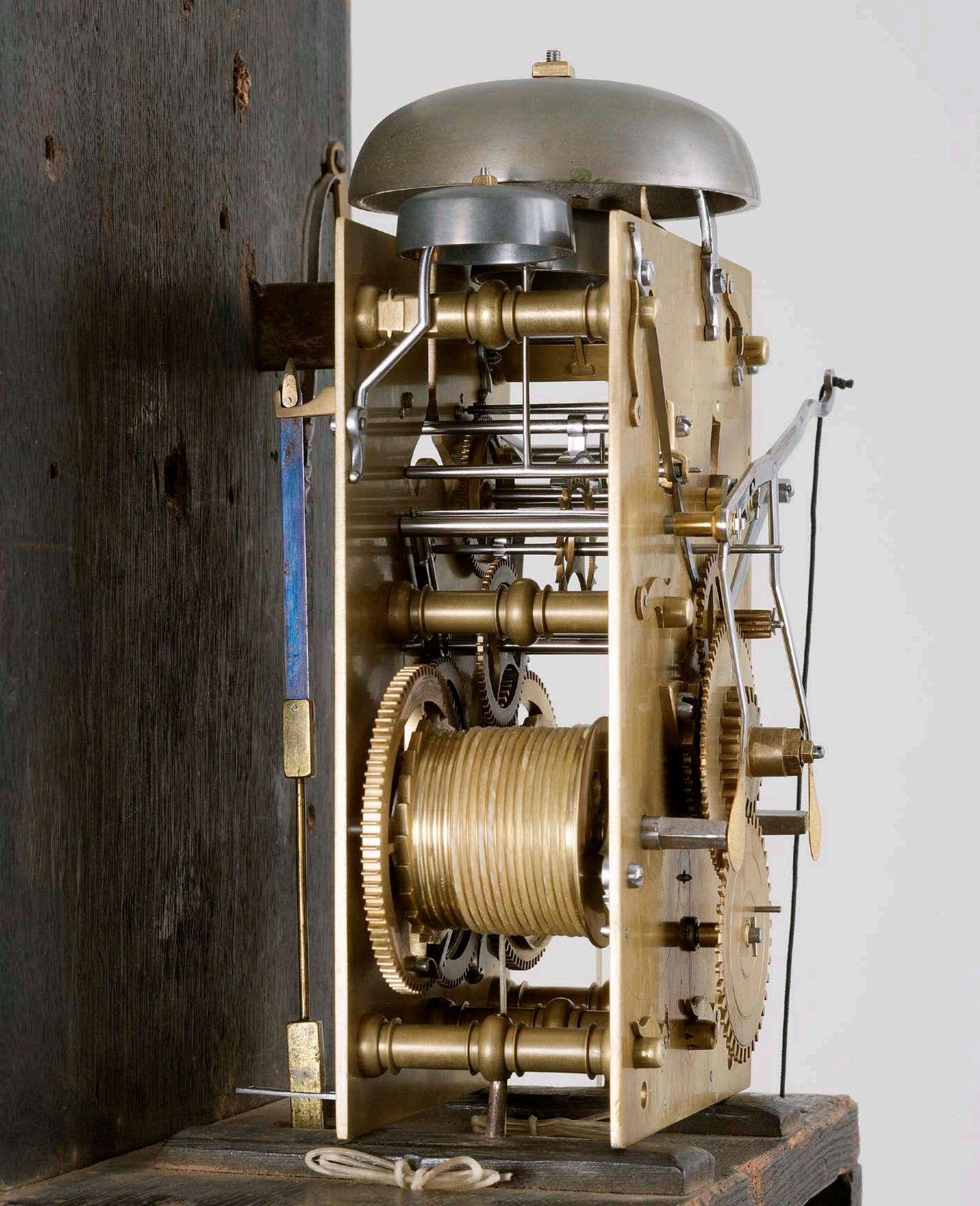
MOVEMENT

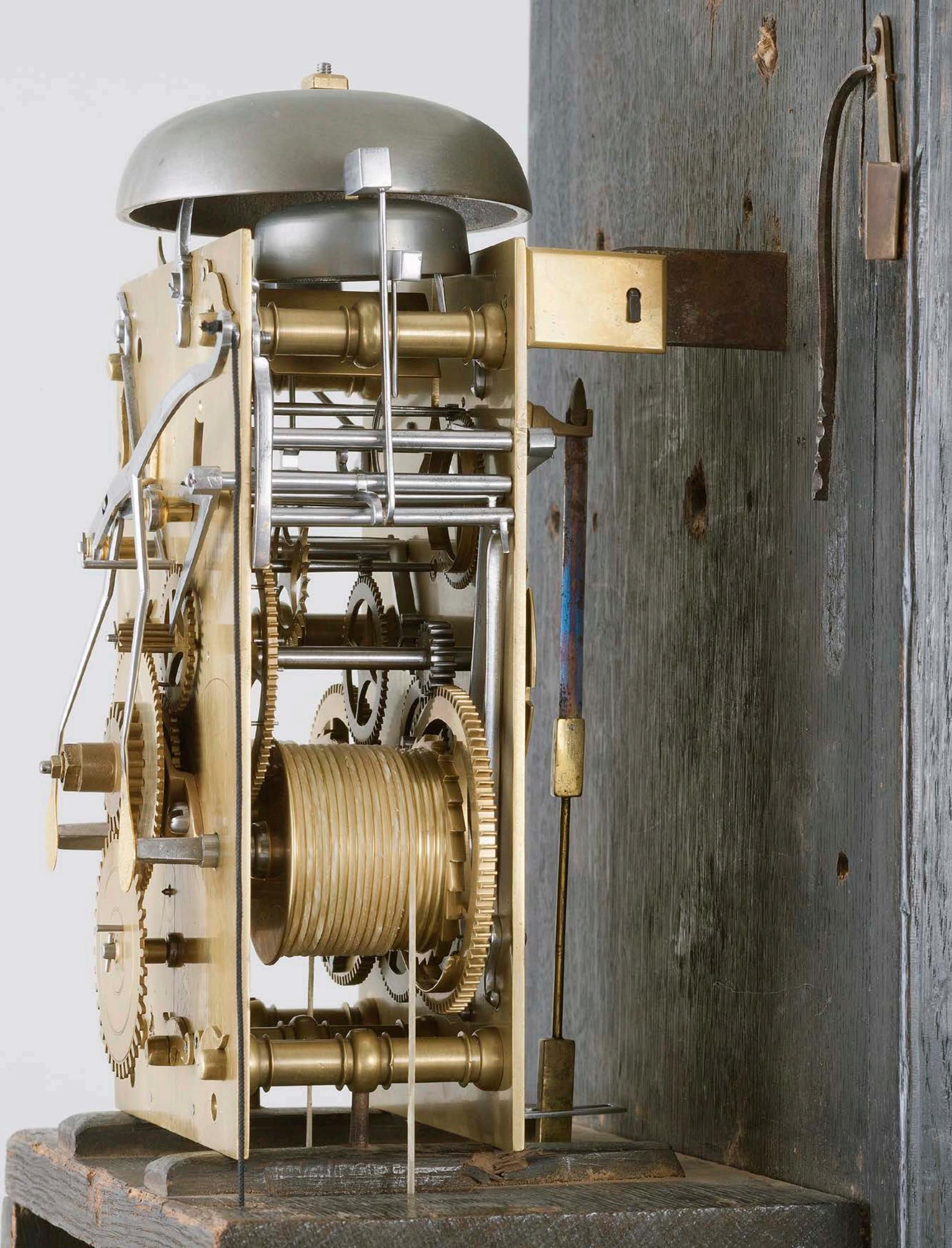
The substantial movement has $6\frac{3}{8}$ by $8\frac{3}{8}$ inch plates held by six finned baluster pillars with steel riveted latches, five wheel trains for month-going and the barrels reverse wound. The going train has an anchor escapement with bolt-and-shutter maintaining power, and a typical multi-piece brass rod lenticular pendulum with a calibrated silvered rating nut. The strike train is governed by an outside countwheel for the Roman notation striking on two bells, with additional half-hour passing strike on a third, all with typical Tompion steel springs and stops. The trains are driven by two original brass-cased weights with typical multi-piece pulleys. The whole movement is mounted on taper pins through the two lower pillars and secured by an L-bracket to the backboard.



The substantial, yet graceful, construction, with weighty plates, sturdy pillars, steel riveted latches, sizeable arbors, chamfered levers, steel springs and stops, scroll feet, pallet cut-out and multi-piece pendulum and pulleys are all illustrative of Tompion's elegant but dependable workshop practices at this time.







This clock is the first of only two known in which Tompion used the Roman-notation striking system, more usually associated with Joseph Knibb, the other being the special Type 1 boxwood month-going night clock of *circa* 1690 and also un-numbered. Equally, both have skeletonised chapter rings, that are most unusual for Tompion but a very Knibb-like feature.

While on the face of it this appears to support the proposition that there was collaboration between the two makers, the present movement is of Tompion's typical sturdy construction in comparison with Knibb's characteristic lighter format (see comparative illustrations and an explanation of the Roman notation striking system on pages 114 to 115). Furthermore, Tompion has added the exclusive complication of half-hour strike, albeit in passing, while detailed elements such as his use of steel springs and stops, rather than Knibb's usual preference for brass, all indicate a competitive influence rather than collusion. Perhaps as a mark of 'authorship', in this early instance Tompion has also retained the numeral IIII on the chapter-

ring, instead of IV. Meanwhile, undoubtedly due to the customer's specification, this special Type 1 long case is also similar in appearance to Knibb's ebony examples, but made by Tompion's own cabinetmaker, Jasper Braem, with archetypal moulding patterns and mounts found on his later special longcases, such as the special Type 2 Drayton Tompion of c.1692.

This was not the first instance of comparable productions; in 1677 both makers presented Charles II with their own take on the new smaller spring clocks. Knibb appears to have been first with his dated Phase II Roman striking spring clock, the Daniels Knibb, only to be outplayed when Tompion presented his new repeating, two-train grande sonnerie clock, The Silver Tompion (see page 105). Like this longcase, these two spring clocks were similar in outward style; both dressed in silver on ebony with velvet dials. However, while Knibb continued with both of these styles of longcase and spring clocks, Tompion only made one of each, apparently confirming their individual status as one-off special commissions.



Special Type 1 Boxwood Tompion Night clock, c.1690



Special Type 2 Drayton Tompion, c.1692.



Jasper Braem, Marqueteur and Cabinet maker, London (fl.1661 – d.1696)

Jasper (or Casper) Braem (Bream, Braeme or Breames) was a Dutch immigrant; nothing is known about his training and he had arrived in London in or before 1661. He was married to Elizabeth and they had five surviving children: sons William and Casper; and daughters Hester, Mary and Ann. His first reference in London is in *The Calendar of State Papers* on 29 May 1668: *Petition of Caspar Braeme, a Hollander...* who received his 'naturalisation' on 3 June 1668 (Shaw, *Letters of Denization*, 1911–23). In the same month, June 1668, he was made free of the Joiners' Company by redemption (purchase), immigrants in theory being barred from becoming free of the City until they had worked for seven years, taking us back to c.1661 (Bowett and Lindey, *Looking for Gerrit Jensen*, 2017).

Production of veneered furniture in London is thought to have started before 1658, with the new pendulum clock cases produced for Ahasuerus Fromanteel of Moses Alley, Southwark, who employed his fellow Netherlandish cabinet makers in that area (Richard Garnier, *Innovation & Collaboration*, 2018). Braem's similar extraction would lead one to expect that on his arrival in c.1661, he first sought work within his own community, perhaps with letters of introduction from home. Tompion gained his freedom from the Clockmakers' Company in 1671, and it is thought he had connections with Fromanteel, when the latter referred to... *my journeyman could do that in the Trade that no five of the Assistants could do... a mere smith that was never trained up in Clockwork*. Whatever the actual circumstances, we are aware that Tompion's nature was not one of compromise, and the best casemakers were Netherlandish and still based in Southwark. In November 1674, Robert Hooke wrote of meeting a *Dutch cabinet maker* with Tompion, but there is no certainty that this was Braem. In 1675, the cabinet maker Edward Traherne died, his estate was placed in the hands of the *Court of Orphans*, and in the inventory were unsettled bills from *Mr. Braem* of £13. The services were not specified and Braem's location not given, but if he was based in Southwark, one particularly devastating event might have caused the loss of his workshop or had a bearing on his need for new premises: *The Great Fire of Southwark* started on 26 May 1676, and... *those eminent*



George Inn rebuilt in 1677 after the Great Fire of Southwark

innes, the Queens-head, the Talbot, the George, the Whitehart, the Kings head, and the Green-dragon... and about five hundred dwelling-houses... were burn'd down, blown up, and wholly destroyed.

By March 1677, tax records indicate Tompion and Braem were co-tenants at the corner house at the top of Water Lane on Fleet Street, and it is unlikely they would have entered such a close financial and social commitment without already having had a working relationship. Their co-tenancy at *The Dial and Three Crowns* was to last from 1677-88, and on the strength of their eleven-year co-tenure, Jeremy Evans first proposed that Braem was Tompion's case maker. This period spans critical initial developments in Tompion's clock production, and Braem's involvement in the evolution of Tompion's cases can be reasonably and logically proposed. The decision to share premises was mutually beneficial from the start, there was no conflict of interest, arguably quite the reverse, and both were commercially on the up. Apart from clock cases, it seems likely that Braem would have provided samples of his cabinet work for display in Tompion's shop, and we know for certain that they subsequently came to share influential and wealthy customers.

In their first year together, Charles II gave Tompion his first royal commission and Robert Hooke wrote on

24 June 1677... *instructed him [Tompion] about the Kings striking clock about bells and about the striking by the help of a spring instead of a pendulum, as also the ground and use of the fly and of the swash teeth.* The only contender for this clock is the first of his two-train Grande Sonnerie spring clocks, The Silver Tompion, and perhaps in confirmation, it is also his only domestic clock that is presented in a similar manner to another of the king's commissions, also made in 1677 by his rival, Joseph Knibb (see p.105). The same rich finish of ebony, velvet and silver was probably specified by the king himself, as was customary, but might also be construed as encouraging their rivalry. It is noteworthy that all subsequent examples



of Tompion's spring clocks mounted in silver have a definite, or presumed, royal provenance.

The true significance of this clock to Jasper Braem, lies not in the finish and its ground-breaking horological advancements (the first rack striking and repeating clock), but in the case's relatively diminutive size, and consequently complicated and ingenious 'rising-hood' construction. The movement is comparatively massive and the case fits with only millimetres to spare, undoubtedly requiring the maker to have the mechanism on the bench, at several stages, for design and construction. The likelihood that Tompion would have countenanced sending such a commercially sensitive and experimental clock elsewhere, seems implausible when he had a cabinet maker to hand. Braem's presence would have enabled Tompion to understand the construction of his clock cases first-hand, and the further connotations of this case can be seen in all of Tompion's standard spring clock cases that follow. Although the construction and use of a basket top differs, The Silver Tompion set the foundations of style and layout for Tompion's Phase I cases, and it utilises for the first time, moulding shapes that Tompion would essentially adhere to for the following 30 years.

Having acquired an understanding of case construction, Tompion would have appreciated how to standardise their production for cost saving and flexibility during supply. It is not inconceivable therefore, that Braem and Tompion together devised and implemented case making arrangements that were to prove a pivotal part of Tompion's success. By 1680, Tompion was already... *the clockmaker most recommended in England* (John Locke/Nicolas Toinard letters, 1680) and the ordering of clock cases began to march with what he was doing in his own workshop, with cases being produced in batches and held in stock, at varying stages, for completion 'to order'. Initially, the adherence to strict patterns is more visually apparent in his Phase I spring clock cases, but it can also be seen in the details of his Type 1 longcases. This methodology was applied to 'special' cases of both varieties, which were usually produced for Tompion's similarly 'special' movements and were made using the moulding patterns and construction methods seen on his standard clocks. The earlier 'special' longcases were often

inlaid to a greater or lesser degree and, with Braem in residence until 1688, the more unusual 'special' cases were also more likely to be constructed on site, rather than being sourced elsewhere (see *The Roman striking Tompion*, p.24). Tompion produced a small number of 'special' metal cases from this time and was fully conversant with founding and casting processes, and for similar reasons, it is both likely and logical that the wooden patterns for these would also have been produced in house, by Braem (see *The Lonsdale Tompion no.23*, below).

For accounting purposes Tompion started to number his clock production in c.1682, which has enabled us to study and sequence the development of his clocks, and on 5 September 1682, Braem took his eldest son William as apprentice for 7 years in the Joiners' Company. The proposal of Braem as Tompion's primary casemaker, producing plain veneered cases for both spring and weight driven clocks, does not undermine his clear success and talent as an inlayer, and in 1682 he is recorded as the employer of Jan van Mekerem (1658- 1733), who is next noted in 1687 as a member St. Joseph's guild in Amsterdam, and would later become Holland's most famous marqueter. However, Tompion never used inlay on his spring clock cases and by the late 1680s, around the departure of Braem, had essentially moved away from the use of marquetry and parquetry on his longcases too, but they still retained inlaid detail. When



A 'special' metal cased Phase I - The Lonsdale Tompion no.23

Charles II died in early 1685, Jasper Braem was working for the then Duke of York's wife, Mary of Modena, who would become Queen when her husband was crowned James II. Braem is recorded as working at Windsor Castle between 1684 and 1686, *inlaying ye step under her highness ye Dutchess of York's Bed done with several coloured woods in Resemblance of flowers, leaves etc. & for Inlaying ye step at ye foot of ye said Bedd, done with walnutt* for which he was paid £33 6s 8d.

By 1688, it appears Braem had outgrown the space in Water Lane and Michael Tesmond, a freeman of the Saddlers' Company, took his place. Perhaps one of the last bills paid for work done by Braem in Water Lane was to an old customer of Tompion's, William Russell, 5th Earl and later 1st Duke of Bedford, which reaffirms the cross-fertilisation of their co-tenancy. The earl had been a patron of Tompion's since before May 1676, when Hooke records him *altering Lord Bedford's watch*. On 3rd July 1688, Braem was paid *for a Walnutt Tree Table & Stands &c.* by the earl's clerk, and Braem is next recorded as situated half a mile away in the parish of St. Mary Savoy. Between 1689–92, Braem rendered three further bills to Bedford, totalling £45 17s 6d for repairing and supplying furniture, including three tables *of Gernobel wood* costing £7 15s, three other walnut tables; *a black table 4 foot*, £9 10s; and a 34 inch glass in a walnut frame, £5 5; and on 8 August 1689, for *Wares delivered, and Workmanship done*, including *a Wainscott Table for the Dyneing Roome*.

In c.1690/1, Tompion's spring clocks changed to Phase 2 and his longcases to Type 2 and while the rigid criteria imposed by Tompion could have been transferred to another off-site casemaker, it is equally feasible and arguably more logical, that production of Tompion's cases would have stayed with Jasper Braem, following his relocation. So, particularly as there was no hiatus in case production (unlike with movements at the time Banger was dismissed as Tompion's partner), there would likely have been a continuing financial arrangement to cover the high costs of part-finished case stocks and related hardware being held on his behalf. Complete standard clocks were being charged at between £17-32, while Tompion's movement batch production was usually of 6-8 units. Even if one assumes smaller batches of spring and long cases, perhaps 4-5 part-finished of each, one can



Phase 1 - The Lancelotti Tompion no.119

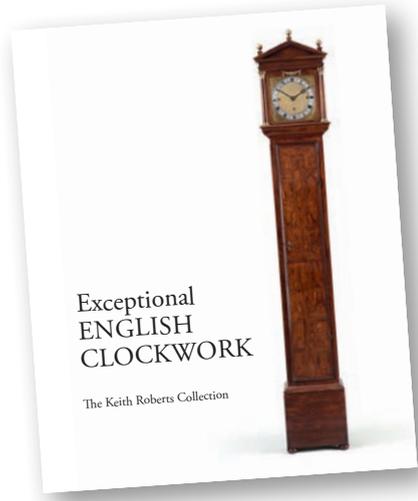
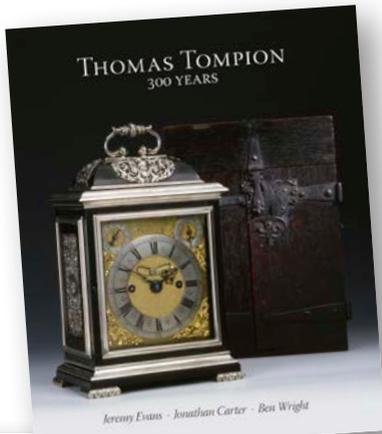
reasonably assume that Braem's basic costs of holding Tompion related stock was at least, £75-100. In 1693/4, *The Four Shillings in the Pound Aid* was levied, which was a 'war' tax, on the rental value of property, stock and/or money held. At this time Braem's rent was £70, while his stock was valued at £150. Interestingly, his rental was the highest of 13 cabinet makers listed in the West End (by Lindey, *The London Furniture Trade 1640-1720*, 2016). Indeed, his stock levels were comparatively modest, other makers stock ranging from £50-400 for each premises.

Jasper Braem signed his will on 19 September 1695, dividing £450 between sons William and Casper, and daughters Hester, Mary and Ann. The residue was to go to his wife and executrix, Elizabeth. Under the terms, William would receive £50 six months after his father's death, while Casper and his sisters would receive £100 to be paid when they reached the age of 24. The will was proved on 17 February 1696.

The more modest legacy to his eldest son would suggest he had already received adequate provision, most likely concerning the succession of the Braem workshop. On 12 December 1693, William Braem had a son Daniel with his wife, Anne, who was baptised at St Bride's, the register unfortunately not stating where they were living, and thereafter William's trail seems

to go cold. It is quite possible that Tompion was using more than one casemaker, nevertheless Tompion's clock production averaged only between 15 to 20 per annum, with delivery times of 10 to 12 days, which required understanding and cooperation, but would have been manageable for a single moderately sized cabinetmaker's workshop, particularly with stock in various stages of completion. The cost of holding part-finished carcasses and mouldings, as well as veneers, locks, hinges and possibly even brass mounts – all specific to Tompion, would have been expensive, as well as calling for trust on both sides, which arguably was not an accord that was simple or easy to replicate. William Braem had already known Tompion for at least five years before his apprenticeship started in Water Lane in 1682, and was fully trained in, and conversant with, the working methods established by his father together with Tompion. Perhaps the lack of references to William Braem might mean that he died soon after 1696, or did the workshop move to more economic premises, specialising solely (unlike his father) in case making commitments for Tompion elsewhere?

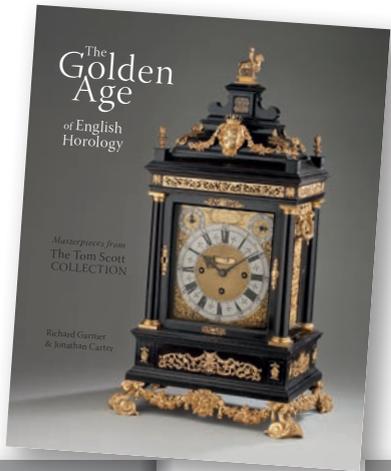
Perhaps a clue, one way or another, may eventually be deciphered from several cases that have secondary case numbers bearing no relation to Tompion's serial numbers, which span the period c.1692-c.1708. There are 22 currently recorded, 3 are spring clocks and 19 are longcases (see *The Eyewood Tompion no.322*, p.44) and the stamps used are the same for both sets of numbers. Nevertheless, these numbers are not found on most cases and it is extremely difficult to ascertain any pattern within them. They certainly started after case making moved away from Water Lane, and would have related to a separate accounting ledger, possibly for that reason. However, they do appear to indicate a continuity of supply, perhaps from a single source before and after Jasper Braem's death in 1696 and, because they are also found on a small number of 'special' cases, they seemingly confirm that these cases too emanated from the same workshop. Either way, we are aware that the family's links to the horological trade continued, when Jasper's younger son, Casper Braem, was apprenticed to John North in the Clockmakers' Company on 6 July 1697 and on his freedom, he took three apprentices of his own between 1716 and 1722.




THE ROMAN-STRIKING TOMPION
A top of ebony and gilt-brass mounted Roman striking month-going long case clock. The numbered, circa 1680.

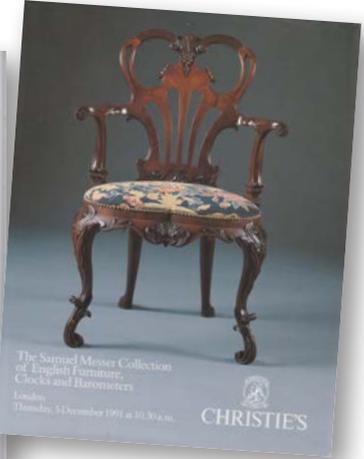
Description:
This top of ebony and gilt-brass mounted Roman striking month-going long case clock with its case open, showing the internal mechanism. The clock is mounted on a tall, slender, dark wood case with a decorative finial. The dial is made of gilt-brass and features Roman numerals. The movement is visible through an open door on the side of the case.

Reference:
The clock is a fine example of the work of Thomas Tompion, one of the most important English clockmakers of the 17th century. It is a masterpiece of English clockmaking and is a valuable example of the work of this great master.





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The Roman Striking Tompion
An important top of ebony and gilt-brass mounted Roman striking month-going long case clock, circa 1680.

Description:
This top of ebony and gilt-brass mounted Roman striking month-going long case clock with its case open, showing the internal mechanism. The clock is mounted on a tall, slender, dark wood case with a decorative finial. The dial is made of gilt-brass and features Roman numerals. The movement is visible through an open door on the side of the case.

Reference:
The clock is a fine example of the work of Thomas Tompion, one of the most important English clockmakers of the 17th century. It is a masterpiece of English clockmaking and is a valuable example of the work of this great master.

THE TOMPION, LONDON & CHARLES II GILT-BRONZE MOUNTED EBONY ROMAN STRIKING MONTH-GOING LONGCASE CLOCK
The case, made of ebony with gilt-brass on the front, the rectangular trunk with three raised panels, brass-mounted oval hands, right-hand mechanism, engraved and gilded, smaller raised panels to the dial, case and dial mounted on a tall, slender, dark wood case with a decorative finial. The dial is made of gilt-brass and features Roman numerals. The movement is visible through an open door on the side of the case.



The Eywood Tompion, No.322, Circa 1699

*A very fine and previously unrecorded William III
figured walnut Type 3 month-going longcase clock
by Thomas Tompion, London*

Provenance:

Probably ordered by Edward Harley MP (1664-1735), of Eywood, Herefordshire, thence by descent to his son; Edward Harley (1726-1790), succeeding in 1741 as 3rd Earl of Oxford and Mortimer. Thence by descent with the earldom; Alfred Harley (1809-1853), 6th and last Earl of Oxford and Mortimer, thence Eywood passing to his elder sister, Lady Jane Langdale (1796-1872) and then his younger sister, Lady Charlotte Bacon (1801-1880); by descent to her son; Edward Harley Bacon (b.1842), who declined an offer to re-instate the earldom and immediately sold the entire estate, house and contents; Arthur Walsh (1827-1920), 2nd Baron Ormathwaite, the purchaser of Eywood, who went bankrupt in 1895. Dispersal of Eywood's household chattels started in 1894, when no.322 was acquired by the Yeomans family; thence by descent.



Eywood House after the remodelling of c.1898, and before demolition in 1954





CASE

The fine Type 3 figured walnut case, with dial mask and forward sliding hood, the three-sided caddy top with inset pedestals and two brass ball finials, flanking a central pedestal with a larger conforming ball finial. The double frieze and typical cornice mouldings between, with pierced walnut sound frets to the front above brass-capped three-quarter Doric columns flanking the hood door. The hood resting on concave throat mouldings, above the rectangular trunk door with highly figured walnut veneers framed by mitred D-shaped door mouldings, and punch-numbered 322 to the top leading edge with a secondary number 8 below, the trunk sides framed with archetypal cross-banding and herringbone inlay. The matching framed plinth with conforming book-matched figured veneers to the front, raised on an original walnut skirting. The backboard has a peened iron bracket in the usual manner to secure the movement, with a 19th century inventory chalk-mark for Eyewood and a 20th century Hampton & Sons, Battersea Park depository label on the back.

Height: 7 feet 8 inches (233 cm)

This style of three-sided hood caddy, with a stepped top and straight moulded riser up to the top frieze, continued in use on Tompion's Type 3 longcases from c.1698 until c.1710/11. The case is punch numbered 322 on the leading edge of the trunk door, with a secondary number 8; from the early 1690s, the first being a Type 2 longcase no.190, a small number of Tompion's cases have a secondary number which bears no relation to Tompion's serial number. Of the twenty-two examples now known, 19 are longcases and 3 are spring clocks. The last one currently recorded is on standard Type 3 longcase no.478 with a secondary no.29, produced just before the departure of Edward Banger in 1707/8. While it is extremely difficult to ascertain any pattern within these numbers, they would certainly have related to a second ledger, but whether that was kept by Tompion or his casemaker, cannot be said.





Tompion's serial number 322 indicates that Edward Harley (1664-1735) probably ordered this clock in c.1699, perhaps initially for use in his London residence at his chambers in New Square, Lincoln's Inn, before moving it to Eywood sometime after the house was completed in c.1705. That the clock remained at Eywood after 1741, when Edward Harley's son inherited the earldom together with the family's primary residence, Brampton Bryan Hall, was probably due to already having a number of Tompion clocks installed there, which had been purchased direct from Tompion by Edward Harley's elder brother, Robert Harley (1661-1724).





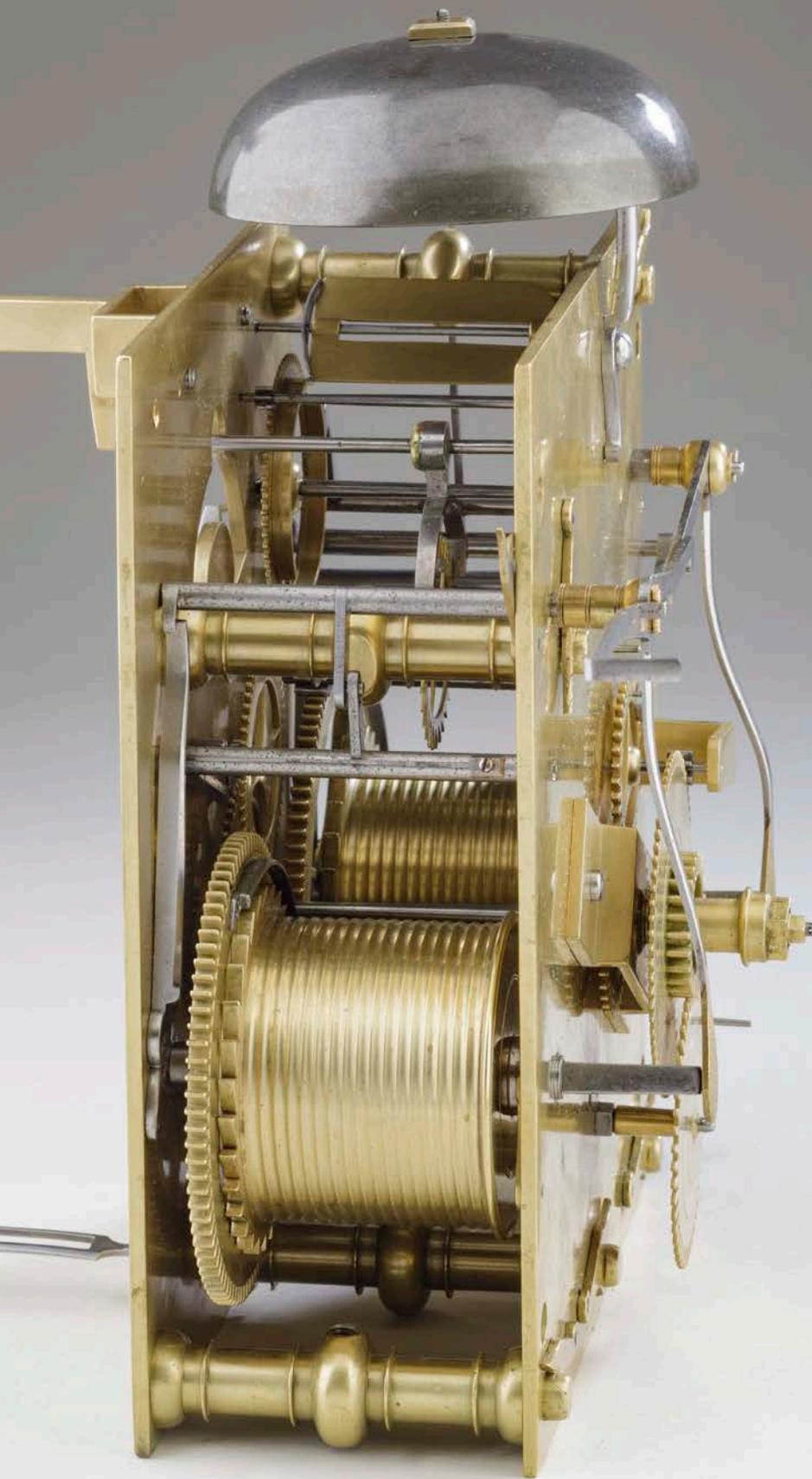
DIAL

The 11 inch square fire-gilded brass dial signed *Tho: Tompion Londini Fecit* along the lower edge, the silvered chapter ring with Roman hours and typical sword-hilt half-hours, Arabic minutes and cross half-quarters, with finely pierced and shaped blued steel hands. The matted centre with seconds ring and pin-adjusted calendar aperture, shuttered winding holes with the shutter lever to the left edge of dial between IX and X, double-screwed gilt-brass Indian mask & scroll spandrels, with engraved scrolling foliage between, attributed to Graver 195, and four latched dial feet. The rear of the dial plate with three post mounted and individually ring-marked rollers for the date ring, and scratch-numbered 322 behind XII.





