

TOBIAS BIRCH

FINE ANTIQUE CLOCKS



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www.tobiasbirch.com



Annual plate from Thomas Mudge equation of time regulator, circa 1758.

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Grateful thanks to the owner of the Mudge letter for their kind permission to reproduce it in this catalogue.

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Catalogue

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Foreword

Welcome, I am proud to present this selling exhibition catalogue of our latest collection of clocks. Dealers in fine antique clocks for over half a century our focus is on English clocks by the eminent makers of the 17th, 18th and 19th centuries. From table clocks and longcase clocks through to mantel clocks, carriage clocks and wall clocks, the clocks we offer for sale have been chosen for their authenticity and are of the very highest quality. After nearly 30 years of dealing in antique clocks from our showrooms in Cheltenham we are now located in the Cotswolds where our clocks can be viewed by appointment. We also exhibit at important antique fairs throughout the year, including Masterpiece London and the CADA Antique Fair at Compton Verney. Do contact us for tickets.

The last two years have been challenging in many ways but amongst all the uncertainty we have continued to do what we do best, immerse ourselves in important, interesting and beautiful clocks. Our current collection includes a table timepiece by Thomas Tompion, a half hour striking table clock and a walnut longcase by Joseph Knibb along with a superb regulator by Reid and Auld. We have a fabulous carriage clock in a bronze case by Nicole Neilsen and the most amazing equation of time regulator by Thomas Mudge.

Those who already know me and are familiar with my business will know of my interest in and appreciation for Thomas Mudge, a leading figure in the world of horology. In December 1981 George Daniels wrote an article for the Antiquarian Horological Journal titled ‘Thomas Mudge, The Complete Horologist’. George Daniels’ article finished by saying that Mudge’s beautiful and constant force timekeepers were a monument to his patient labours and an inspiration to each succeeding generation of aspiring horologists, and that these alone, were enough to give Mudge a special place in the history of horology. However Daniels felt that it was Mudge’s invention of the lever escapement, which continues to be used today, combined with Mudge’s love of the horological arts, that produced so many original and beautiful clocks and watches, containing great diversity of interest that made Daniels choose Thomas Mudge as the Freeman of the Clockmakers’ Company who added most to the prestige of British horology. So, you will understand my excitement and the thrill I experienced upon discovering one of the finest clocks Mudge ever produced, an incredible equation of time regulator made in 1758 for King Ferdinand VI, the King of Spain.

In the 1970s a letter emerged, written in Madrid, dated 1757 in which very specific orders for an equation of time regulator were set out and sent to Mudge in Fleet Street. You can see a copy of the letter on pages 48-51 along with a transcript. When the letter came to light, over 200 years after having been written, the whereabouts of the clock, or even its existence were unknown. Fast forward almost another 50 years, the very same year we held our selling exhibition of Mudge and Dutton clocks and watches in London and the Mudge equation of time regulator surfaced in Madrid, untouched and as impressive in the 21st century as it would have been when delivered in 1758. It is clear that no expense was spared in its production. I would go as far as to say it is the finest clock I have had the privilege of offering for sale in over 30 years of dealing in clocks. The case, the dial and movement are all in their own way exceptional. Take a look for yourself on page 35.

Whilst much has and is changing in the world, time passes as methodically as always. The clocks we offer for sale count out the hours diligently, calmly and reliably. Fine antique clocks are the result of masterful collaborations between skilled clockmakers, cabinet makers and engravers to produce things of mechanical excellence and great beauty which give tremendous pleasure to those who appreciate the joy of owning something exceptional and incorporating it into their everyday life.

I hope there is much in this collection to bring you pleasure and I look forward to being able to assist you in the purchase, sale or restoration of an antique clock or watch very soon. We are always keen to buy fine antique clocks or help with the disposal of collections and for those of you who are not yet familiar with us we offer a second to none clock restoration service, undertaking work for both private collectors and museums in our own workshops.

*Tobias Birch
May 2022*





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NATHANIEL HODGES, LONDON

An ebony basket top table timepiece with pull quarter repeat. Circa 1685.

- Case** Ebony and ebonised fruitwood on oak with a brass repoussé basket top decorated with cornucopia, swags of fruit, flowers and cherubs with a brass carrying handle. The front of the case with repoussé gilt escutcheons, glazed side apertures with pierced wood frets above, on a moulded plinth and gilt brass bun feet.
- Dial** 6 inch square brass dial with winged cherub head spandrels and a silvered chapter ring having Roman and Arabic numerals with half hour marks, the matted centre with decorated date aperture, ringed winding and false winding holes. Blued steel hands.
- Movement** Eight day movement with five pillars, single fusee with verge escapement, pull quarter repeating sounding the hours and quarters on two bells. The engraved backplate with tulips and entwined foliage signed Nathanael Hodges in Wine Office Court in Fleet Street Londini Fecit.
- Height** 12 inches (30 cm)

Nathaniel Hodges, listed as a “Great Clockmaker”, was free of the Clockmakers’ Company in December 1681. In arrears with his quarterage in 1687 he was not heard of thereafter. Wine Office Court in Fleet Street was found opposite the shop of Thomas Tompion at the corner of Water Lane in Fleet Street.

A similar example by Nathaniel Hodges was sold by Carter Marsh & Co. from the Tom Scott Collection Part 1 in 2015.





JOSEPH KNIBB, LONDON

A fine Charles II half hour striking table clock. Circa 1685.

Case Refined Phase III ebonised case surmounted by a foliate tied handle to the cushion moulded top with foliate mounts. The top rail inset with a gilt sound fret, the uprights with matching escutcheons.

Dial 7 inch square brass dial with a finely matted centre signed along the base Joseph Knibb, London. Silvered chapter ring with trident half hour markers and Roman hours and Arabic minutes, winged cherub spandrels. Blued steel pierced and faceted hands.

Movement The two train fusee movement has a knife edge verge escapement and bob pendulum. The hours are sounded on a bell and the half hours on a smaller bell. The backplate is engraved with tulips and foliage around the signature, Joseph Knibb London.

Height 12 1/2 inches (31.7 cm)

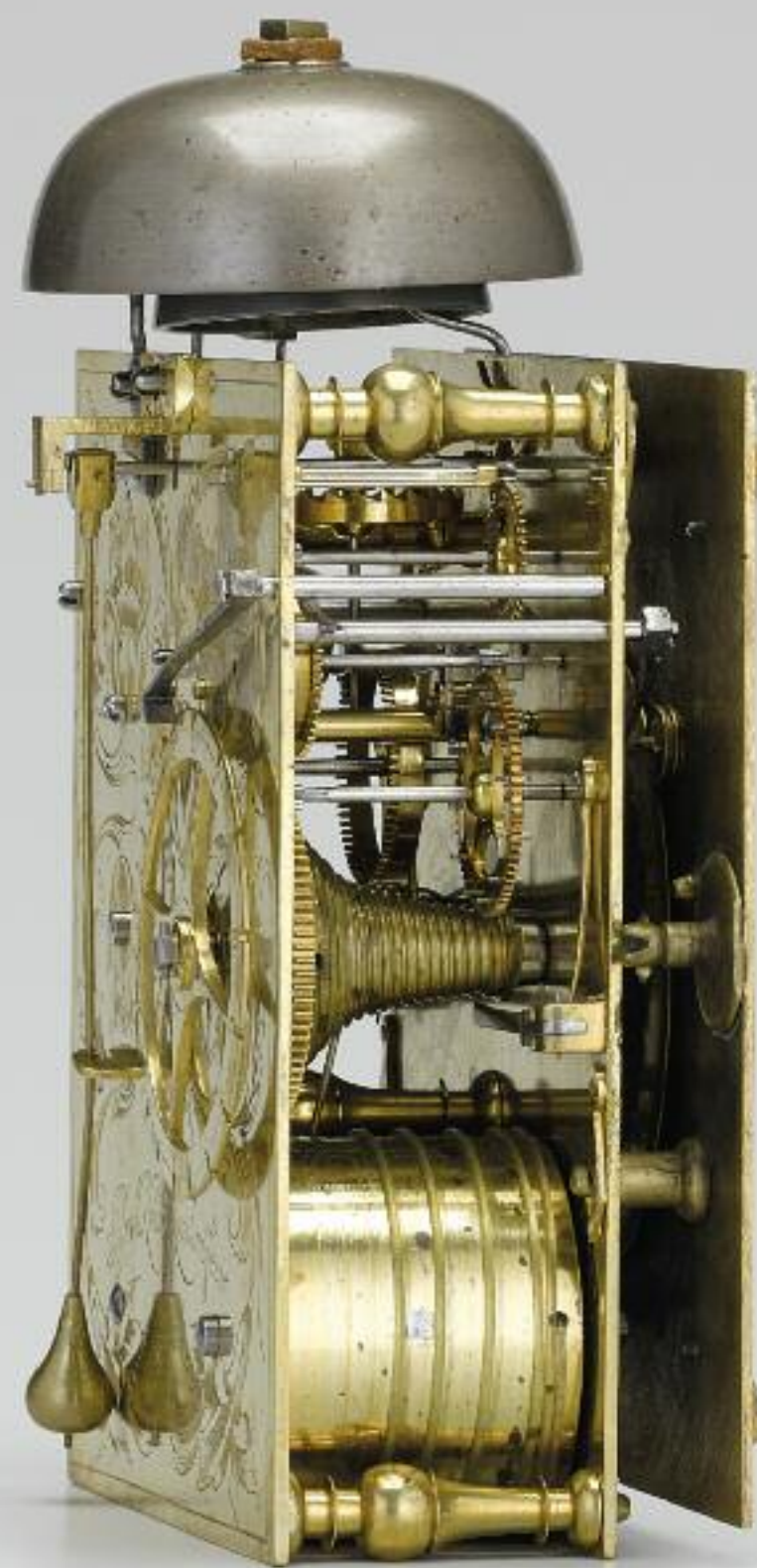
Joseph Knibb was born in 1640 and began his career in Oxford. Circa 1670 he moved to London and became Free of the Clockmakers' Company. Joseph firmly established himself as a leading maker and his clocks are notable for their elegant proportions and innovative striking mechanism.

In 1697 he retired to Hanslope, Buckinghamshire, where he lived until his death in 1711.

Examples of his work can be found in the British Museum and the Victoria & Albert Museum.







JOSEPH KNIBB, LONDON

An elegant Charles II walnut month duration longcase clock. Circa 1675.

Case The case veneered in figured walnut. The formerly rising hood with shallow dome top above cornice mouldings with solid frieze over Solomonian reflective columns with integral turned capitals and bases. Convex throat mouldings to the trunk, long trunk door framed by half round cross grain mouldings and veneered in book matched sections. Crossbanded plinth with book matched veneer resting on later bun feet.

Dial 10 inch square fire gilded dial, signed Joseph Knibb Londini Fecit to the lower margin, narrow silvered chapter ring with Roman hour numerals, Arabic minutes and fleur-de-lys half hour markers. Finely matted centre, calendar aperture below XII and floral engraving between the cherub spandrels to the corners. Fine blued steel pierced and sculpted hands.

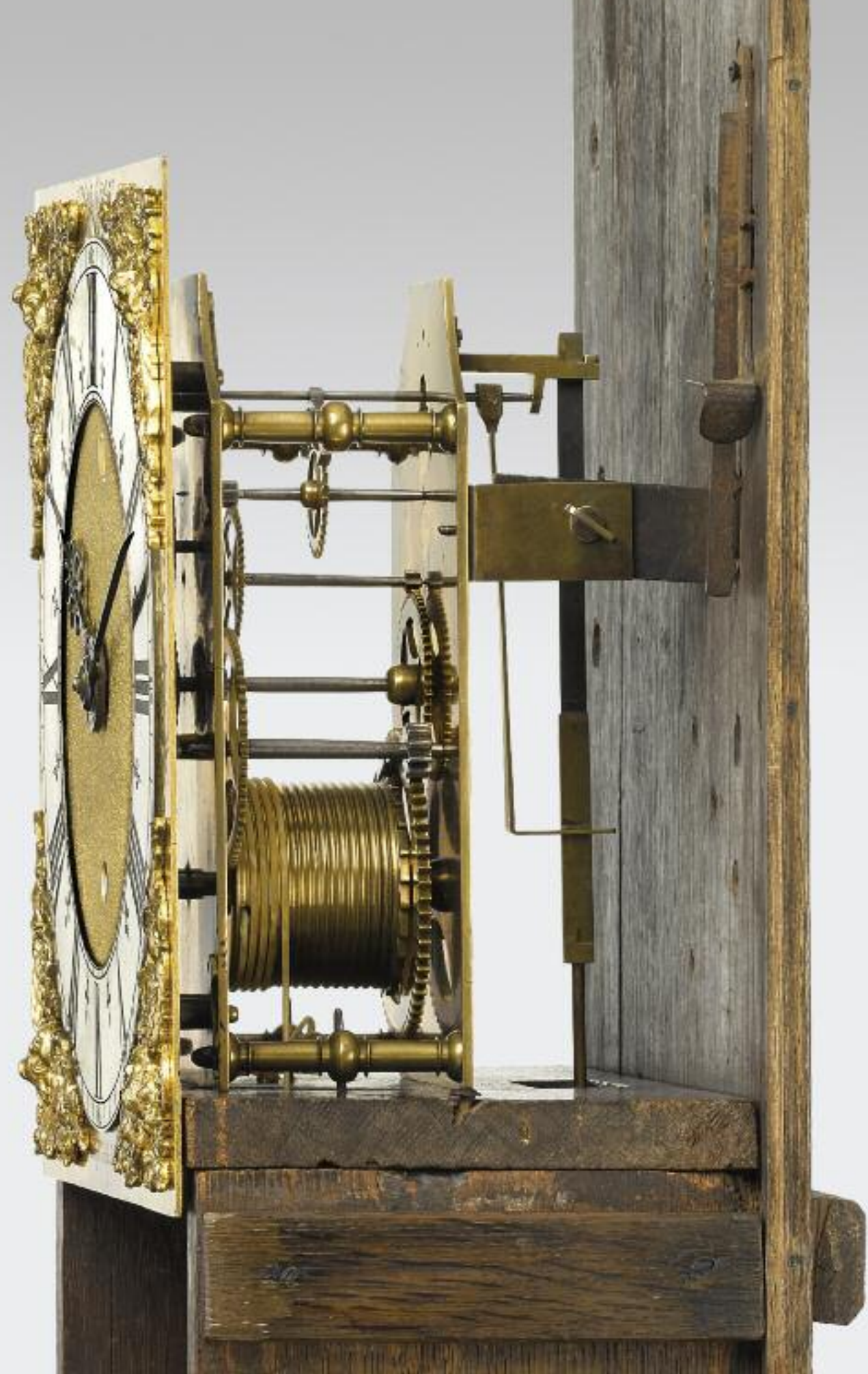
Movement The month duration movement with four fine knopped pillars, all latched to the shaped plates, the single going train planted vertically in line. Typical single foot shaped Knibb backcock, pinned brass pendulum crutch to the spring suspended brass rod pendulum with lenticular Knibb brass threaded bob. Five wheel reverse wound train. The movement secured to the backboard via a bracket and resting on the oak seatboard with steel pins through the bottom pillars.

Height 6ft 10 inches (208 cm)

Literature R A Lee, *The Knibb Family Clockmakers*. 1964, Plate 30.









THOMAS TOMPION, LONDON NO. 87

**A fine Phase I ebony table timepiece with pull quarter repeat.
Circa 1687.**

Case Ebony veneer and mouldings to the oak carcass, the domed top with gilt brass scroll and garland mounts surmounted by a gilt thistle and bud handle. The front door with gilt brass scroll sound fret, gilt bellflower escutcheons and bellflower mount to the bottom rail. Pierced ebony frets to the sides and rear door.

Dial 6 1/2 inch fire gilded dial is signed Tho Tompion Londini Fecit on the silvered chapter ring flanking VI, the Roman hour numerals with sword-hilt half hour markers and Arabic minutes. Finely matted centre, gilt and chased winged cherub spandrels and sculpted blued steel hands.

Movement The substantial six pillar, eight day movement with extended backplate signed Tho Tompion Londini Fecit in a rectangular reserve within the tulip engraving and punch numbered 87 at the base. Knife edge verge escapement with pear shaped bob pendulum, Tompion's silent pull quarter repeat via Z pull bar. Movement is secured within the case by two steel bolts into the lower pillars.

Height 13 inches (33 cm)

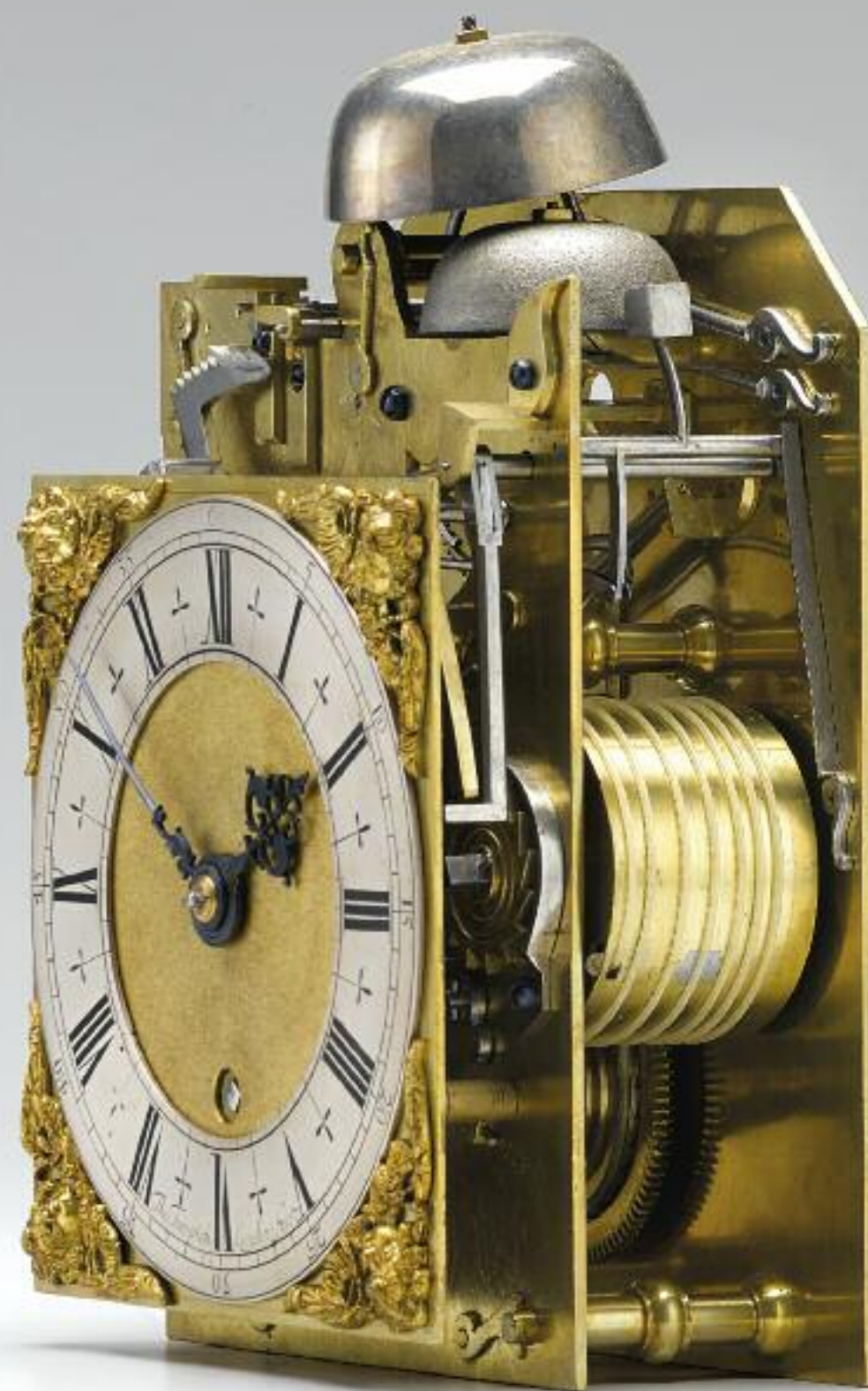
Literature Evans, Carter, Wright *'Thomas Tompion 300 Years'*, 2013

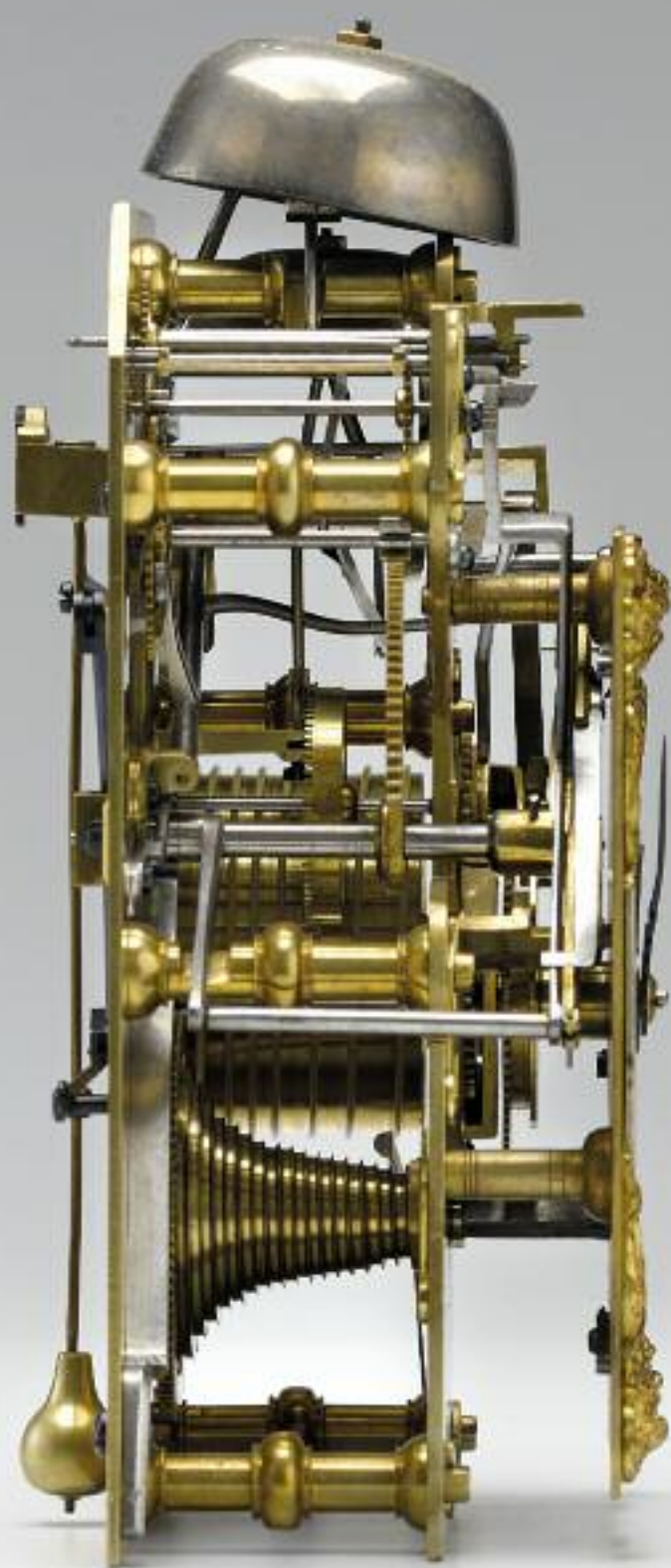
Thomas Tompion was baptised in 1639 at Northill, Bedfordshire. Admitted to the Clockmakers' Company in 1671. His shop was in Fleet Street at the corner of Water Lane, later to become No. 67. He was Master of the Clockmakers' Company in 1705 and took George Graham into partnership in circa 1711. He died in 1713 and is buried in Westminster Abbey.











THOMAS MUDGE, LONDON

An important and previously unrecorded George II month going mahogany equation of time longcase regulator. Almost certainly made for the King of Spain, Ferdinand VI. Circa 1758.

This is one of only two known equation of time regulators made by Thomas Mudge.