Thos Tompion Londini Fecit

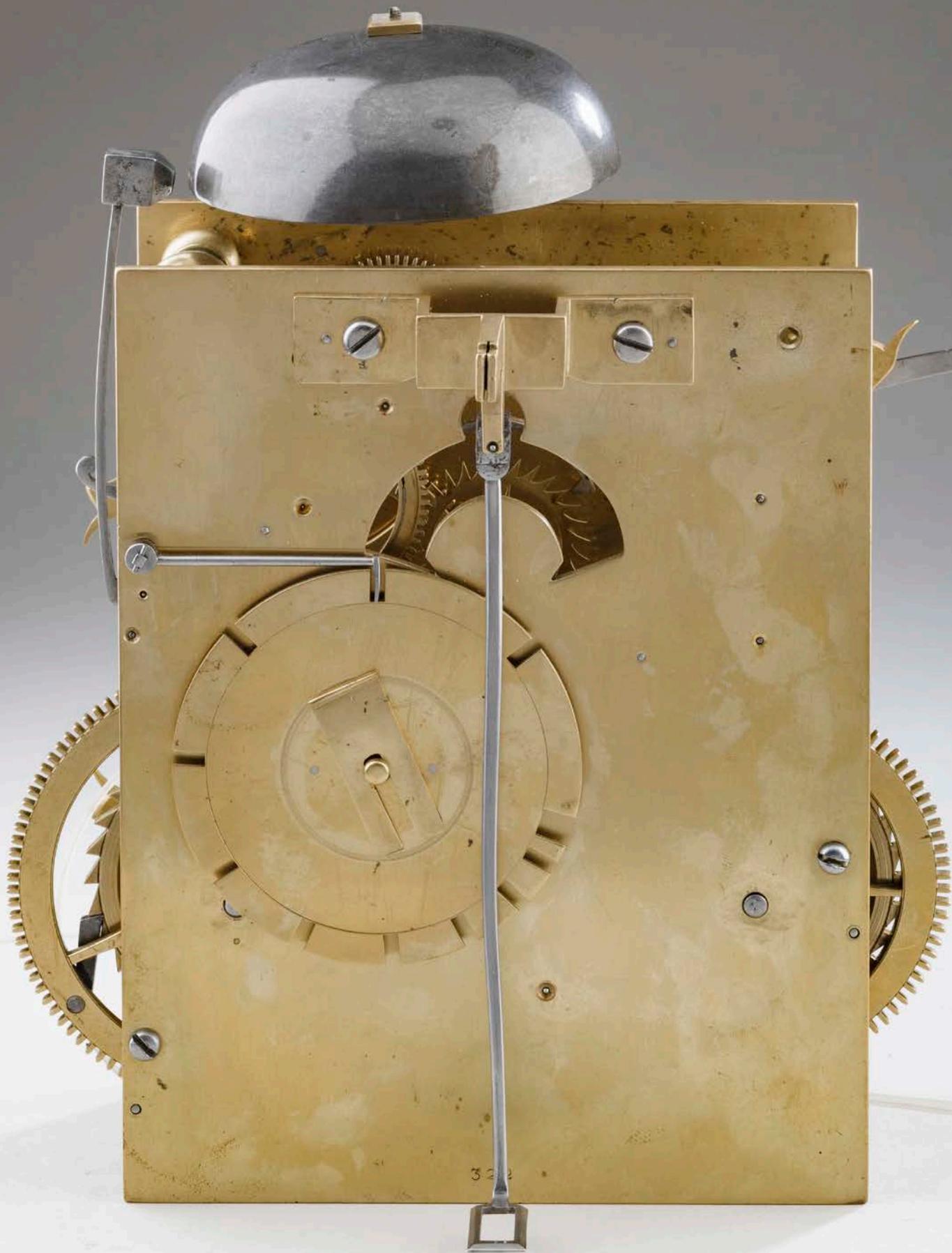


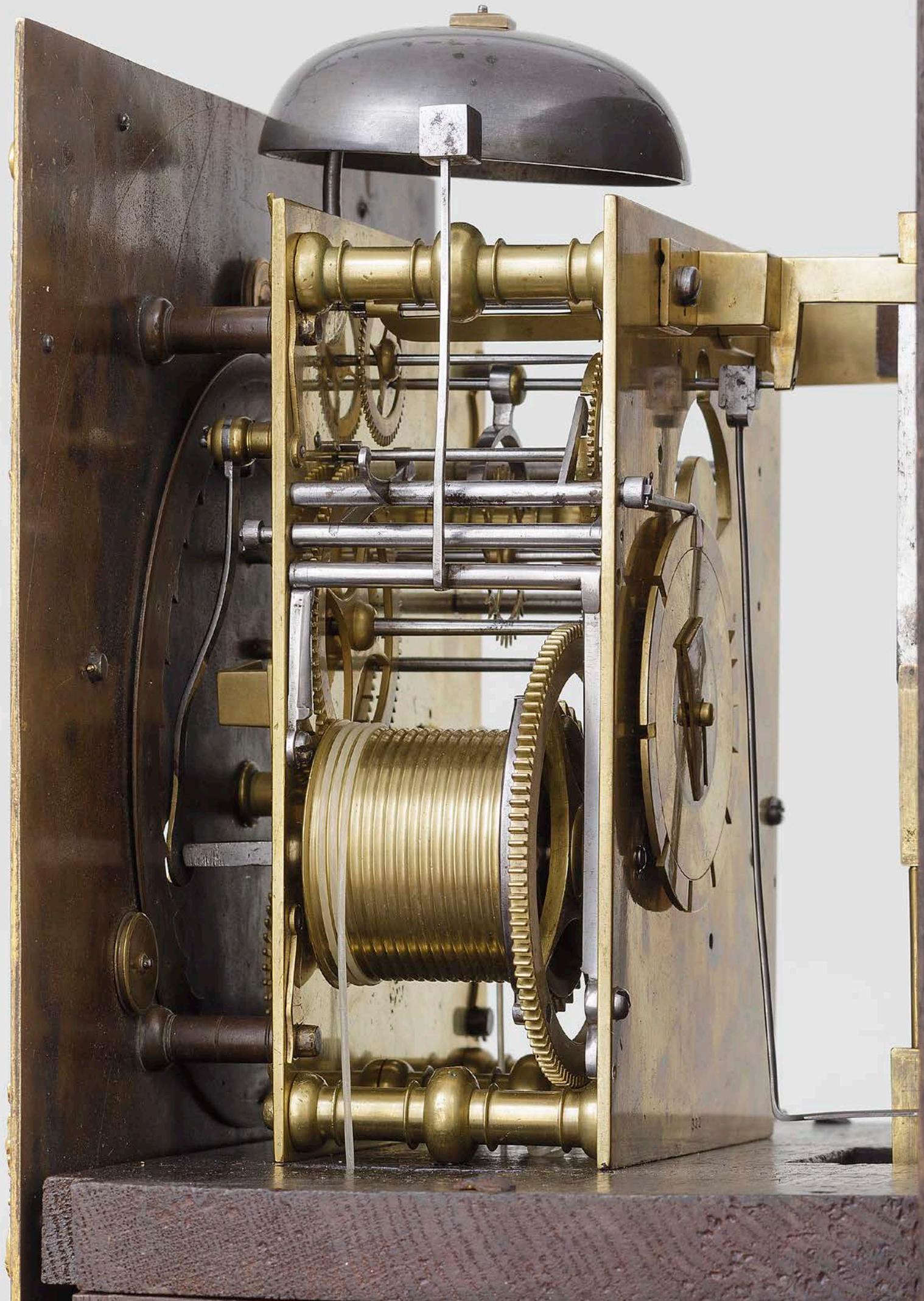
MOVEMENT

The substantial month-going movement with archetypal rectangular plates held by six latched and finned baluster pillars. The going train with bolt and shutter maintaining power, anchor escapement and one-second multi-piece brass-rod pendulum with lenticular bob and calibrated rating nut. The strike train governed by a typical large external countwheel, driven by a pinion of report, and striking on the bell above. The backplate with cut-out for the pallets and punch-numbered 322 to the bottom centre, with two typical multi-piece pulleys and original brass cased weights. The whole resting on the seatboard, held by two screws into the base pillars and secured to the backboard by a screwed L-shaped brass bracket.









Edward Harley MP (1664-1735) of Eywood, Herefordshire

The Harleys were descended from a long line of Herefordshire squires; in the 17th century they were Presbyterians, parliamentarians and Whigs. Edward Harley was second son of Sir Edward Harley (1624-1700) of Brampton Bryan, Herefordshire and the younger brother of Robert Harley, 1st Earl of Oxford and Earl Mortimer (1661-1724). Edward was educated at Westminster School and the Middle Temple, where he was called to the bar in 1688. His father was MP for Herefordshire in ten Parliaments and raised a troop of horse in support of the Prince of Orange in 1688, and Edward recorded his own part: *Sir E. Harley sent me... to London to buy arms, and to transmit to him the best intelligence I could get, which, during the greatest part of King James's reign, I weekly sent to him by a method of writing not to be discovered... [B]eing thoroughly convinced that the religion and liberties of the nation were then at stake, I acted without the least fear and less caution than I ought ... Apprehending myself discovered in buying arms, I got out of London and... met the Prince [of Orange] at Salisbury... From Salisbury I went directly into Herefordshire and met my father... he and my brother having raised a troop of horse. The family seized Worcester and were rewarded by William III with a grant of land in Radnorshire, carrying extensive electoral influence there.*

Edward Harley represented Droitwich in Parliament from 1695 to 1698, after which he was the member for Leominster, almost continuously, until 1722. Both brothers had begun as Whigs, but gradually changed their politics, Robert became leader of the Tory party, he was in government as de facto *Prime Minister* (the post was yet to be specified) from 1710 to 1714, and was created 1st Earl of Oxford in 1711. Both Robert and Edward married sisters of the 1st Lord Foley, with whose family the Harleys were closely allied in national and local politics. Edward was made Recorder of Leominster from 1692 to 1732, and in 1702 he was appointed to the lucrative lifetime role of *Auditor of the Imprests* and, to distinguish him from his brother, became known as *Auditor Harley*. In the same year, 1702, Edward was able to purchase the Eywood estate at Titley, Herefordshire and proceeded to build a new house that was completed in 1705. As this clock



The Hon. Edward Harley (1664-1735) by George Vertue FSA

testifies, both brothers were customers of Tompion, and a bill to Robert Harley covering the same period as this longcase, 1695 to 1704/5 survives; containing charges for four clocks, a silver watch, a gold chain, a thermometer, a barometer, and sundry repairs [BL. Dept. Mss. Add. Ms. 70264, Misc.5].

In 1715 the political landscape changed, and Edward exerted himself to maintain his family's electoral interests in Radnorshire, Bishop's Castle and Leominster, but with little success. In Radnorshire, he wrote, *I never met with so much open villainy and secret perfidy as universally prevailed ... which has brought me to a resolution to dispose of my estate in that county.* The same applied to Bishop's Castle, where *the baseness and perfidy that I met with in this place has brought me to the like resolution of parting*

with it, being unwilling to leave the temptation to my son of being drawn into a great expense upon such mercenary rascals. Only Leominster, where I had the least reason to expect success, remained loyal. Edward was re-elected after a contest, but the ascension of George I placed his brother out of favour and a motion for Lord Oxford's impeachment was brought. Edward vigorously opposed this, but he was unsuccessful, and his brother the earl was imprisoned in the Tower of London for two years. However, he did successfully refute charges of financial dishonesty brought against himself as *Auditor of the Imprests*.

At the general election of 1722, Harley proposed to decline nomination for Leominster on account of his health, but not wishing to *refuse the kind invitation* he received from the borough, he stood, only to be heavily defeated. He lodged a petition but allowed it to drop, withdrawing into private life. He contributed towards the setting up of charity schools, maintaining three from his own resources in Herefordshire and Monmouthshire, and in 1725 was chosen as chairman of the trustees for charity schools in London.

From 1717, Edward Harley was responsible for the supervision of the development of the Cavendish-Harley estates in Marylebone. In December of that year, Edward Harley wrote to his namesake nephew to tell him that six peers; Dartmouth, Carnarvon, Harcourt, Bingley, Bathurst and Castleton, were set to take leases and build on their estate. All were Tories associated with the Harley administration that ended in 1714, and they all intended houses on the newly proposed development, Cavendish Square, the name deriving from his nephew's wife, Lady Henrietta Cavendish Holles. Meanwhile, further building on their estates resulted in other locations named after the family, such as Harley Street.

During his later years he wrote several devotional works, before dying on 30th August 1735 at his chambers in Lincoln's Inn. He was buried at Titley, the parish in which Eywood was situated, and fittingly, it was his personal piety that was best remembered. Queen Anne had called him *a very good man*, while in 1735, not long before Harley's death, the son of the Bishop of Sodor and Man remarked with admiration that *his whole life has been one preparation for futurity*. The inscription on his funerary monument recalled that *the ... tenor of his life was strictly moral . and the great example of piety and religion is the great consolation and blessing he has transmitted to posterity*. While in politics he had displayed a *steady and unbiassed adherence to the constitution, and a disinterested zeal for the good of his country*, yet *his assiduity in civil employments neither lessened his attention to religion, nor interrupted his daily course of devotion; the discharge of his duty as a Christian was the source and centre of all his desires*.



Eywood House and Estate

The Eywood estate at Titley, Herefordshire was acquired in 1702 by Edward Harley MP (1664-1735), the younger brother of Robert Harley, 1st Earl of Oxford, who was Speaker of the House of Commons and later Chancellor of the Exchequer under Queen Anne. Edward was appointed by his brother to the lucrative office of *Auditor of the Imprest*, and the proceeds of this appointment are said to have funded the building of a new house at Eywood, completed in about 1705. It seems that the house of this time was a plain five by five bay block of three storeys. The rusticated basement and giant Ionic columns, which decorated the front may also have been original features, or may have been added later in the 18th century. Inside, there was a fine staircase, with three turned and fluted balusters per step, which survived later alterations to the building. Another original part that survived was the fully panelled 'Oak Room', which was later used as a billiard room, meanwhile the house also had handsome fireplaces, which were also from the initial 1705 building period.

In 1735 the house and estate passed to his son, also Edward Harley (1699-1755), who in 1741 succeeded his cousin as 3rd Earl of Oxford. With the earldom came the Brampton Bryan estate in Herefordshire, the ancient seat of the Harleys, and Eywood became a secondary estate of the earls, but this did not mean that it was neglected,

and the 3rd Earl established a landscaped setting for the house, which Bishop Pococke (owner of The Bradby Tompion, no.391, see biography page 72) noted on his travels in September 1756, *Lord Oxford has a large house and a fine lawn, with a beautiful piece of water and great woods on the hill over it*, which remained a true description of the house for many years. Edward Harley (1726-90), 4th Earl of Oxford, brought Capability Brown to Eywood in 1775, but it is not clear whether any of his proposals for the estate were executed, nonetheless by 1795, there were three pools within the parkland setting of Eywood House, two of which remain.

Edward Harley (1773-1848), 5th Earl of Oxford, came of age in 1794, and in that year married Jane Scott, a Hampshire clergyman's daughter. She was to be the Countess with whom Lord Byron had an infamous affair in 1812, when she was 40 and Byron was only 24, and on the rebound from Lady Caroline Lamb. By the time Byron stayed at Eywood in 1812, the house had been greatly altered. Between 1805 and 1807, Lord Oxford employed Robert Smirke (1780-1867) to enlarge and modernise the house. Smirke seems to have turned the early 18th century square block into a courtyard house by adding much longer, three-storey wings to either side of the original building, and a connecting section joining the ends of the two wings to the north-west. On the main south front, the new wings were stepped back a little from the original block, which with its tall parapet



The proposed remodelling of Eywood house, by Sir Robert Smirke, 1805

continued to dominate the appearance of the house. A new entrance was made into the north-east wing, and the ground floor of the main block and this wing were rusticated. Inside, Smirke created new interiors, including a grand new dining room with a screen of columns across one end and a large pair of matching alabaster urns (see illustration), a new drawing room, and several other rooms with fine chimneypieces and plasterwork, while a new pleasure ground was also laid out around the house.

In 1848, Eywood and Brampton Bryan passed to Alfred Harley (1809-53), 6th and last Earl of Oxford, and when he died, the estates passed to his elder sister, Lady Langdale. She died in 1872 and Brampton Bryan passed to a cousin, William Daker Harley. Meanwhile, after some legal wrangling, Eywood passed to her younger sister, Lady Charlotte Bacon. She was the widow of Major General Anthony Bacon (1796–1864), whose career had encompassed being *the finest cavalry officer in the army*, two years imprisonment for debt, an abortive attempt to found a colony in South Australia, and military service under Dom Pedro I, Emperor of Brazil (1798 – 1834), who later briefly became Pedro IV, King of Portugal. At the time of her inheritance, Lady Charlotte was living in straitened circumstances in Australia with her children, but she returned home and eventually died at Eywood in 1880. Her son, Edward Bacon (b.1842), apparently refused an offer to re-instate the earldom on grounds of expense, and immediately sold Eywood, lock, stock and barrel to Arthur Walsh (1827-1920), 2nd Baron Ormathwaite.

Walsh's father, Sir John Walsh (1798-1881) was a Tory politician who had inherited a fortune made in India, including estates in Berkshire and Radnorshire, but also large holdings in Ireland, mainly in Cork and Kerry, and in 1868, Sir John was raised to the peerage as 1st Baron Ormathwaite. However, his son's interests lay in gambling and shooting, and he began borrowing against his future inheritance 30 years before succeeding. The Eywood estate was bought in 1880, a year before his father died, and by the early 1890s his debts had risen to over £200,000. The income from his various estates could no longer cover the annual charges, and the mid 1890s saw frantic efforts to keep the creditors at bay: furniture (including Tompion no.322), household chattels, plate

and farming implements were all sold, but the inevitable could not be delayed and in September 1895, the 2nd Baron Ormathwaite was declared bankrupt. So, after only 15 years in tenure at Eywood, Arthur Walsh was forced to sell and the Eywood estate were bought by Charles James Paul Gwyer (1854-1940) and his wife Mary (1862-1950).

The Gwyer family fortune had been made by his father trading in Russia, and Charles was born in St. Petersburg. In 1898, the couple employed the architect, Oswald Milne, to remodel Eywood house, which was apparently looking decidedly run-down after half a century of only intermittent occupation. The wings of the house were reduced from three storeys to two, and the central block was refaced in brick with huge quoins to the angles, resulting in a more unified appearance than before. A large new porch was built on the east side, and this is almost the only part of the building to survive today. Charles Gwyer had two sons from a previous wife, Alice Losh Gwyer (d.1887), but both sadly perished in the Great War, so that after the death of Mary Gwyer in 1950 there was no one left to inherit, and the estate was acquired by a Mr Vowells, who sold off the farms and demolished the house almost entirely. The house appears not to have been in poor condition but it went, like so many others at the time, because it was so large and the new owner had no use for it. The landscaping and the stable block survive, but the porch and some odd stumps of walling are all that remain of the house today. At least one of the chimneypieces from the house was re-acquired at this time by the Harley family and taken to Brampton Bryan.



The dining room at Eywood House, after the alterations from 1805 to 1807 by Robert Smirke, pictured here shortly before the house was demolished in 1954

**The Bradby Tompion,
No. 391 Circa 1703**

An exceptional Queen Anne, ebony and gilt-brass mounted mid-sized Phase 2 striking table clock with pull-quarter repeat by Thomas Tompion, London

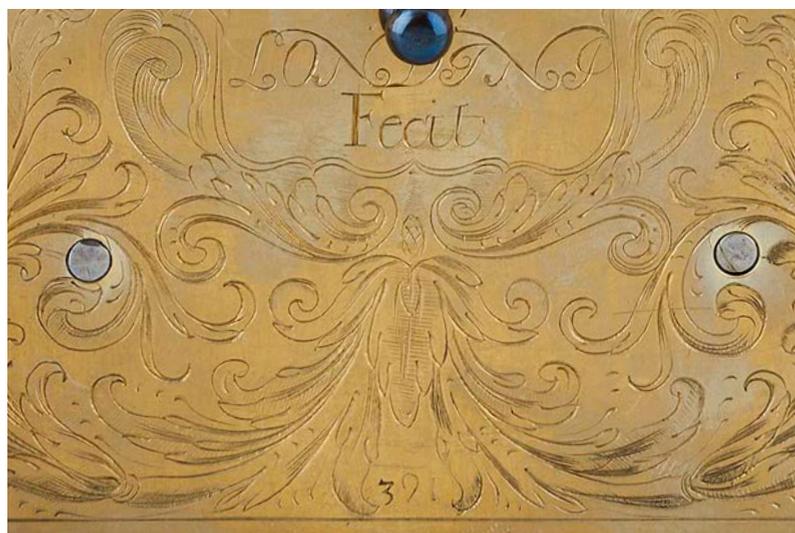
Provenance:

Bishop Richard Pococke 1704-1765, purchased secondhand, possibly from Graham, thence by female descent to the Bradby family;

Rev. Dr. Bradby c.1890, thence still by family descent until sold, Sotheby's 22nd February 1990, lot 316;

The Tom Scott Collection, inventory no.85, until sold 2015;

Private collection UK.



When this small and beautifully proportioned example sold at Sotheby's in 1990, it made an auction record for a mid-sized Tompion table clock, £176,250, while the following lot in the same sale was a good standard-sized Tompion table clock, no.394, that sold for almost a third less, £121,000.

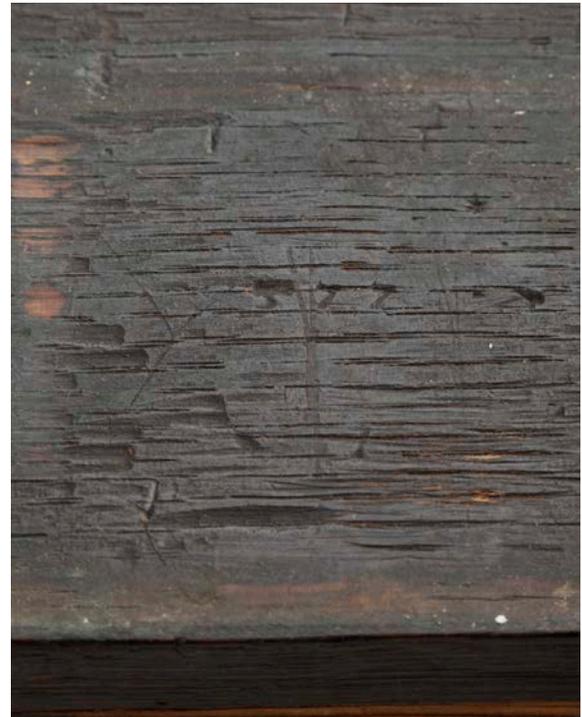




CASE

The well-proportioned mid-sized ebony veneered Phase 2 case has the original gilt-brass foliate-tied handle, specific to Tompion's mid-size series, that surmounts the cushion-moulded top. The sides of the case have later gilt-brass foliate frets above glazed apertures with a glazed door to the rear. The front door is applied with gilt foliate cartouche escutcheons to the sides whilst the bottom rail has a typical satyr mask and foliate mount. The seatboard is punched numbered 577, indicating an exchange or repair in George Graham's workshop ledger, circa 1716. The whole case is raised on conforming ebony base mouldings and block feet.

Height: 12¼ inches (312 mm)





DIAL

The 5¾ by 6¾ inch brass Phase 2 dial has retained the original fire-gilding on the front, it is signed *Tho: Tompion LONDINI Fecit* within a wheatear oval, executed by Graver 195, and flanked by subsidiary silvered rings for strike/silent and pendulum regulation. The main silvered chapter ring has Roman hours with typical sword-hilt half-hour markers, while the Arabic minutes have cross half-quarter markers outside their division ring, both indicated by delicately pierced blued steel hands. The finely matted centre has a mock pendulum and pinhole-adjusted calendar apertures, the lower double-screwed spandrels are finely cast ornate foliage, the upper spandrels are matching quarter versions. The dial is fixed to the frontplate by three latched dial feet.

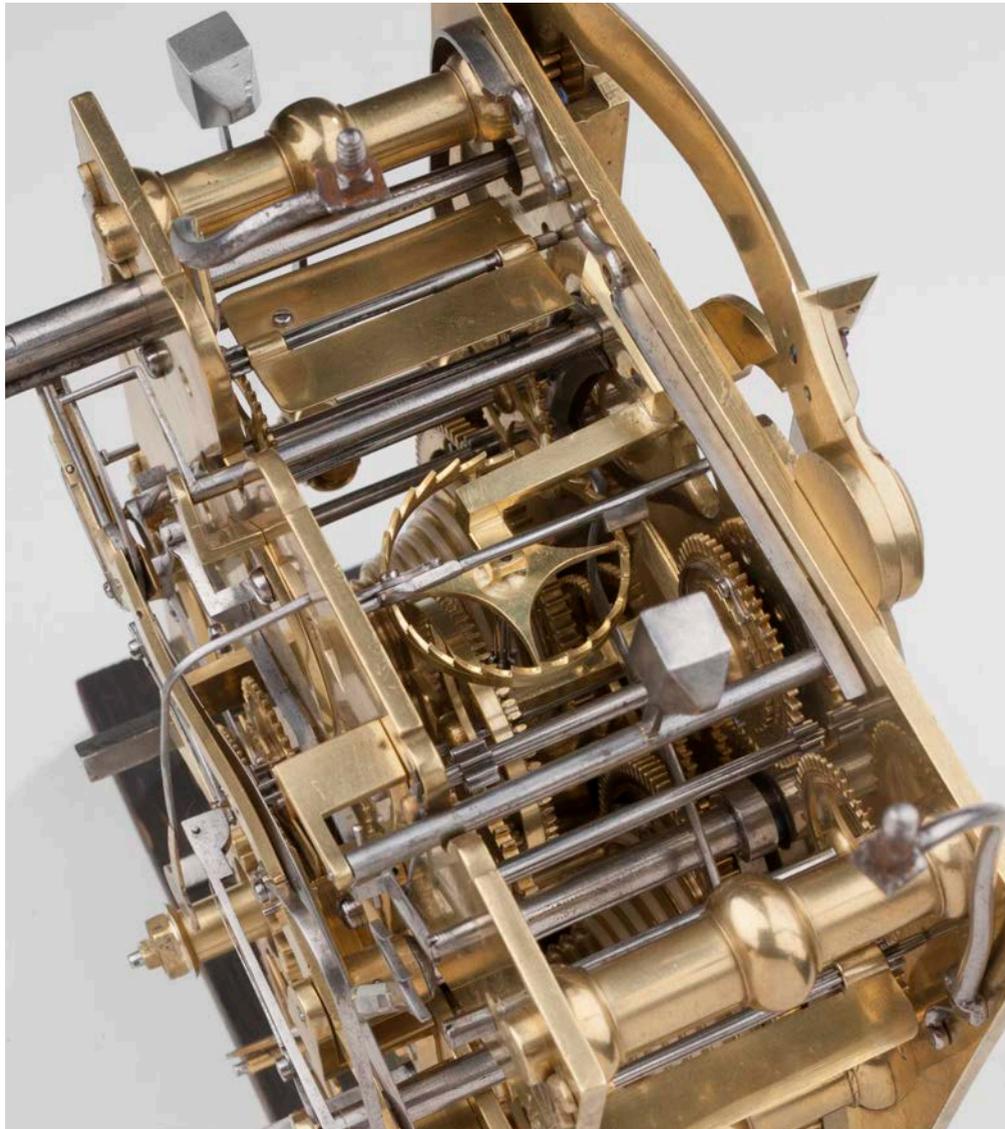




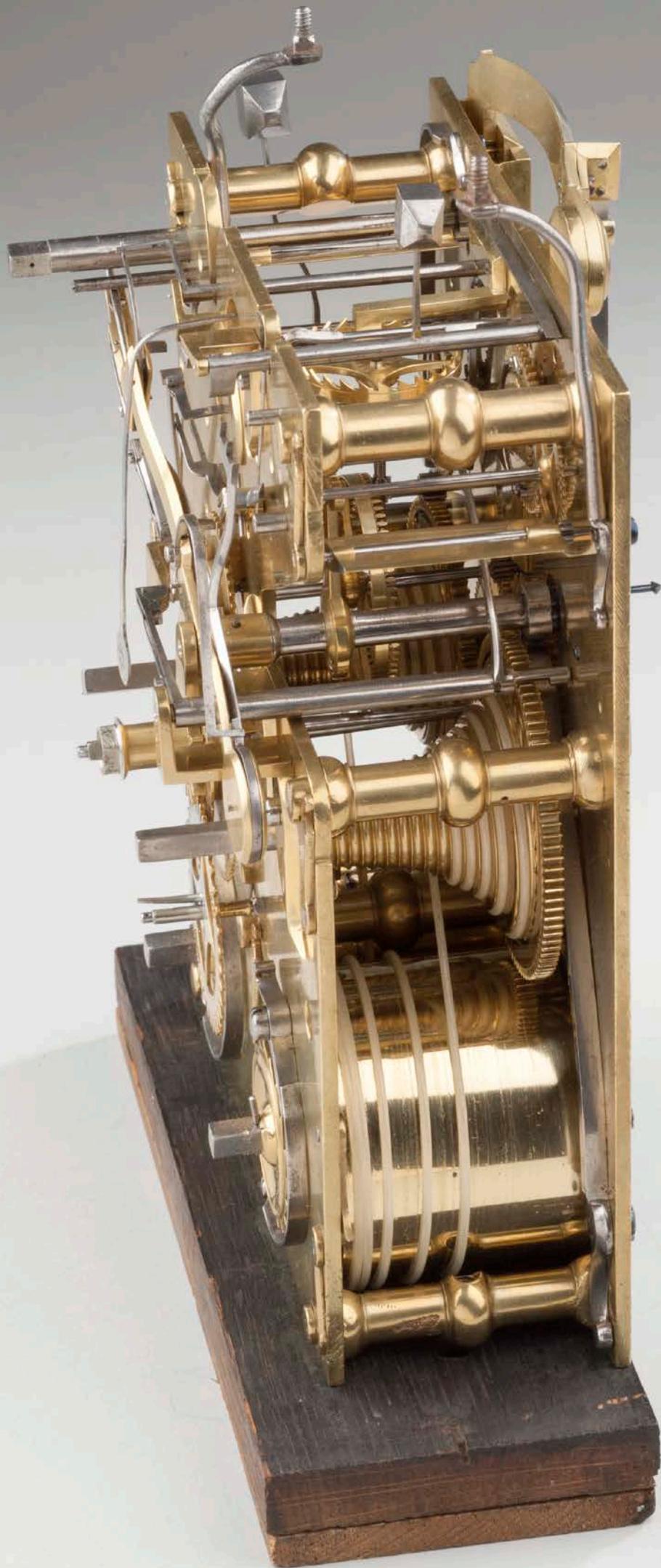


MOVEMENT

The substantial mid-size movement is fixed by seven finned baluster pillars, all latched, with twin fusees and spring barrels. The going train has a pivoted verge escapement with brass rod lenticular pendulum, spring-suspended from the regulation bar atop the plates with pinion adjustment through the dial. The striking train strikes the hours on the larger bell and the quarter repeat operates on Tompion's own fail-safe-system with double-cocked interlocking blued steel levers that may be pulled from either side of the case. The backplate was executed by Graver 195 and is profusely engraved with scrolls and foliage within a scored line border and signed in the lower centre *Tho: Tompion Londini Fecit* within a cartouche and punch-numbered 391 at the base. The movement is secured within the case by means of two steel bolts into the base pillars.







Literature:

Entry in *D Desbois & Sons ledger*, 18 Feb 1891: Rev Dr. Bradby of St. Katherine's Dock House [London, LMA, GB 0074 CLC/B/064];

Evans, Carter & Wright, *Thomas Tompion 300 years*, 2013, illust. p.154, 185;

Garnier & Carter, *The Golden Age of English Horology*, 2015, p.90-93.



Exhibited:

Masterpiece London 2015, Highlights of the Tom Scott Collection, inv. no. 85, exhibit no. 5



Bishop Richard Pococke (1704–1765)

Pococke was an English-born Irish churchman, inveterate traveller, antiquary and travel writer. He was born in Southampton, son of Richard Pococke, rector of Colmer, Hampshire, and his wife Elizabeth, the only daughter of another clergyman, Isaac Milles (1638–1720). Elizabeth Milles's three brothers obtained lucrative church appointments, two of them in Ireland, Thomas as Bishop of Waterford (1708–40) and Isaac was treasurer of Waterford and prebendary of Mondelligo (1714–27). On his father's death in 1710, the Pococke family moved to Isaac Milles's rectory at Highclere, Hampshire. The Milles influence, upbringing and connections gave the motive and means for an ecclesiastical career. Having been taught at the school conducted by his grandfather, he entered Corpus Christi College, Oxford, on an exhibition (1722), graduating BA (1725), MA (1731) and Doctor of Laws (1733). When he was ordained has not been ascertained, but he was appointed to the precentorship of Lismore, a sinecure, in 1725 by his bishop-uncle and was thus set on a career in Ireland. Five more sinecures in the same diocese followed (1729–32), and most of these he held for many years.

Between 1733 and 1736 he undertook two Grand Tours with his cousin, the Rev. Jeremiah Milles (1714–84), treasurer of Lismore (1735–45), travelling through France, the Low Countries, Hanover, Prussia, Austria, Switzerland, Italy, and, even more adventurously, Greece. Detailed accounts of his travels survive in a collection of letters written to his mother and uncle, Bishop Milles, as well as in a number of notebooks in the British Library (Add. Ms. 19939, 15779, 22998, etc.). The earlier manuscripts include probably the most detailed description of Venice's *Marriage to the Sea* ceremony as well as precious information on contemporary music, especially opera. Meanwhile, in 1734, he had been made vicar-general of Waterford and Lismore. By 1737 Jeremiah Milles had been recalled by their mutual uncle, the Bishop of Waterford & Lismore, leaving Pococke to continue his major excursion to the Middle East alone.