Case The small mahogany case of exceptional quality, typical of Mudge’s design having a break arch pillarless hood with narrow ogee moulded door frame and canted reeded corners. Single pedestal and gilt brass ball finial. The hood resting on concave throat mouldings, above the break arch solid mahogany flame figured trunk door with fine mouldings. Solid mahogany sides and a flame figured panelled plinth with fine mouldings and double skirting on pad feet.

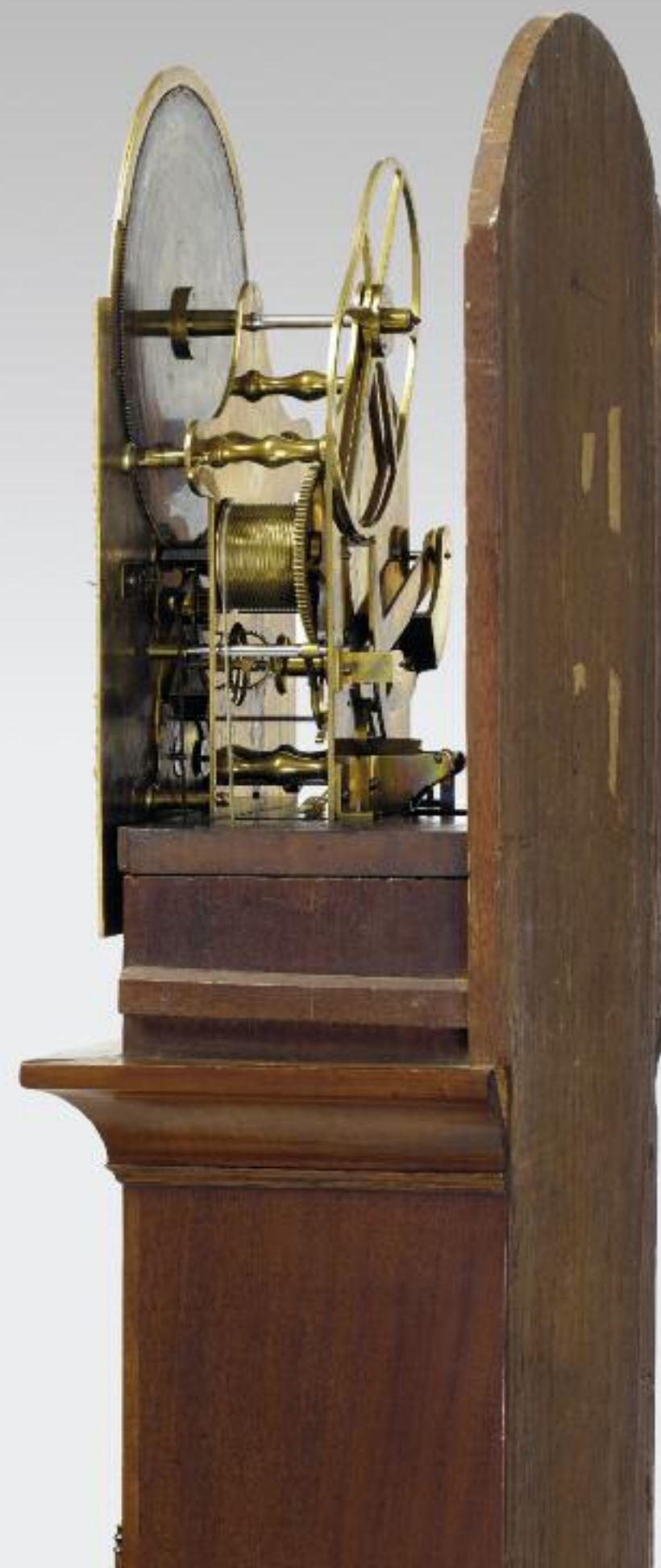
Dial The 12 inch break arch fire gilded brass dial signed Thomas Mudge London below the large aperture to the arch revealing a silvered annual calendar dial, engraved with day of the month, the month in Spanish, position of the sun in the ecliptic (ecliptic longitude), signs of the zodiac, declination of the sun and times of sunrise. Silvered chapter ring with Roman hour numerals and Arabic minutes, the matted dial centre with shuttered winding holes for winding and setting of the annual calendar dial. The subsidiary seconds dial above the VI inset flush to the dial with a further inset matted centre having an aperture for the date of the month below 60. Gilt plumed mask and scroll spandrels. Finely pierced and shaped blued steel hands, the blued steel solar hand with a gilt brass sun.

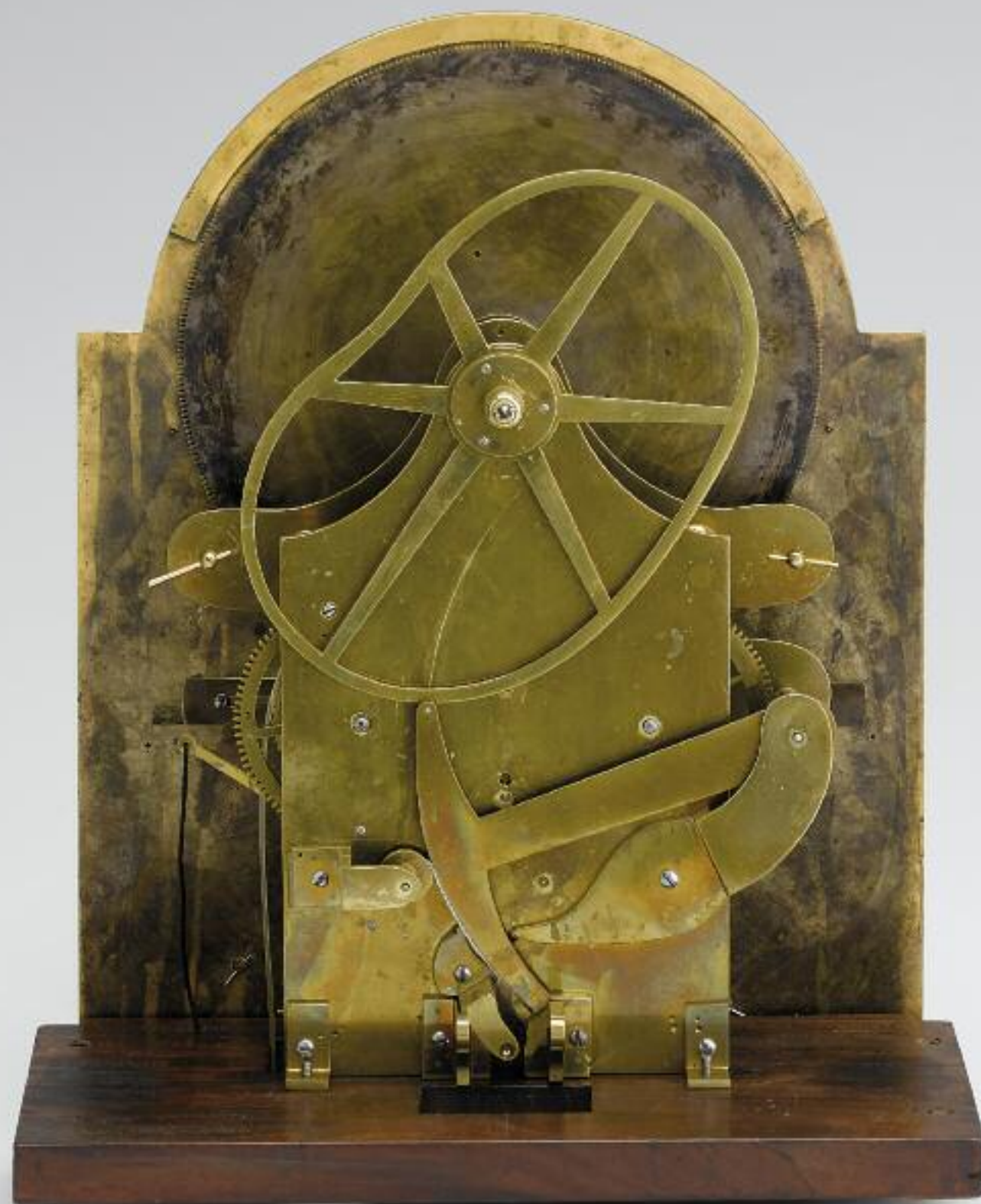
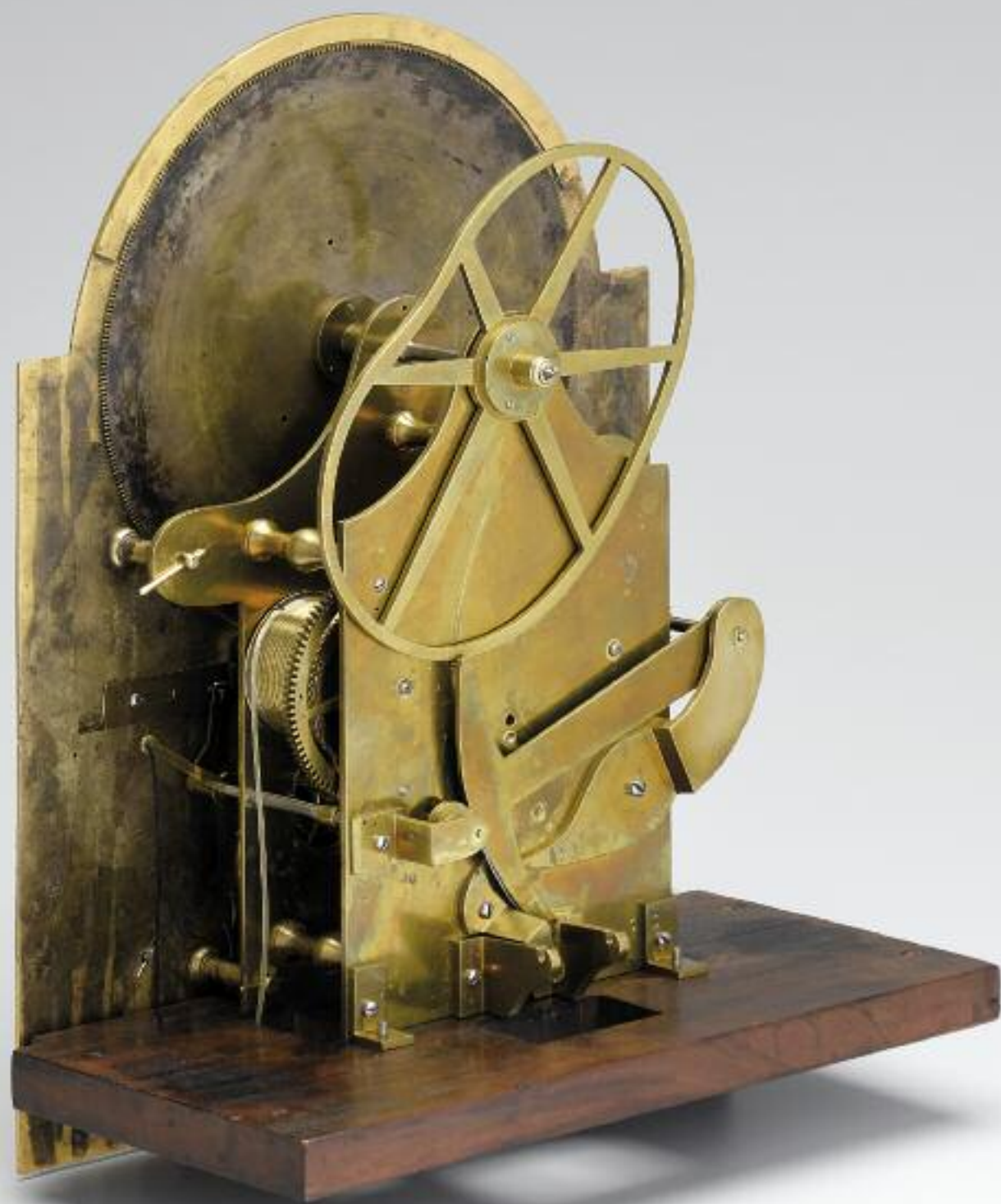
Movement The substantial month going movement with shaped plates held by five swollen baluster pillars. The kidney shaped equation cam at the top of the backplate attached to the year arbor, going through the plates and attached to the annual calendar dial. The kidney cam follower arm that pivots in a large shaped cock mounted to the backplate, has a hardened steel roller and fine steel chain connected to an arbor that moves the sun hand. Four spoke straight crossings and high count pinions to the wheel train with bolt and shutter maintaining power. Inverted Graham deadbeat escapement positioned at the bottom of the movement. Between the plates, the bevel wheel differential that drives the sun hand and the wheel work to drive the annual dial, the arbor of the wheel being extended through the front plate and squared for setting the annual dial. Movement mounted to the seatboard with three brass brackets. Roller suspension to the flat steel rod pendulum with large lenticular brass faced bob, inset brass pointer with a calibrated knurled rating nut. Brass pulley wheel and brass cased weight.

Height 6 feet (182cm) 6ft 5 ins (195cm) to top of finial











The Equation of Time

Across the world, for convenience, we have adopted what is referred to as mean time and think of a day as being twenty four hours in length. This is how most mechanical clocks are set up to measure time. However, technically, a day is the duration between one solar noon, the time when the sun is at the highest point in the sky, to the next, this is solar time. The length of a solar day is not exactly twenty four hours long. It changes throughout the year because of the axial tilt of the Earth and, as Johannes Kepler noted when he published his conclusions in 1609, the elliptical shape of the Earth’s orbit which means that its distance from the sun varies throughout the year.

When the earth is further from the sun it moves in its orbit more slowly than when it is closer. A solar day is longer than twenty four hours around the Summer and Winter solstices and shorter than twenty four hours around the Spring and Autumnal equinoxes. During the 17th century most of the population operated by solar time. The public clocks and domestic clocks being of short duration and varying in their time keeping ability by up to 10 minutes in twenty four hours were wound and set to time each day according to a sundial.

The equation of time is the difference between apparent mean time and apparent solar time. This difference varies across the course of the year. In 1665 Huygens published tables quantifying the equation of time and more practicable tables were published in 1672/1673 by Flamsteed. These showed the correction to be applied to a sundial’s apparent solar time to obtain mean, or clock time. Apparent solar time runs up to sixteen minutes ahead of mean time, and up to fourteen minutes behind, the two coincide just four times a year when a clock dial will agree with a sundial on 15th April, 15th June, 1st September and 25th December.

In his book, Horological Dialogues, John Smith writes in 1675, "that if the hours given by a Sun dial, increase and decrease in length, according to the slow and swift motion of the sun, then tis impossible for the most exact Clock that was ever made, to keep time with the Sun dial, but there will be difference, according to the time of the year and the course of the sun."

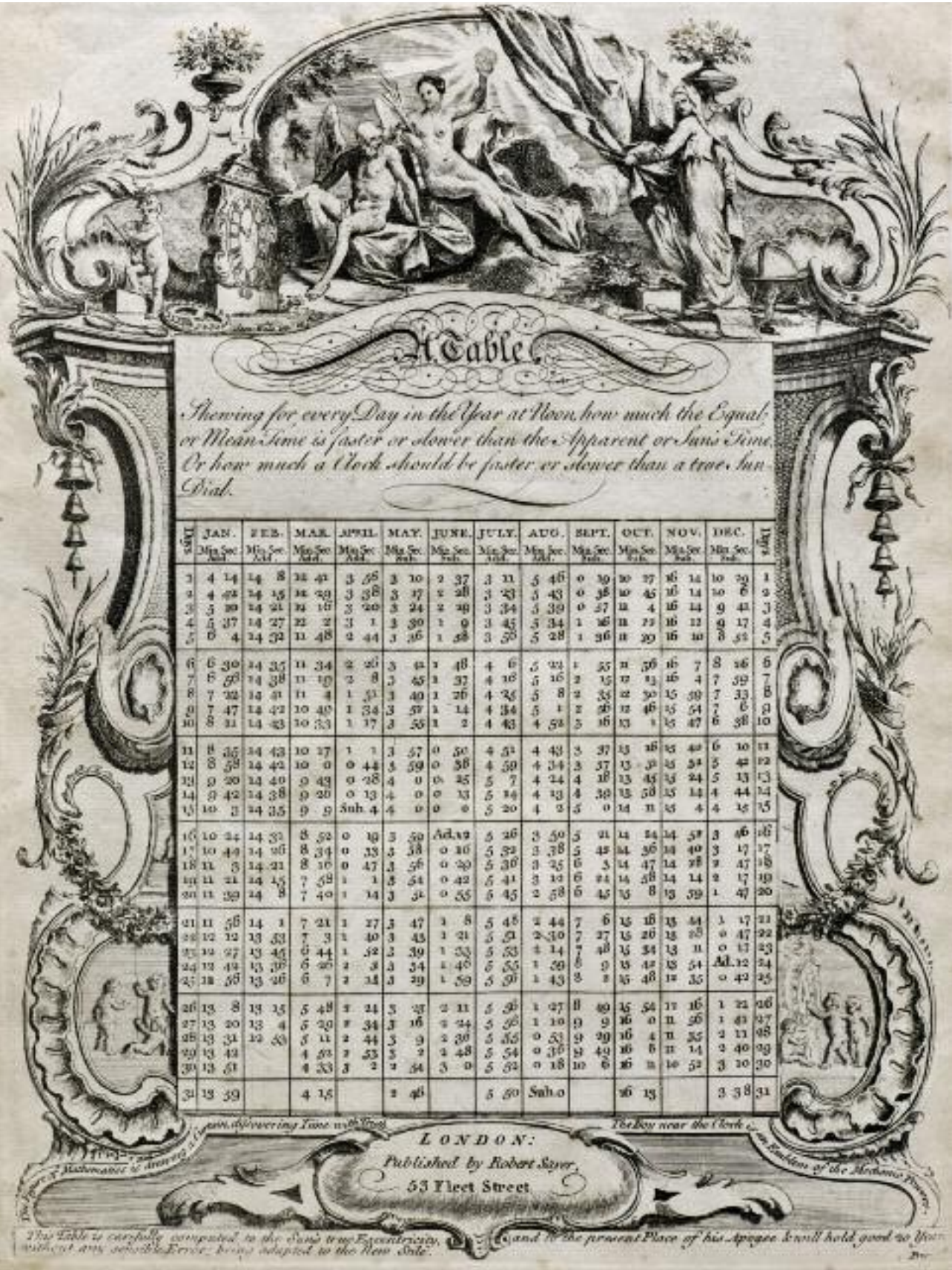
As science advanced, the timekeeping abilities of clocks and watches became more accurate and the duration between winding increased, the difference between solar time and mean time meant that two different kinds of time ran concurrently, and became noticeable. The advantages of not having to constantly adjust your clock to solar time meant that mean time was adopted.

The difficulty during the 17th and 18th centuries was setting a clock to mean time, as the only way to determine the time and set your clock was by observing a sundial, and using an equation of time table to convert to mean time. Clockmakers, including Thomas Tompion, were known to supply sundials to their wealthy clients, sometimes with an engraved equation of time table for setting the mean time.

With the difficulty and inconvenience of having to use an equation of time table to set the time, some clock and watchmakers at the beginning of the 18th century used their ingenuity and mastery in the mechanical arts to devise a way to display both solar time and mean time directly on the dial without the need for calculations. The sophisticated movements in these timepieces incorporate a kidney shaped cam derived from the analemma, the figure of eight traced out by the sun’s position in the sky throughout the year. These equation of time watches and regulators are marvellous machines made by only the finest clock and watchmakers.

The complex month going movement in Mudge’s equation of time regulator has 18 wheels with a total count of 1,581 teeth, the largest wheel being the annual calendar wheel with 365 teeth. To put this into perspective, a month going regulator without the equation of time function would have 8 wheels and a total count of 266 teeth. Subsequently such timepieces were very expensive and very few were ever produced. Those that were made were commissioned by Royalty and the most wealthy and would have served as talking points and impressive status symbols.

Facing page: Equation of time table, circa 1752 by Robert Sayer, Fleet Street, London.





Thomas Mudge (circa 1715-1794)

Portrait by Mr Dance for His Excellency Count Bruhl, image courtesy David Penney.



The King of Spain, Ferdinand VI (1713-1759)

Portrait by Louis-Michel van Loo, image courtesy Museo Nacional del Prado.

Thomas Mudge (circa 1715 - 1794)

Thomas Mudge was apprenticed to George Graham in 1730, becoming free of the Clockmakers' Company in 1738. By 1746 Mudge had set up on his own at the 'Dial and One Crown' opposite the Bolt & Tun, in Fleet Street. In many ways he can be seen as the direct inheritor of horological traditions continued and improved by George Graham that were first established by Graham's business partner Thomas Tompion.

Thomas Mudge has long been considered a leading figure in the world of horology, a perfectionist, celebrated for making beautiful, complicated timepieces and for his invention of the lever escapement which continues to be used today in almost all wristwatches. Admired and sought after during his working life, he supplied superb and intricate watches to the King of Spain, Ferdinand VI and was made watchmaker to King George III. George Daniels referred to Thomas Mudge as 'The Complete Horologist' and in an article written for the Antiquarian Horological Journal in December 1981 Daniels chose Mudge as the Freeman of the Clockmakers' Company who added most to the prestige of British Horology.

The fact that King Ferdinand VI possessed an equation watch signed Ellicott and made by Mudge is substantiated by a letter dated 3rd July 1752, sent to Mudge by the Spanish court clockmaker Michael Smith. The letter is addressed, 'To Mr Mudge watch maker in Fleet Street three Doors above Mr Grahams shop London.' Smith had met Mudge during a visit to London between January and May, 1752, having made enquiries about him, and examined his work. It was he who informed King Ferdinand VI that Mudge made the Ellicott equation watch, and it was he who, impressed by the quality of Mudge's work, recommended him as 'the most Capable person now Mr. Graham is dead'. In the following years Mudge made fine and complicated items for King Ferdinand VI of Spain, including, the exceptional mahogany equation of time longcase regulator on page 35, very specific orders for which were set out in an additional letter from Smith to Mudge, dated 26 December, 1757. This letter, along with a transcript, can be seen on pages 48-51.

Other outstanding pieces by Mudge include his extraordinary detached lever escapement clock, circa 1754, now part of The British Museum collection, his marine timekeeper, commissioned by and delivered to Johann Jacob Huber, circa 1755, currently in the Historisches Museum, Basel and marine timekeeper, Mudge Green, circa 1777, sold to a private collector from the John Taylor Collection.

The watchmaker Thomas Mudge, Ferdinand VI, the King of Spain, and Mudge's 'lost' equation clock of circa 1758

It has long been known that Thomas Mudge was brought to the attention of His Catholic Majesty the King of Spain following an unfortunate accident that befell an equation watch bearing the name of its retailer, John Ellicott, but actually made by Mudge. This happened in 1752 and, via Michael (Miguel) Smith, the Irish born watchmaker working for the King in Madrid, further commissions passed from Ellicott to Mudge. This is luckily detailed in a surviving letter from Smith to Mudge dated "July ye 3, 1752"

The first item known to have been supplied by Mudge is a fine large quarter-repeating clockwatch, No 212, the case bearing the London hallmark date letter for 1753. A second surviving letter of December 1757 from Smith to Mudge describes other important watch commissions, plus it also mentions an order for a longcase clock showing both solar and mean time. Smith requests it to be month-going, have a deadbeat escapement, but not have a gridiron pendulum as these were found to give trouble in Spain's climate. In particular, it should be in a case that is no more than 6ft tall, a most unusual request based on the new owner's desire to be able to "view every part in the annual [calendar] plate that is in the Arch of ye Dial plate."

Michael Smith does not name the new owner, but this clock has always been referred to as the King of Spain's equation clock and, until now, its whereabouts or even if it had survived remained unknown.

Only recently discovered in Spain, the clock has been repatriated to the UK. Equally remarkable is the fact that over the last two hundred and sixty years it has survived in almost totally original condition, needing no repairs to the movement and only light conservation to its magnificent, and unique, mahogany case.

It is not the first equation-of-time clock, but stands as possibly the finest ever made, as well as being one of the best examples of Thomas Mudge's extraordinary and creative output for the King of Spain and his court - two others of the very few known examples, both watches, can be seen in the British Museum.