From 1737 to 1741 he explored Egypt, Palestine and Asia Minor, returning to Egypt to go up the Nile as far as Aswan before revisiting Greece and, on his way home,



Richard Pococke in Oriental Costume, 1738, by Jean-Étienne Liotard

penetrating the *Mer de Glace* in the Savoy; he was thus also considered one of the first Alpine travellers. After these travels he joined the Egyptian Society (founded 1741) and acted as its secretary (1742–43). The account Pococke published of his eastern travels, *A description of the East* (2 vols, 1743–45), was translated into French, German and Dutch, establishing him as a pioneer Egyptologist. It remains an important record of sites and monuments that had disappeared by 1798, when Napoleon Bonaparte's invasion opened up Egypt to European scholars. Among other things, he was one of the European travellers to give an account of the origins of the medieval Arabic document, the *Ashtiname of Muhammad*, which claims that Muhammad had personally confirmed a grant of protection and other privileges to the monks of Saint Catherine's Monastery at Sinai, in Egypt.

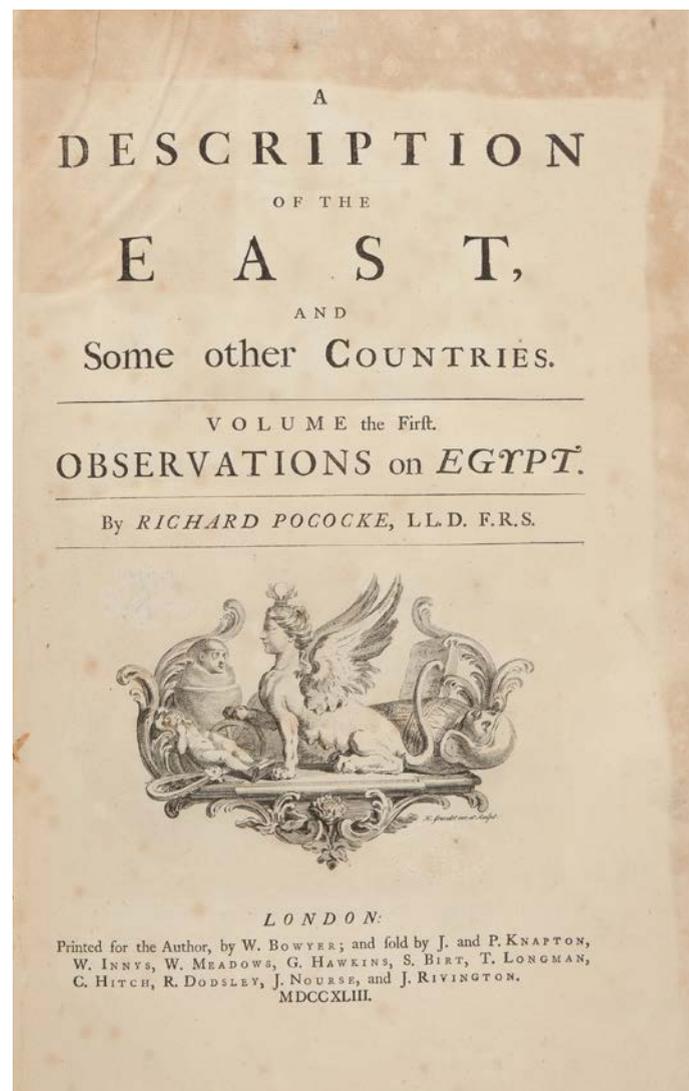
Each year, after returning from the east, Pococke toured a part of Britain or Ireland and wrote a regular

account of his travels in the form of letters to his mother or sister, most of which have been published since his death. His visits to England and Wales took him into every county (see his visit to Eywood House, Herefordshire, under *The Eywood Tompion*, no.322, p.44). His first tour of Scotland in 1747 was only a year after Culloden, while on his second in 1750 he saw the Border Country, his third tour in 1760 was more extensive and his itinerary took him in a clockwise circuit round most of Scotland, including Loch Lomond, Iona, Fort William, Inverness, the North West, Orkney, the North East, Perth, Fife and Edinburgh, finishing at Berwick on Tweed. His travels and observations were recorded in a series of letters and sketches to his mother and sister, these were published for the first time by the Scottish History Society in 1887. Pococke's narratives of his Irish travels survive for 1752 (a tour of the coastal counties) and 1758 (Cork and Kerry), as do accounts of short journeys made in 1753 and 1760, while an earlier tour of Ireland in 1749 is lost. His narratives of his travels are interesting for his *disregard of accepted itineraries* and they contain much on antiquities and local customs.

Richard Pococke was elected FRS in 1741, which would have introduced him to George Graham FRS (1673-1752), who it seems likely supplied him with the current clock: the re-sale of goods was an important part of Graham's business, and the secondary stamp on the seatboard, 577, indicates this clock had initially returned to Graham as early as c.1716. Pococke was an active member of the Physico-Historical Society, founded in Dublin in 1744, and is mentioned in the charter of the Dublin Society granted in 1750. It was Pococke's ecclesiastical career that gave him means and leisure to travel. He was appointed to what was probably another sinecure, the precentorship of Waterford, in 1744 and, after arriving in Ireland as lord lieutenant, the Earl of Chesterfield, appointed him Archdeacon of Dublin (1746), while a successor, the 4th Duke of Devonshire, nominated him Bishop of Ossory (5 March 1756). Despite long absences, which were commonplace in the 18th century, Pococke was a conscientious and industrious clergyman. While at Kilkenny (1756-65) he restored St Canice's Cathedral, partly at his own expense. After his appointment

as Bishop of Meath (22 June 1765) he moved to the episcopal palace at Ardracran, in the grounds of which he planted seeds of cedars of Lebanon, one of which is still standing. Three months later, on 15 September 1765, Pococke died of apoplexy during a pastoral visitation to Charleville Castle and he was buried at Ardracran, County Meath, Ireland.

Bishop Pococke was the only Bishop of the Church of England, since the Revolution, that preached and confirmed in Scotland when Episcopacy was there abolished. For in the summer of 1760, this prelate made a journey from Ireland to the north parts of it [Scotland]...He preached and confirmed in the English Church in Elgin, and continued to do so in every other of that persuasion which he had occasion to be near, greatly regarded and esteemed by all ranks and degrees of people. The Cambridge Chronicle, October 5, 1765.



A Description of the East, by Richard Pococke, 1743



Joseph Knibb
Oxford, London & Hanslope

Joseph Knibb (1640-1711)

Joseph was baptised in 1640, the fifth son of Thomas Knibb, yeoman of Claydon. No record of any official apprenticeship has been traced, but it is thought that he probably learnt his trade between 1655 and 1662, from his cousin Samuel Knibb in Newport Pagnell, who subsequently moved to London.

On completing his training, Joseph started a business in St Clement's Oxford. Despite being outside the city liberties, the freemen *smiths and watchmakers* drew up a petition objecting to his presence as a *foreigner*. By July 1665 the Great Plague was raging in London and Charles II and his Court relocated to Oxford, while in early 1666, Joseph moved to Holywell Street within the city liberties and was forced to apply for his freedom, but it was refused. There was an on-going conflict between city and university over their respective privileges, one of which allowed the university to employ tradesmen within the liberties but outside city jurisdiction. Joseph's new premises were scheduled a 'university' shop and the Matriculations Register of August 1667 included Knibb as a *gardener* for Trinity College.

Another petition was drawn up almost immediately by the *Clockmakers and Watchmakers of the City*, and on 29th October 1667 the council resolved that *...Knibb and any others who offended were to be suppressed*. By the beginning of 1668 there was a temporary settlement between city and university, and Joseph's situation was debated where he offered the council a compromise:

...Mr. Mayor acquainted this House that Joseph Nibb Clockmaker who formerly sett upp shopp in the parish of Holywell in the Suburbs of this Citty upon Accompt of being a Gardener to Trinity Colledge did now make his application to this Citty for a freedome waveing the power of the University who formerly endeavoured to Maynteyn him to keepe shopp upon this accompt.

Joseph suggested he withdraw his university tradesman's privilege, so that he could be made a freeman upon payment of a fine. The solution was accepted and Joseph paid his admission 'fine' of 20 nobles and a leather bucket. Soon afterwards, Joseph issued an undated farthing trade token in copper.

Joseph's last year in Oxford, 1669, was also of major

importance in the history of horology, as he carried out two important turret clock commissions. Firstly, he converted the foliot-controlled clock belonging to the University Church, St Mary the Virgin, to a pendulum; accounts for 1669/70 include the entry *...to Mr Knibb for altering ye Univ'sity clock to a Pendulum*. This clock no longer survives, but it is believed that Joseph used this as a test-bed for his second commission, the Wadham clock, which is considered the earliest known clock designed to incorporate an anchor escapement.

It is thought that Samuel Knibb died in about 1670 and Joseph had arrived in London by January 1671, when he was made a free brother of the Clockmaker's. Evidence suggests that he set up in the Fleet Street area continuing where Samuel left off, perhaps literally, because two of Joseph's earliest signed architectural table clocks bear the hallmarks of Samuel's unfinished work. Joseph's move left his brother John in charge of the Oxford business, but the two workshops continued manufacturing links.

Still aged only 30, Joseph quickly established himself in London, he had taken his cousin Peter apprentice in Oxford in 1668, who accompanied him, to complete his term in 1677. Joseph also took over his cousin Samuel's apprentice John Miller, who was made free in November 1674 and may have played a leading role in Joseph's workshop. Over the course of his career Joseph would enroll eleven apprentices.

Within three years of his arrival in the capital Joseph was accomplished enough to supply two longcase clocks and a weight-driven, split-second timer with a tic-tac escapement, to James Gregory FRS, Mathematician and Astronomer at St. Andrews University, where they remain today. Gregory described the clocks in a letter to John Flamsteed, the Astronomer Royal, dated 19th July 1673: *I have 2 Pendulum Clocks making, with longe Swinges, Vibratinge Seconds; and Pointinge Houres, Minits and seconds, without Strikinge; And also one little Pendulum Clock, with a short Pendulum, vibratinge 4 times in a Second, alsoe without Strikinge; for discerninge small Intervalls; when there may be a pointe of a Second in Question.*



Joseph's clocks display simplicity in structure and elegance in form and, as is often mentioned, his cases and dials have a gracefulness rarely achieved by other makers. Indeed, he is one of only a few makers whose individual style can be easily identified, and throughout the 1670s and 1680s we can see a clear evolution in the designs, which enabled RA Lee to categorise his clocks from Phase I to IV.

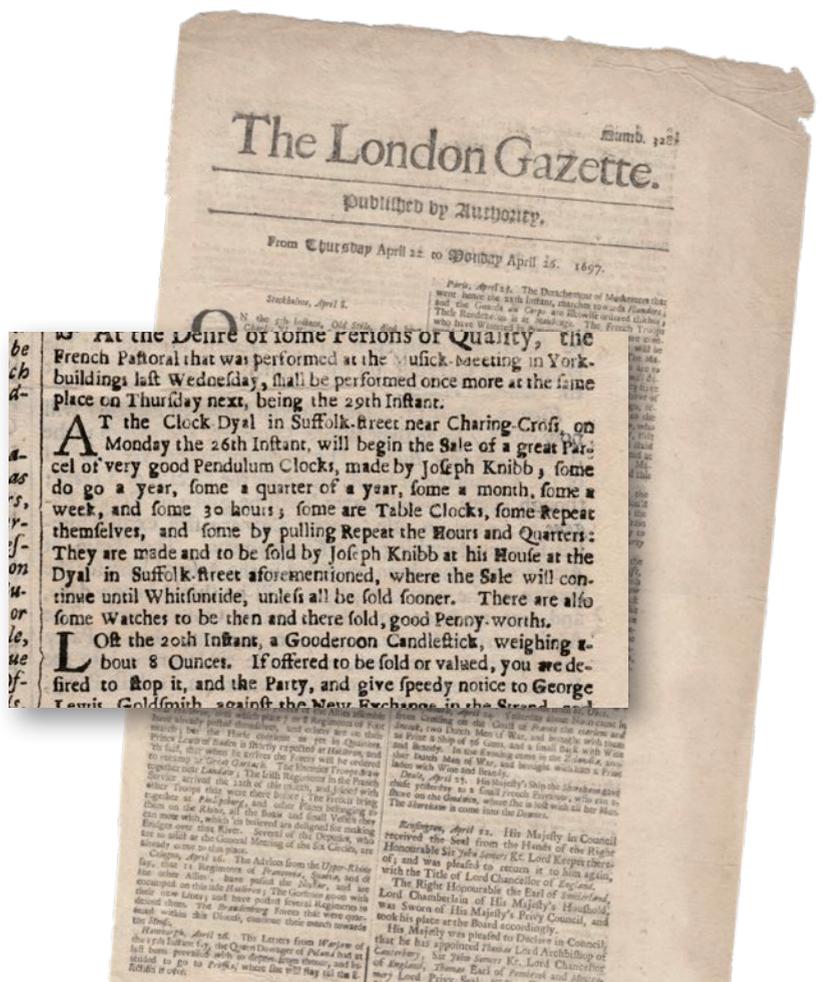
In the busy environment of a resurgent city with a competitive horological community Joseph's clocks displayed more innovations than those of any other maker. In just a few years the choice of clocks available had increased dramatically, and Knibb's customers would have been mightily impressed with the combinations he could offer. Whereas just a short time before they had been confined, with few exceptions, to inaccurate clocks going for only short periods perhaps striking on the hour, they could now buy clocks of longer duration with a choice of strike work, including Roman, quarter, double-six and full grande-sonnerie striking, each ingeniously designed within the constraints of countwheel governance. In hindsight, some of these methods appear somewhat confusing but at the time they must have been sensational and certainly assisted Joseph in developing his business.

Customers also had a wide choice of case, the newly adopted wooden clock case being available in light or dark woods, and with the option of inlaid decoration as well – in many different styles and designs. In 1675, the politician Sir Richard Legh of Lyme Hall, Cheshire (1635–87) wrote to his wife describing Knibb's advice on choosing a case for a longcase clock: *I went to the famous Pendulum maker Knibb, and have agreed for one, he having none ready but a dull stager which was at £19; for £5 more I have agreed for one finer than my Father's, and it is to be better furnished with carved capitalls gold, and gold pedestalls with figures of boys and cherubimes all brass gilt. I wold have had itt olive Wood, (the Case I mean), but gold does not agree with that colour, soe took their advice to have it black Ebony which suits your Cabinet better than Walnut tree wood, of which they are mostly made. Lett me have thy advice by the next. Legh's wife, Elizabeth, replied in agreement: My dearest Soule; as for the Pandolome Case I think Blacke suits anything.*

Two years later in 1677, Knibb was commissioned to supply both a turret clock for Windsor Castle and his famous Phase II spring clock for Charles II. The latter has a tic-tac escapement, and is signed *Invenit et fecit Anno Domini 1677*, but as this clock has another innovation, Roman striking, it is not clear for which feature he was claiming priority, possibly both (see the Hildesborg Knibb following, that has both features and apparently pre-dates that example). The Dukes of Sussex and York also ordered clocks and in 1682 he was paid for more work carried out for Charles II.

From *The Dyal* near Sergeants Inn, Fleet Street, Joseph had built one of the most prosperous clockmaking businesses in London and in circa 1693 he moved to *The Clock Dyal* in Suffolk Street near Charing Cross but by then, whether by design or circumstance, his operation was winding down and in 1697 he advertised the sale of his stock (see below), leaving for Hanslope in Buckinghamshire.

He was now a wealthy man and his estate included a farmhouse with 78 acres. He took a new apprentice, James Hunt, from 1699 to 1708, and continued to make clocks until he died in 1711. After his death his widow Elizabeth lived with her brother-in-law John Knibb in Oxford; she died in 1726 aged 84.



The Hildesborg Knibb ***Circa 1675***

A very rare Charles II ebony and gilt-brass mounted Phase I Roman striking table clock with tic-tac escapement by Joseph Knibb, London

Provenance:

The Count Gotthard Wachtmeister (1834-1920),
Hildesborg Palace, Sweden;

Bonhams, London, 28th June 2011, lot 95;

The Keith Roberts collection, inventory no.8

Joseph Knibb's Phase I spring clocks were the first made to his own specific design and were all probably produced within eight years of him setting up his business in London in circa 1670; all share the same case style, but they are often mechanically quite different, displaying Knibb's renowned array of strike variations, in this instance Roman notation striking. By the latter part of the 1670s, Knibb started to evolve his spring clocks making them smaller; the first Phase II example was dated 1677, and marked a shift away from this earlier style.



CASE

The ebony-veneered case of archetypal Knibb Phase I form with a flat topped architectural moulding below the shallow dome top, which is applied with a gilt-brass winged cherub mount and surmounted by an octagonal-section faceted gilt-brass Phase I handle, all flanked by four gilt-brass finials. The side apertures are glazed, whilst the front door is set with a pierced ebony sound fret to the top rail and elaborate gilt-brass escutcheons to the side stiles. The case plinth has conforming ebony mouldings and the whole is raised on four typical gilt-brass bun feet.

Height: 15 inches (390 mm)







Joseph Knibb Londini fecit

DIAL

The 8 inch square gilt-brass dial has a finely matted centre and is signed *Joseph Knibb Londini Fecit* along the lower edge, flanked by winged cherubs head spandrels. The silvered chapter ring has Roman hours, with *IV* to signify Roman strike, and *fleur-de-lys* half-hour markers with Arabic minutes within the division ring. The delicate pierced blued steel hands are of typical early form and the three dial feet are latched behind the front plate.

As seen here, on his Roman striking clocks Knibb used IV on the chapter ring instead of the usual IIII. The Roman striking system is explained on page 87 and is most often associated with Knibb. It did not become widely popular, possibly due to it being rather confusing unless one concentrates, as the Is are denoted on a high pitched bell and the Vs and Xs on a lower bell.



Joseph Knibb Londini fecit

MOVEMENT

The twin gut fusee movement has delicate brass plates united by eight latched and finned baluster pillars, the going train has a tic-tac escapement on a knife-edge with engraved single foot backcock and brass-rod bob pendulum. The strike train is governed by an outside countwheel with a double-sided pinwheel for lifting the two hammer tails. The hours are indicated using the Roman system, whereby the Is are struck individually on the small 'pork-pie' bell and the Vs (singly) and Xs (doubly) on the larger 'pork-pie' bell mounted above it. The small numbered and rose engraved countwheel is mounted on the backplate with a re-setting trip lever through a slot above it. The backplate retains its original fire-gilding and the engraving, inspired and possibly executed by Wenceslaus Hollar (1607–1677, see pages 92-93), has a single stem of foliage issuing six open and closed flower heads, with individual tulip heads to the bottom corners, the centre of the backplate is signed *Joseph Knibb Londini Fecit* in an arc above an engraved winged hour-glass, an allegory for *Tempus fugit* (time flies), all enclosed within a single line border.

The original fire-gilding to the present backplate is particularly beautiful, but also a costly and early attribute, although the first of Knibb's Phase II spring clocks retain this expensive feature (See the Daniels Knibb, made for Charles II and dated 1677, p.105) by the late 1670s, and the introduction of his Phase III clocks, Knibb had essentially dispensed with it.

The Tic-tac Escapement

The tic-tac is a type of recoil escapement found on early clocks less than a decade after the introduction of the pendulum from a variety of makers, but it is perhaps most well known on clocks by the Knibb family, as shown on the current example.

When the anchor escapement was introduced, with its consequential improvements in timekeeping, it was natural that clockmakers would want to apply a similar escapement to their spring clocks. Because of their high value at this time, owners would frequently move them from room to room and the wide arc of the verge pendulum was tolerant to this. A heavy anchor escapement would have been prone to damage on the pendulum suspension and, as a consequence of the narrow arc of swing, required setting up on a perfectly level surface.

It seems the tic-tac was an early attempt to overcome these difficulties and ape the improved timekeeping of the anchor escapement. The pallet arbor is normally supported at the back by a knife-edge and the escape wheel is mounted vertically with the pallets embracing just two teeth. This produces the required wide arc of pendulum swing to be able to move the clock around, but the safety margin of extra swing is greatly reduced. While the verge will operate in spite of considerable wear, the tic-tac needs to be in good condition. The greater part of the impulse is delivered on exit and, when slightly worn, the escape teeth will often foul on the entry pallet and stop the movement altogether, this may have caused problems for the early clockmakers and is likely the reason for its limited use.



Roman Notation Striking

This ingenious form of strike is again most usually found on clocks by the Knibb family, both spring and weight driven. The system uses two bells to sound the hours, the smaller bell is for Roman I, while the larger bell indicates Roman V (single strike) and X (double strike). The chapter ring is usually engraved accordingly and four o'clock is shown in 'true' Roman numerals IV, rather than the usual clockmakers' IIII.

The two bells, I and V, are struck according to Roman notation and are governed by a single countwheel subdivided for 12 hours with unequally spaced arc segments that reflect the number of hammer blows required, thus for X (2 hammer blows), the arc segment is smaller than III, (3 hammer blows). The pinwheel has pins mounted on both sides, one side gathers the I hammer and the other gathers the V hammer.

On the frontplate is a release lever which engages with a single pin on the minute wheel, this is mounted onto the warning arbor between the plates that has the warning piece attached internally and a lifting piece to lift the countwheel detent arbor, which is placed directly above and parallel. The countwheel detent arbor has the hoop wheel detent fixed internally and the countwheel detent attached externally on the backplate, which at this stage, is locked and seated in one of the hour divisions.

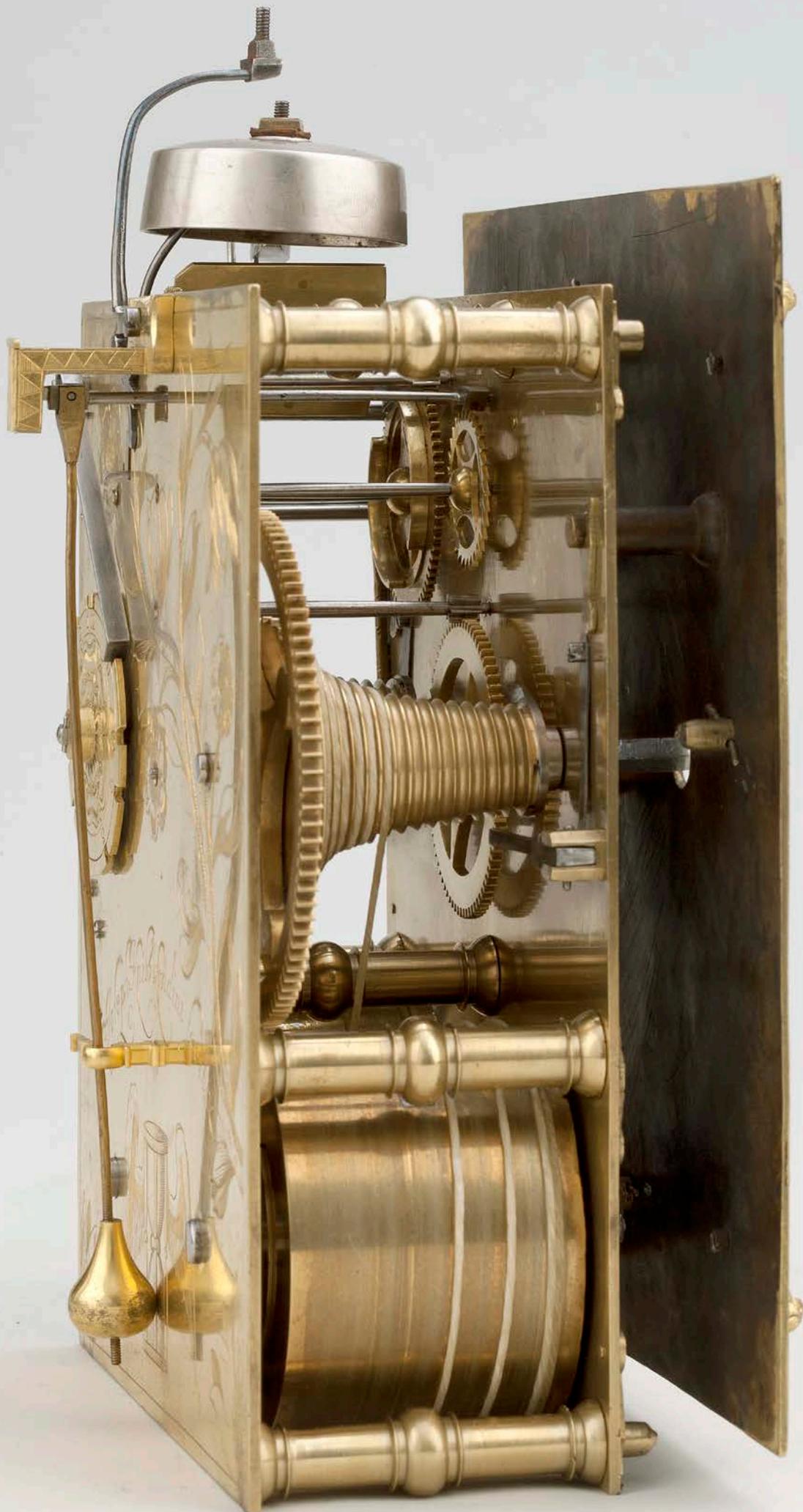
At a minute or two before the hour, the release lever is raised by the pin on the minute wheel and the warning arbor lifting piece engages with the countwheel detent arbor above. This, in turn, raises the hoop wheel detent releasing the hoop wheel. The warning wheel runs for about half a turn until stopped by a pin on its rim engaging with the warning piece and putting the system on 'warning' to allow the train to release exactly on the hour. The minute wheel continues to turn and, on the hour, the pin passes and the release lever drops.

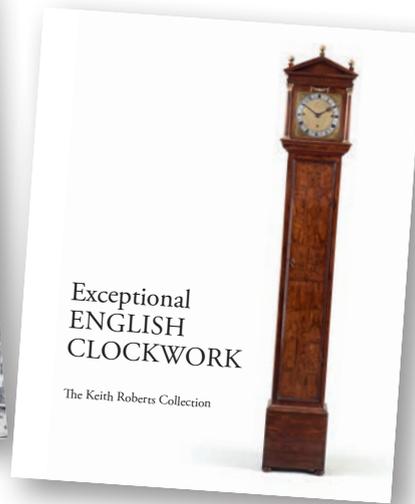
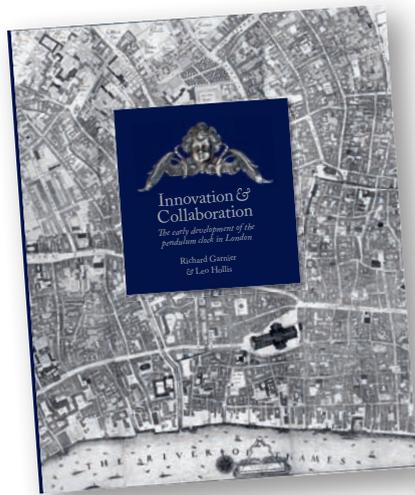
As the lever drops, the warning piece falls away from the warning wheel pin, thus releasing the strike train. The uneven arc segments on the countwheel govern how much the strike train moves while, between the plates, the double-sided pinwheel gathers the I and/or V hammer tails



in sequence as required, thus striking the correct bells at each Roman hour as their tails pass and drop off each pin.

At the same time, the hoop wheel in the strike train rotates and the hoop wheel detent (mounted to the countwheel detent arbor) falls into the gap therefore checking the state of the countwheel after each blow. When the detent finds the next slot in the countwheel it drops into the hoop gap and locks the hoop wheel, stopping the strike train from turning.





Literature:

Exceptional English Clockwork, The Keith Roberts Collection, 2015,
p.76-81

Garnier & Hollis, *Innovation & Collaboration, 2018, p.250-253*

Exhibited:

London 2018, *Innovation & Collaboration, exhibit no.73*



The Count Gotthard Wachtmeister af Johannishus (1834-1920)

The Count Gotthard Wachtmeister was Governor of Malmöhus County, on the southern tip of Sweden, from 1880 to 1892. The Swedish title, Count Wachtmeister af Johannishus, was bestowed in 1687 on Hans Wachtmeister (1642-1714), admiral of the whole Swedish Navy and advisor to two Kings, Charles XI and Charles XII.

Gotthard was the son of Francese Lovisa von Rehausen (1803-1837) and Count Carl Johan Wachtmeister (1793-1843). Francese Lovisa was the daughter of a Swedish diplomat, Baron Gotthard Mauritz von Rehausen (1761-1822), the Minister

Plenipotentiary in London, and Harriet Louisa Bulkeley (1776-1834). Harriet's father, John Bulkeley (d.1803) was a *Member of The British Factory of Lisbon* and amassed a fortune. Between 1757 and 1776, Parr & Bulkeley were the leading merchants in Lisbon's trade with the British North American colonies. Over this period they handled 185 of the 1,040 vessels, more than double the business of any other firm, accounting for one third of all of the grain and flour coming into Lisbon, but they also traded other cargoes of Newfoundland fish and Carolina rice. By the time John Bulkeley died in 1803, he left an estate worth over £300,000.



Norra slottsfasaden och gårdsplanen
Hildesborg Palace and gardens



Count Wachtmeister at his desk with the current Knibb at Hildesborg Palace, 1908

The photograph illustrated above was taken in 1908 and shows the count at his desk with the clock in situ at his palace on the Hildesborg Estates, outside Landskrona, Sweden.

It is not known how or when this clock came into the family; while it is conceivable that it was acquired direct from Knibb in 1670s by Admiral Count Wachtmeister, it is also possible that it came via Baron von Rehausen, perhaps bought when he was Swedish Envoy Extraordinary and Minister Plenipotentiary to London in 1805-7, or even by descent from the Bulkeley.



The Hildesborg estate

Wenceslaus Hollar (1607 – 1677)

Wenceslaus Hollar was born in Prague on 13 July 1607, and died in London on the 28 March 1677. His family was ruined by the capture of Prague in the Thirty Years War, and, although originally destined for the law, Hollar was determined to become an artist.

By 1627 he was in Frankfurt, working for the etcher and engraver Matthäus Merian, later moving to Strasbourg, and then to Cologne in 1633. It was there that he attracted the attention of the famous English art collector Thomas Howard, 14th Earl of Arundel, then on an embassy to the imperial court. Hollar travelled with the Earl to Vienna and Prague finally arriving in England in 1637. Though he lived in the Earl's household, he also worked for various publishers. For one book seller he produced a view of Greenwich, nearly a yard long, but only received thirty shillings for the work, being paid just four pence an hour, his time measured apparently by an hourglass.

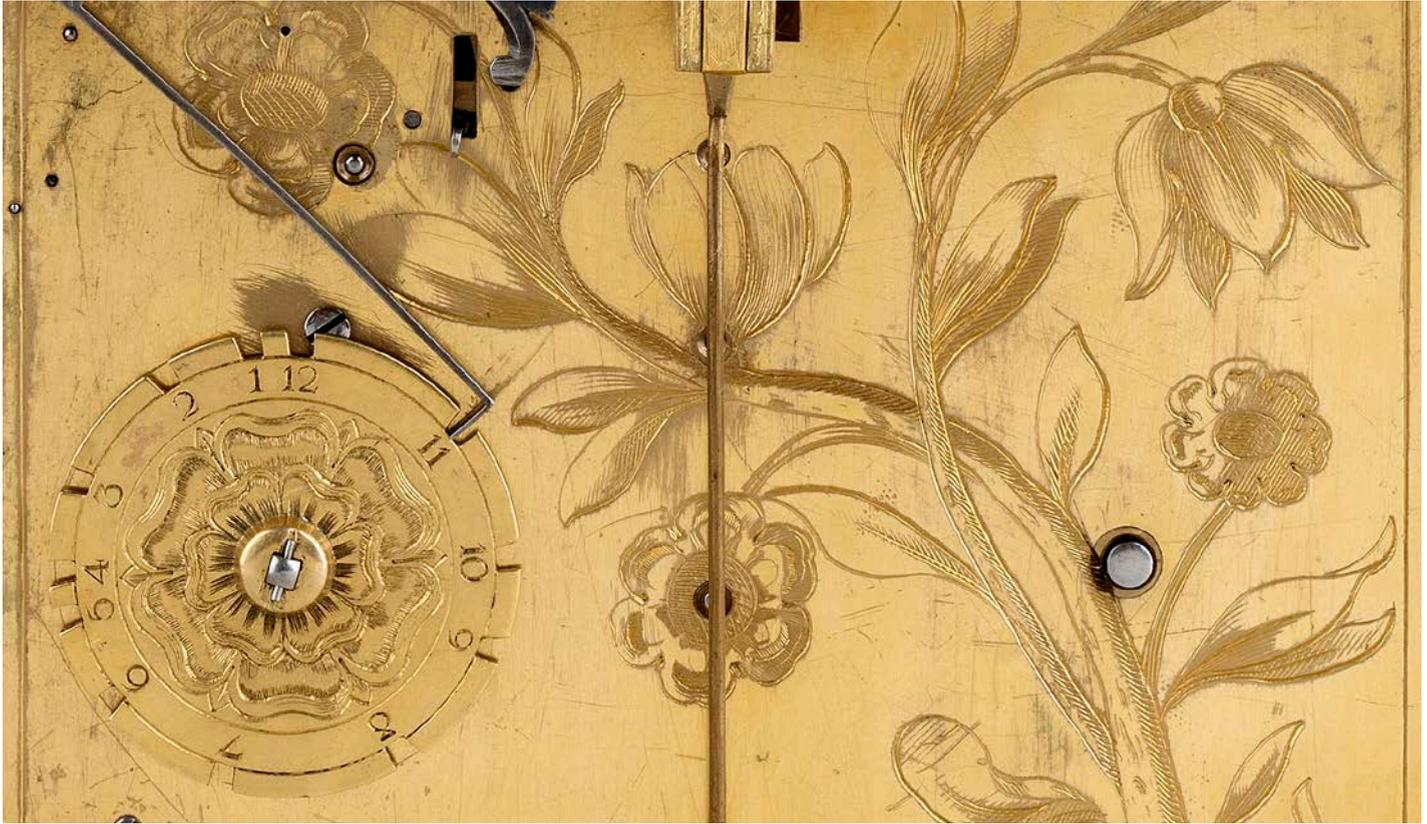
The Civil War caused Lord Arundel to leave England in 1642, so Hollar worked for the Duke of York, and took lodgings at Larkhall, near Stockwell. He served in a royalist regiment during the Civil War and was taken prisoner at the siege of Basing House in 1643, Hollar was imprisoned with another engraver, William Faithorne, as well as the architect Inigo Jones and, perhaps critical to our horological story, his pupil John Webb, recently deduced as the designer of Ahasuerus Fromanteel's first architectural clock cases. This placed Hollar within 'Fromanteel's circle' and furthermore, Hollar's main English patron was the grandfather of Henry Howard, 6th Duke of Norfolk and Earl of Arundel (1628–1684) who commissioned the Norfolk Fromanteel, the earliest recorded complete longcase clock.

On release Hollar joined Lord Arundel in Antwerp, where he stayed for eight years producing some of his finest work. In 1652 he returned to London and shared lodgings for a time with his former prison mate, Faithorne, near Temple Bar. He illustrated several

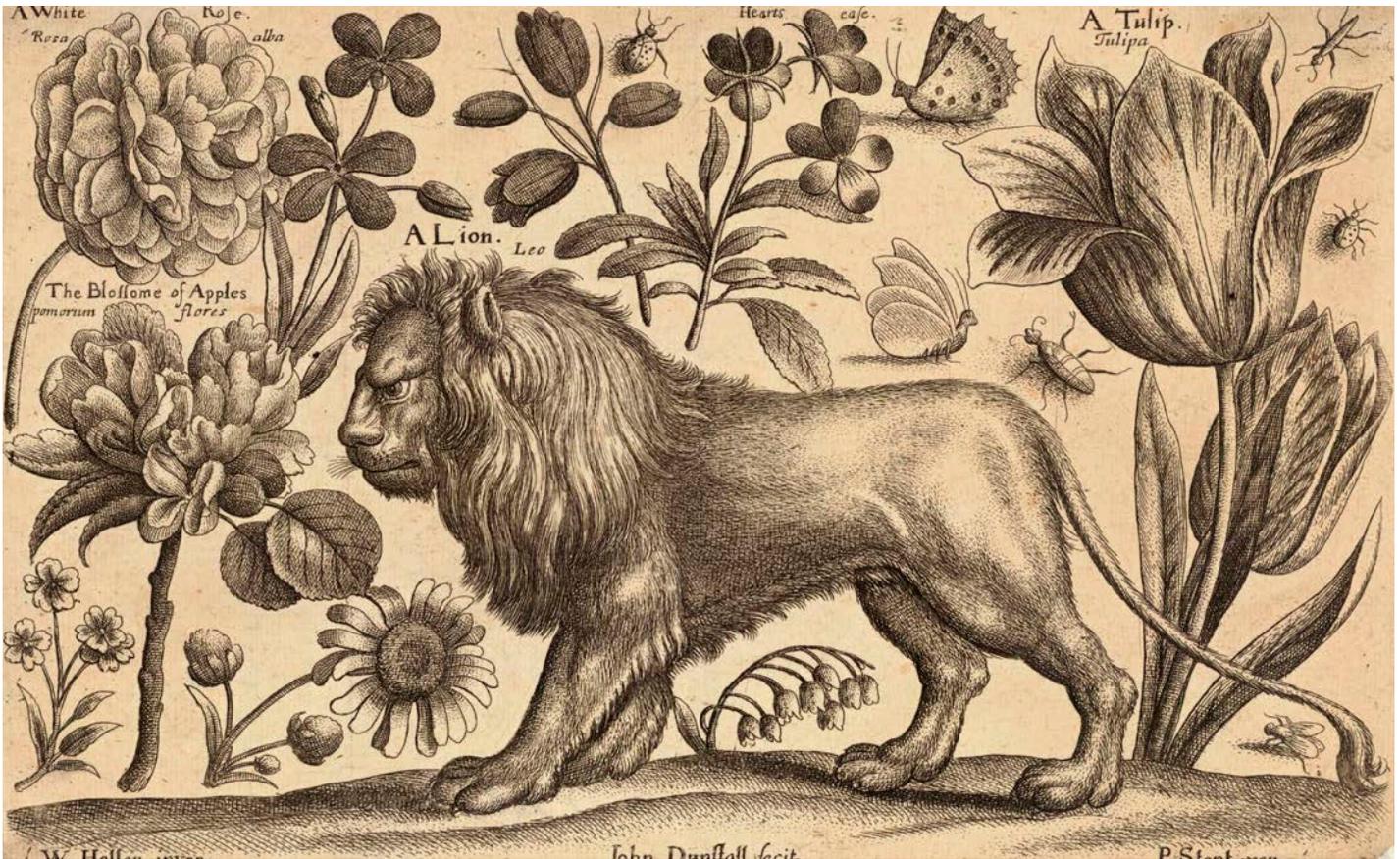
books and also worked for Elias Ashmole, whose cabinet of curiosities was to form the basis of the Ashmolean Museum in Oxford. Hollar's fortunes did not fundamentally improve and his employers, probably by this time including Fromanteel and Samuel Knibb, continued to pay low prices for his excellent work. The Restoration did not improve his position, and in the great plague he lost his son, a promising young artist. After the Great Fire of 1666 he produced his famous Views of London.

In 1668 the king sent Hollar to Tangier to draw the town and its forts. England had acquired the Moroccan port as part the dowry when Charles II married Catherine of Braganza, and it remained in English hands until 1684. On his return to England, Hollar etched the battle scene in which the ship he came back on, the *Mary Rose*, successfully fought against seven Algerian pirate men-of-war. He also produced the large plate of Edinburgh (dated 1670) that is widely regarded as one of the greatest of his works. From this time on, he appears to have started his employment on horological backplates for Samuel Knibb's nephew, Joseph; these are some of the first fully engraved backplates and Hollar's style is recognisable on almost every Phase I spring clock known. It is interesting to note that Hollar's death in 1677 also coincided with Knibb's shift away from larger Phase I spring clocks to the smaller Phase II and III examples, which no longer show his influence. Hollar died in extreme poverty, his last recorded words being a request to the bailiffs that they would not carry away the bed on which he was dying.

Hollar was one of the finest master etchers of the 17th Century and worked on a wide variety of subjects producing some 2,740 plates including views, portraits, ships, religious subjects, heraldic subjects, landscapes, and still lifes in a hundred different forms, and his work is still much admired by connoisseurs.



The Hildesborg Knibb backplate



'Lion and Tulip' by Wenceslaus Hollar, c.1662

The Roberts Knibb ***Circa 1680-1685***

An exceptional Charles II ebony and silver-mounted Phase II striking table clock with pull quarter repeat by Joseph Knibb, London

Provenance:

RA Lee, Bruton Place, Mayfair, London W1;

Acquired *circa* 1980, by a private collector from Chicago, Illinois;

The Keith Roberts collection, inventory no.12

This example is one of only nine from Joseph Knibb's famous series of Phase II clocks (see page 104). The first was commissioned by Charles II and is dated 1677. As was usual at this time, the king is likely to have chosen the outward specification; ebony-veneered and adorned in silver, with a velvet-backed dial. Thus the King probably started an expensive trend that Knibb was happy to capitalise on. As these were probably his most expensive productions, the Phase II clocks that followed, including this example, would likely only have been made to order for his wealthiest customers.

Although it is not known where RA Lee acquired this clock in the 1970s, scratch marks indicate that it spent the 1730s in France and the majority of the 19th Century in Sweden, which implies the clock was originally commissioned for export. Meanwhile the case has a clockmakers label inside the back door, Husband of Richmond, revealing it returned to North Yorkshire at the end of 19th Century, and further scratch marks show that it remained in England until Lee's purchase.





CASE

The archetypal Knibb Phase II case has a flat topped cornice moulding below the dome, which has fine repoussé silver dome mounts applied to the front and sides, formed with acanthus leaves, flower heads and a laurel wreath, all surmounted by a silver foliate-tied handle with cupped eight-leaf silver base plates. The sides are glazed, while the front door is applied with typical cast and chased silver S-scroll escutcheons to the vertical stiles, the left pin-hinged, and a silk-backed pierced ebony sound fret to the top rail. The base has conforming plinth mouldings, typically and correctly, without feet.

Height: 12 inches (305 mm)

Knibb's use of silver repoussé dome mounts here is noteworthy; being individually hand-beaten, formed, pierced and chased, the labour required to make them was much higher, but they were produced from lighter weight sheet, and so their application here was almost undoubtedly related to the high cost of silver.





DIAL

The 6¼ inch square brass dial is covered with early velvet and applied with a delicate solid silver chapter ring with Roman hours, *fleur-de-lys* half-hour markers and Arabic minutes within the division ring. The silver hour hand is delicately pierced and chamfered whilst the minute hand has a silver boss and shaft but is tipped with blued steel. The centre of the dial is set with the signature plaque which has been finely pierced and engraved with tulips and foliage and signed in an arc *Joseph Knibb London*. The winding holes are embellished with silver ferrules and the corners are applied with Knibb's earlier pattern of cast and chased silver winged cherub spandrels. The dial is fixed to the movement by four latched dial feet, and to the case by two typical screw-turns to the back, at III and IX, into the carcass behind the mask.







Joseph Knibb
Londini Fecit

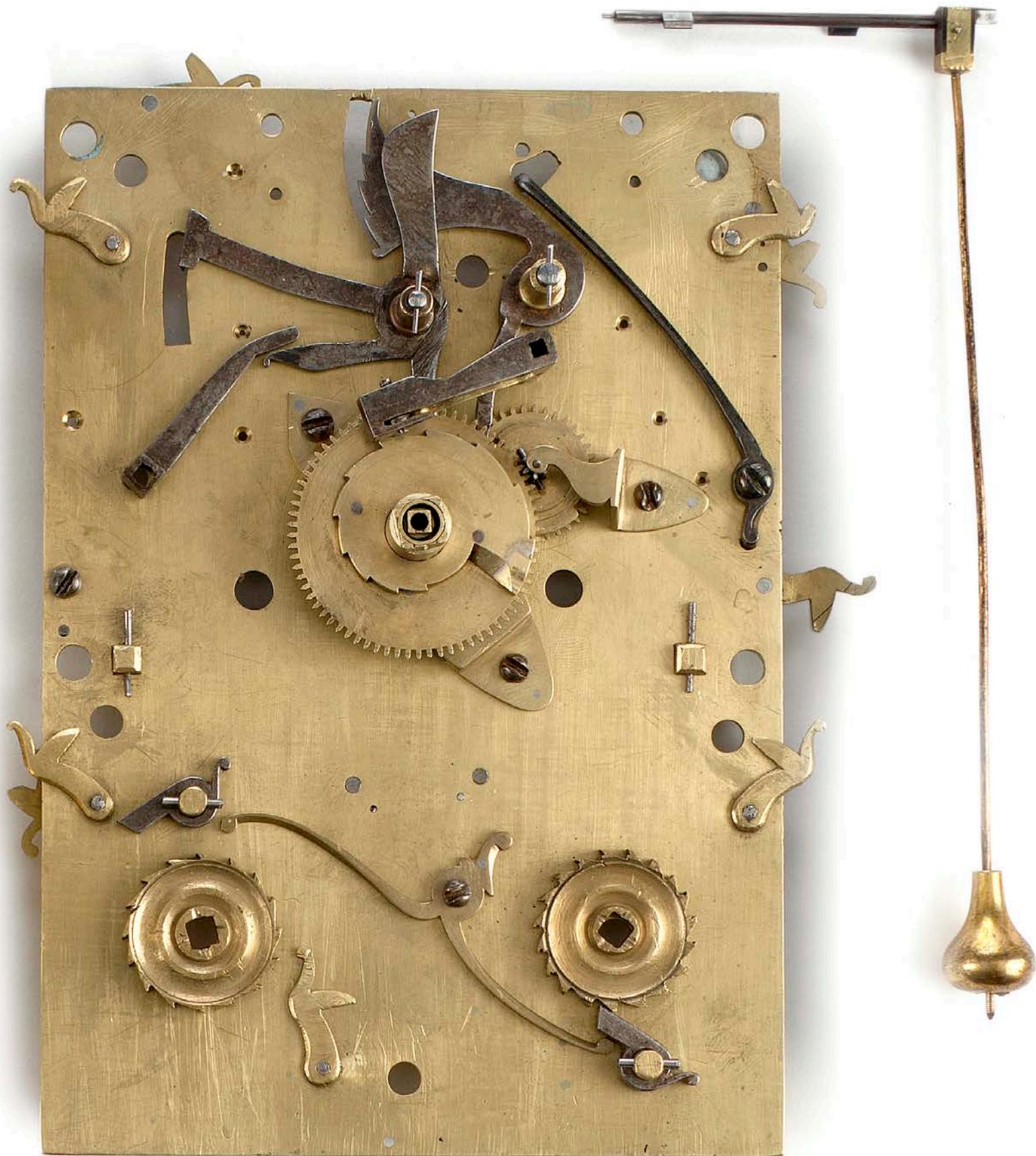
WARRANTED TO BE
GENUINE
C. HUBBARD
PRACTICAL
WATCH & CLOCK MAKER
Jewellers
PINKLE STREET
LONDON
ESTD 1840

MOVEMENT

The delicate plates with six archetypal vase-shaped pillars, five latched and the sixth, central pillar, pinned. The going train has a knife-edge verge and crown wheel escapement with fusee and spring barrel with gut line. The strike train, with conforming gut fusee and barrel, striking the hours on the larger bell, governed by a rack-and-snail. The pull quarter repeat system enables the quarters and hours to be activated at will from either side of the case, the quarters on the smaller bell, via an S-form steel repeat lever on the backplate. The backplate is beautifully engraved with tulip and flower heads amidst scrolling foliage; the signature *Joseph Knibb Londini Fecit* is set within a foliate cartouche and the pendulum holdfast is mounted to the left side.









The Roberts Phase II Knibb

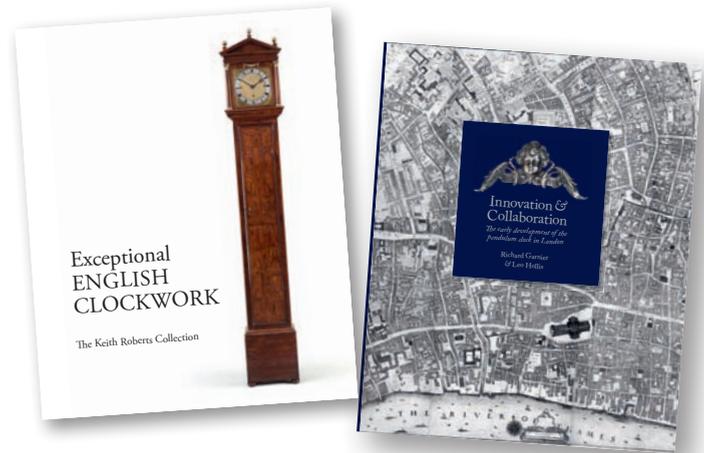
Literature:

Exceptional English Clockwork, The Keith Roberts Collection, 2015, p.104-109

Garnier & Hollis, *Innovation & Collaboration*, 2018, p.302-305

Exhibited:

London 2018, Innovation & Collaboration, exhibit no.87



Joseph Knibb's Phase II spring clocks

Joseph Knibb's clocks display an elegant simplicity of structure and, as is often mentioned, his cases and dials have a gracefulness rarely achieved by other makers. Indeed, he is one of only a few makers whose individual style can be instantly identified, and throughout the 1670s and 1680s we can see a clear evolution in his designs, which enabled RA Lee to categorise his table clocks from Phase I to IV.

These phases were not absolutely sequential; of course the Phase I clocks, which are usually larger in size and have feet, come first and, as the fashion was moving towards smaller and more 'portable' clocks, in the late 1670s the Phase III clocks were introduced. The Phase II clocks were produced over a time that bridges both his later Phase I and his Phase III productions, they are of a similar 'feet less' and smaller form to his Phase III clocks and thus are distinguished by their velvet dials and silver mounts. In total, there are only nine Phase II examples currently recorded, the present clock being no. 8 on the following list:

1. Roman striking, tic-tac escapement, royal and dated 1677, George Daniels Collection sold Sotheby's, 6 November 2012, lot 130, for £1,273,250.
2. Grande sonnerie, tic-tac escapement, circa 1678, Sotheby's 16th Oct 1972, lot 46, The Hamburg Collection.
3. Grande sonnerie, tic-tac escapement, circa 1678-80, RA Lee, *The Knibb Family Clockmakers*, 1964, plate 77.
4. Striking with pull quarter repeat, circa 1680, RA Lee, *The Knibb Family Clockmakers*, 1964, plate 78.
5. Full grande sonnerie, circa 1680-85, CH St J Hornby Collection c.1900, private collection USA.
6. Roman striking, circa 1680-85, RA Lee, *The Knibb Family Clockmakers*, 1964, plate 79.
7. Full grande sonnerie, circa 1680-85, no dome mounts. *Horological Masterworks*, No. 32, John C. Taylor Collection.
8. Striking with pull quarter repeat, circa 1680-85, *Exceptional English Clockwork*, no.12.
9. Striking with pull quarter repeat, circa 1685, Christie's 21 November 1990, lot 91.

Competition with Tompion?

It is interesting that concurrent with the production of Knibb's first Phase II silver and velvet clock, (The Daniels Knibb shown right), Tompion was also making his first clock commission for Charles II, which was referred to by Robert Hooke in his diary entry of 24th June 1677, as *'the Kings striking clock'*.

The only contender to fulfill Hooke's description is Tompion's first two-train repeating grande sonnerie clock, The Silver Tompion (see right and p.39), and it is probably significant that Tompion finished his clock in silver with a velvet-covered dial, in exactly the same manner as the important royal commission by Knibb of the same date.

That there was an element of competition between these two up-and-coming makers during 1677 seems both likely and logical. As Knibb went on to produce this now famous series of Phase II clocks, we tend to associate this sort of dial application in London with him. However, Tompion had already presented his two Greenwich regulator dials in a similar manner in 1676, but unlike Knibb, the Silver Tompion seems to have been the first and last time Tompion made a domestic clock in this manner. Probably, as was customary for special orders, the king simply specified the same silver and velvet finish from both Knibb and Tompion, but that might also be construed as encouraging the rivalry between them.



The Daniels Phase II Knibb, backplate, dated 1677



The Daniels Phase II Knibb, dated 1677



The Silver Tompion, circa 1677

Joseph Knibb, London
Circa 1680-85

*A very rare Charles II olivewood, walnut and
marquetry three-month going Roman striking
longcase clock*

Provenance:

Private collection, Portugal;

John Carlton-Smith, acquired 2007;

The Keith Roberts collection, inventory no. 14

This clock belongs to a particularly small and important group of longcases by Knibb that are three-month duration and Roman striking. As evidenced here, on his Roman striking clocks Knibb used the Roman IV on the chapter ring instead of the usual IIII. Each of the group are distinguished by their distinctive pattern of break-arched shaped plates and, while others of the group are housed in ebony panelled cases with 1¼ seconds pendulums, this example has a seconds pendulum and was placed in a particularly fine walnut, holly and green-stained bone marquetry case on an olivewood-oyster ground.





CASE

The rising hood has a gilt-wood ball finial surmounting the ebonised swan-neck carved cresting centred by a scallop shell. The book-end moulded frieze is supported by ebony Solomonian columns to the front and back. The trunk, headed by a convex throat moulding, has a long rectangular door veneered with olivewood oysters and inlaid with geometric panels of floral marquetry with green-stained bone leaves, all within holly ovals and quarter rounds. The sides are veneered with olivewood oysters within holly border frames. Similar geometric marquetry panels are applied to the base, which is raised on ebony bun feet.

Height: 6 feet 10½ inches (210 cms)



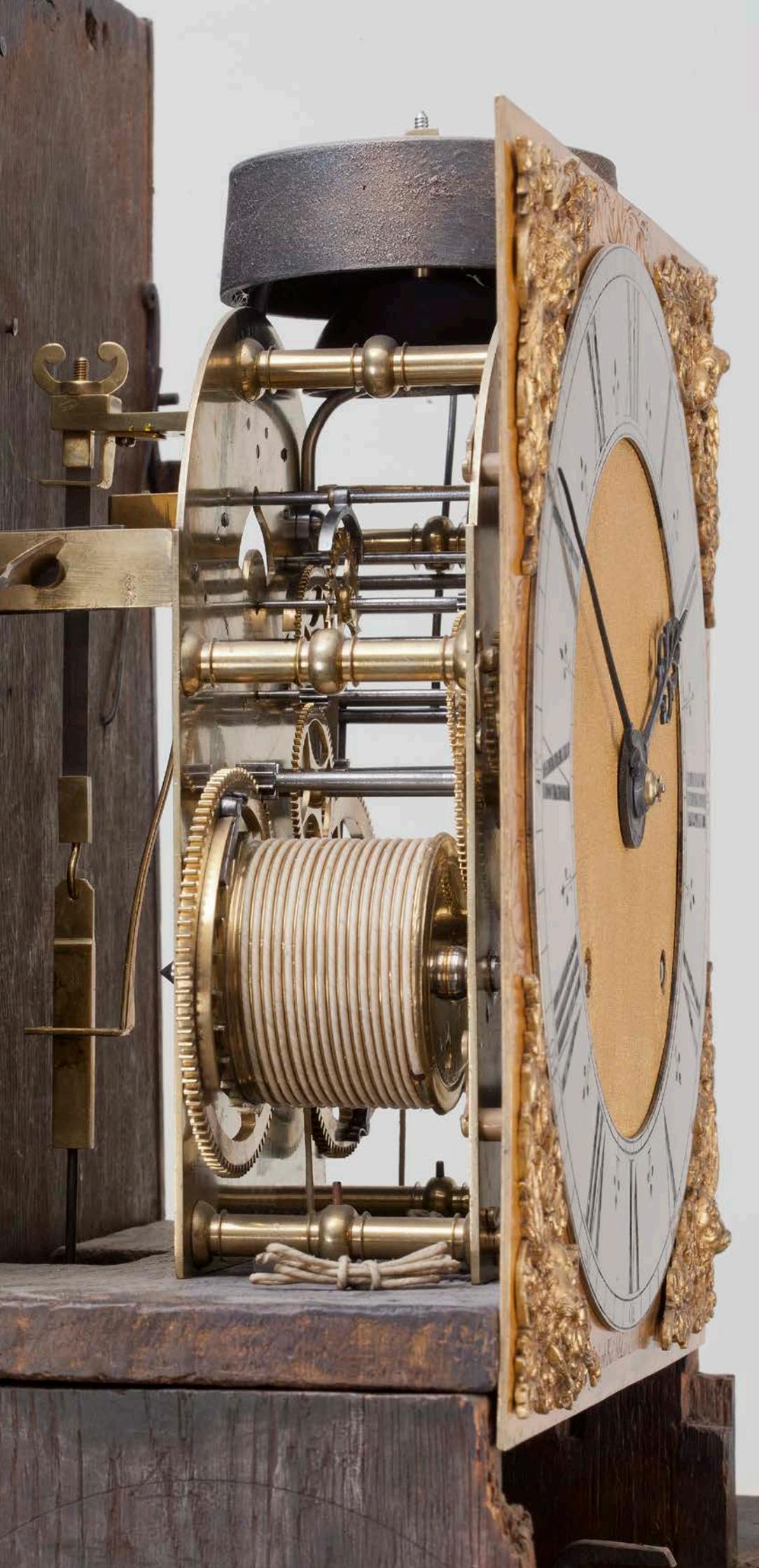


Joseph Knibb Londini Fecit

DIAL

The 10½ inch square gilt-brass dial with three latched dial feet is signed *Joseph Knibb Londini Fecit* beneath the silvered chapter ring with Roman hour numerals, *fleur-de-lys* half-hour markers and Arabic minutes within the division ring, the chapter *IV* evidencing Roman strike. The finely matted centre has low-position winding holes and typically fine shaped and pierced blued steel hands. Foliate winged cherub spandrels adorn the four corners of the dial interspersed by delicate foliate engraving.





MOVEMENT

The three-month going movement has light break-arch brass plates secured at the front plate by six latched and finned baluster pillars. The six wheel trains are wound anticlockwise; the going train has a delicate anchor escapement with a spring-suspended pendulum regulated by a butterfly-nut atop the suspension block on the backplate and a further butterfly nut above the threaded pendulum bob. The striking train operates via a small brass countwheel planted on the backplate with Roman strike on two bells of different size, the smaller for I and the larger for V. The movement resting on seatboard taper pins into the base pillars and secured by a brass L-shaped backplate bracket, screwed to the corresponding peened iron case bracket.



The Roman striking system is explained on the following pages and is most often associated with Knibb. It did not become widely popular, possibly due to it being rather confusing unless one concentrates, as the Is are denoted on a high pitched bell and the Vs/Xs on a lower bell. This system did, however, have

a great advantage in power saving when used in long duration movements, as it takes only 30 strikes every twelve hours compared with conventional striking which requires 78: in this instance the movement has Knibb's distinctive three-month pattern of break-arched shaped plates.

Roman Notation Striking

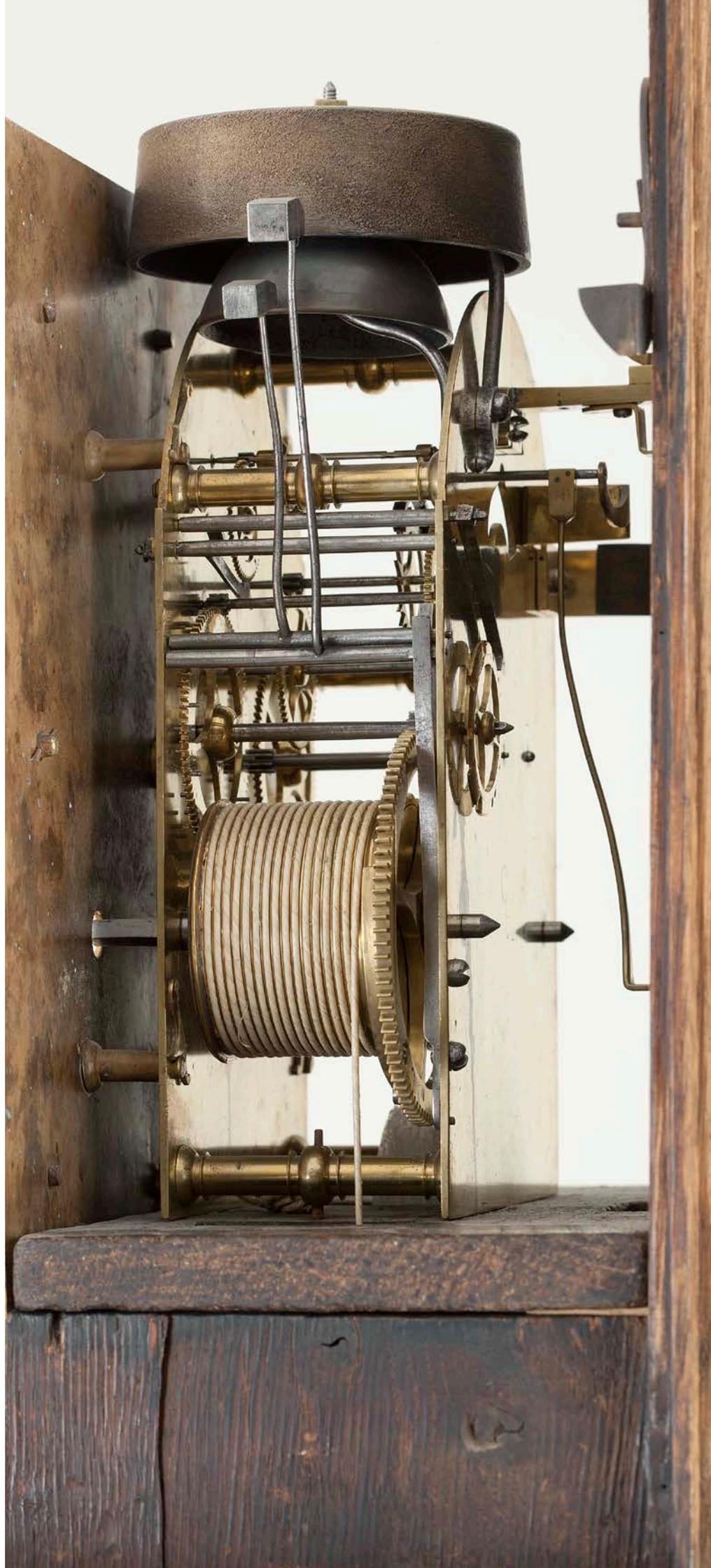
This ingenious form of strike uses two bells to sound the hours, the smaller bell is for Roman I, while the larger bell indicates Roman V/X. In the instance of these two examples, Knibb's chapter ring is engraved with the Roman numeral IV, while Tompion retained the usual III.

The system reduces the number of hammer blows required over 12 hours from 78 to 30 and consequently saves power in the strike train, helping to extend the duration.

The two bells, I and V/X, are struck according to Roman notation and are governed by a single countwheel subdivided for 12 hours with unequally spaced arc segments that reflect the number of hammer blows required, thus for X (2 hammer blows), the arc segment is smaller than III, (3 hammer blows). The pinwheel has pins mounted on both sides, one side gathers the I hammer and the other gathers the V/X hammer.

On the frontplate is a release lever which engages with a single pin on the minute wheel, this is mounted onto the warning arbor between the plates that has the warning piece attached internally and a lifting piece to lift the countwheel detent arbor, which is placed directly above and parallel. The countwheel detent arbor has the hoop wheel detent fixed internally and the countwheel detent attached externally on the backplate, which at this stage, is locked and seated in one of the hour divisions.

At a minute or two before the hour, the release lever is raised by the pin on the minute wheel and the warning arbor lifting piece engages with the countwheel detent arbor above. This, in turn, raises the hoop wheel detent releasing the hoop wheel. The warning wheel runs for about half a turn until stopped by a pin on its rim engaging with the warning piece and putting the system on 'warning' to



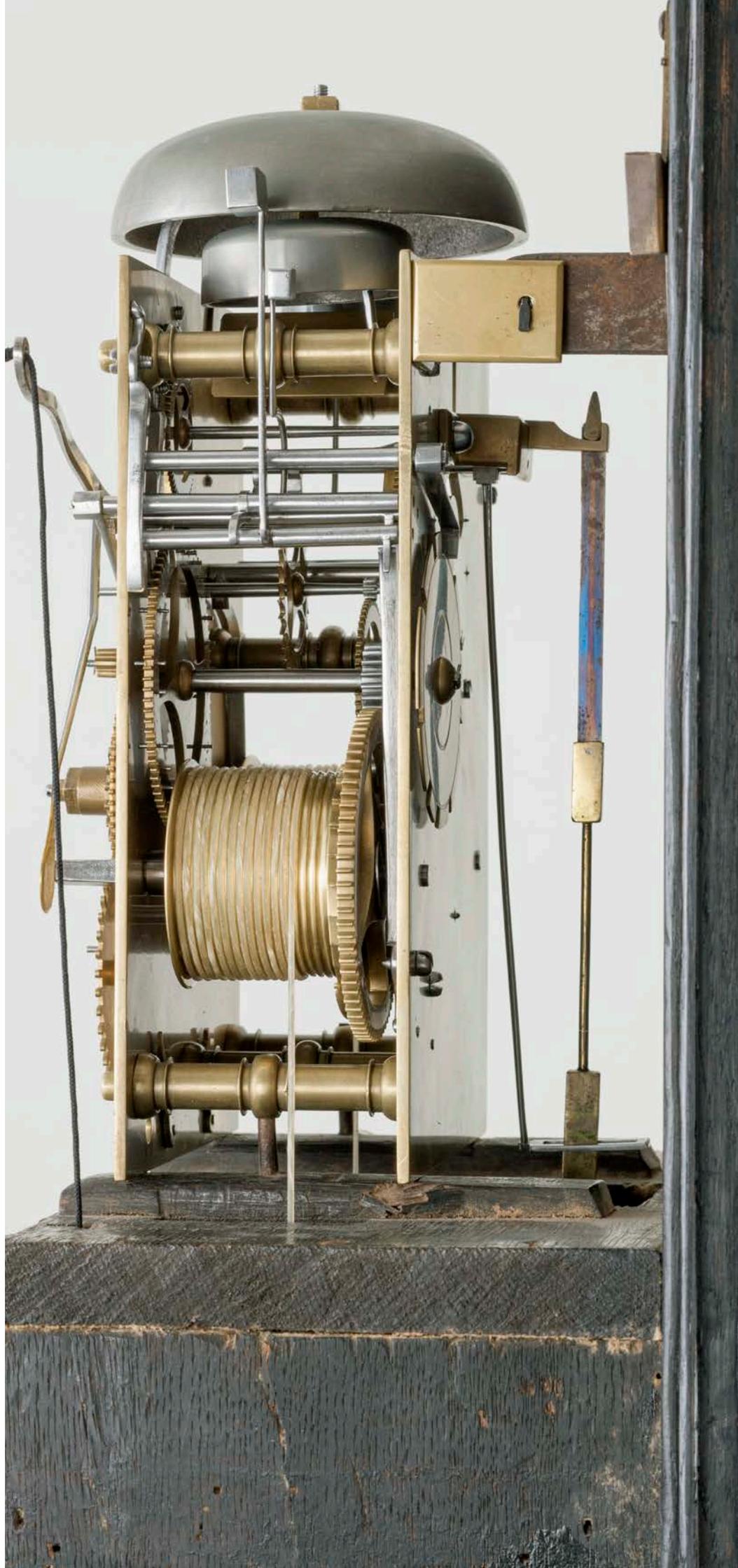
allow the train to release exactly on the hour. The minute wheel continues to turn and, on the hour, the pin passes and the release lever drops.