David Penney, March 2022



Thomas Mudge, London No.212 Large quarter-repeating clockwatch, hallmark date letter 1753.

Diameter 67 mm

Photographs by David Penney ©, courtesy of the owner

Transcribed letter to Thomas Mudge.

To Mr Mudge watch maker in fleet street

London

Decr 1757 Orders for a Quarr
Strikeing Watch that Repeats the
Minutes, surpriseing performance of the
first Watch Mr. Mudge made for the King
Orders for an Equation Month Regulator

Mr Thomas Mudge

Madrid Decbr ye 26 1757

Sr, my last to you was ye, 19 current wch time then would not permitt me to Give you the orders that his Majesty desired me viz that you would put in hand Directly a large Gold strikeing quarter mini Repeating watch I mean that it must have all the performances that the crook-head has that you made, that is it must strike the Hours every quarters as it goes it must repeat ye hours quarter & minutes in single blows as far as 14 minutes & the Double Blows at ye quarters; in Regards to the size of it, Let it be as nigh as you can Get to the size of a Large quarter clock watch that you made about 4 years a gon by my order which ye King wares & allows to be the best watch for performance that he ever had, & to my Knowledge the minute hand has not been set to any time these 45 months and in that time never was none to make a minute difference wh the King by altering the Kirls Directly brings it to the true time without altering ye hands. In short it Goes surprisingly & I believe you must have the Caliber of it by you which may of some service to you as to ye size Spare no charges in makeing it in the best manner & Left the Cases be in the same manner as the minute Repeater you made for his Majesty take care and always send a Double supply of main springs with all the work you make for the King, his Majesty Recd. ye striking watch for his cain head wch. Dutens sent & is to his satisfaction ye King Desires that you may send Springs for it in case you have the Size that Corrispond Each Barrel I recd the files for ye Infant & som time past the two clocks from Bilbao but I expected you would have made them to goe Dead Seconds they are Liked her best, **as soon as possible send me a Sun Regulator I mean that sheweth ye Equal & Sun time. Let it Goe a month & the heighest part of ye Case not to Exceed 6 feet. So that the person that it is for may view every part in the annual plate that is in the Arch of ye Dialplate. Let it be in a mahoganey Case but plain & a single Rod to the Pendulum for all those Rods that has been made hither to for heat & Could Dos not answer jn this climate when you send it Direct it to his Ex.ll ye Duke of Alva madrd & ship it on a Spanish vessel for Bilbao ye said way as you did ye other clocks in what time permitts** from yr assured friend & Humble Servant

Michael Smith

Letter part of a private collection,
reproduced courtesy of the owner.



Mr. Thomas Mudge Madrid Decr 6 - 1787
I am glad to hear of your success in the time then would
you permit me to give you the order that his Majesty
has given me vizt. that you would put in hand Directly
a large gold striking quarter minute repeating
watch of this kind. It must have all the performance
that the crook head has that you made, that is,
it must strike the flowers every quarter as it goes &
it must repeat of flowers quarter & minute. ~~It must~~
single blows as far as 14 minutes & the Double Blow
every quarter; in regard to the size of it, let it be
as nigh as you can to the size of a large quarter
clock watch that you made about 4 years ago by
my order which of King wears & allows to be the
best watch for performance that he ever had it to
my knowledge. The minute hand has not been set
to any time these 15 months past has not been set
to any time and in that time never was done to
make above a minute difference wth the King by
altering the King Directly brings it to the true
time without altering of hands. In short it goes
surprisingly & I believe you must have the Order
of it by you which may be of some service to you
as to of Price I spare no charges in making it in the
best manner & let the Case be in that same manner
as the minute Repeater you made for his Majesty
take care and always send a Double supply of main
springs with all the work you make for the
King, his Majesty Rec^d of striking watch for the
crown head wth Daters sent & is to his satisfaction
& King Desires that you may send springs for it in
case if you find the size that corresponds. Each Barrel
I Rec^d the files for of Infants & in time past the two
locks from Bilbao but I expected you would have made
them to go with Dead seconds & the another here best, as

soon as possible send me a Sun Regulator I mean
that I should of Equal & Lion time. Let it be
a month & the highest part of of Case not to
Exceed 6 feet. So that the person that it is for
may view every part in the annual plate that
is in the Arch of of Dialplate. Let it be in a
mahogany Case but plain & a single Rod to the
Pendulum for all those Rods that has been made
hitherto for heat & Cold. Do not answer in this climate
when you send it Direct it to this Care of Duke
of Alva mad^d & ship it on a Spanish vessel
for Bilbao of said way as you did of other clocks
in what time possible from your hand for
Humble Servant Michael Smith

WILLIAM DUTTON, LONDON

A superb and rare quarter chiming, mahogany table clock with enamel dials, subsidiary seconds to the arch and silver spandrels. Circa 1780.

Case Refined brass mounted mahogany bell top case with ebonised stop fluted canted corners, brass flamed carrying handle, brass mouldings to the glazed side panels. The break arch doors with moulded brass frame apertures and cast brass sound frets, the brass framed plinth on ogee bracket feet.

Dial The break arch brass dial with enamel chapter having Roman and Arabic numerals, three subsidiary enamel dials to the arch for calendar, regulation and seconds dial signed Wm Dutton London with strike-silent selector below. The finely cast silver spandrels depicting the Green Man and mythical Ho Ho bird. Blued steel hands.

Movement The exceptional three train chain fusee movement with thick plates and nine large baluster pillars. Deadbeat escapement with heavy lenticular brass faced pendulum bob suspended from a pivoted regulation platform mounted on top of the sub plate. Quarter chiming on six bells and the hours on a further bell. The plain backplate signed Will'm Dutton London with a pendulum holdfast and four securing brackets.

Height 19 inches (48.3 cm)

Provenance Stair & Co - Meyrick Neilson Exhibition, 9th June 1971.

William Dutton was an exceptional clockmaker and made this clock while he was in partnership with Thomas Mudge, they clearly had an agreement between them that Dutton could sign special order clocks with his name only. It is interesting to compare the similarity of the beautifully cast silver spandrels with those on the Thomas Mudge Green and Blue marine timekeepers, made a few years before. Most likely sourced by William Dutton in London for Mudge, who at this time was working and living in Plymouth.







ROBERT FLEETWOOD, LONDON

A fine and small ebonised table clock with pull quarter repeat and alarm. Circa 1770.

Case Ebonised fruitwood on oak case, the bell shaped top with four pineapple finials and surmounted by a brass flamed carrying handle. The brass framed break arch flat top doors with brass canted corners and pierced wood sound frets.

Dial 5 inch break arch flat top brass dial with silvered strike silent subsidiary dial and silvered regulation subsidiary dial, signed to the arch Robt. Fleetwood, Abchurch Lane London. Silvered chapter ring with Roman hour numerals and Arabic minutes. Matted dial centre with calendar aperture above VI. Indian mask spandrels, pierced blued steel hands and brass alarm hand.

Movement Eight day double fusee movement with five pillars, verge escapement with spring suspended lenticular pendulum bob. Pull quarter repeating on six bells, sounding the hours on a further bell. Pull wind alarm sounding on the hour bell. Floral engraved backplate.

Height 14 1/2 inches (37cm)



WILLIAM HUGHES, LONDON

An attractive small ebonised table clock with pull quarter repeat. Circa 1770.

Case Ebonised fruitwood on oak case with a canted corner bell shaped top and four pineapple finials, surmounted by a brass carrying handle. The brass framed front door with brass pierced blind fret canted corners and pierced brass sound frets flanking the break arch. Shaped brass plinth with brass ogee bracket feet.

Dial 5 inch break arch brass dial with silvered strike silent subsidiary dial to the arch, silvered chapter ring with Roman hour numerals and Arabic minutes. Matted centre with false pendulum aperture, calendar aperture, signed to a silvered shaped plaque William Hughes Holborn London. Foliate spandrels and blued steel hands.

Movement Eight day double fusee movement with five pillars, verge escapement with bob pendulum, pull quarter repeating on six bells, sounding the hours on a further bell. Engraved backplate signed William Hughes Holborn London.

Height 14 inches (35.5cm)

William Hughes is listed as working at 119 High Holborn from 1755-1792.

In 1763 Thomas Earnshaw became William Hughes' apprentice and succeeded to the business on Hughes' death in 1792.

William Hughes, an interesting maker, is believed to have supplied a miniature travelling table clock with verge balance wheel escapement to Captain Cook. Three travelling clocks by Hughes are known with one in the Museum of New Zealand.



RICHARD GUNTER, LONDON

A fine and rare George III balloon mantel timepiece. Circa 1782.

Case The balloon shape waisted case with rich flame mahogany and harewood veneer with kingwood and boxwood inlay. Cast brass bezel with convex glass and brass ogee bracket feet. Signed in ink to the case Mr Gunter and stamped with J Thwaites number 1097 to seatboard.

Dial Superb enamel convex dial with Roman numerals signed Richard Gunter London. Blued steel hands.

Movement High quality eight day fusee movement with anchor escapement. The border engraved backplate signed Richd Gunter London secured with three brackets. The frontplate stamped J. Thwaites and numbered 1097. Shaped pendulum bob with pendulum holdfast.

Height 15 inches (38 cm)

The surviving Thwaites records date this clock as circa 1782. The Thwaites were a famous family of clockmakers in Clerkenwell who made domestic clocks and turret clocks, including the turret clock for Horseguards Parade which is still in use today.





MATTHEW & THOMAS DUTTON, LONDON NO. 262

A fine George III mahogany Phase II drop dial wall timepiece. Circa 1797.

Case Drop dial mahogany case with substantial concave moulded cast brass hinged bezel, shaped ears to the sides of the central trunk with raised panel mouldings and a solid ogee moulded door to the base with lock. Inspection doors to both sides.

Dial 14 inch silvered one piece dial with Roman hour numerals and Arabic minute numerals signed Mattw & Thos Dutton, London. Blued steel heart shaped hands.

Movement The substantial eight day fusee timepiece movement with thick plates and four large baluster pillars secured to the mahogany seatboard with steel screws. Half deadbeat escapement and original steel rod pendulum having heavy brass faced bob and calibrated rating nut.

Height 26 inches (66 cm)

Matthew Dutton and Thomas Dutton are the sons of William Dutton, Thomas Mudge's business partner. Like their father, they employed the skills attained in the Tompion and Graham era to great effect. They were patronised by the aristocracy and wealthy merchants of their time and it was generally acknowledged that the style and quality of their work surpassed others.

Matthew Dutton was born in 1757 and was apprenticed to Thomas Mudge in 1771, becoming Master of the Clockmakers' Company in 1800.

Thomas Dutton was born in 1761 and was apprenticed to William Dutton in 1776, becoming free of the Clockmakers' Company 1791.



REID & AULD, EDINBURGH

A fine and very rare month going longcase regulator with Royal provenance. Circa 1816.

One of only two known regulators by Thomas Reid with his original spring pallet escapement.

Case Figured mahogany case with shallow arched hood over canted corners to a concave throat moulding. The dial surround lined in brass, long trunk door with shaped glazed panel, applied shaped moulding to the base on a plinth raised on block feet.

The interior of the trunk door applied with various labels including an engraved brass presentation plaque. ‘Presented to THE LADY ALICE MONTAGU DOUGLAS SCOTT on the occasion of her Marriage with H.R.H. THE DUKE OF GLOUCESTER, K.G., P.C., K.T. From the Directors & Senior Officials of the Royal Bank of Scotland of which Bank her Father, The Seventh Duke of Buccleuch & Queensberry K.T., GVC was Governor 6th November 1935.’