As the lever drops, the warning piece falls away from the warning wheel pin, thus releasing the strike train. The uneven arc segments on the countwheel govern how much the strike train moves while, between the plates, the double-sided pinwheel gathers the I and/or V hammer tails in sequence as required, thus striking the correct bells at each Roman hour as their tails pass and drop off each pin.

At the same time, the hoop wheel in the strike train rotates and the hoop wheel detent (mounted to the countwheel detent arbor) falls into the gap therefore checking the state of the countwheel after each blow. When the detent finds the next slot in the countwheel it drops into the hoop gap and locks the hoop wheel, stopping the strike train from turning.

*Left: Three-month Roman Striking Knibb longcase
Right: The Roman Striking Tompion longcase (see pages 24-43)*

These two Roman Striking countwheel governed movements illustrate the difference between the two leading horological workshops of the time: with Knibb relying on his archetypal 'lightness of touch', while Tompion's approach was consistently more 'solid, robust and dependable'.



Literature:

Exceptional English Clockwork, The Keith Roberts Collection, 2015, p. 120-125

Garnier & Hollis, *Innovation & Collaboration*, 2018, p. 316-319

Exhibited:

The Grosvenor House Fair, 2007, stand 62

London 2018, Innovation & Collaboration, exhibit no. 93





Joseph Knibb, London
Circa 1682-85

*A very fine and rare Charles II ebony and gilt-brass
mounted Phase III double-six Grande Sonnerie
striking table clock with skeleton dial*

Provenance:

Private collection Devon, sold at
Bearnès of Torquay, auctioneers, 9 March 1995;

Vitale collection, New York, USA, sold Christie's 26 November
1996 for £84,000;

Private collection UK;

Anthony Woodburn and sold 2003;

Private collection UK.

*To date, only six grande sonnerie Phase III table clocks with
distinctive skeletonised dials by Joseph Knibb are known to have
survived. These clocks utilise his most sophisticated strike method,
and all have triple-divided frontplates; devised specifically to
enable the clockmaker to access the complex linked wheel trains
without having to disassemble the entire movement.*

*This fully developed Phase III form of case was first categorised
by RA Lee in 1964, 'The Knibb Family, Clockmakers', and is often
argued as the most aesthetically pleasing of all styles of English 17th
century table clocks. What is indisputable, is that in combination
with a skeletonised dial and highly complex movement, this Phase
III example represents Joseph Knibb's best work at the height of his
powers and success.*



CASE

The archetypal Phase III case with ebony veneers and mouldings onto an oak carcass. The cushion domed top with cast gilt-brass acanthus mounts to the front and sides and surmounted by Knibb's own foliate-tied gilt-brass handle. The flat-top cornice moulding with foliate-urn finials to each corner, above a square front door with typical cast and chased S-scroll escutcheons to the vertical rails, the left pin-hinged, and a silk-backed pierced ebony fret to the top rail, the sides with rectangular glazed apertures. The base has conforming plinth mouldings, typically and correctly, without feet.

Height: 12¼ inches (312 mm)





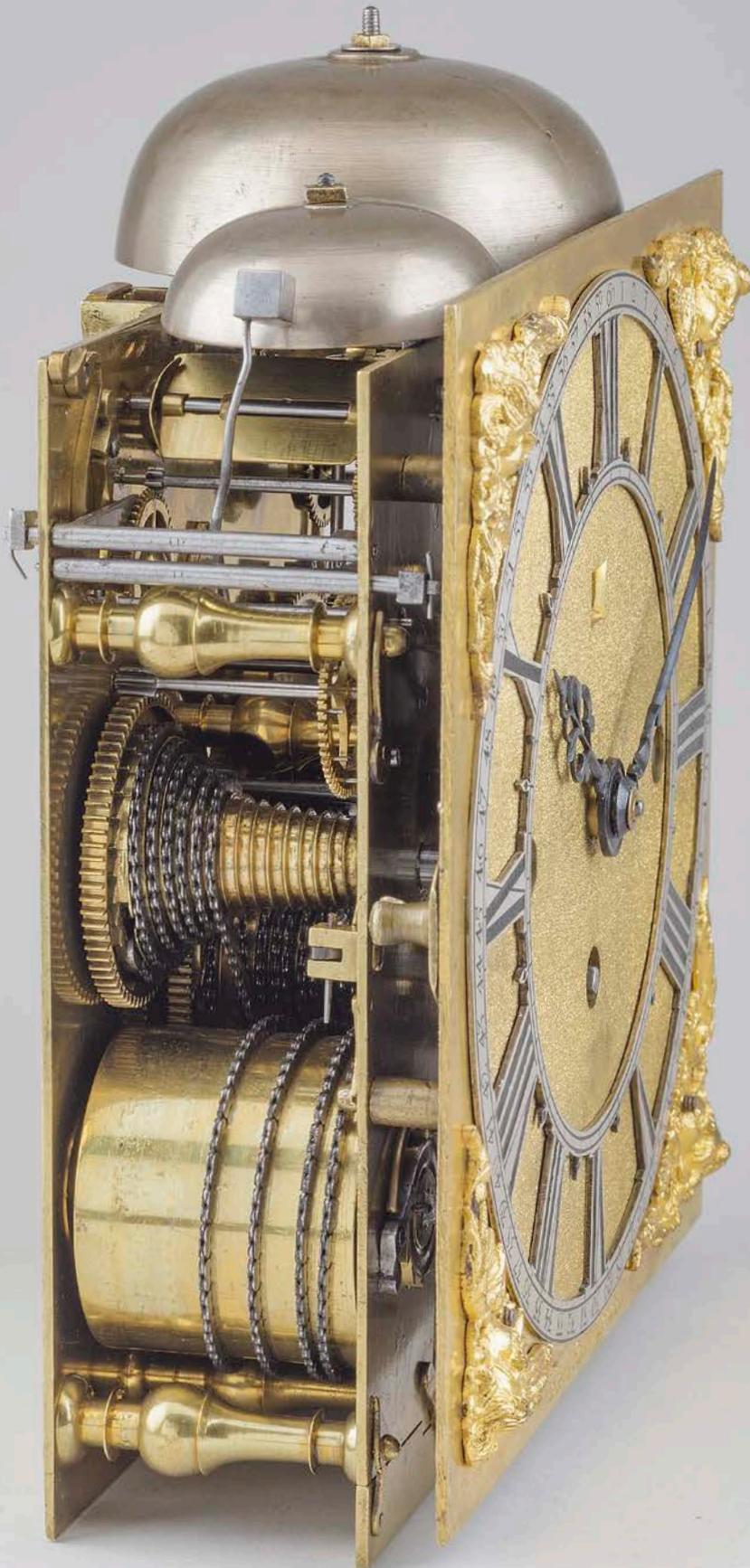
DIAL

The 6¾ inch square fire-gilded brass dial, signed along the lower edge *Joseph Knibb London* and the corners applied with Knibb's later pattern of cast and chased gilt-brass winged cherub spandrels. The very fine close edge matting extending behind the delicate skeletonised chapter ring with pierced Roman hours and dot half-hour markers, with every Arabic minute engraved within the division ring. The centre set with a chamfered date square below XII, three winding apertures, and archetypal finely pierced and chamfered blued steel hands. The dial is fixed to the movement by four latched dial feet, and to the case by two typical screw-turns to the back, at III and IX, into the carcass behind the mask.





Joseph Knibb London



MOVEMENT

The massive but delicate plates have ten latched vase-shaped pillars, the triple-split frontplate is divided for each train, holding their individual wheelwork, fusees and barrels, now with later chains. The going train has a knife-edge verge escapement with short brass pendulum rod and pear-shaped adjustable bob. The IX side quarter strike train is governed by a small outside countwheel, quarter-slotted for the detent lever, engraved 1-4, and with four pins to lift the pivoted link lever and trip the hours. The III side hour train with massive brass countwheel, divided to strike the hours at all quarters and twice engraved 1-6 at each hour (four times for every quarter), and pin-fixed to the fusee arbor. The fully engraved backplate has fine symmetrical scrolls and foliage with open and closed tulip flower heads, and is signed *Joseph Knibb Londini Fecit* in the lower centre, all framed within a single line. The movement is further secured, in the early manner, by two pins resting against the backplate into the seatboard.



Knibb's double-six Grande Sonnerie striking system

The countwheel striking system is, theoretically, relatively simple and straightforward and had been in use in England to govern striking clocks since at least the 15th Century. However, countwheel striking depends on all elements running sequentially and as a result the system cannot have a repeat option, and if it gets out of sequence it will strike incorrectly against the time indicated, which then requires manual release of the countwheel(s), until the number struck matches the time shown by the hands. Unlike his contemporary, Thomas Tompion, who built his movements with more robust components, often with added fail-safes to ensure their continued operation, Joseph Knibb approached his construction with a view to simplicity and lightness of touch, so that his clocks have a delicacy and fineness of construction that, not only crucially served to reduce inertia and friction, but resulted in the most aesthetically pleasing of movements.

More than any other maker, Joseph Knibb offered an intriguing array of different strike options within his clocks; most were introduced prior to the general uptake of rack and snail striking and were governed by countwheels. Some of his striking systems with two bells require both concentration and understanding, and this may go some way to explaining why his unusual Roman striking clocks (see *The Hildesborg Knibb* page 78) were made in such small quantities, while the rarity of his complicated double-six Grande Sonnerie countwheel clocks (such as this example) can be further explained by their complexity and the consequential difficulties in their manufacture, leading to an undoubtedly very high original cost.

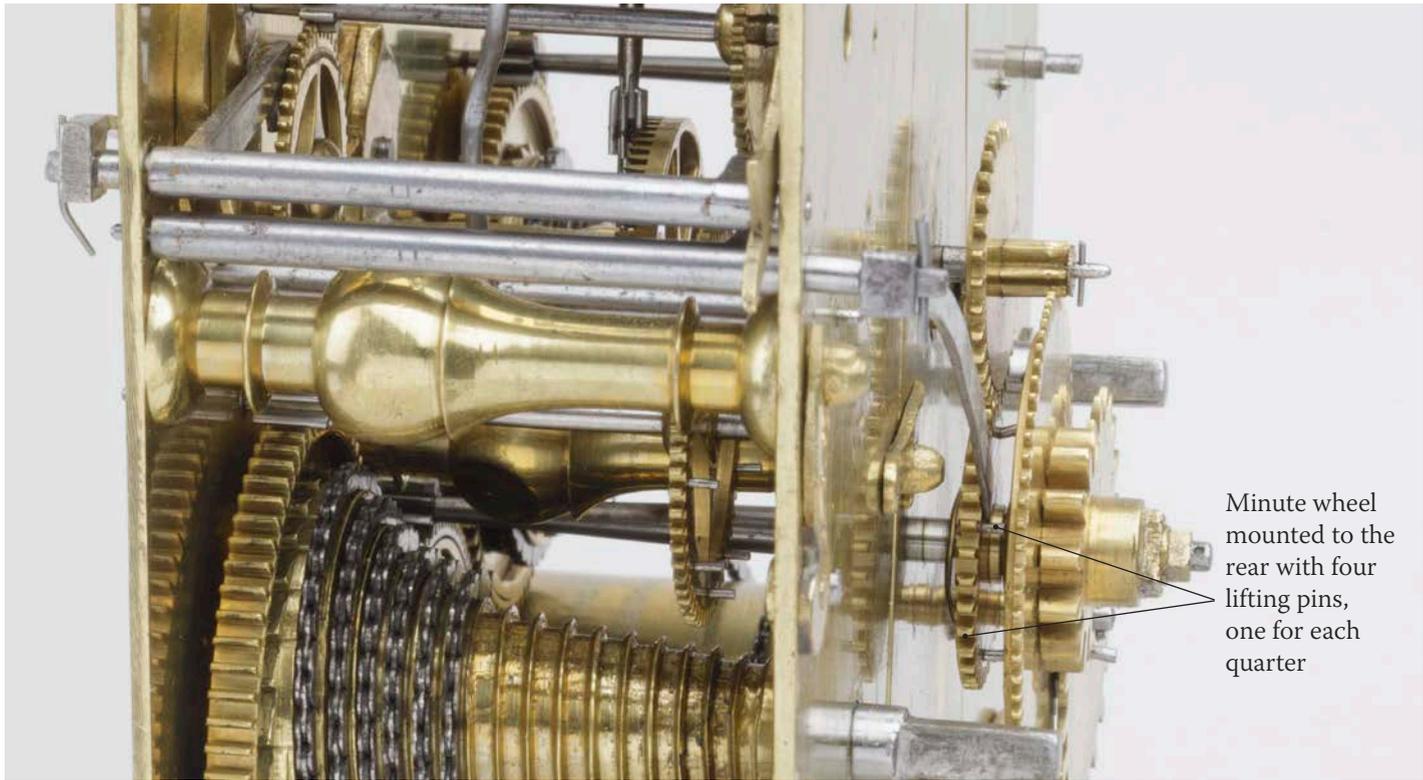
Knibb used double-six hour striking specifically to save on power in the strike train, and the first six hours are struck normally, but the strike reverts to 1 blow at VII o'clock, through to 6 blows at XII o'clock. The double-six Grande Sonnerie method requires a total of 288 blows every 12 hours: 120 blows from the quarter train and 168 blows from the hour train. The double-six hour countwheel is divided: 1, 1, 1, 1, 2, 2, 2, 2 etc., through to 6, 6, 6, 6 but twice, to make 12 hours.

Operation

The minute wheel rotates once per hour, has 4 equally spaced pins for the quarters and the system is activated in passing. On the frontplate is the quarter release lever that engages with the minute wheel quarter pins, this is mounted onto the warning arbor between the plates, which has the warning piece attached internally and a lifting piece to raise the countwheel detent, which is placed directly above and parallel. The countwheel detent arbor has the hoop wheel detent fixed internally and the quarter countwheel detent attached externally on the backplate, which at this stage, is locked and seated in one of the four quarter divisions.

At a minute or two before the quarter, the release lever is raised by one of the quarter pins on the minute wheel and the warning arbor lifting piece engages with the countwheel detent arbor above, which, in turn, raises the hoop wheel detent releasing the hoop wheel. The warning wheel runs for about half a turn until stopped by a pin on its rim engaging with the warning piece and, on release, the pinwheel turns and one of the pins engages and lifts the quarter hammer tail. As the pin passes, the tail drops, releasing the hammer and striking the quarter bell. The hoop wheel rotates and the hoop wheel detent (mounted on the countwheel detent arbor) falls into the gap, therefore checking the state of the quarter countwheel after each blow. When the detent finds the next slot in the countwheel it drops into the hoop gap and locks the hoop wheel again. The slots in the quarter countwheel are divided to make the requisite number of hammer blows at each quarter: 1, 2, 3 and 4 quarters at the hour. The course of a single rotation of the quarter countwheel takes one hour.

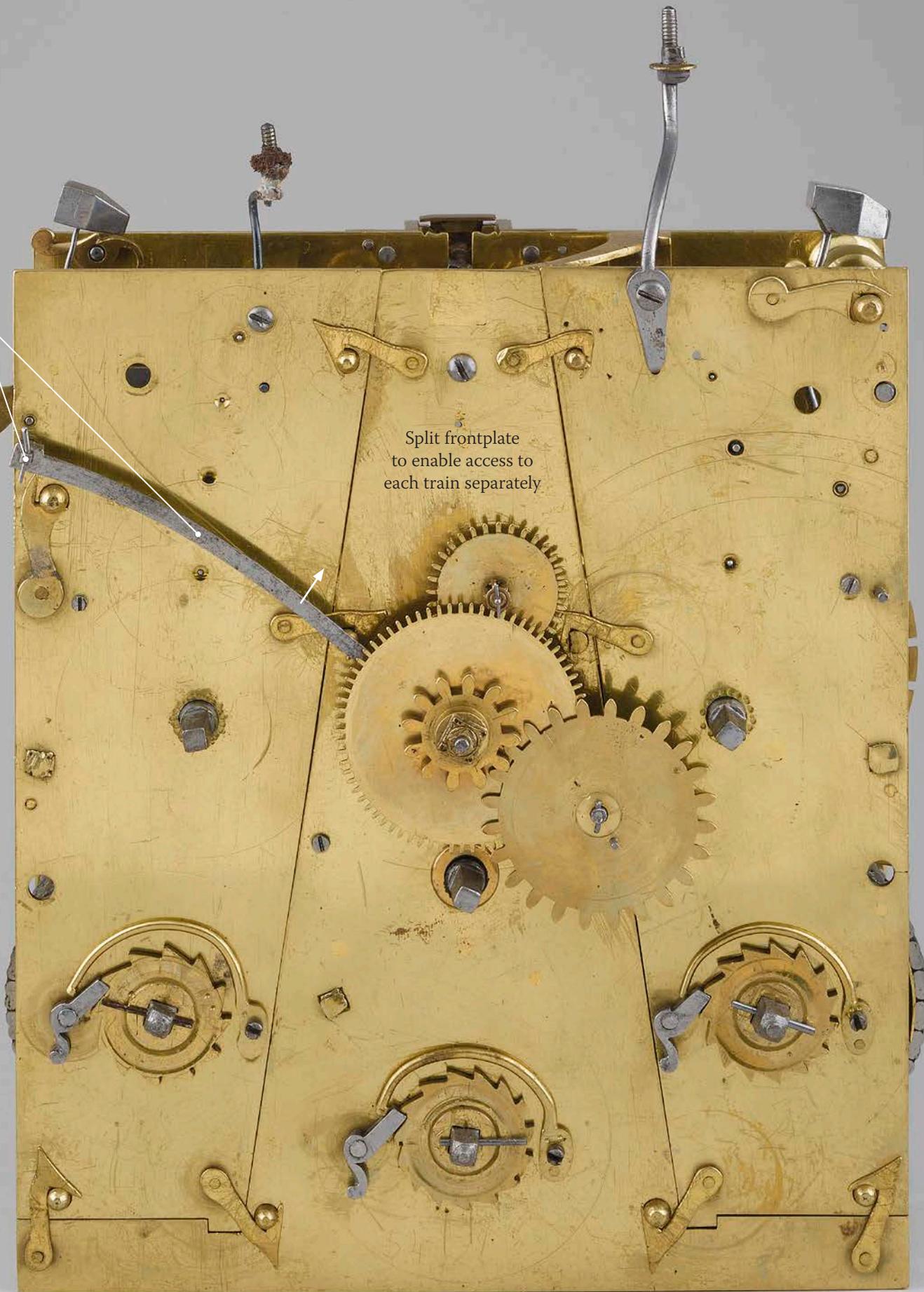
On the backplate, between the quarter and hour countwheels, is a pivoted hour trip lever mounted on a post. The quarter countwheel has four external pins to engage the tail of the trip lever. As the external pin engages the trip lever, it in turn lifts the hour countwheel detent and releases the hour train. Because the timing is governed by the quarters coming to an end, no warning system is required for the hour train, which is released immediately. The striking is governed by the slots in the hour countwheel and controlled using the same method with a hoop wheel and detent. The course of a single rotation of the hour countwheel takes 12 hours.



Release lever
pinned to
warning arbor

Split frontplate
to enable access to
each train separately

Minute wheel
(not visible, as
mounted to the
rear) with four
pins to lift the
release lever,
one for each
quarter



Hour
countwheel
detent lifted
to release
the hours

Trip lever
pivotted
on post

Double-
six grande
sonnerie
striking
countwheel

Quarter countwheel
detent

Grande
sonnerie
quarter
countwheel
with four
lifting pins

Quarter
countwheel
detent arbor

Warning
arbor and
release lever
to frontplate

Quarter
hammer arbor
and tail (lifted
by pinwheel
pins)

Pinwheel

The Callander Knibb ***Circa 1683-85***

*An extremely rare and important Charles II
olivewood, walnut, ebony and boxwood parquetry
miniature longcase clock with skeleton chapter ring,
by Joseph Knibb, London*

Provenance:

The Callander Family, Preston Hall, Midlothian, until sold;

Christies, The Exceptional Sale, July 2011, lot 24;

The Keith Roberts collection, inventory no.13

*This superb miniature 8-day longcase clock by Joseph Knibb has
exceptional provenance and is one of only three currently recorded.
While being typical of work produced at the height of his success,
it also epitomises Joseph Knibb's renowned eye for proportion,
gracefulness and elegance, scaled down to a miniature format.*



Preston Hall, Midlothian, home of the Callander family



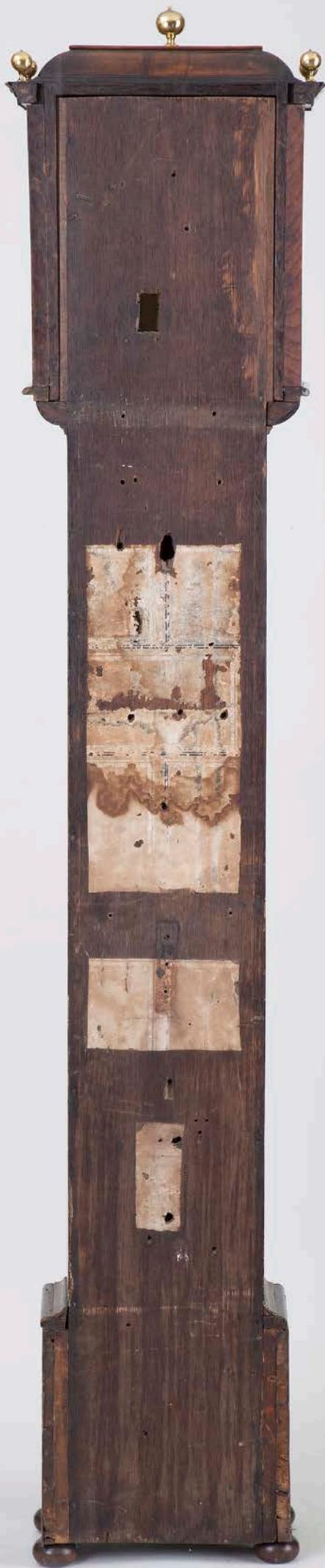


CASE

The case, with an oak carcass, has a walnut-veneered shallow domed top, with five brass finials, over a delicately fretted frieze supported by ebonised Solomonian columns to the front and matching quarter columns to the rear. The trunk, headed by a convex throat moulding, has a long rectangular door veneered with three geometric stylised parquetry flowers in holly and ebony, on an oyster-veneered ground. The plinth has cavetto/ovolo block mouldings above a further conforming geometric stylised parquetry panel to the front, which is raised on ebonised bun feet.

Height: 5 foot 6 inches (168 cms)

This clock is said to have remained in situ at Preston Hall for over two hundred years, and perhaps because of this, the case is remarkably complete and in original condition with an unaltered rising hood, even retaining its original spoon catch. The plinth has splitting and minor repairs, but has also survived intact, however the bun feet have been replaced, probably in the 20th Century. Meanwhile, the stylised parquetry flowers are found on two other full-sized Knibb longcase clocks, both originally in The Wetherfield Collection and illustrated on page 140.



DIAL

The 8 inch square gilt-brass dial has four latched dial feet and is signed *Joseph Knibb London* interrupting the scored line border beneath the silvered skeletonised chapter ring, with an outer ring engraved with every minute and typical *fleur-de-lys* half-hour markers. The blued steel hands are exquisite with a bold S-curve for the minute hand and multiple delicate C-scrolls for the hour hand. The centre of the dial is delicately and finely matted to the outside of the chapter ring and there is a date aperture directly above chapter VI. The corners are applied with well-chased gilt-brass winged cherub spandrels.

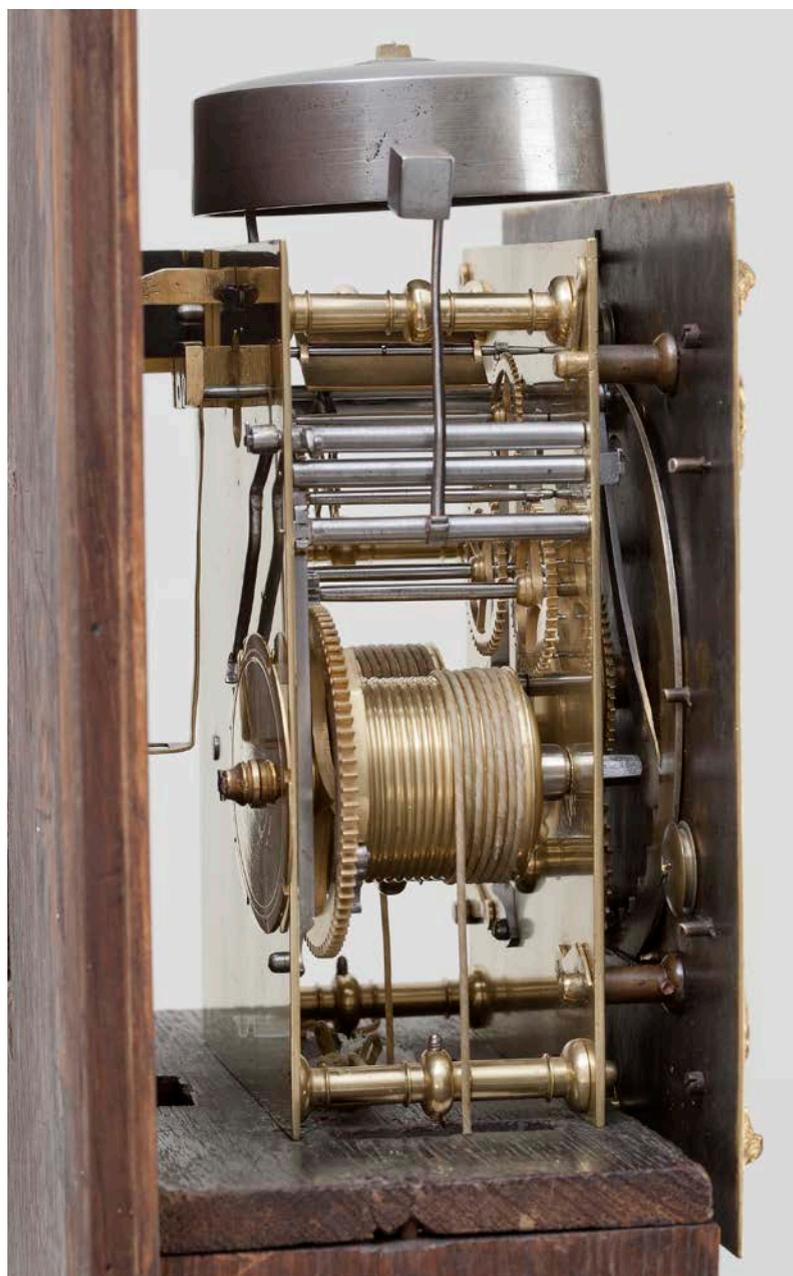
Arguably, one of the most arresting and aesthetically pleasing features to be found on early clocks is a skeletonised chapter ring. Being complicated and time consuming to make, these were rarely used and Knibb thus reserved them for his finest productions, most usually of a special nature, as seen here. The present clock is the only example of the three recorded miniature longcases by Joseph Knibb to have been handled in this exclusive manner (see page 140).

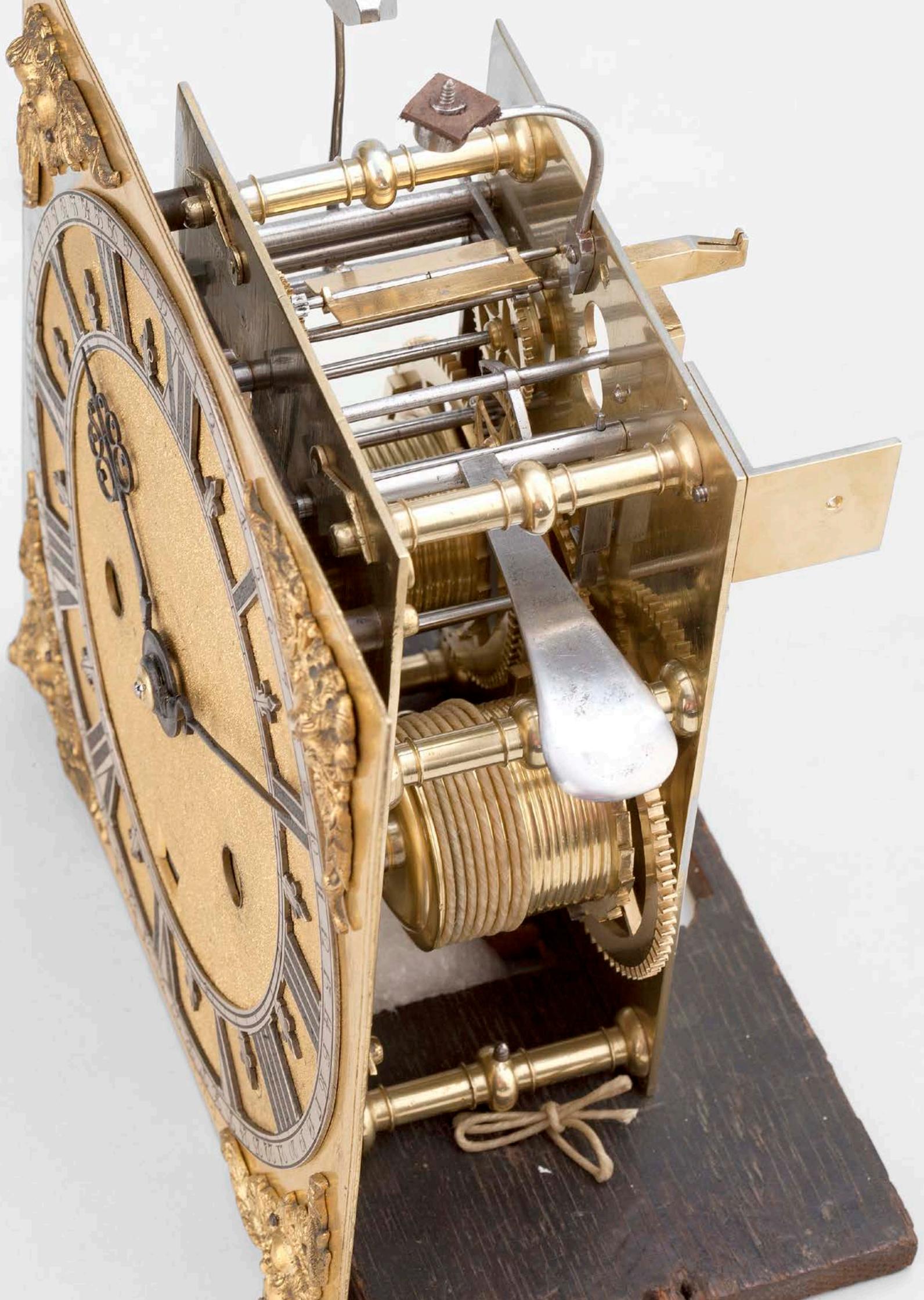


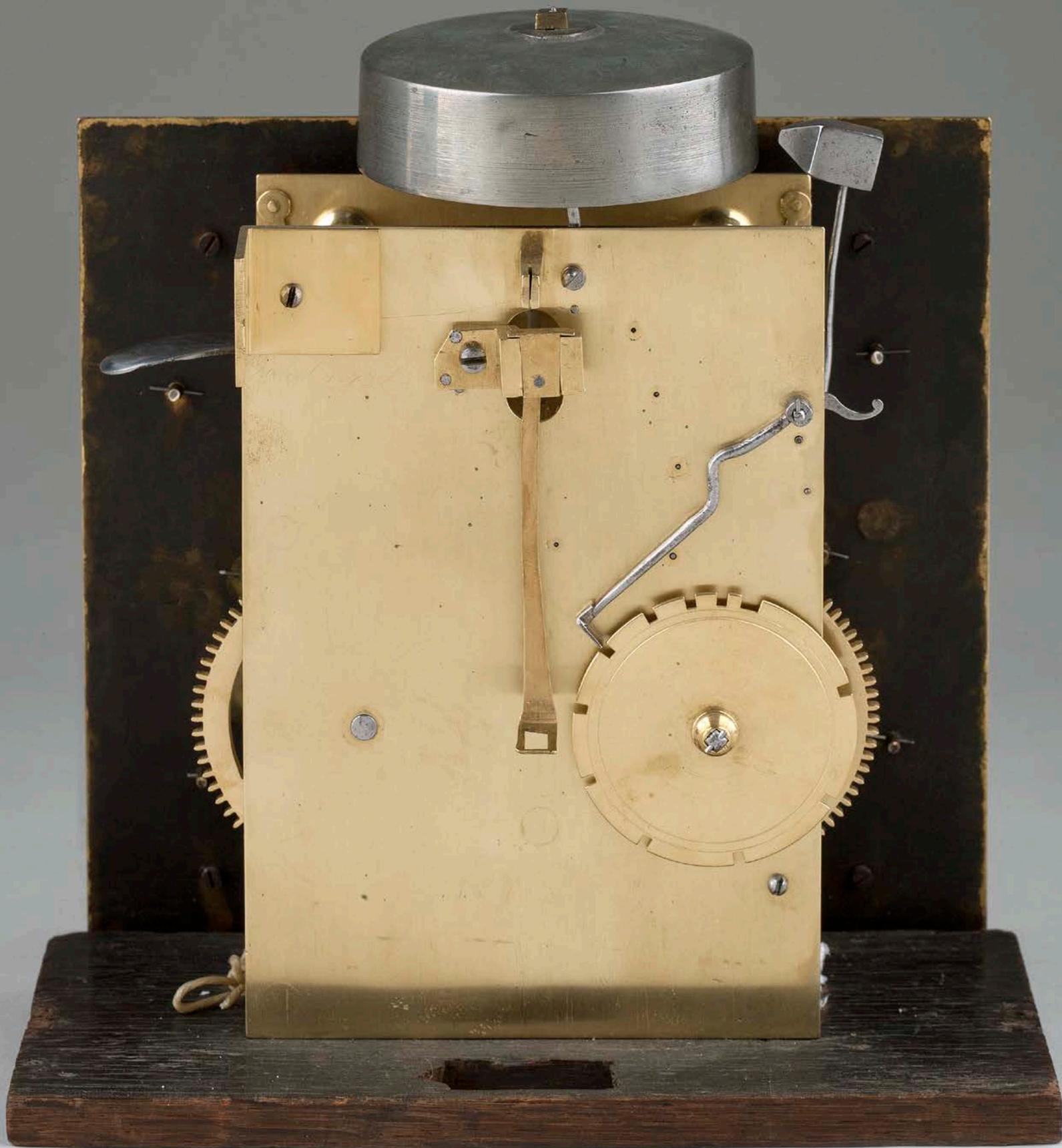
Joseph Knibb London

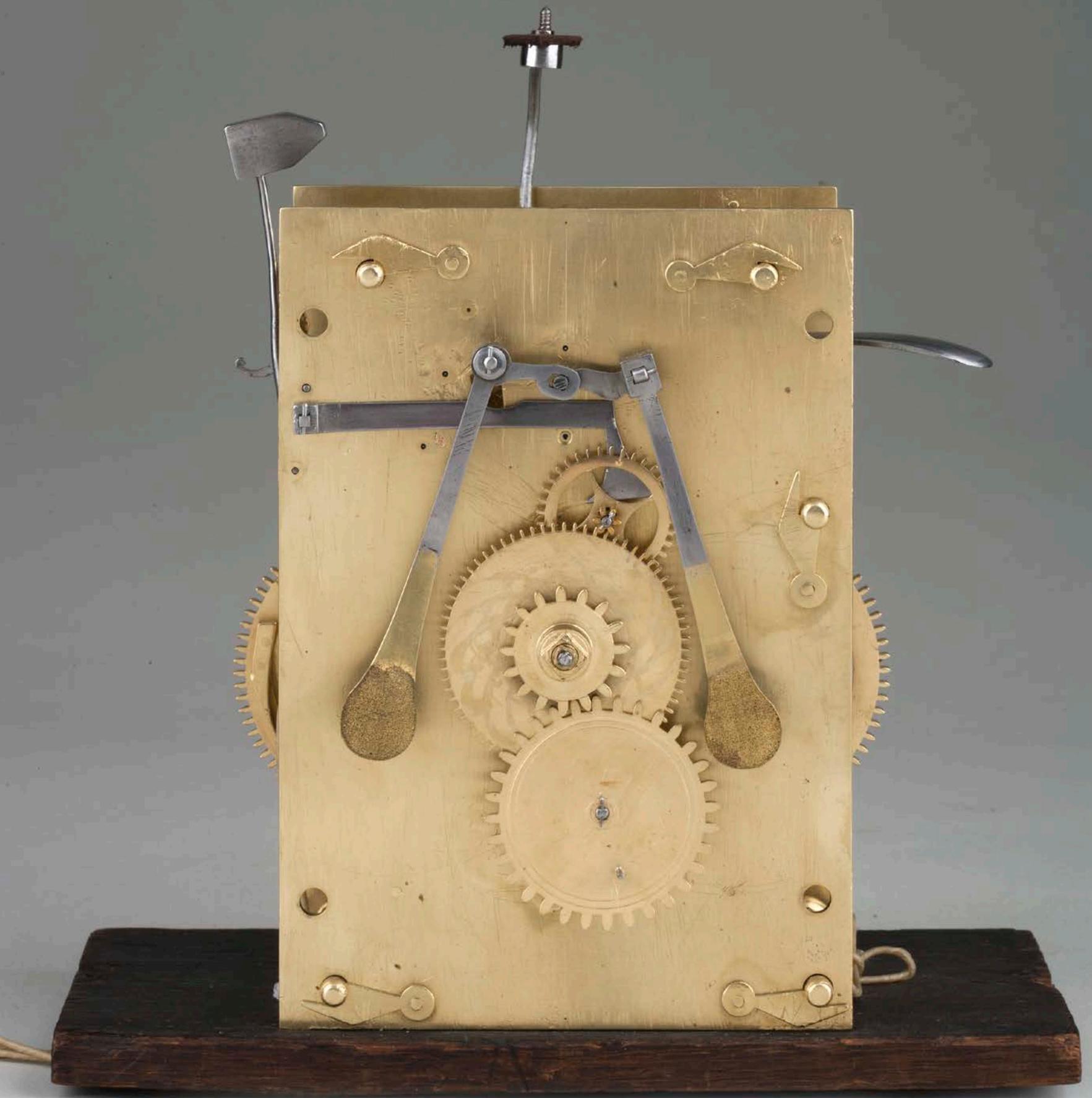
MOVEMENT

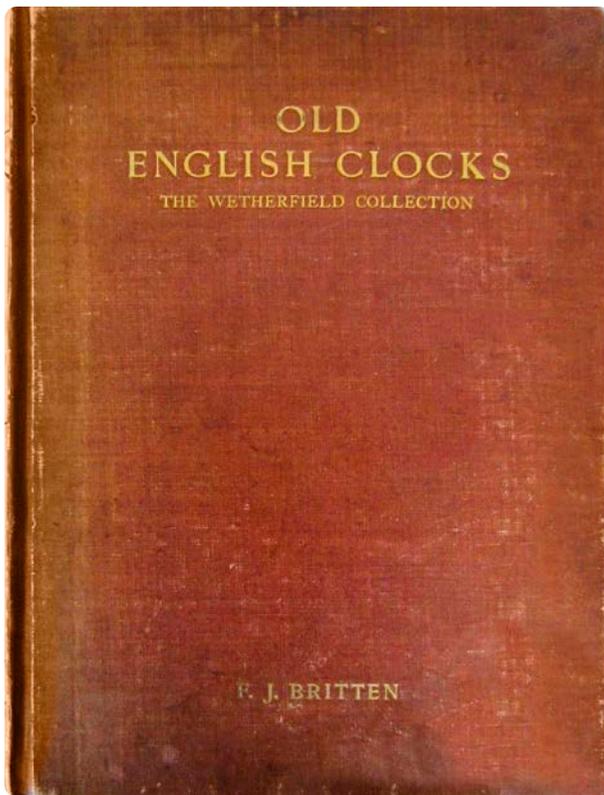
The 8-day movement has delicate brass plates secured by six latched and finned baluster pillars. The going train has an anchor escapement with bolt-and-shutter maintaining power that is cocked via a large, round-end and tapered iron, hand lever. The striking train has an outside countwheel for hour strike on a 'pork-pie' bell above the movement plates. The backplate has a brass L-shaped securing bracket that fixes the movement to a forged iron bracket in the top right corner of the backboard, while the base pillars rest in iron taper pins on the seatboard.











Joseph Knibb's Series of Miniature Longcase clocks

Miniature longcase clocks are exceedingly rare, none more so than those dating from the late 17th century. Although the term 'miniature' is not defined, it is generally used for longcase clocks under six feet high, but arguably superb proportions are much more important. That this is something for which Joseph Knibb is renowned, makes it unsurprising that he excelled on both counts with his rare miniature longcase clock series.

Including the present clock, there are just three examples recorded, listed here in probable date order:

1. A miniature longcase clock in an ebony case (opposite left), 5 foot 4 inches (162.5 cm);
2. A miniature longcase clock in an olivewood stylised marquetry case (the present clock, opposite centre), 5 foot 6 inches (168 cm);
3. A miniature longcase clock in an olivewood and floral marquetry case (opposite right), 5 foot 5½ inches (166.5 cm).

The shallow-domed caddy tops to the hoods of all three clocks show a strong family resemblance, and each one has an 8-inch square dial in keeping with their small size. The other two examples have standard chapter rings with wheat-ear engraved borders, whilst the present example has a sophisticated skeletonised chapter ring, complemented by a simple scored line border. The floral marquetry Knibb has a seconds ring as well as a date aperture and is signed, as is the present clock, *Joseph Knibb London*; the ebony clock simply has a date aperture, and is signed *Joseph Knibb Londini Fecit*.

The stylised flowers in the marquetry design seen on this clock can also be found on two other full-sized Knibb longcase clocks originally illustrated by FJ Britten, *Old English Clocks, The Wetherfield Collection, 1907*:

1. John Knibb, Oxon illustrated on page 24, fig. 26 (shown far left);
2. Joseph Knibb, London illustrated on page 27, fig. 28 (shown left).

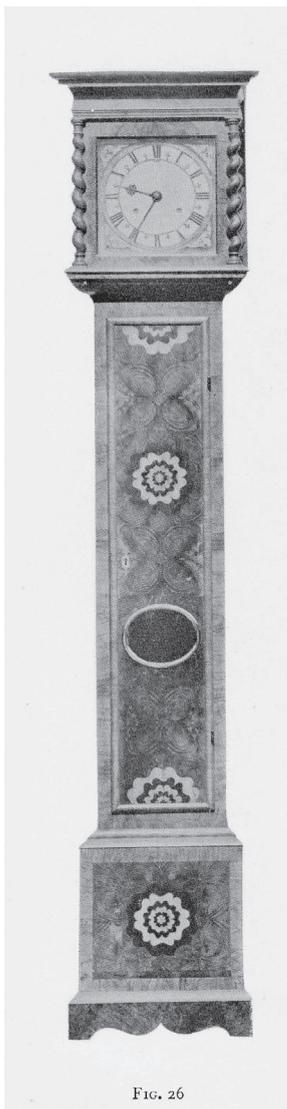


FIG. 26

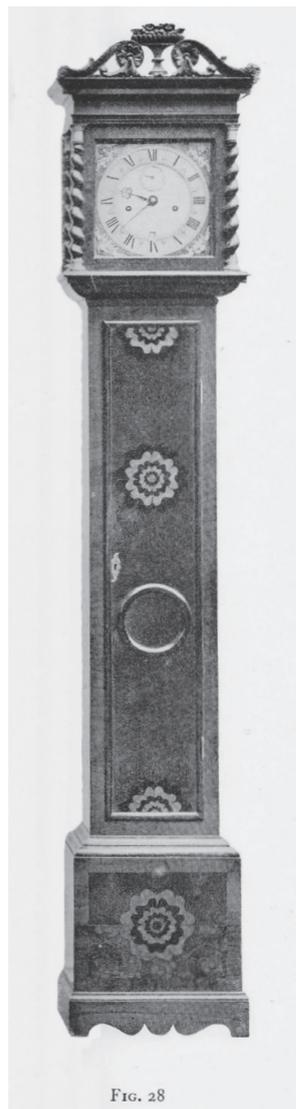


FIG. 28

The three Joseph Knibb miniature longcases in panelled ebony, parquetry, and marquetry cases (with a full size parquetry Knibb shown to scale behind)





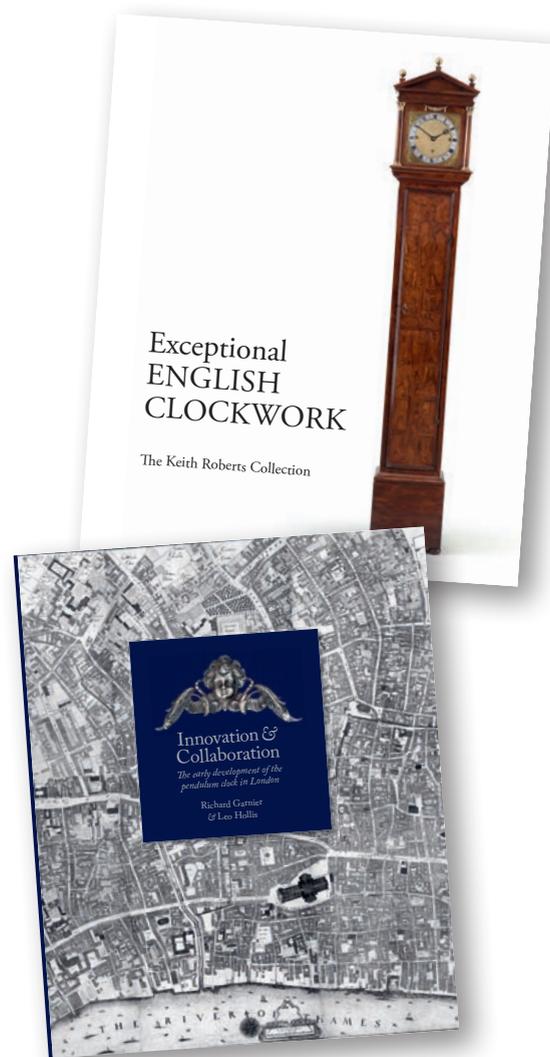
Literature:

Exceptional English Clockwork, The Keith Roberts Collection, 2015, p. 336-339;

Garnier & Hollis, *Innovation & Collaboration*, 2018, p. 110-119

Exhibited:

London 2018, Innovation & Collaboration, exhibit no. 101



Comparative Literature:

FJ Britten, *Old English Clocks, The Wetherfield Collection*, 1907;

RW Symonds, *The Rare Grandmother Clock*, *Country Life Annual* 1955;

FJ Britten, *Old Clocks and Watches and Their Makers*, 7th ed, 1956;

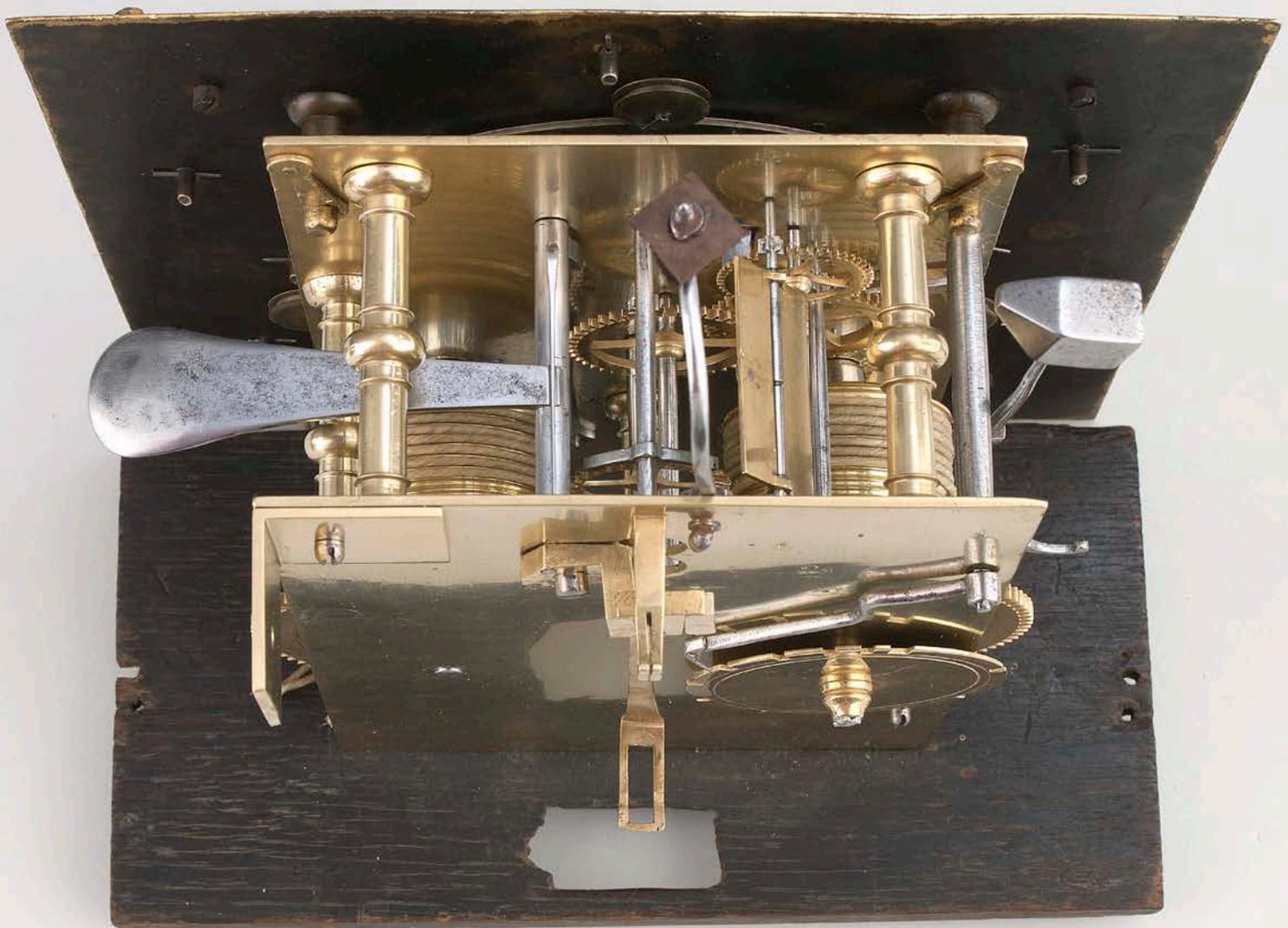
RA Lee, *The Knibb Family, Clockmakers*, 1964;

HA Lloyd, *The Collector's Dictionary of Clocks*, 1964;

Dawson, Drover & Parkes, *Early English Clocks*, 1982;

Dawson, *The Iden Clock Collection*, 1987;

J Darken (ed.), *Horological Masterworks, English Seventeenth Century Clocks from Private Collections*, 2003



THE RARE GRANDMOTHER CLOCK

By R. W. SYMONDS

NOTHING like it had ever been seen before. It was something quite new: it was in the latest fashion; and it evoked, in those who were lucky enough to see it, a sense of wonder. A later age was to call it a grandfather clock; but in 1658, when it first appeared, it had no such colourful name and was described, exactly if not crisply, as a pendulum clock in a long case.

The dial was about eight inches square, the case was of ebony, veneered on oak. Enclosing the dial was a hood, designed with a pediment which was sometimes supported on columns. Apart from the ornamentation of mouldings, there were fire-gilt brass mounts, which took the form of caps and bases to the columns, swags on the door, and an escutcheon in the pediment. The height of these early grandfather clocks was seldom more than six feet, six inches, which was a convenient and logical height, for then the centre of the dial was approximately at eye level. They were regulated by short bob pendulums, as they were called, which swung in a wide arc. These pendulums had no standard length, but they seldom extended below the bottom edge of the back-plate.

In the late 1660s the famous Robert Hooke, the Royal Society's Curator of Experiments, discovered that a long pendulum, with a heavy

bob swinging in a small arc, regulated the time-keeping of a clock far more accurately than a clock with a short pendulum swinging in a wide arc. Hooke's long pendulum beat seconds and measured 39.2 inches. Clockmakers were not slow to adapt this important discovery. The length of this pendulum could be conveniently fitted into the long case, and the beat of a second immediately suggested a seconds dial, the hand of which vibrated in unison with the swing of the pendulum.

In the late 17th century another long pendulum was used: it was approximately five feet in length and beat $1\frac{1}{4}$ seconds. But although popular with some London clockmakers, particularly William Clement, it soon went out of use; and the Royal Pendulum, as the seconds pendulum was called, became common to all grandfather clocks in the 18th century.

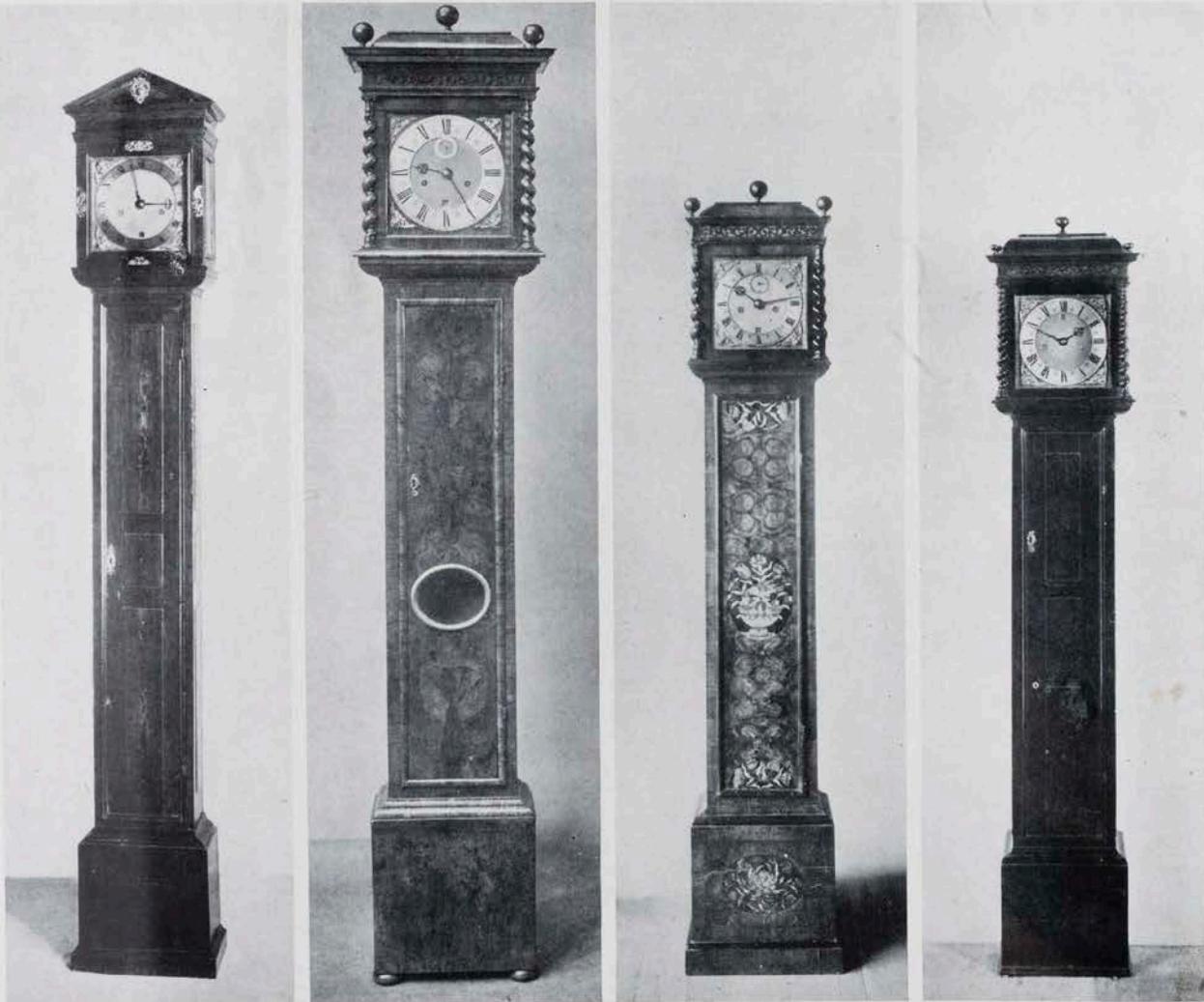
With the advent of the long pendulum in the reign of Charles II the dial increased to ten inches square, the hour ring became broader and the hour numerals taller. These changes gave greater legibility, although the height of the case, to be in proportion with the larger dial, was increased so that it rose above the eye level of a man of average height. Such long cases, with their crestings, were usually seven feet high. The ten-inch dial continued in fashion

until the end of the 17th century, when it grew to eleven inches square. With this increase the case, too, became taller by six or nine inches.

This growth in the size of dials and cases of long-case weight clocks enabled the time to be more easily told in a candle-lit room and made the clock and its case a more imposing piece of furniture: the lofty rooms of the newly-built mansions of the time of William III and Anne called for a tall clock.

The tendency was for bigger and more legible dials and for taller and more imposing cases. It is, therefore, surprising to find that some clockmakers were producing at the same time a long-case clock which, by comparison, was a miniature. Instead of having a ten-inch square dial, it had one which was from seven to eight inches square, and its height was in the region of five instead of seven feet. This miniature grandfather, or grandmother clock as it is called to-day, was first made towards the end of Charles II's reign.

Its wheels and pinions were smaller than those of the grandfather clock, but the number of teeth and pinion leaves, although finer, were the same. Grandmother clocks, like many grandfather clocks, were of eight-day duration. The only measurement common to both clocks was that of the pendulum, which was fixed at 39.2

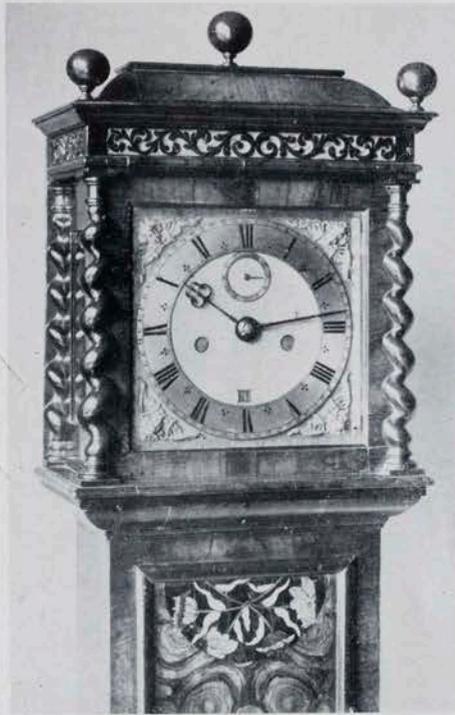


(Left to right) 1.—WEIGHT CLOCK OF ABOUT 1660 BY AHASUERUS FROMANTEEL. Height, 6 ft. 4 ins. 2.—GRANDFATHER CLOCK OF ABOUT 1685 BY JOHN KNIBB, OF OXFORD. Height, 6 ft. 10 ins. 3.—GRANDMOTHER CLOCK OF ABOUT 1675 BY JOSEPH KNIBB, OF LONDON. Height, 5 ft. 4 ins. 4.—GRANDMOTHER CLOCK OF ABOUT 1675 BY JOSEPH KNIBB. Height, 5 ft. 1 in.

inches. To allow for the shorter drop of the weight of the grandmother clock, the diameter of the barrel was reduced. The smaller barrel necessitated greater power (i.e. a heavier weight) to work the train, but the finer wheel work, which produced less friction, offset this. In fact, the weights of some grandmother clocks are lighter than those of ordinary eight-day grandfather clocks.

Judging by extant examples of grandmother clocks, the period in which most of them were made was from 1680 to 1730. One must be careful to distinguish a miniature long-case clock from the first long-case clocks with eight-inch dials, short pendulums and verge escapements made by the Fromanteels in the 1660s, before Robert Hooke's brilliant invention of the long seconds pendulum. Also, the miniature clock must not be confused with the cheap thirty-hour, one-hand clock of the countryside; for this clock, in the first half of the 18th century, had often an eight- or nine-inch dial in a short case. Another grandfather clock of short stature which falls outside the definition of a grandmother was a type of regulator with a small dial in a six-foot case which was made in the second half of the 18th century.

The miniature long-case clock was not a cheap clock; it had a good-quality movement and a well-made case. Judging by the few that have been preserved, they appear to have been made by only a small number of London clockmakers. In fact, although only about twenty-five grandmother clocks have so far been recorded, two of them are by Joseph Knibb and four by Christopher Gould. One wonders why these two



5.—DIAL AND HOOD OF THE CLOCK ILLUSTRATED IN FIG. 3. (Right) 6.—DIAL AND HOOD OF THE CLOCK ILLUSTRATED IN FIG. 4

makers in particular were so interested in miniature long-case clocks; for, as far as we know, such clocks did not come out of the workshops of Thomas Tompion, Daniel Quare and George Graham.

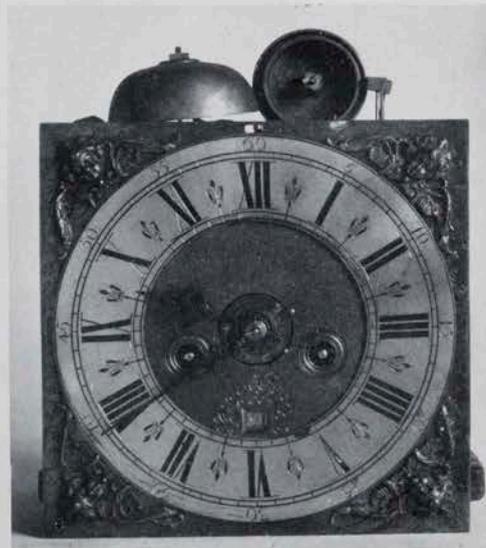
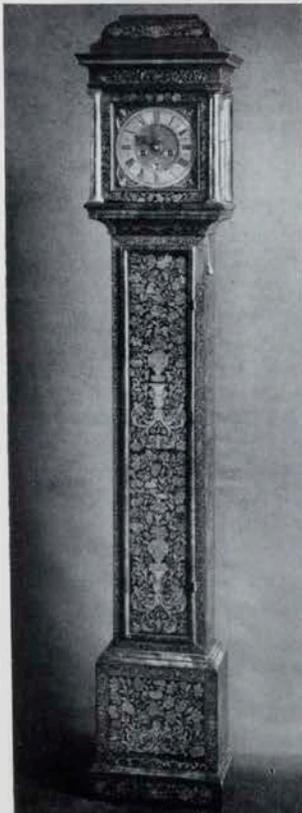
For what purpose were miniature long-case clocks made? And why were they in vogue for only about fifty years? They are in scale with closets which, in the late 17th and early 18th centuries, led off bedchambers, libraries and parlours and which were used for dressing or writing. These small private rooms were also used for the keeping of china or curiosities. A few grandmother clocks have repeating work and are fitted with an alarm, which suggests that they were used in bedrooms. And some examples have a strike-or-silent mechanism, which is a useful device for a bedroom clock.

Unfortunately, no contemporary inventory, auction-sale catalogue or clockmaker's advertisement mentions a miniature long-case clock. And we do not

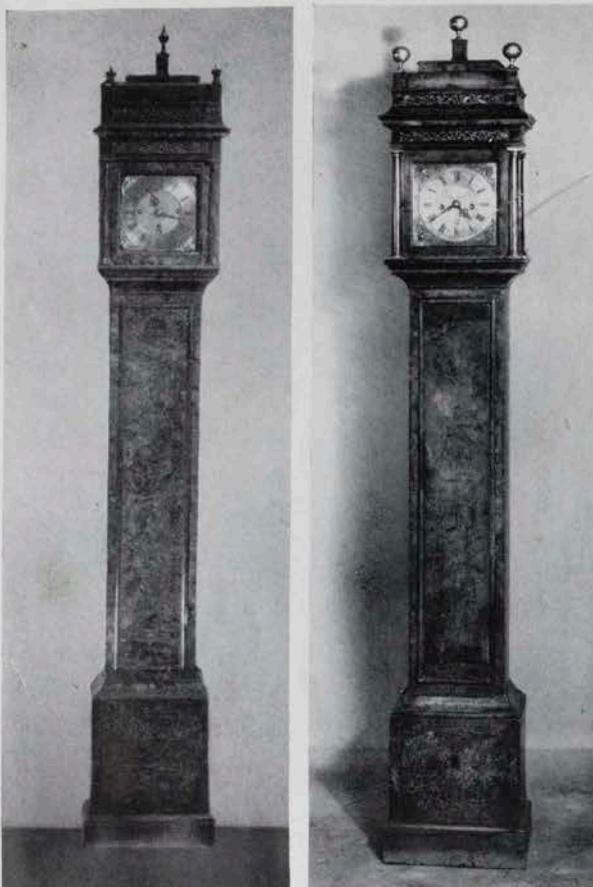
know by what name our ancestors called these clocks, for the term grandmother is the modern clock collector's name, derived from grandfather, which came into use in Victorian times.

The two grandmother clocks illustrated in Figs. 3 and 4 are both by the well-known Joseph Knibb, who came from a family of clockmakers. The first fact we know about Knibb is that in 1667, at the age of 27, he was working with his brother John in Oxford. Three years later he was in London, for in 1670 he was made free of the Clockmakers' Company. John remained in Oxford, followed the craft of a clock- and watchmaker and attained the eminent position of Mayor of Oxford in 1700 (see *Johannes Knibb Oxonia Fecit*, by John James, in *The Antique Collector*, August, 1936).

Joseph set up in business at the Dial at Serjeant's Inn Gate, Fleet Street, where, as far as we know, he practised his craft till 1693; then, according to an



7.—GRANDMOTHER CLOCK WITH ALARM AND REPEATING WORK IN A MARQUETRY CASE. BY CHRISTOPHER GOULD, ABOUT 1695. Height, 5 ft. 6 ins. (Middle) 8.—THE DIAL OF THE CLOCK. (Right) 9.—DETAIL SHOWING THE INLAY OF THE DOOR



10 and 11.—GRANDMOTHER CLOCKS OF ABOUT 1710, BY CHRISTOPHER GOULD. Both 5 ft. 9 ins. high. The example on the left has a three-train movement which strikes the quarters; that on the right has repeating work on six bells. (Right) 12.—DIAL AND HOOD OF THE CLOCK ILLUSTRATED IN FIG. 11

advertisement in *The London Gazette*, he moved to "Suffolk Street near Charing-cross, where he has good conveniency to serve Customers with Clocks and Watches".