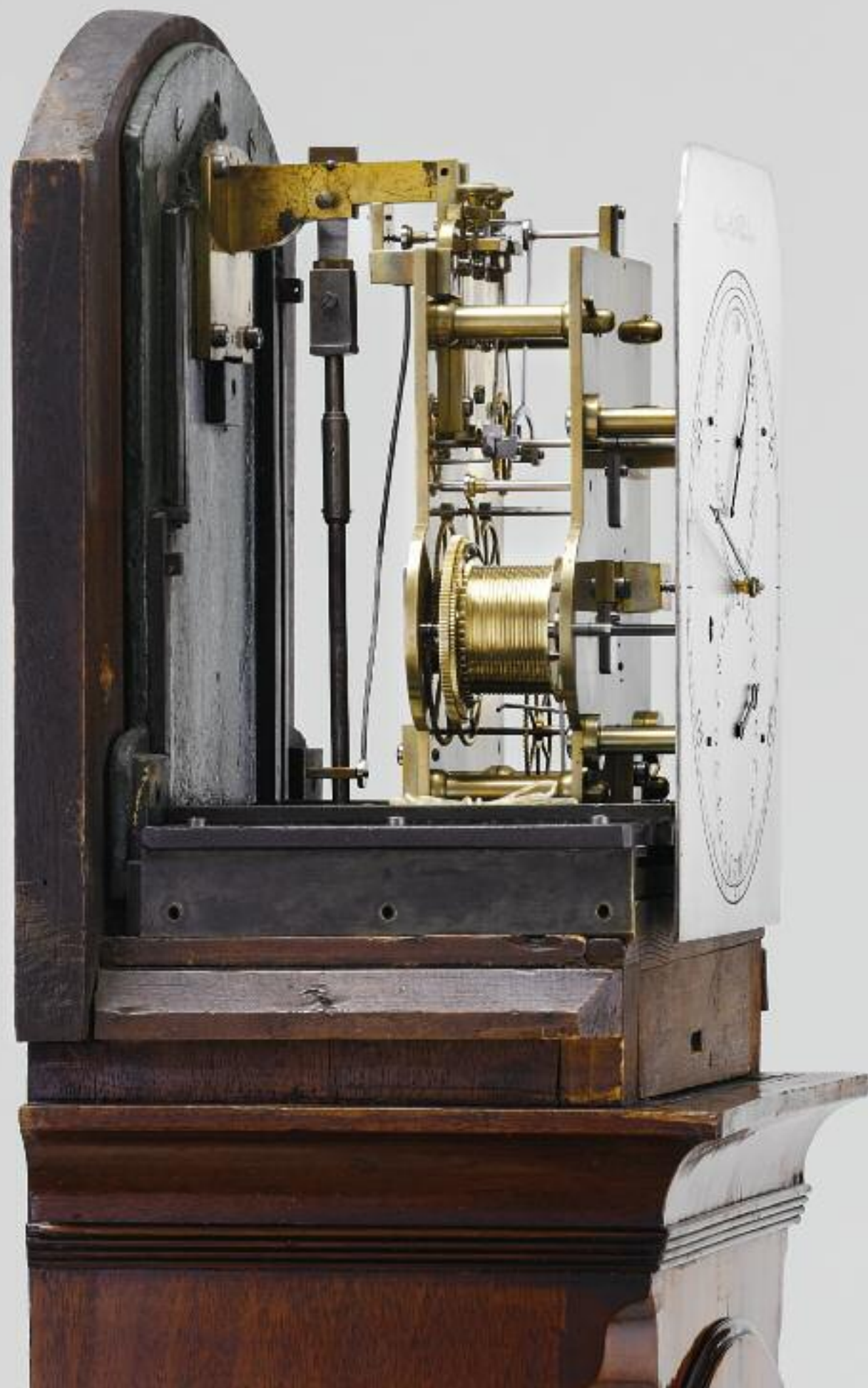
Dial 9 1/2 inch shallow arched one piece silvered dial with regulator layout. The outer minute ring marked in tens, enclosing the subsidiary seconds dial above the twice 1-12 Arabic hour ring. Signed in the shallow arch Reid & Auld Edinburgh. Fine blued steel hands.

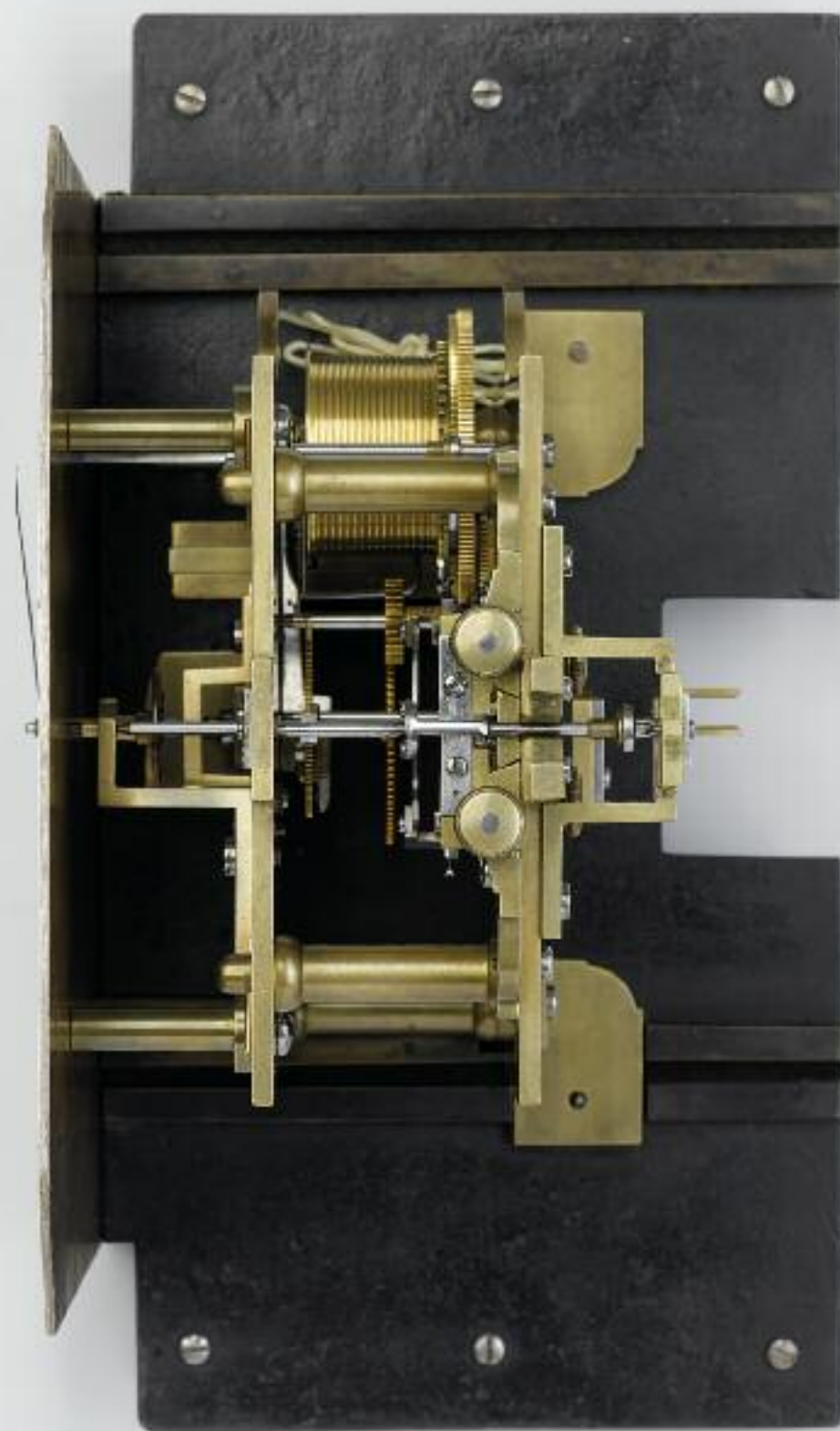
Movement The substantial one month duration movement signed on the backplate Reid & Auld Edinburgh 1816 with four large pillars. Hardened steel endstops to each arbor, Reid’s spring pallet escapement with jewelled pallets and Harrison’s maintaining power. Long steel crutch, stop work on the winding and six spoke crossings to all wheels mounted to high count pinions. The movement sits on a cast iron seatboard with slide runner for the gut line, mounted on a large shaped cast iron bracket screwed to the inch thick backboard. Massive three rod hollow zinc and steel rod gridiron pendulum of Reid’s design with heavy brass faced bob and calibrated rating nut, running behind the calibrated beat scale mounted to the backboard.

Height 5 ft 3 inches (160 cm)









Thomas Reid (1746-1831)

Thomas Reid was a most talented and inventive clockmaker. He was apprenticed to his cousin, James Cowan, in Edinburgh in 1762, for six years. On completing his apprenticeship he went to work in London, returning to Edinburgh to carry on the business left to him by James Cowan in 1781. Reid made a clock for the tower of St. Andrew's Parish Church and subsequently erected clocks all over Scotland. On 19th April 1790 he married Alexandria, the widow of William Auld. His stepson William Auld was apprenticed to him for six years in 1793, becoming a partner in the business in 1806. Their business was located at 8 Parliament Close and later 66 Princes Street in Edinburgh. This partnership was to become one of the most eminent in the history of Scottish horology.

In 1811 Reid was commissioned by Lord Gray to design and make a regulator for a new observatory at Kinfauns Castle. A similar regulator was commissioned in 1813 by the Royal Observatory for Calton Hill, Edinburgh. The Calton Hill regulator was attached to a stone pillar and was still in use in 1852 when it was used to drop a time ball from the top of the Nelson monument. From 1861 this same regulator was used to time the firing of the one o'clock gun at Edinburgh Castle.

For these regulators, Reid devised an escapement similar to Mudge's gravity escapement with the aim to detach the pendulum from the direct influence of the movement and give it a constant impulse. This is known as Reid's spring pallet escapement. Reid made two more regulators which incorporated this escapement in 1816 and 1818. In his book Reid wrote that the Calton Hill regulator went for upwards of ten

years without requiring any help, or even cleaning and the Kinfauns Castle regulator was recorded as going for nine years without any attention. Unfortunately the Calton Hill regulator lost its original spring pallet escapement in the 19th century and the Lord Gray regulator lost its original spring pallet escapement in the early 20th century. Reid's escapement was used in a modified form in LeRoys tank regulators over a century later, achieving an accuracy of .01 second per day.

Thomas Reid also devised a zinc and steel compensated pendulum, this and his spring pallet escapement are illustrated and described in his book, '*Treatise on Clock and Watchmaking*' published in 1826. This book, consisting of 466 pages with 20 plates, went to six editions, including one in America, and is still a valuable reference today. Thomas Reid died on the 24th September 1831 at the age of 85. His stepson William Auld left the Reid & Auld Bequest to the Royal Society of Arts.



Thomas Reid

VULLIAMY, LONDON NO. 1109

A fine and rare miniature travelling timepiece with alarm. Circa 1830.

- Case** Mahogany chamfer top case with solid back door and pad feet. Front opening door with silvered sight ring, the chamfer top is detachable to view the large platform escapement.
- Dial** The delicately engraved and chased arched silvered dial with Roman numerals and centre dial for the gold alarm hand signed Vulliamy London and engraved for winding and setting the alarm. Blued steel hands.
- Movement** The superb eight day fusee movement with large gilt lever escapement platform having compensation curb to the balance spring.
- Height** 6 ½ inches (16.5 cm)

Benjamin Lewis Vulliamy was the last of a line of exceptional clockmakers, and the last of his illustrious family to hold the Royal Clockmaker's Warrant. Only a few carriage clocks are known by him, mostly in beautifully proportioned and well finished rosewood and mahogany cases. The high quality lever escapement was used as it was more practical than the chronometer escapement which could be damaged when travelling.





VULLIAMY, LONDON NO. 1895

A resplendent gilt mounted turtleshell bouille mantel timepiece. Circa 1850.

Case The waisted case veneered in red shell and inlaid in brass, the ormolu mounts with lion paw feet and shell casting to the top, the rear door having a pierced gilt fret finely engraved with a scroll and floral design.

Dial 3½ inch silvered engine turned dial with Roman hour numerals signed Vulliamy, London. Blued steel hands.

Movement Eight day chain fusee movement signed and numbered on the backplate Vulliamy, London 1895. Steel rod pendulum with heavy brass bob numbered 1895.