In 1697, Knibb sold up and went to live in Hanslope, Buckinghamshire. His departure from London, which had witnessed his greatest feats and triumphs, was announced by this advertisement in *The London Gazette*: "At the Clock Dyal in Suffolk-street near Charing-Cross, on Monday the 26 instant, will begin the Sale of a great Parcel of very good Pendulum Clocks, made by Joseph Knibb; some do go a year, some a quarter of a year, some a month, some a week, and some 30 hours; some are Table Clocks, some Repeat themselves, and some by pulling Repeat the Hours and Quarters: They are made and to be sold by Joseph Knibb at his House at the Dyal in Suffolk-street aforementioned, where the sale will continue until Whitsuntide, unless all be sold sooner. There are also some Watches to be then and there sold, a good Pennyworths."

Knibb did not, however, retire from business, but continued unexpectedly to manufacture clocks in Hanslope: they are signed "Joseph Knibb at Hanslop." He died in 1711-12.

Judging by the large number of Knibb's extant clocks, both weight and spring, his output must have been considerable. His movements, however, are of unequal quality: some display the finest craftsmanship and finish, others are inferior. One suspects that he employed journeymen of varying degrees of skill who came and went; also that he may have placed his work out with "garret masters," for that, decidedly, would account for some of its inferior quality. Tompion, his great contemporary, maintained, on the contrary, a uniform level of excellence.

Knibb is especially noted for his dials, which he made particularly pleasing. The hands were also of individual design. The dial of the clock illustrated in Fig 5 has several distinctive features: every minute is numbered and the hour hand is of an early design; it has the seconds dial, which is an unusual feature for a grandmother clock, and maintaining power. The movement has both going and striking trains. The case is of olive-wood parquetry with walnut cross-bandings and floral panels of marquetry inset. The width of the trunk, it will be noticed, is on the wide side. This was probably due to Knibb's anxiousness to allow sufficient room for both weights; also, as this is one of the earliest grandmother clocks, it is not made as narrow as the later examples (Figs. 10 and 11).

The clock in a floral marquetry case (Fig. 7) and the clock in a slender plain walnut veneered case (Fig. 11) are both by Christopher Gould. It is profitable to compare them with the two Knibb clocks. The dials and hands of the Knibb clocks are in perfect taste, but the cases are slightly over-wide and box-like. The two Gould clocks, on the contrary, have dials and hands of less pleasing design, but their cases are slender and elegant.

Gould showed little taste in designing dials. He liked functional rings round the winding holes and engraving round the calendar slot. Also, he was fond of adding scroll engraving to the outer edge of the dial-plate. (In Knibb's dials, the engraving in this position is confined to a neat herring-bone border, not scroll work which interferes with the spandrel mounts and spoils the simplicity of the dial.) On the dials of both Gould's clocks the hour circles are overwide; this is in contrast with Knibb's dials, which are in perfect proportion. The urge to over-ornament his dials is a constant feature of Gould's clocks. On the other hand, all his clock cases are perfect of their kind: the proportions are always elegant and the quality of the craftsmanship, particularly of his marquetry cases, is of the highest order. One would like to know who was the maker of such perfect work (Fig. 9). The cases Gould commissioned him to make could not have kept him constantly employed, and other clockmakers must have given him orders as well.

An interesting feature of the clock in a marquetry case (Fig. 7) is that it must have been designed as a bedroom clock, for it has an alarm, strike-or-silent and repeating work, a device which, when a cord is pulled, strikes the last hour and quarter. The cord for the repeating work is to be seen hanging down under the hood on the right-hand side of the clock.

The second clock by Gould has also an alarm, silent-or-strike and repeating work. But what is surprising is that the quarters are chimed on six bells. Gould did not add the refinement of maintaining power to his movements, nor did he go to the trouble of a seconds dial; but he amply made up for this by repeating work.

Another grandmother clock by Gould, which is now in America, is illustrated in Fig. 10. Instead of repeating work it has a three-train movement that strikes the quarters, which means that the narrow trunk has to enclose three weights. No other grandmother clock with a three-train movement has, so far, been recorded.

In 1682 Gould was admitted to the Clockmakers' Company as a "brother," and, like Tompion, who was also admitted by this means (i.e. he did not serve an apprenticeship with a London master), he was described as "a Great Clockmaker", that is to say, a maker of large turret clocks. According to an advertisement for a lost table-clock in 1706, Gould's shop was next door to the Amsterdam Coffee-house, behind the Royal Exchange. In 1706 he was declared a bankrupt, a misfortune he shared with Thomas Herbert, who was clock- and watchmaker to William III. In 1713 he was chosen Beadle to the Clockmakers' Company, a post which he held until his death in 1718.

Recently another grandmother clock became known in the clock-collecting world. To everyone's surprise, its movement was found to be





(Left to right) 13.—GRANDMOTHER CLOCK WITH AN ARCHED DIAL AND WALNUT CASE. BY ANTHONY BANNISTER, ABOUT 1720. Height, 6 ft. 14.—GRANDMOTHER CLOCK IN A GREEN AND BLUE LACQUER CASE. BY WILLIAM GIBBS, OF LONDON, ABOUT 1725. Height, 6 ft. 9 ins. 15.—GRANDMOTHER CLOCK OF ABOUT 1730 IN A JAPANNED CASE. Height, 6 ft. 4 ins. 16.—WALL CLOCK BY EDWARD MOORE, OF OXFORD, IN A GREEN JAPANNED CASE. A type of clock that can easily be converted into a grandmother. (Right) 17.—A MADE-UP GRANDMOTHER CLOCK

of a year duration, which is no mean achievement. The fact that its maker, Daniel Delander, was a journeyman to Thomas Tompion helps to explain this. The movement is heavily built and the weight is so large that it almost touches the side of the slender walnut veneered case.

The two grandmother clocks in japanned cases (Figs. 14 and 15), both of which were made between 1720 and 1730, raise the question of grandmother clocks for export. The exceptionally narrow example by William Gibbs originally came from the Continent, which strongly suggests that it was made for an export order. (I have seen a similar grandmother clock by Markwick Markham in a scarlet japanned case that came from Spain.) The weights of the going and striking trains of the Gibbs clock must be close to each other, for the width of the trunk is only eight inches and of the dial less than seven inches, which did not deter the maker from fitting a seconds dial.

The other clock in a japanned case has an eight-inch dial with an alarm, but without a striking train. The fact that grandmother clocks were made in japanned cases may mean that, in the second quarter of the 18th century, they were much more popular than the few extant examples would have us believe; for no clock has so high a rate of destruction as the long-case clock in a japanned case.

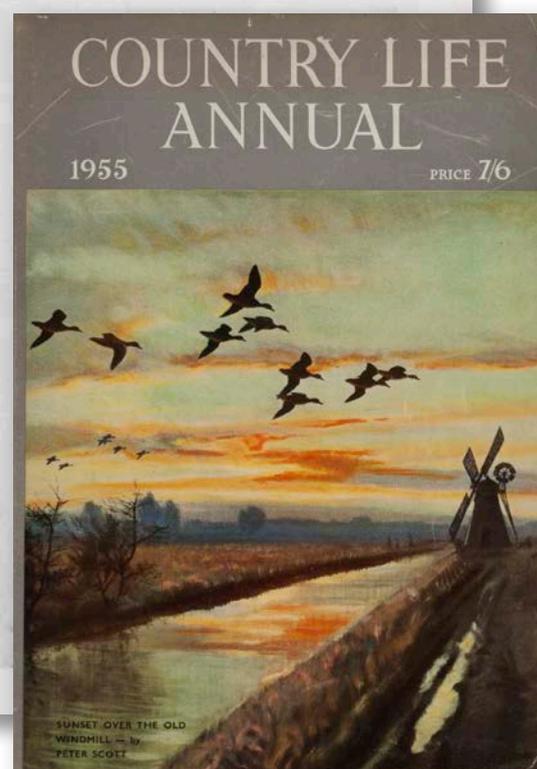
Grandmother clocks grew taller after 1720, through an arch being added to the dial; this

increased their height by at least three inches. Also, 18th-century grandmother clocks had higher domes, so that they reached the same height as the later 17th-century grandfather clock with a ten-inch dial (Fig. 2).

Because of their rarity and high value, it is not surprising that grandmother clocks have attracted the faker. The easiest way to make a spurious example is by adding a base to the case of a wall clock (Fig. 16). The movement of a wall clock, its small dial and the short drop of its weights make it suitable for this conversion. The curious-looking clock shown in Fig. 17 is a made-up example, for the case, dial and movement never originally belonged to one another. The dial probably came from a sheep's head, 30-hour wall clock, which had an hour hand only, for there are no minute divisions on the hour circle. Later, this dial was probably fitted to a spring clock, for this alone can account for the two filled-in winding holes in the middle. For its present purpose—it was chosen on account of its small size—a new winding hole was drilled in the dial-plate for the one-train movement. The case was probably once the case of an ordinary grandfather clock, for its hood and base are of a large size, the connecting trunk, with its door, having been cut down.

Fortunately, a made-up clock of this type has little chance of deceiving anybody who possesses the smallest knowledge of clocks.

Illustrations: 1, Mr. C. A. Ilbert; 4, Mr. Lionel Moore; 11, Sir Harry Hague.





Ivory bust of Daniel Quare, by his son in law, Silvanus Bevan FRS (1691-1765)

*Daniel Quare,
Exchange Alley, London*

Daniel Quare (1647/8-1724)

Daniel Quare is thought to have been born in Somerset, but it is not recorded where he learnt his trade. Described as a *Great Clockmaker* he was admitted to the Clockmakers' Company as a Brother on 3rd April 1671, the same year as Joseph Knibb and Thomas Tompion. Quare was considerably younger and his rise was slower; whereas Knibb and Tompion were commercial rivals almost from the outset, Quare became Tompion's great rival from the mid 1680s, and by the 1690s Knibb's business was in decline. Quare served the Company as Assistant from 1698 and was elected Junior Warden in 1705, rising to Master in 1708. Quare was a Quaker and, although eased by the Toleration Act of 1689, his beliefs often brought him into conflict with the authorities.

Nothing is known of his whereabouts until 1675/6, when he had premises in St. Martin-le-Grand, and by 1681 he was established at Lombard Street. By 1686 he moved to *'The Dial'* in Exchange Alley, a small thoroughfare much favoured by the horological trade, where he took over the premises of Robert Seignior, changing the sign to *'The King's Arms'*, and his business truly started to flourish.

In 1687 Edward Barlow (Booth) sought a patent for the *sole making and managing of all pulling repeating pocket Clocks and Watches*, but with backing from the Clockmakers' Quare was encouraged to successfully challenge the application. James II favoured Quare's design as it had just one push-piece whereas Barlow's had two, and in any case it was pointed out that ... *the same [are] being now made by several clockmakers*. Tompion is reputed to have made the watch submitted by Barlow and yet he told Constantyn Huygens, the Dutch statesman and scientist, that he *had never seen Barlow, the priest who had invented repeating watches*.

In 1691/2 Quare supplied William III with a repeating watch costing £69 17s 6d, and at Hampton Court a fine 10-foot year-going walnut solar/mean-time longcase clock still stands in the king's bedchamber (RCIN 1040). He is also known to have supplied a small dual balance or pendulum controlled travelling clock (at Windsor, RCIN 30111) and three barometers (two of which are at Hampton Court, RCINs 1033 and 1041). On 4th

December 1694, Huygens wrote in his diary that he ...*was in Kensington. The King called me again as he came out of his Cabinet, saying: "Zuylichem, Zuylichem"* [Huygens was Lord of Zuylichem] *and showed me a barometer which the Quaker Quare had made for him, and it was such that it could be carried from one place to another*. By 2nd August 1695, Daniel Quare had been granted a 14-year patent for his portable pillar barometers ...*the first ever given for a barometer...* and described as ...*a portable weather glass or barometer, which may be removed or carried to any place though turned upside down without spilling one drop of quicksilver or letting any air into the tube*.

It was not until *circa* 1704 that he began to number his clocks in series, which continued after he died and exceeded 300 items, but his business may have retailed twice that number, while the last clock recorded signed by Quare without Horseman is no.162. His business in portable barometers flourished from *circa* 1695 until *circa* 1718, and it seems likely the numbering of these began at a similar time, and that series reached at least no.148.

In papers held at Friends House, Quare wrote of his meetings with the newly crowned king, George I ... *Having had the Experience of my work for many years before he came to the Crown, sent for me... at his Palace, and then offered to make me his Clock and Watchmaker in Ordinary, but I made some hisitation of accepting it, for that I thought I must swear*. The king was aware of his religious beliefs and Quare goes on to hint at a position without official title...*the King...bid me tell him, That he would order a Patent and Pension for me to be his Clock and Watch-maker, during life*. Whatever the exact relationship, the King told him that he could call to see him at any time and, accordingly ...*The Yeoman of the Guard lets me frequently go up without any body for leave, as otherwise he would tho' persons of quality*.

The measure of Quare's success, advancement and export trade can be seen from the list of guests at his daughter Ann's wedding in 1705. Envoys from Florence, Hanover, Venice, Portugal, Sweden, Denmark and Prussia were all invited. The weddings of a further son and daughter in 1712 added the Earl of Orrery, the Duke of Argyll and other noble dignitaries to the guest list,

whilst in 1715 the Prince and Princess of Wales failed to attend his daughter Elizabeth's wedding only because parliament forbade royal attendance at dissenting places of worship. Amongst others, Sarah Churchill, Duchess of Marlborough signed the register and the Princess did attend the subsequent wedding feast.

An interesting reference concerning Quare's eyesight, presumably in these latter years but not datable, comes from a letter about the Duke of Argyll, saying that *I once saw him come into Quare's shop, while I was discoursing with the Master of it, about a small Improvement in Watches, not in the Movement Part, but in the striking ... but Quare could not take it well, having just then lost his Sight.* [Ipswich Journal, 3:4:1756].

In 1712, his former apprentice Stephen Horseman had married Quare's niece, Mary Savage, and in *circa* 1717/18, Quare took Horseman into partnership, and it is conceivable that his failing eyesight may have necessitated this. He took a total of fifteen apprentices and in 1717, in *Philosophical Transactions*, one of his workmen, Joseph Williamson, wrote: *Having been informed lately of a French book in which the Author speaks of making Clocks to agree with the Sun's apparent Motion; and supposeth it was a thing never thought of by any before himself... he rebuffs, asserting his authorship on an earlier clock ...found in the late King Charles the second of Spain's cabinet, about the year 1699 or 1700... supplied by ...Mr. Daniel Quare... and ...This I [Williamson] am well satisfied is a clock of my own making.*

Daniel Quare died aged 75 on 21st March 1724, and using the partnership name, Horseman continued the business until he was declared bankrupt (*London Gazette*, 28th November 1730) but, curiously, it was over two years before the stock was advertised for sale, on 19th April 1733, in the *Daily Post*: *To be sold by auction for the benefit of the creditors of Quare and Horseman all the clocks, watches, movements, mathematical instruments and sun dials consisting of great variety that were taken by Statute of Bankruptcy in the dwelling house of the late celebrated Mr Quare.*

Daniel Quare's reputation continued long after his death, and association with his name was clearly a powerful marketing tool; twenty-five years later, clocks

by the Grignions were signed ... *from the late Mr. Quare.* Later still, and in the colonies, John Adams wrote a letter to the *Boston Gazette*, dated 27 January 1766 about the fundamentals of human life ... *A clock also has a constitution ... this is the proper business of Quare, Tomlinson and Graham, to execute the workmanship like artists, and come as near to perfection...* Over 40 years had passed, but Quare was still held up as being one of the foremost makers of the time. Adams was later to be 1st Vice-President, 1789-1797, and 2nd President of the United States of America, 1797-1801.



Daniel Quare, London
Circa 1690

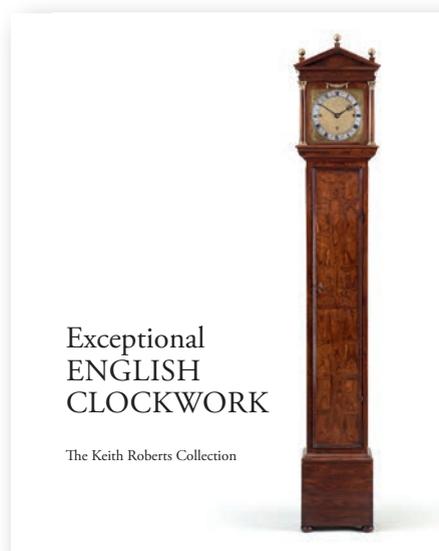
*A good William & Mary walnut and floral
marquetry panelled eight-day striking longcase clock*

Provenance:

1980, Anthony Woodburn and sold to private collection UK;

2001, Derek Roberts and sold to;

The Keith Roberts Collection, inventory no.15







CASE

The hood is surmounted by an elaborate walnut cresting carved with two baskets of flowers flanking a large scallop shell within further foliate carving. The frieze is set with a foliate-pierced walnut sound fret above walnut Solomonic columns flanking the dial, now cut for a door and converted to forward-sliding, with glazed panels to the sides. All resting on convex walnut throat mouldings, the trunk door with D-end frame mouldings and elaborate bird-and- floral marquetry in geometric panels and a brass-framed oval lenticle by the escutcheon. The rectangular plinth panel is inlaid with further matching marquetry above a later walnut-veneered double skirting.

Height: 7 foot 5 inches (226 cms)



DIAL

The 11 inch square brass dial is signed *Dan Quare London* on the silvered chapter ring flanking VI, the Roman numerals with elaborate *fleur-de-lys* half-hour markers and Arabic minutes within the outer division ring. The matted centre has Quare's archetypal ringed winding holes, with a seconds ring below XII, decorated date aperture and elaborately pierced and shaped blued steel hands. The corners are applied with winged cherub-and-foliage spandrels with foliate border engraving between, and the dial is fixed to the frontplate by four pinned dial feet.



Dan Quayre London

13

60

55

50

45

40

35

30

25

20

15

10

5



MOVEMENT

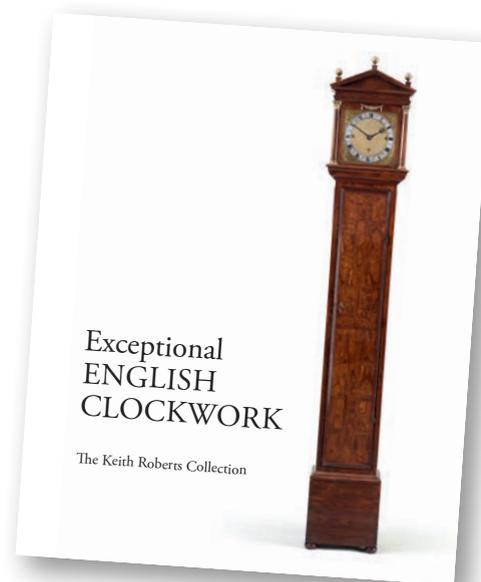
The substantial rectangular plated movement held by five ring-turned baluster pillars, which are fully latched; the going train has an anchor escapement with a one-second, steel rod and brass lenticular bob, pendulum; the strike train is governed by an inside countwheel, mounted on the greatwheel and striking on the large bell above the plates, both trains driven by matching brass-cased weights.

Literature:

Antiquarian Horology, Autumn 1980,
Anthony Woodburn advertisement;

Antiquarian Horology, Spring 2001,
Derek Roberts advertisement

Exceptional English Clockwork,
The Keith Roberts Collection, 2015,
pp. 126-129;



Daniel Quare, London
No.93, Circa 1711

An extremely scarce Queen Anne miniature ebony striking and pull-quarter repeating table clock

Provenance:

Private collection UK;

Christie's, *Important Clocks*, 11 December 2002, lot 77;

Private collection Hampshire, until 2014;

Private collection, London

*Miniature table clocks by Daniel Quare are exceedingly rare; an un-numbered miniature table clock can be viewed in the Student Clock Room in the British Museum (museum no.1006.2078, Ilbert Collection, Edgar bequest, 1958). Two other miniatures from Quare's numbered series are, in similarity to this example, decorated by Tompion's 'Graver 515' (see 'Thomas Tompion 300 Years', *Decorative Engraving*, p.174-185), but with movements additionally attributed to Tompion's workshop, these were sold by us in 2015 and 2021; Quare no.62 from the Tom Scott Collection (inventory no.74); and Quare no.47 from the John C Taylor collection (inventory no. 10).*



CASE

The superbly proportioned and elegant miniature case, ebony veneered onto an oak carcass, and surmounted by a small gilt-brass knopped handle above an inverted bell top. The front door is embellished with laid-on ebony dial aperture frame mouldings, while the arch is flanked by pierced ebony frets. The glazed sides with conforming break-arch apertures and matching frame mouldings, the rectangular rear door inset with break-arch glazing and matching outer frame. The whole resting on a well-defined base moulding above four ebony moulded block feet.

Height: 11 inches







DIAL

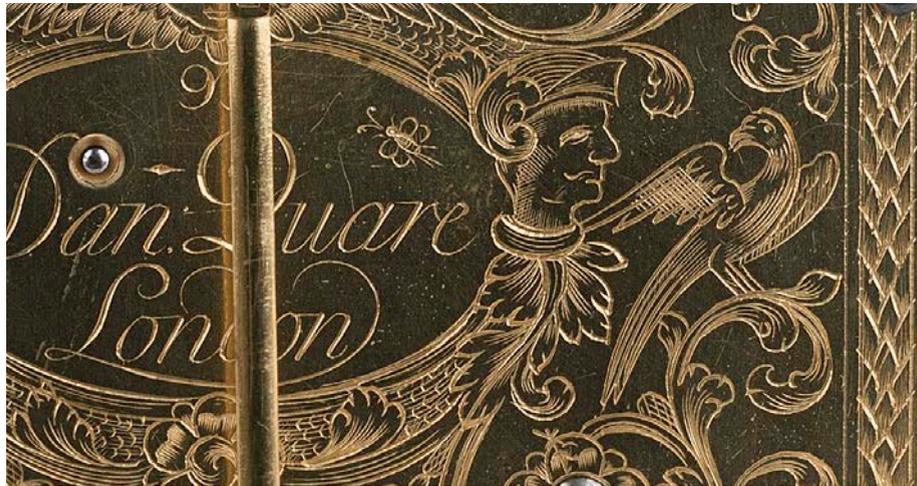
The 4 by 6 inch break-arch gilt-brass dial is signed *Dan: Quare London* in cursive script on an oval reserve within the matted centre, with mock pendulum aperture above centre. The silvered chapter ring has Roman hours and Arabic minute numerals with *fleur-de-lys* half-hour markers and small lozenge half-quarter markers, with pierced blued steel hands. The lower corners of the dial are embellished with cherub's head spandrels, with corresponding half-spandrels below the top corner subsidiary rings for pendulum regulation and strike/silent, interspersed by foliate and bird decoration by Graver 515, flanking a typical large silvered calendar ring with a matching matted centre.

*Until c.1704, Quare's output was entirely square or rectangular dialled and his signatures were usually found on the chapter rings, or within dial decoration outside them. Soon after the introduction of the break-arch dial in c.1702-03, Quare embraced the form. He first applied the break-arch to his pre-numbered table clocks and then his numbered series; there are fewer than six recorded un-numbered break- arch clocks and all continue to be signed on the chapter rings. Quare had an average production, not dissimilar to Tompion's, of perhaps 11 to 13 clocks per year (see *The Golden Age of English Clockmaking*, 'Daniel Quare, Exchange Alley, London', p.260-313), and the paucity of un- numbered break- arch dial clocks suggests that the introduction of Quare's new dials and the start of his clock serial numbering were almost concurrent, with numbering probably starting within a year in c.1704/05. Henceforth, with just a few exceptions, all of Quare's standard numbered clocks had break-arch dials. His signature reserves within the matting were not introduced on his spring clocks until Quare no.39 of c.1707, suggesting that no.93 was perhaps made in c.1711.*

MOVEMENT

The diminutive movement with substantial plates has five typical ring-turned baluster pillars and original chain fusees and spring barrels for the trains; the going train has a restored verge escapement with the spring-suspended pendulum from the brass regulation bar, with snail-cam regulation adjusted via the left subsidiary dial. The strike train governed by a rack and snail and striking on a large bell, the re-instated repeat sounding the quarters on the smaller bell via a steel lever to the backplate. The exceptional backplate, engraved by Tompion's craftsman, Graver 515, is profusely decorated with birds, scrolls and flowers with a central gadrooned urn, flanked by a pair of bees and eagles, above the elaborate oval cartouche with a cherub's head and opposing masks signed *Dan: Quare London 93*, with further scrollwork below, all set within a wheatear border. Fixed to the case with two steel brackets and a screw into the central lower pillar.

Graver 515's subject matter was far more extensive than seen in the work of Tompion's earlier engravers and included eagles and snakes, winged cherubs, trophies of arms, birds, vases and bowls containing fruit or flowers, and insects.

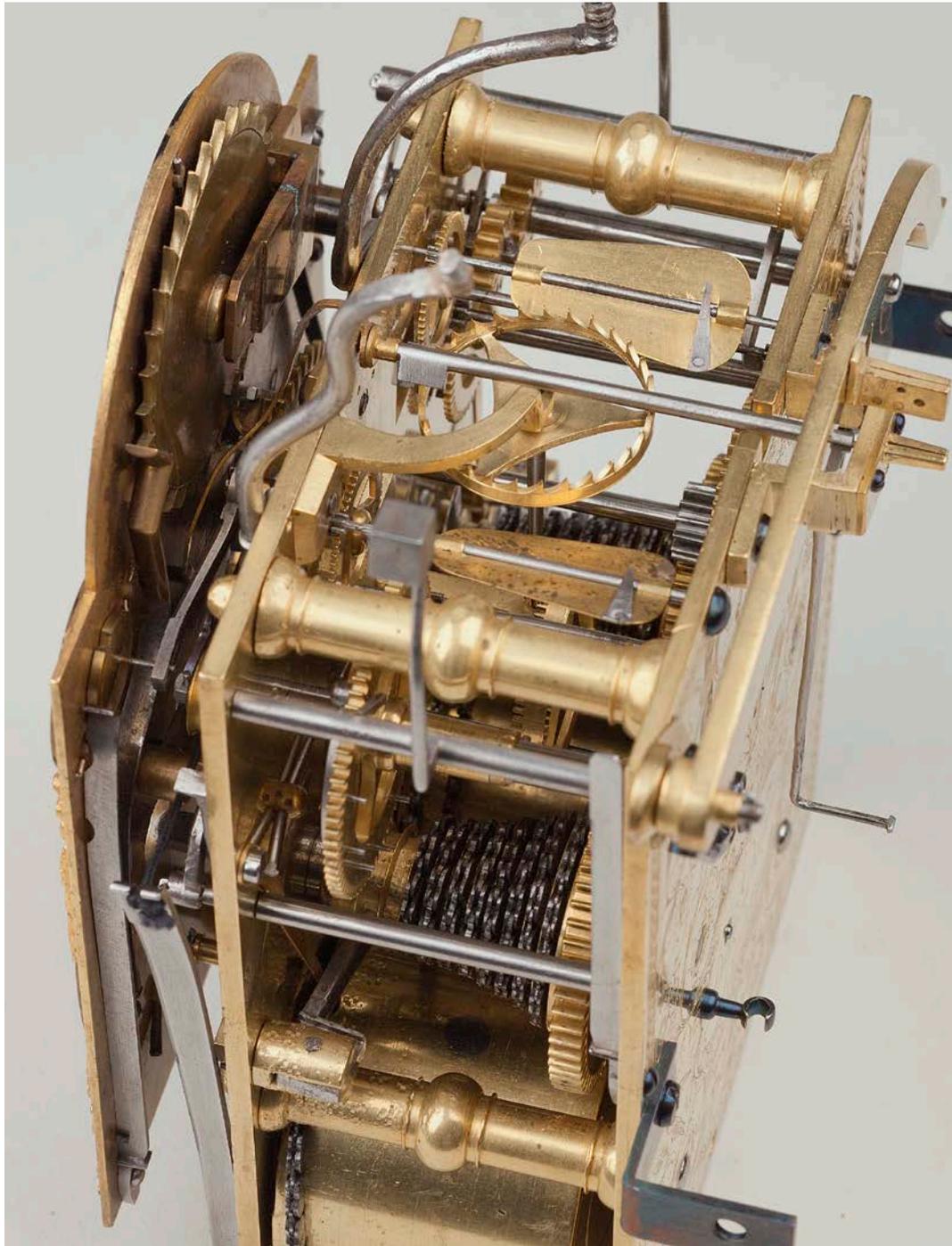


Working near to the end of Tompion's career, fewer than twenty clocks are listed which he engraved, but his employment continued long after Tompion's death and a small number of examples by his successor, George Graham (see page 184), are recorded, before he discontinued with backplate decoration altogether in the late 1720s.

As one would expect, Graver 515 worked for Tompion's apprentices and associates, but also for number of other good makers, such as his great latter-day rival, Daniel Quare, as evidenced here.

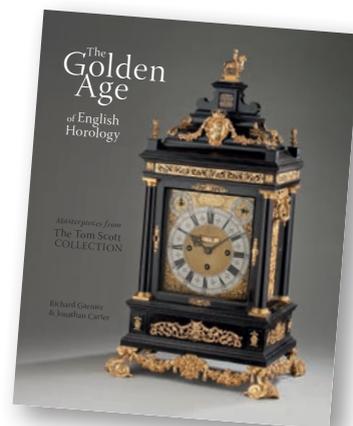


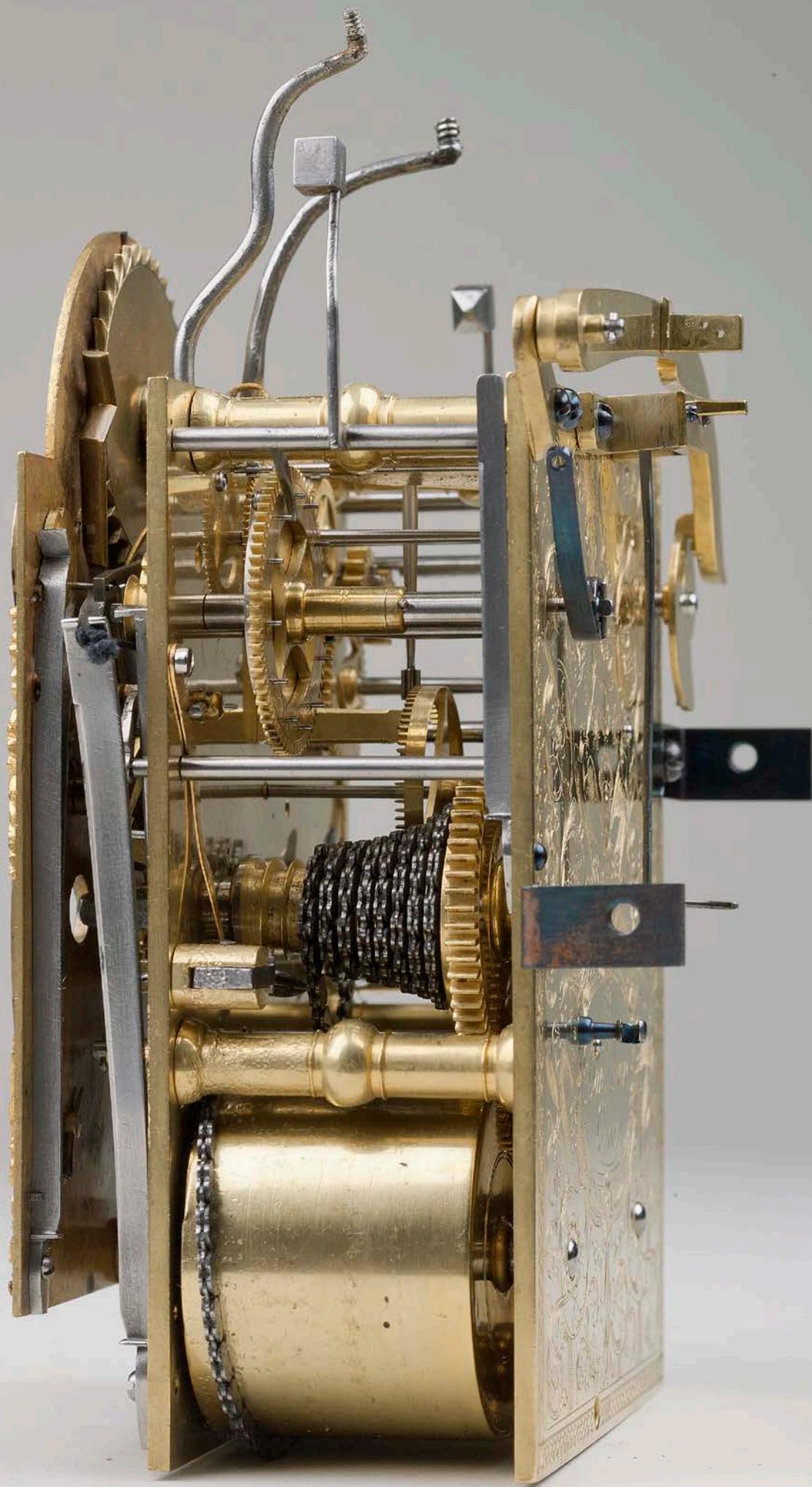
Dan. Quare
London



Literature:

Garnier & Carter, *The Golden Age of English Horology*,
2015, Quare chapter pp.260-312, illustrated p.294





The Glas Quare
No.188, Circa 1720

*A fine George I figured walnut month-going longcase clock
by Daniel Quare & Stephen Horseman, London*

Provenance:

Probably originally made by Quare & Horseman for export direct to
Sweden;

By 1852, in the private collection of Dr. Olof Glas (1812-1880), Professor of
Theoretical and Practical Medicine at the University of Uppsala, Sweden,
and thence by family descent

*It has long been appreciated that Quare had an extensive export trade
throughout Europe, as well as it being a matter of wonderment how
Quare managed to attract such an assemblage of dignitaries and foreign
ambassadors to the weddings of his children. Taking place in 1705, 1712
and 1715, the guests included not only English court figures rising in rank as
high as the Prince and Princess of Wales, but also the Venetian, Florentine,
Hanoverian, Portuguese, Swedish, Prussian and Danish ambassadors.*

*This is unrivalled for a clockmaker, but reflects his circle of customers,
the envoys very conceivably acting as agents for transmitting orders from
their home states for clocks, watches and barometers. Thus it made good
commercial sense for Quare to ask such figures to his children's wedding
banquets, both in thanks and to encourage further orders. Quare's goods
have been discovered in many countries, including France, Spain, Portugal,
Sweden, Holland, Lichtenstein and Denmark, as well as the former states
now within unified Italy and Germany and further east in Europe in the
countries formerly beyond the Iron Curtain.*





CASE

The case with deeply contrasted figured walnut veneers and a forward sliding break-arch hood, with restored dome caddy flanked by two brass ball finials. The original top frieze with pierced walnut sound frets to the front and matching frets to the arch below the cornice, the hood door flanked by brass-capped Doric columns. The trunk with concave throat mouldings above the rectangular trunk door, veneered in highly figured walnut and framed with cross grain mouldings. The cross-banded plinth has matching figured walnut veneers and is raised on a double skirting. The backboard stamped and inscribed *O Glas Upsala 1852*.