Height 9 ¾ inches (25cm)

Provenance 2nd Countess Mountbatten of Burma, Patricia Edwina Victoria Knatchbull (1924–2017)

Possibly Sir Norton Joseph Knatchbull, 10th Baronet (1808–1868)

Paper label to underside reads 'Hodges Bequest'

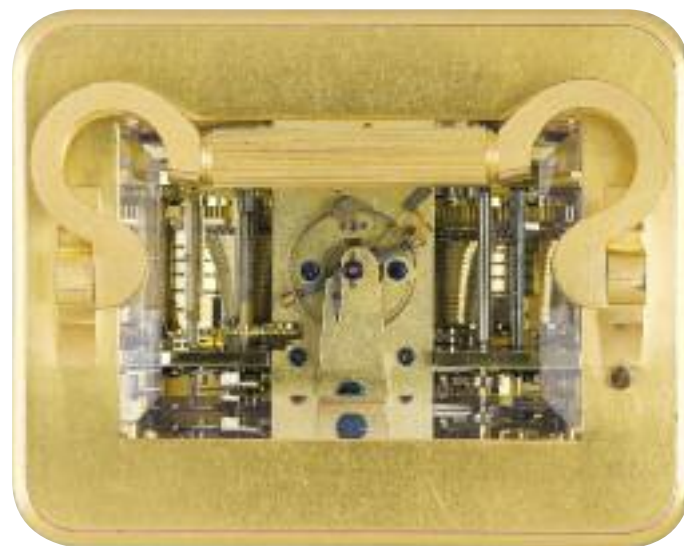




CHARLES FRODSHAM NO. 1087

An exceptional gilt brass repeating chronometer carriage clock. Circa 1865.

- Case** The gilt brass case with thick bevelled glass panels to the sides and top, the moulded case with reeded carrying handle and shuttered rear panel with glazed seconds aperture.
- Dial** 3 1/4-inch silvered dial with Roman hour numerals signed Chas Frodsham, 84 Strand, 1087, Clock Maker to the Queen, engine-turned centre. Subsidiary state of wind dial below VI engraved 'not wound', 'wound up' and 'wind'. The gilt mask finely engraved with foliate scrolls. Blued steel heart shaped hands.
- Movement** Eight day chain fusee movement with five pillars, Harrison's maintaining power, striking the hours with repeat function on a blued steel gong. Large frosted gilt spring detent platform escapement with blued steel helical balance spring to the bimetallic balance. The backplate signed Charles Frodsham Clock Maker to the Queen 84 Strand London No. 1087. Blued steel strike silent selection hand and silvered chapter ring for seconds in reverse.
- Height** 8 3/4 inches (22 cm)
- Literature** Vaudrey Mercer, *The Frodshams; The Story of a Family of Chronometer Makers 1758-1980*. Published by The Antiquarian Horological Society, London 1981.





DENT, LONDON NO. 24128

A rare and important giant chronometer carriage clock with perpetual calendar, equation of time and moon phase. Circa 1862.

- Case

The gilt brass case with thick bevelled glass panels to the sides and top, pierced scrollwork panel to the rear with shuttered winding holes and setting apertures. Facetted folding handle, inscription to the base ‘To H. Custance from the Duke of Hamilton Oct. 1879.’ Mahogany turntable base and numbered winding key.
- Dial

8 inch by 7 inch rectangular dial with gilt scroll engraved and chased mask, silvered dial with Roman numerals and sunken subsidiary seconds dial, the centre, scroll engraved with cartouche signed M.F.DENT Chronometer Maker TO THE QUEEN 33 & 34 Cockspur St Charing Cross LONDON 24128. Blued steel Breguet hands. Silvered subsidiary dials above for the day of the week, day of the month and the equation of time with moon phase indication and leap year.
- Movement

The massive five pillar, eight day, three train fusee movement has a fourth train going barrel to drive the calendar work. Large spring detent platform escapement with blued steel helical balance spring to the bimetallic balance. Striking the quarters on a nest of eight bells and the hours on a blued steel gong, trip repeat function. The perpetual calendar mechanism, equation of time and moon phase behind the dial and between the dial and frontplate.
- Height

15 inches (38.1 cm) Handle up 18 inches (45.7 cm)
- Literature

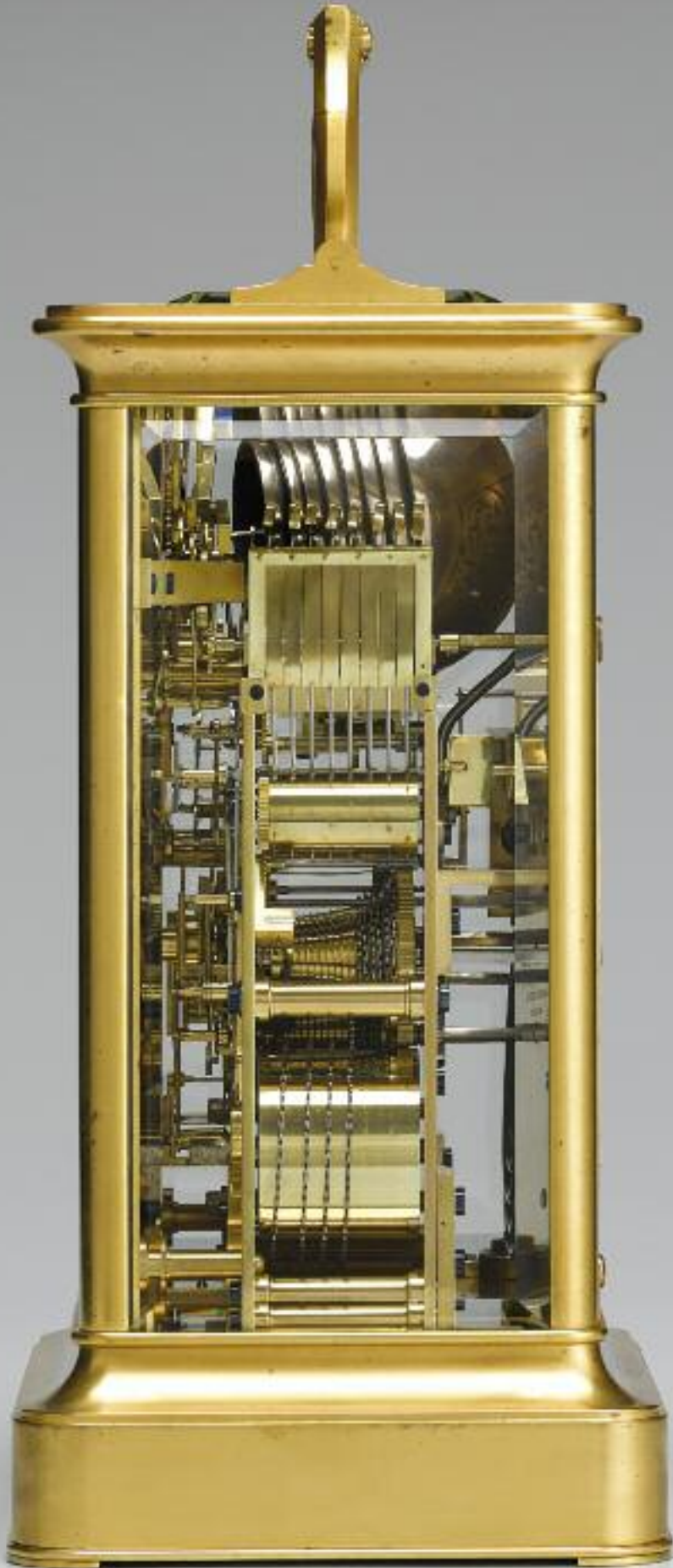
Charles Allix and Peter Bonnert, ‘Carriage Clocks’. Discussed and illustrated, p247-264.

Exhibited at Asprey, *Rare Carriage Clocks*, New Bond Street, London 1975.

Edward John Dent (1790-1853) went into partnership with John Roger Arnold at 84 Strand. In 1840 he set up on his own at 64 Strand and also at 28 and 33 Cockspur Street.

He was granted the Royal Warrant as Chronometer Maker to the Queen in 1841. In 1852 Dent won the commission to make the great clock for the Houses of Parliament at Westminster but died in 1853 before it was completed.







THOMSON & PROFAZE, LONDON

A Victorian gilt brass repeating carriage clock. Circa 1870.

- Case

The gilt brass case with thick bevelled glass panels to the sides and top, solid back door with shuttered winding holes. Reeded carrying handle and moulded base
- Dial

The silvered floral engraved dial with Roman hour numerals signed Thomson & Profaze, 25 New Bond St, London. Blued steel hands
- Movement

Eight day chain fusee movement with fine turned tapered pillars, maintaining power, ratchet-tooth lever platform escapement with cut bi-metallic balance, trip repeat striking on a blued steel gong.
- Height

8 1/2 in (21.5cm)

Adam Thomson is believed to have established his business at 25 New Bond Street, London in circa 1830. In 1860 he was joined in partnership by Joseph Profaze.



CLERKE, 1 ROYAL EXCHANGE

A superb giant gilt brass mantel chronometer with rare Kullberg flat rim balance. Circa 1890.

Case The gilt brass case with thick bevelled glass panels to the sides and top, bevelled glass and dust shutters to the back door.

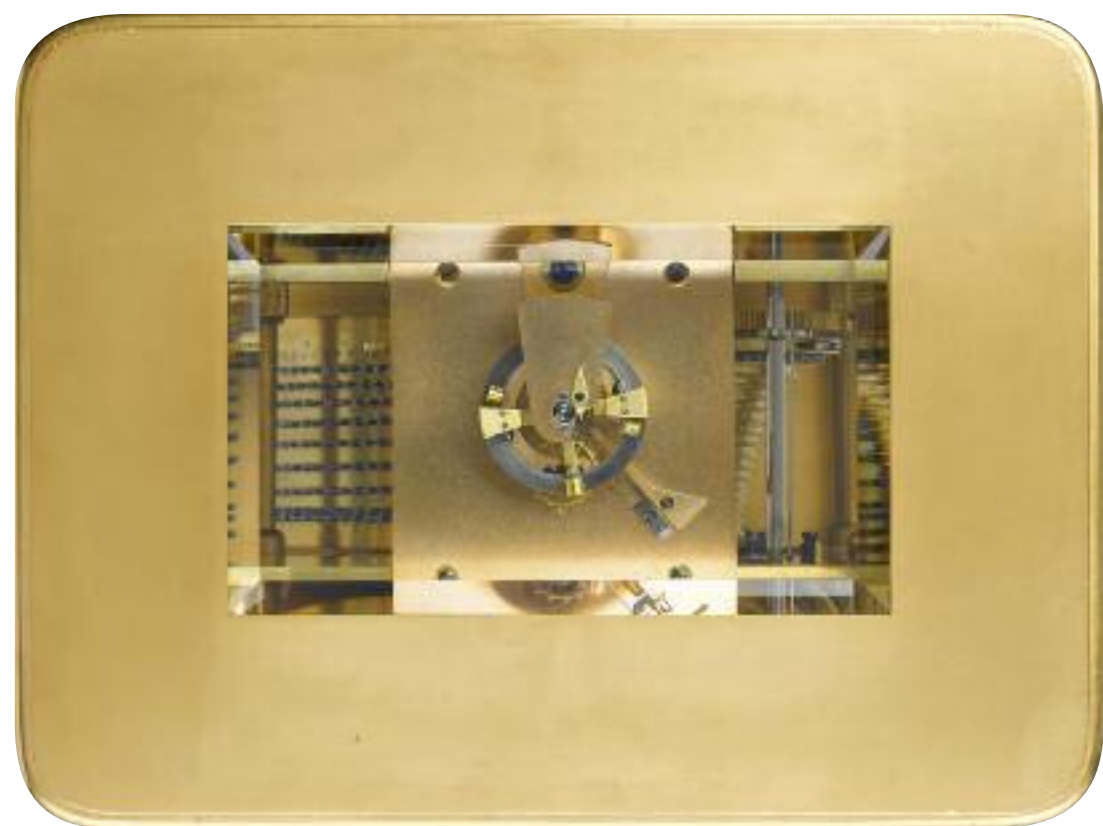
Dial 6 inch rectangular dial with gilt engine turned mask signed to an oval cartouche Clerke, 1 Royal Exchange. Silvered engine turned chapter dial with Roman numerals, subsidiary seconds dial and state of wind subsidiary dial above VI. Blued steel Breguet style hands.