Height: 8 feet 2 inches



DIAL

The 12 inch break-arch lacquered brass dial with silvered Roman and Arabic chapter ring, *fleur-de-lys* half-hour and lozenge half-quarter markers, and flanked by well-cast 'Indian mask & scroll' spandrels with asymmetric 'dolphin & scroll' spandrels flanking the large subsidiary date ring to the arch. The matted dial centre with a seconds ring and an oval reserve signed *Dan: Quare & Ste: Horseman London 188*. The finely pierced and sculpted blued steel hands are of typical Quare pattern with moulded centre bosses.

After the introduction of the break-arch dial in circa 1702-3, Quare embraced the form, perhaps from as early as circa 1704: first for his pre-numbered table clocks and then for his numbered productions of all types, including barometers. Henceforth, with just a few exceptions, all of his standard numbered clocks had break-arch dials. His signature reserves within the matting were not introduced until no.39, circa 1707, and the number sequence carried over into his partnership with Horseman in circa 1717-18. The last known clock signed by Quare alone is no.162, while the first recorded from the partnership is no.165, rising to no.299 by 1730. That being so, the average annual production of numbered clocks was perhaps approximately 11 to 13: hence the current longcase, no.188, can be dated to circa 1719-20.

After Daniel Quare's death in 1724, Horseman continued with the partnership name but, without Quare's business acumen and finance, he went bankrupt in 1730.



Wm. Quare
London

MOVEMENT

The substantial month-going movement plates are held together with five Quare pattern ring-turned knopped pillars. The underdial with a large 24 hour wheel to trip a date lever with a sprung 'snotty', in turn moving the subsidiary date hand in the arch. The going train has an anchor escapement with a lenticular bob pendulum. The strike train is governed by a rack and snail, striking the hours on the large bell mounted above; with two typical pulleys and brass cased weights.





Professor Dr Olof Glas (1812-1880)

Olof Glas was a Swedish physician and Professor of Practical Medicine at the university of Uppsala. He was born in Umeå, the son of Lars Glas and his wife, Magdalena, and the older brother of Lars Petter Glas, a shipowner and industrialist, who founded the massive steam sawmill in Sandvik.

Glas became a student at Uppsala University in 1831, where he read medical studies and became a disciple of Israel Hwasser, admiring his idealism but would later abandon his philosophy of nature. In 1837, Glas became a Doctor of Medicine and graduated with a master's degree in surgery in 1838. He was appointed assistant Professor of theoretical and practical medicine at Uppsala University in 1839, as Professor of practical medicine in 1848 and professor of surgery and obstetrics in 1851. In 1856 he succeeded Hwasser as Professor in theoretical and practical medicine, where he remained until the end of 1877.

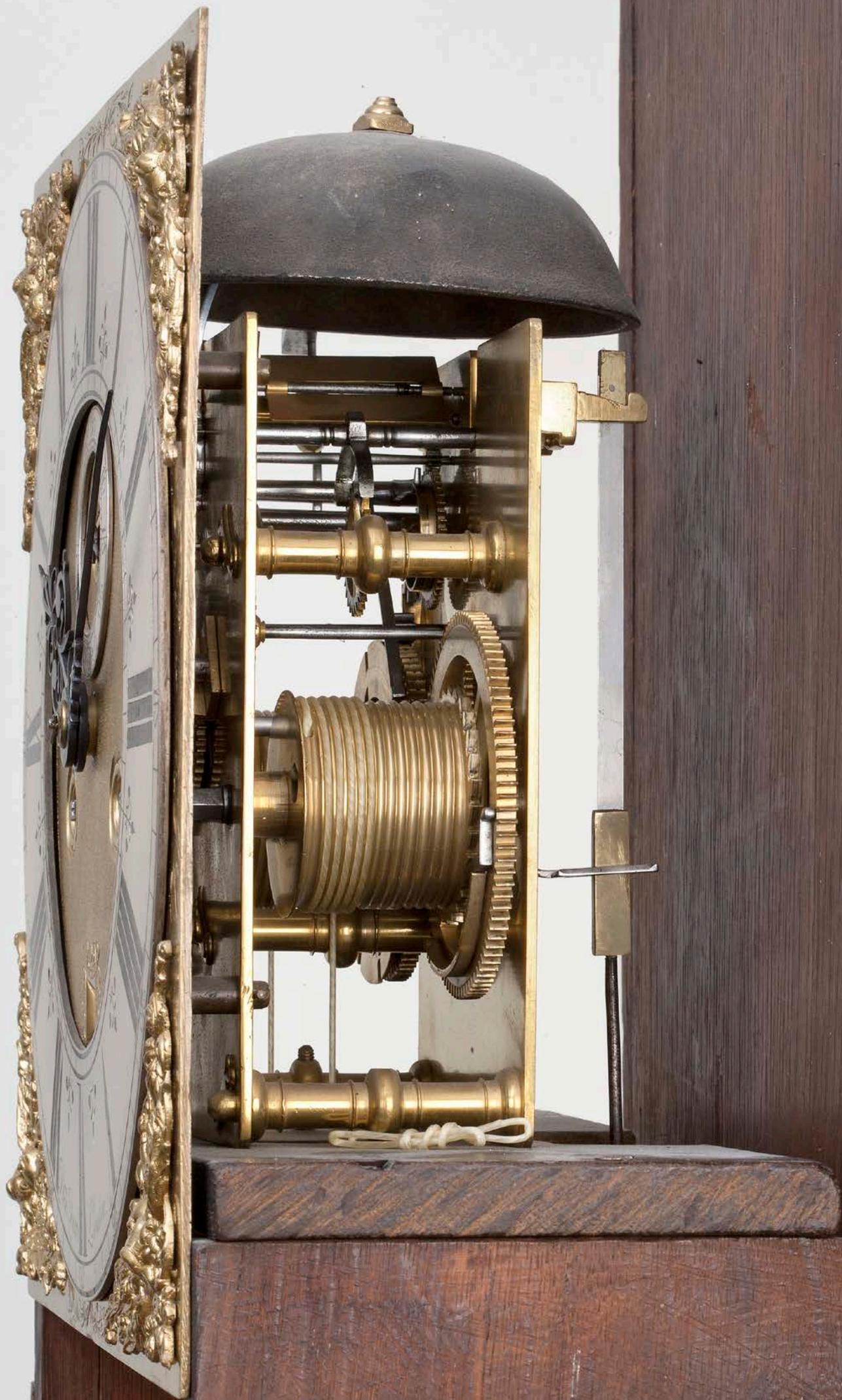
From 1852 to 1867, he was the curator of the university's natural well at Sättra, one of the oldest health springs in Sweden, which was much improved under his leadership. In Uppsala he worked as a practicing physician, and was the prefect of the old hospital (1854-67) and the chief physician of the new Academic Hospital in Uppsala (1867-77).

Glas became a member of the Swedish Medical Society in 1842, the Swedish Society of Sciences, Uppsala in 1847, the Swedish Academy of Sciences in 1860, and the Science Society, Gothenburg, and the Physiographical Society, Lund, in 1878.

Olof Glas was married to Gustafva Charlotta Winblad von Walter and, in 1877, he founded *The Olof Glas Scholarship*, for students of medicine at Uppsala University. The scholarship fund continues to this day, providing for an accomplished, needy student for two to three years, who is Swedish-born and a member of the Uppsala Medical Society.

Professor Dr Olof Glas died in 1880 and is buried at Uppsala old cemetery.







*George Graham,
Fleet Street, London*

George Graham c.1673-1751

George Graham was born on 7 July 1673 (1675?) in the parish of Kirkclinton, Cumberland, but orphaned at an early age and raised by William, his elder brother. His father was a Quaker, but William was not and George does not appear to have followed that faith either. Making his way to London, Graham was apprenticed in July 1688 to the clockmaker, Henry Aske, who had premises in Naked Boy Alley, near the Fromanteels (Aske's master was Edward Norris, who finished his time under Thomas Loomes within the Fromanteel stable), becoming a journeyman to Tompion almost immediately after being freed in September 1695.

By c.1701 Tompion had taken his nephew-by-marriage, Edward Banger, into partnership, while in 1704 Graham married another of Tompion's nieces, Elizabeth, daughter of James Tompion of Ickwell, Bedfordshire. There were no children from this marriage and it was later reported: *This union proved unfortunate: Mrs Graham had two sons, whose legitimacy her husband refused to acknowledge.* [Johan Horrins (anagram of John Harrison), *Memoirs of a Trait in the Character of George III*, 1835, Appendix 6, *On the Character of Mr George Graham*]. The supposition has been made that Mrs Graham's sons may have been fathered by Banger, causing the split between them c.1707/8, while there is no evidence to support this, by c.1711 Tompion had taken Graham as his partner instead. Graham became Tompion's successor on his death in 1713 and continued the workshop's numbering for his own clocks and watches.

The London Gazette for 28th November 1713, carried the following announcement: *George Graham, Nephew of the late Mr. Thomas Tompion, who lived with him upwards of seven-teen years and managed his trade for several years past, whose name was joined with Mr. Tompion's for some time before his death, and to whom he left all his stock and work, finished and unfinished, continues to carry on the said trade at the late Dwelling House of said Mr. Tompion at the sign of the Dial and Three Crowns, at the corner of Water lane, in Fleet Street, London, where all persons may be accommodated as formerly.*

In 1720 he advertised that he had moved to new

premises: *George Graham watchmaker is removed from the corner of Water Lane in Fleet Street to the Dial and One Crown on the other side of the way, a little nearer Fleet Bridge, a new house next door to the Globe and Duke of Marlborough's Head Tavern.* Soon after assuming control of the business on Tompion's death, Graham was moving in the highest intellectual and commercial circles in London. His rise in the Clockmakers' Company and Fellowship of the Royal Society (to which he presented many papers in *Philosophical Transactions*) are well documented, but he was also a Freemason and their early records reinforce the evidence of well-known relationships, as well as confirming others.

The foundation of the First Grand Lodge in 1717, marked the revival of 'speculative' Freemasonry, which had begun in London during the 17th Century. It is not known when Graham joined, but the appearance of his name in the first Minute Book of Grand Lodge dated 1723, places him as a member of the small but fashionable un-named Lodge, meeting at Rummer's Tavern in Charing Cross. Amongst others, his masonic associates included: the polymath JT Desaguliers (who bespoke a special timer); the Dukes of Richmond, Montagu and Buccleuch (all known customers, and Buccleuch bespoke longcase no.734); Sir Hans Sloane PRS; Martin Folkes PRS; Lord Mayor Sir William Billers; George Heathcote, MP; Alexander Stuart FRCP; Sir Henry Bateman, 1st Viscount Bateman, MP; William Bucknall, MP; Benjamin Hoadly, royal physician and successful dramatist; and John Byrom, poet and inventor of a system of shorthand. It is Byrom's journal that informs us that they were both members of the 'Cabala Club', a rather shadowy group of Fellows of the Royal Society that met at the Sun Tavern, in St. Paul's Churchyard, and later at the King's Head, in Holborn. They discussed matters outside the formal business of the Royal Society, such as magic, miracles and the occult, possibly driven by sceptical curiosity rather than belief, and probably because they dared not do so among the circle of Fellows generally.

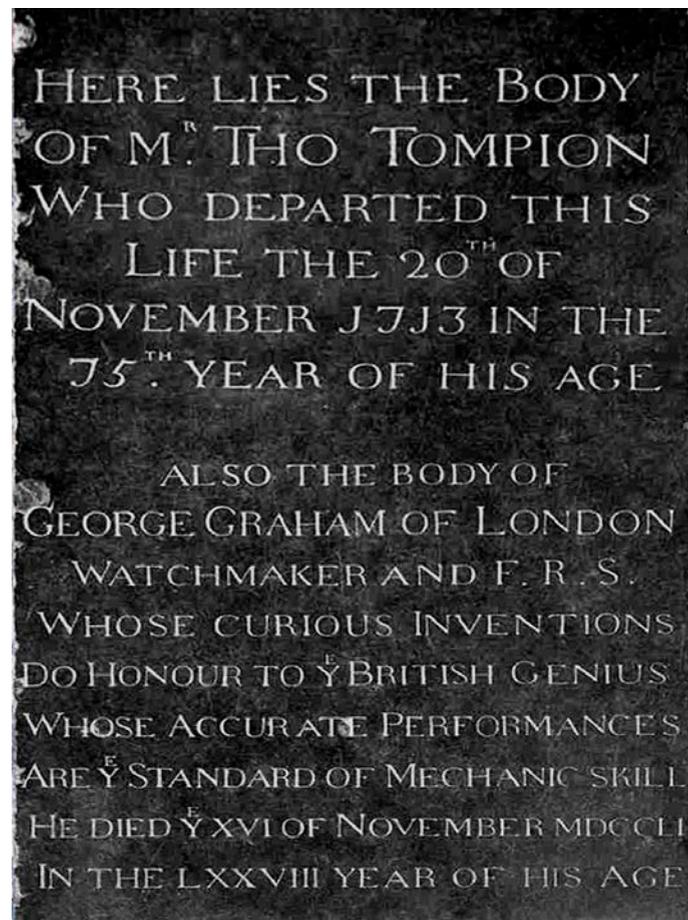
By c.1726/7 Graham had perfected the cylinder escapement originally designed by Tompion, thereafter invariably using it in his watches. He had also by 1715 perfected the deadbeat escapement,

initiated by Richard Towneley and Tompion in the mid-1670s. In 1721 Graham invented the temperature-compensated mercury pendulum, which went on to be extensively adopted in the trade for regulators. In fact, when combined with the deadbeat escapement, such high-grade clocks were not surpassed in accuracy for more than 150 years. Nonetheless, a majority of Graham regulators are fitted with a gridiron pendulum, based on an invention of John 'Longitude' Harrison, whom he had met on the latter's arrival in London and to whom he instantly became a long-time advisor: *After they got the ice broke (as John Harrison expresses it) this worthy man, than whom there could not be a better judge, allowed that young Harrison's plans were superior to his own; and probably saw that he was destined to supplant the imputation of all who had gone before him (his own inclusively) yet he manifested not a particle of that envy and ill-will which few but such rare geniuses can suppress at such a time.* As a result of their first meeting, Graham advanced Harrison an unsecured, interest-free, loan to enable him to continue his work in developing his marine timekeepers, and when Harrison brought H1 to London in 1735, it was installed in Graham's workshop to show London's scientific community. He later presented Harrison to the Board of Longitude, speaking on his behalf and securing additional funding.

Graham was the preeminent instrument maker of his time, involved intellectually as well as professionally, establishing the exact shape of the earth by means of precision clocks, but also very knowledgeable in astronomy, necessary in his quest to perfect astronomical instruments. With the measurements in the tropics made with his instruments and instructions, Newton's figures for the proportion of the earth's axis were corrected. During the terms in office of Edmond Halley and James Bradley as Astronomers Royal, Graham produced instruments to their specifications for the Royal Greenwich Observatory, including a transit instrument and a great zenith sector. He also made for the French *Academie des Sciences* in Paris, an astronomical apparatus used for the measurement of a degree of the meridian. He invented a beam caliper

with a micrometer screw, and an improved micrometer screw for reflecting telescopes in 1727. One of his most famous inventions was a mechanical tellurian, now known as an orrery, a clockwork model showing the motions of the planets around the Sun. However, Graham's pioneering of the orrery is occluded by its naming after the slightly later example made by John Rowley for Charles Boyle, Earl of Orrery. Graham made two: one with Tompion, now in the Museum of the History of Science, Oxford, the other signed by him alone, now at the Adler Planetarium, Chicago.

His rise through the Clockmakers' Company was as Assistant from 1716, Warden in 1719 and Master in 1722. Graham should be considered as not only one of the greatest horologists, but also the foremost instrument maker of his time, and a man of major importance in the development of chronometry, and his achievements are reflected in his burial in the same grave as Tompion's in Westminster Abbey, resting in what is effectively the Nation's Hall of Fame.



The Howard Graham, No.643, Circa 1723

*A very fine George I ebony veneered
and silver-mounted Phase 3 striking and
pull-quarter repeating table clock*

Provenance:

Possibly purchased second hand by John Lloyd FRS (1749-1815) of Wigfair and Hafodunos, by descent to his unmarried sisters, who in turn may have bequeathed it to their niece;

Dorethea Catherine Howard (née Clough, d.1872), thence by descent to her son;

Rev. Richard Henry Howard of Wigfair Hall, St Asaph, Denbighshire, thence by descent to his son;

Col. Henry Richard Lloyd Howard (1853-1922), thence to his daughter;

Lady Gwladys (d.1965), wife of Lord Lloyd Tyrell-Kenyon, 4th Baron Kenyon, KCVO, TD (1864 –1927), remaining with the family until sold, Bonhams 2017;

Private collection UK.



The quality of George Graham's table clocks can be compared directly with those of his former master, and latterly his partner, Thomas Tompion. However, only 30 striking and repeating numbered table clocks by Graham are currently recorded.

By the mid 1720s Graham had started to produce plain backplates with a signature only, so only a small handful of these rare surviving clocks have fully engraved backplates, as found here by Graver 515.





CASE

The archetypal Graham mid-sized Phase 3 case with ebony mouldings and veneers onto an oak carcass. The inverted bell top surmounted by a typical 'mid-size' gilt foliate-tied handle with rosette terminals. The front door has Tompion's gilt 'scroll' escutcheons and the top rail of the door is inset with a finely pierced sound fret and the door glazing is framed by delicate ebony mouldings with matching mouldings to the break-arch side apertures, as well as framing the rear door. The base resting on ebony moulded block feet.

Height: 13¼ inches (336 mm)

Tompion made his table clocks in three sizes; miniature, mid-sized and standard, while his case designs have been categorised into phases 1, 2 & 3 – ranging in date from the late 1670s to 1713.

This example is a 'mid-sized phase 3' case, the size and phase category which Graham continued after Tompion's death, and all of his scarce wooden cased striking and repeating table clocks are of this type.



DIAL

The Phase 2 fire-gilded, 5½ by 6½ inch brass dial is signed at the top, *Geo: Graham London*, and flanked by subsidiary dials for strike/silent and pendulum regulation. The silvered chapter ring has Roman hours with 'lozenge' half-hour markers and Arabic minutes outside the division ring. The lower double-screwed 'foliate-and-scroll' spandrels are cast and chased in solid silver, the upper spandrels are matching quarter versions, also in solid silver. The finely matted centre has a chamfered D-ended aperture for the mock pendulum and a pin-adjusted calendar aperture, with fine quality pierced and shaped blued steel hands, all held to the frontplate by three latched dial feet.

While the layout is of fully-developed Phase 2 format, first introduced by Tompion c.1691, noteworthy is Graham's use of spandrels in solid silver; which Tompion reserved for his few silver-mounted table clocks, that all have a definite, or presumed, royal provenance. Meanwhile, the use of a calendar also became a rarity on Tompion's standard later table clocks, and this solid disc format was originally laid out for his mid-sized table clocks.



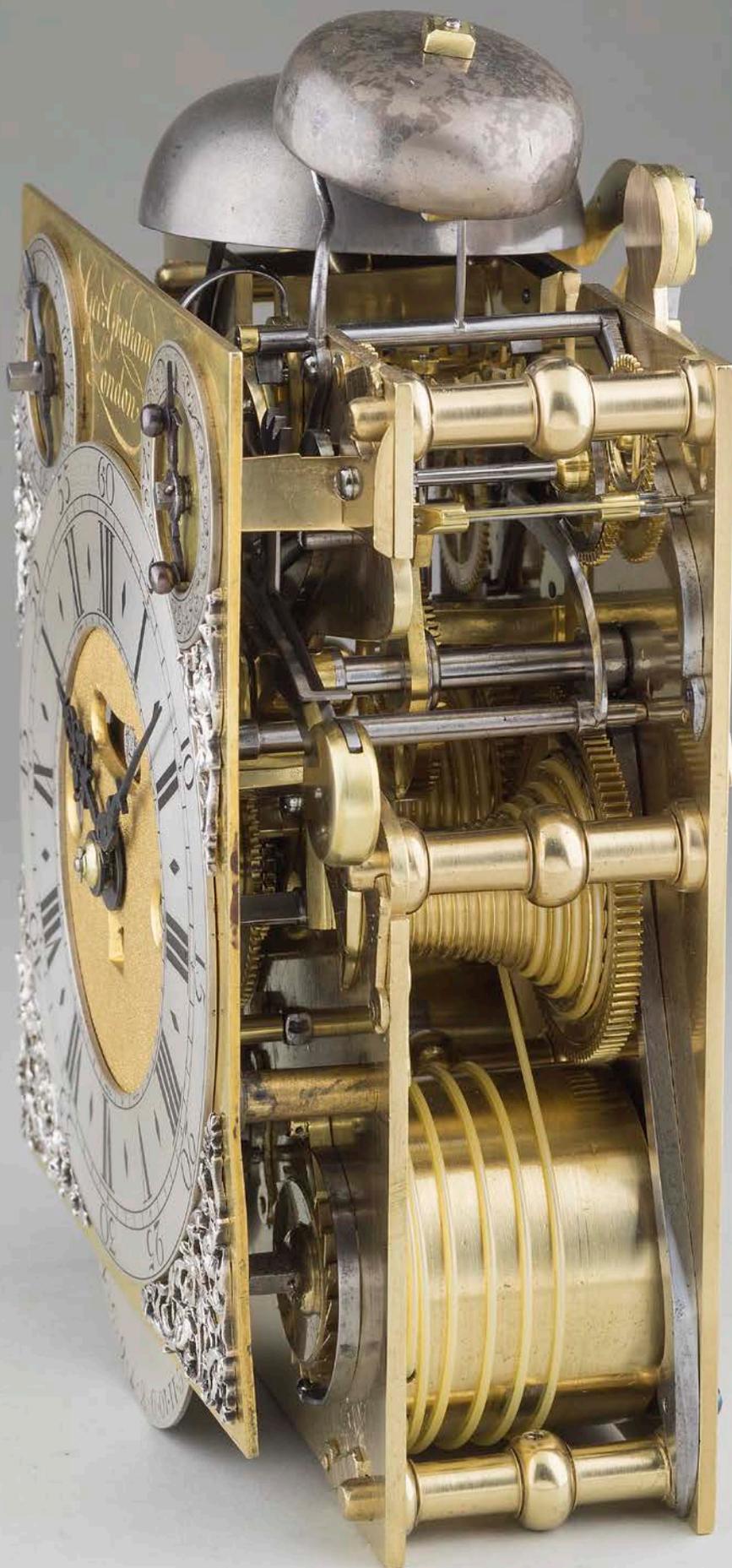


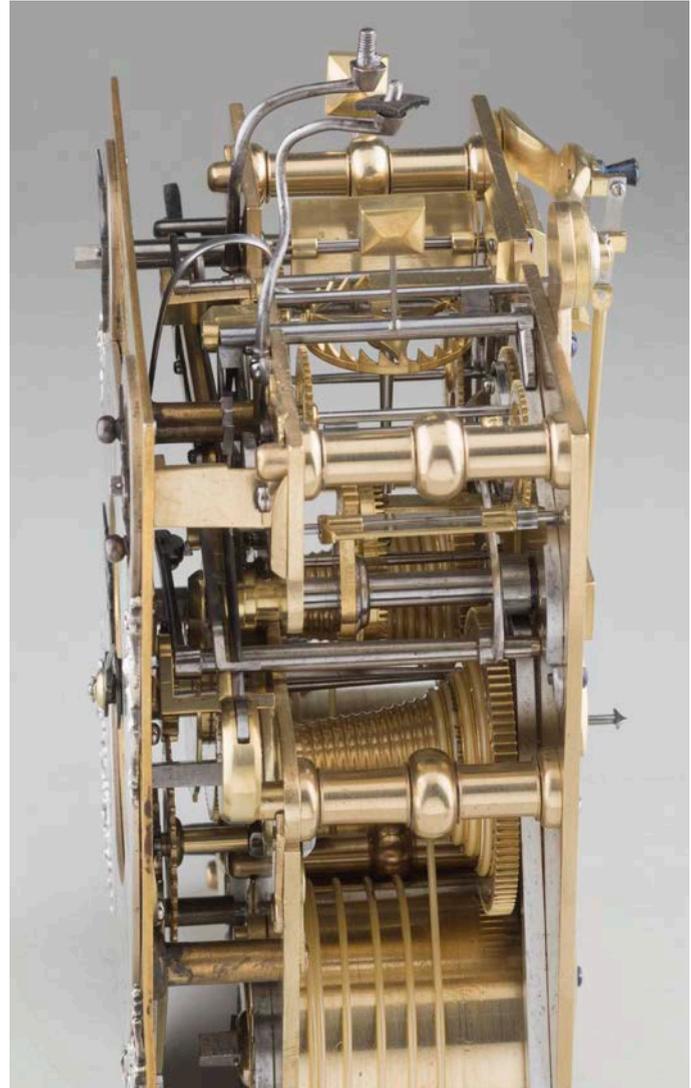
MOVEMENT

The substantial movement has seven knopped and latched pillars with twin spring barrels and fusees. The going train with restored verge and crown wheel escapement and typical mock pendulum with a lenticular bob suspended on the regulation bar. The strike train is governed by an internal rack and snail sounding the hours on the larger bell, the restored pull-quarter repeat system is of Tompion/Graham's 'all-or-nothing type' with original interlocking double-cocked blued steel levers on the backplate, which is superbly engraved by Graver 515. Profusely decorated with birds, scrolls and flowers with a central basket, above the elaborate oval cartouche signed *Geo Graham London*, and flanked by trumpeting winged cherub's with further scrollwork below, and stamped 643 to the centre of the stepped base. Fixed to the case with two steel brackets and two screws into the lower pillars.

Graver 515 continued to work for Graham until the 1740s, and his quality was outstanding. His subject matter was more extensive than Tompion's earlier engravers and included eagles and snakes, winged cherubs, trophies, birds, vases and bowls containing fruit or flowers, and insects. However, by the late 1720s, Graham had moved to using plain backplates with a signature only.

Also noteworthy is Graham's continued use of stepped plates, whereby the bottom edges were recessed to form, in effect, four feet. This would have kept the movement steady if the wooden seatboard bowed, a feature first introduced by Tompion from c.1704.





George Graham's table clocks can be considered the epitome of 18th century English horological work, made by the pre-eminent clock, watch and instrument maker of his day, and emanating from the finest workshop in London. The quality of the case, movement, dial and decoration was the finest available, while it retains the sophisticated and ground-breaking developments first pioneered by the father of English clockmaking, Thomas Tompion.

On succeeding to the business, Graham continued with the serial numbering that Tompion had started in c.1682, but soon reduced production levels to between a half and a third of that of his predecessor – so that during the majority of his career he was only making 3-5 numbered clocks a year. This included longcase

clocks, which explains the paucity of his spring clocks surviving, despite a career that lasted nearly 40 years.

Graham continued to set the overall standard of workmanship that other makers tried, and invariably struggled, to achieve. His reputation in scientific and intellectual circles continued to rise, while his attention to detail and drive for quality over profit never wavered – for instance, by the time this example was made in c.1723, almost no other clockmaker in London was mercury gilding their dials as standard. His approach appears to have reflected his personality: intelligent, sophisticated and yet understated; he never sought royal patronage, and by the time he started to pare back and simplify his dial and backplate decoration in c.1730, the best clockmakers had little option but to eventually follow suit.



The Howards and Lloyds of Wigfair, Denbighshire

By family tradition Graham no.643 can be traced back to Wigfair Hall, near St Asaph, Denbighshire. The current Victorian house was a lavish commission, elaborately-detailed inside and out, and was conceived in 'Tudorbethan' red brick style. It was designed by the Chester architect, John Douglas (1830-1911) and built for Rev. Richard Henry Howard between 1882-84. The house is centred by a large, pyramid-roofed 'feudal' tower, designed to hold vast water tanks that served as the original electricity generating system. Its tanks, pipework and associated generator and battery houses survive intact, and with the exception of an early addition of a service block later in the 19th century, the house remains practically unaltered and is consequently listed Grade II.

The Graham clock then passed to his son, Col. Henry Richard Lloyd Howard CB of Wigfair (1853-1922), who was commissioned into the 16th (Queen's Royal) Lancers and, as Captain, served in the Zulu wars of 1879, receiving the South African Campaign Medal

with Clasp. An old note from Chas. Frodsham & Sons, was found in the clock giving regulation instructions, indicating it was in London at some stage for repairs, however a clue to its possible background prior to the Howards, might be suggested by the Colonel Howard's middle name, Lloyd. Wigfair, formerly known as Wickwer, is an ancient site and was the seat of the Lloyd family, who lay claim to being one of the 'Fifteen Tribes' of North Wales. The present house replaced an original sub-medieval hall that had been in the Lloyd family's possession since at least the 16th century, and the Rev. Richard Henry Howard's mother, Dorothea Catherine Howard (née Clough), was the owner of Wigfair and had left it to him when she died in 1872. Dorothea herself had come by the Wigfair estate (via maiden aunts) from her great uncle, John Lloyd FRS (1749-1815), who had renowned scientific interests and after whom her grandson Colonel Howard was named.

John Lloyd FRS (1749-1815) of Wigfair and Hafodunos, was a Welsh speaking landowner who was conversant



Wigfair Hall built for Rev. Richard Henry Howard, between 1882-84



Col. Henry Richard Lloyd Howard of Wigfair by Oswald Birley 1900

with every branch of natural science and dubbed 'The Philosopher' by his friends. He was admitted to the Middle Temple in 1770 and, after a tour of the Continent, was called to the bar 1781, then practising on the Northern and Chester circuits and becoming Bencher of his Inn in 1811. Lloyd was *one of the politest gentlemen in Wales* and according to Mrs Thrale *extremely agreeable, gentlemanlike in carriage, polished in talk, and has a mind so completely stored - I consider his acquaintance as a treasure* (Broadley, *Doctor Johnson and Mrs. Thrale*, 1910). Lloyd was also a sometime politician, and it was under peculiar circumstances that he represented Flintshire for two years. He was put up at the by-election of 1796, when there was opposition to the return of Sir Thomas Mostyn, who was still a minor when his father died in that office. The allegation, freely made at the time, was that Lloyd was being sponsored by the Mostyn family (longtime owners of two royal clocks by Graham's partner, Tompion) as their friend and stopgap, which seems to have been warranted as, although Lloyd went through the process of unseating Mostyn on petition, he resigned his seat in Mostyn's favour in 1799, pleading 'indisposition'.

However, it is for his scientific curiosity and collecting that John Lloyd is chiefly renowned. He was elected Fellow of the Royal Society (FRS) in 1774, as well as holding fellowships of the Society of Antiquaries (FSA) and the Linnean Society (FLS). He had a wide range of interests, and corresponded with the leading scholars of the day, including Sir Joseph Banks (PRS); the astronomers Herschel and Maskelyne; the engineer John Rennie; the antiquaries Daniel Lysons, Thomas Pennant, Philip Yorke, and Daines Barrington; and the close friend of Samuel Johnson, Hester Lynch Piozzi (Mrs Thrale). He amassed a library of more than 10,000 volumes (books, manuscripts and maps) and a large collection of scientific apparatus, including clocks.

John Lloyd died at Wigfair on 24 April 1815, leaving his estates to his sisters and his nephew Thomas Hugh Clough, who subsequently sold Hafodunos in 1830. However, Wigfair was left to his two unmarried sisters, who in turn bequeathed it to their niece Dorethea Catherine Howard (née Clough), the mother of Rev. Richard Henry Howard, who tore down the old house and rebuilt Wigfair Hall in 1880s.

John Lloyd's collections were sold by John Broster of Chester in January 1816, taking nearly a fortnight, and the catalogue survives: *Bibliotheca Llwydiana. A catalogue of the entire library and philosophical apparatus, late the property of John Lloyd which will be sold by auction*. The scientific section lists nine clocks, three being domestic longcases and the rest of a scientific bent; namely regulators and observatory timers, three of which were by the famous Fleet Street maker of the period, John Holmes. There is little doubt that John Lloyd would have been fully conversant with George Graham's clocks and instruments, as well as his scientific reputation, through the Royal Society. Lloyd's scientific curiosity and collecting habits testify to him being just the kind of character who would have wanted, and appreciated, a rare clock by Graham. It is quite conceivable that his spinster sisters, who clearly had no particular interest in precision timepieces, may have wanted to retain a number of domestic clocks for continued to use at Wigfair, and perhaps this small and particularly attractive table clock by George Graham, no.643, was one of those?



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