Movement The massive five pillar, eight day chain fusee movement with Harrison's maintaining power, gilded six spoke wheels and high count pinions. Large spring detent platform escapement with blued steel helical balance spring to the Kullberg flat rim balance.

Height 12 1/2 inches (31cm)

Victor Kullberg (1824-1890) was one of the greatest chronometer makers of the second half of the nineteenth century. He made chronometers under his own name but also supplied movements to many other prominent chronometer retailers. One his finest inventions was his 'flat rim' balance, a very pleasing design but expensive to produce due to the constructional difficulties.







NICOLE NIELSEN & CO. LIMITED, SOHO SQUARE, LONDON

A superb bronze case carriage clock with twin up and down power reserve dials. Circa 1890.

- Case

The case with ribbed handle over a bevelled glass panel with repeat button to the right and calendar adjuster to the left. Bevelled glass panels to the sides over the one piece silvered dials, right side engraved for the mercury thermometer reading against Reamur and Fahrenheit scales, each marked for the strategic temperatures of 'Freezing', 'Temperate', 'Summer Heat' and 'Blood Heat'. The left side acting as a calendar, with the one piece silvered dial set with a vertical day-of-the-week column, adjustable from the rotating button above. Beside each day is a selection of dates to allow for any day and date combination. Solid rear door with three shuttered winding holes.
- Dial

One piece silvered dial with minute track enclosing the Roman numerals and twin subsidiaries for power reserve for both the going- and striking- trains marked 'Down' and 'Up', Blued steel moon hands.
- Movement

Eight day twin chain fusee movement held by five pillars with blued steel screws and collets through the backplate. Harrison's maintaining power to the going train with a frosted gilt platform, lever escapement with cut and compensated bimetallic balance and gold timing screws, over-coiled blued steel balance spring, detailed regulation arc to the rear. Striking the full hour on the hour and a single blow every half hour on a blued steel coiled gong, repeating the hours via the repeat button.
- Height

7 1/2 inches (19cms)

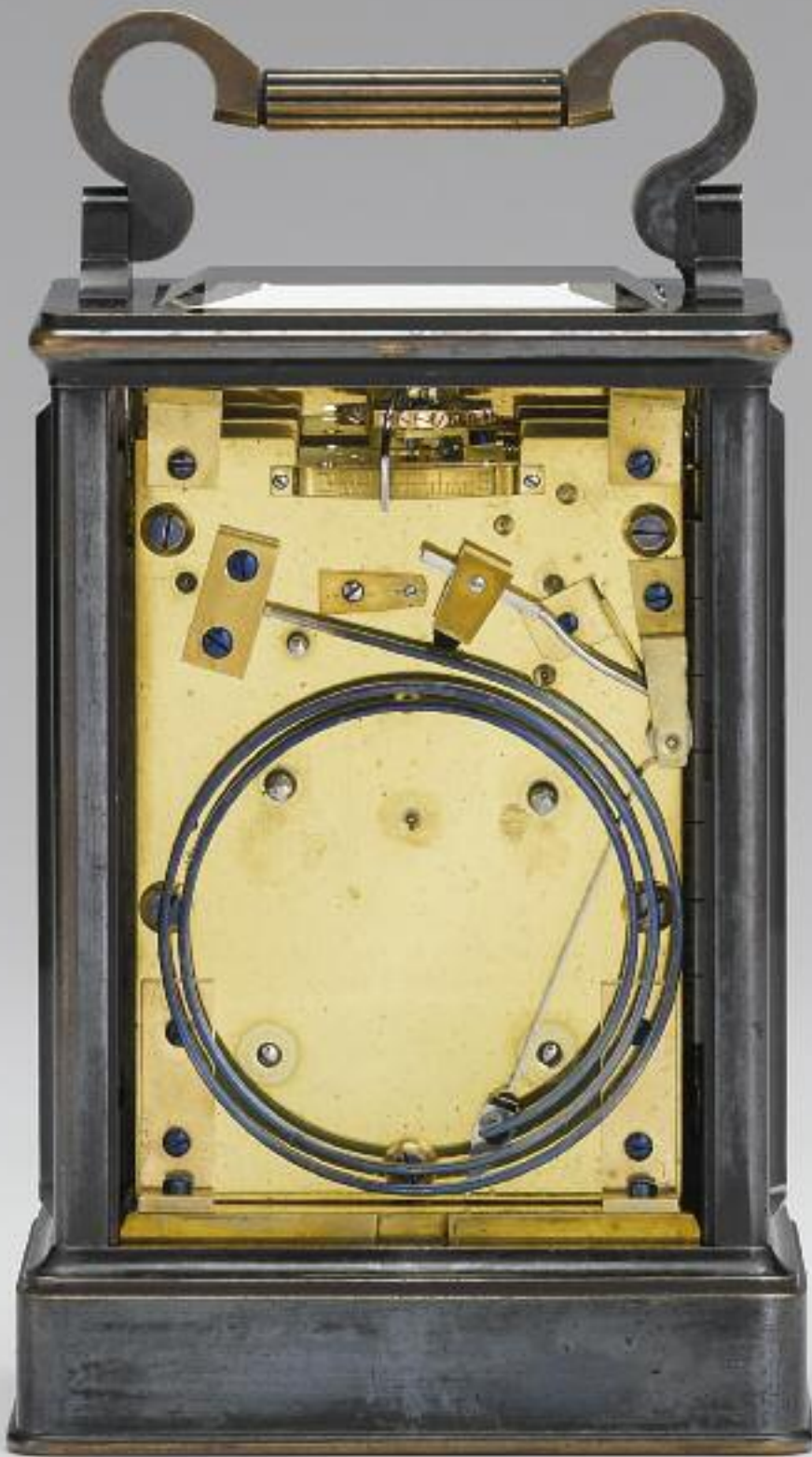
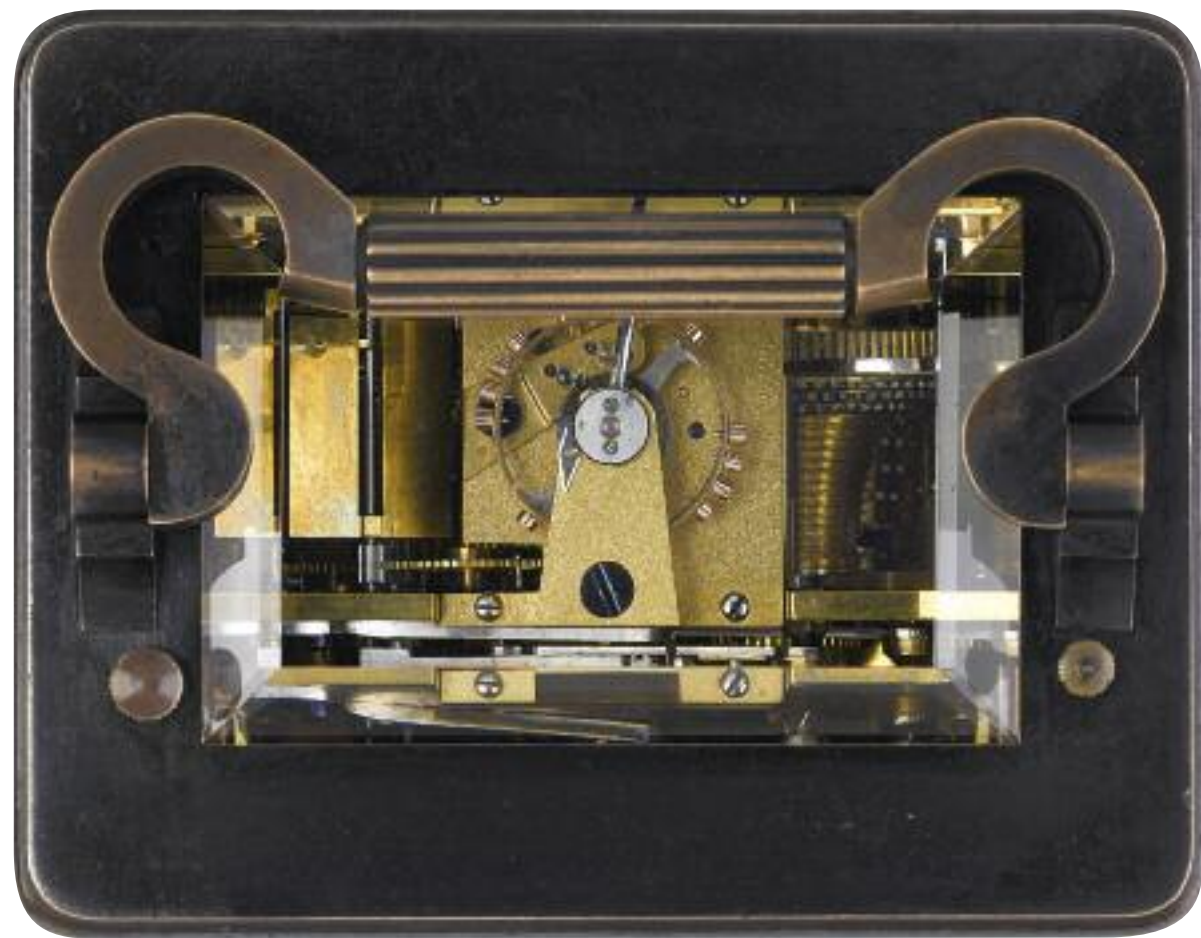
Adolphe Nicole established his watchmaking business in London in 1837 and went on to play a central role in 19th century horology. He invented two types of Constant Force Escapement as well as a new split seconds hand for timing two events simultaneously on a watch. In 1844 he patented a keyless winding system, the manufacturing rights later passing to Dent to whom he supplied many fine movements.

When Charles Frodsham died in 1871, Nielsen became a director of Charles Frodsham & Co. Ltd. In 1876 he took his son-in-law Emile Nielsen into partnership and within four years they were established in Soho Square, London.

Such was the acclaim of the workshop, The Horological Journal visited and published an article in June 1889. The clocks and watches surviving today often feature the most complex functions including their legendary tourbillons, in particular the series of remarkable silver hump-back travel clocks made just before the First War which also feature the twin up-and-down power reserve subsidiaries on the main dial.







Further reading

George Daniels, ‘*Thomas Mudge, The Complete Horologist*’, Antiquarian Horology, Vol XIII, No.2 December 1981, p150.

Andrew Crisford & Anthony Turner, ‘*Documents Illustrative of the History of English Horology, I: Two letters addressed to Thomas Mudge*’, Antiquarian Horology, Vol X, No. 5, Winter 1977, p580.

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David Thompson, ‘*Clocks*’, British Museum Press, ISBN 978 0 7141 2812 2.

John R Millburn, ‘*The Fleet Street addresses of Graham and his Successors*’, Antiquarian Horology, Vol VIII, No 3, June 1973, p299.

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J Ramon Colon De Carvajal, ‘*Catalojo de Reloges del Patrimonio Nacional*’, 1987, ISBN 84 505 6844 7.

Tobias Birch, ‘*Thomas Mudge and William Dutton, A Perfect Partnership*’, 2019, ISBN 978 1 9160462 0 7.

Thomas Reid, ‘*Treatise on Clock and Watchmaking*’, Edinburgh, 1826.

R A Lee, ‘*The Knibb Family Clockmakers*’, 1964.

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Vaudrey Mercer, ‘*The Life and letters of Edward John Dent Chronometer Maker and some account of his Successors*’, published by The Antiquarian Horological Society, London, 1977.

Vaudrey Mercer, ‘*The Frodshams; The Story of a Family of Chronometer Makers 1758-1980*’, published by The Antiquarian Horological Society, London, 1981.

Nicole Nielsen & Co. ‘*High class English watches*’, reprinted by David Penney, 2002, ISBN: 0 9533122 1 6.

Places to visit

The British Museum www.britishmuseum.org

The Science Museum www.sciencemuseum.org.uk

The National Maritime Museum www.nmm.ac.uk

Belmont House & Gardens www.belmont-house.org

Museo del Prado www.museodelprado.es

Historisches Museum in Basel www.hmb.ch

Thomas Mudge’s equation cam

