



# British Horology Times

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## CHARLES LOWNDES QUARTER REPEATER MOVEMENT

*By Pete Ekins (Australia)*

**T**he NAWCC Bulletin of January/February 2017 included Mr. V. Niles Kynett's Part 1 of his series of articles on Early English Verge Watches that featured a pocket watch signed by Charles Lowndes of

Pallmall London, circa 1693 (*Figure 1*). It is a beautiful, complete, timepiece. Photographs of the watch for this article were kindly supplied by Mr Kynett. He notes that Charles Lowndes was apprenticed to Thomas Playford from 18 July 1674 until 1681 and freed on 4 December 1682. He was a freeman of the Clockmakers' Company until his death in 1724 and lived on the south side of Pallmall London by 1694.

Among the various "treasures" I have collected over the years at various NAWCC Chapter 72 auctions and from other deceased estates are the remnants of an English Pocket Watch with a verge movement signed by "Charles Lowndes In Pallmall London" (*Figure 2*). The quarter striking mechanism is engaged by the action of pressing the pendant winding the striking spring barrel. Striking action is initiated immediately upon release of the pendant. The time train positions the star wheel, and hence the hour snail, to limit the extent of travel of the winding rack hour snail arm.



*Figure 1: Lowndes movement from Bulletin article  
(Copyright Niles Kynett)*



*Figure 2: Lowndes hour and quarter repeater movement*

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### British Horology Times

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Chapter 159

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At the beginning of time the clock struck one  
Then dropped the dew and clock struck two  
From the dew grew a tree and the clock struck three  
The tree made a door and the clock struck four  
Man came alive and the clock struck five  
Count not, waste not the years on the clock  
Behold I stand at the door and Knock

Eric Lomax (From the movie *The Railway Man*)



## President's Message:

As I write this message I have just returned from our Chapter meeting at the Florida Mid-Winter Regional. Hats off to David Cooper whose presentation on the restoration of a "Star of David" watch was incredibly informative. The watch was a true fantastic find.

David's presentation enlightened us as to the characteristics that make it an extremely rare piece. His pictures, descriptions, and his analysis of the issues in the clock's design and execution attest to his skills. Thanks David for sharing with us.



Our March meeting at the Southern Ohio Regional is fast approaching. Andy Dervan, who is well known for his articles and presentations will be talking about his research into an early Massachusetts watchmaker. From the watchmaker's accounts books, Andy was able to gain incredible insight into the horological connection between Samuel Bemis (1785-1798) and his son, Samuel A Bemis (1815 - 1822) and the community in which they served. Although I have prior commitments that prevent me from attending the meeting, I very much regret not being able to learn from Andy's presentation. It promises to be great.

Once again, I remind you of our National Convention in York Pennsylvania. We need your assistance for our display which will be in the center of the mart room. If you have a British timepiece that you would be willing to put on display at the Convention please let us know by responding to [BritishHorology@gmail.com](mailto:BritishHorology@gmail.com). They have promised a secure setting and can provide insurance coverage if required. Please help us promote British Horology and our Chapter on this special occasion that celebrates the 75th Anniversary of the NAWCC.

Thanks as well to Pete Ekins for his masterful article in this issue of the British Horology Times. We are very grateful that Pete has shared his knowledge of this extremely rare timepiece with us.

Wishing you all the best and hoping to see you soon.

Cheerio,  
Bob

*(Continued from page 1)*

This action winds the striking barrel, under the hour rack, and positions the appropriate number of teeth of the hour rack to the pallet to strike the hours. The quarters are then struck by the quarter rack.

The quarter striking train had three ‘runners’ and a weighted pinion (adjustable in its gear meshing) to govern the rate of release of the power and hence the striking rate.



*Figure 3: As found under Dial striking mechanism of Lowndes Repeater Movement (left) and missing parts (right)*

However, the movement had lost some of its parts (*Figure 3*) including; the fusee chain, centre/second wheel of the time train, and the quarter rack, pallets and a ‘runner’ of the striking work; as well as the dial, hands and the case (and a tooth from the minute wheel).

The January/February 2017 Bulletin article by Mr Kynett rekindled my enthusiasm to attempt a resurrection of the Lowndes movement. From my contact, NAWCC passed on to Mr Kynett a couple of photographs of the Lowndes movement with a request for contact and communication. That communication has provided the basis for this article.

The similarities of the incomplete Lowndes repeater movement and the watch pictured in the Bulletin article (*Figures 1 & 4*) were apparent; identical tulip pillars, balance cock etc. A significant difference is the layout of the time trains.



The layout of the striking train of the Lowndes repeater movement necessitated the relocation of the fusee and winding arbor of a time only movement.

In the quarter repeater movement the fusee is positioned such that the time train fusee arbor protrudes through the balance cock and hence the balance wheel. A fusee arbor through the balance wheel needs the peculiar crossings in the wheel to allow the balance the necessary amplitude! See Figures 5 & 6 on next page.

*Figure 4: Lowndes movement from Bulletin article (Copyright Niles Kynett)*

Pocket watches by Bushman circa 1720 (following picture courtesy of Philip Kuchel) and Richard Baker, London circa 1695 also have balance arms similarly shaped to accommodate the going train's winding arbor. These similarities also indicate a probably date for the production of the Lowndes repeater movement.



A Sotheby's catalogue, "The Celebration of the English Watch Part 11, London 7 July 2016" notes that Daniel Quare (C. 1647/8-1724) was admitted to the Clockmakers' Company in 1671 and invented a type of repeating mechanism around 1680."

Attempting to identify the missing parts of the repeater movement, a colleague in Sydney Clockmakers' Society (Philip Kuchel) recommended I contact a BHI colleague of his (Jim Arnfield) for advice. The latter suggested seeking a copy of an article by Francis Wadsworth in *Antiquarian Horology* dated September 1965 entitled, "A History of Repeating Watches".

That article notes, "About 1687 Edward Barlow... commissioned Thomas Tompion to make a repeating watch of his design."; also, "Daniel Quare, on hearing of Barlow's patent application, was rather indignant as he had had similar thoughts a few years previously, but had not brought them to fruition.

He now set to and produced a repeating watch of his own design"; also, "These watches were possibly not the first repeating watches ever made, but it is significant that from them can be traced the repeating mechanisms that followed." Plates 1 and 11 of the article have pictures of the movements of an "Early repeating watch signed Daniel Quare London 611" (*Figure 7*) and Plate 111 showing the movement of an "Early repeating watch by Thomas Tompion".



Figure 5: (top) Lowndes Repeater Movement showing peculiar Balance Crossings and Fusee Arbor

Figure 6: (bottom) Bushman Movement circa 1720 courtesy of Philip Kuchel, Sydney Clockmakers' Society

The Lowndes repeater movement shows remarkable similarities to the Quare movement pictured in the September 1965 Antiquarian Horology Society magazine by Mr F. Wadsworth. As Daniel Quare and Charles Lowndes were working in the same part of Pallmall London and both were members of the Clockmakers' Company and both passed away in 1724 there is a possibility that they shared design information for the making of the subject early quarter repeater pocket watch.

The picture of the Quare movement in the AHS article shows the striking train and quarter rack 'G' (missing from the Lowndes movement). Note that the Quare movement also has a 'surprise piece' 'O'.

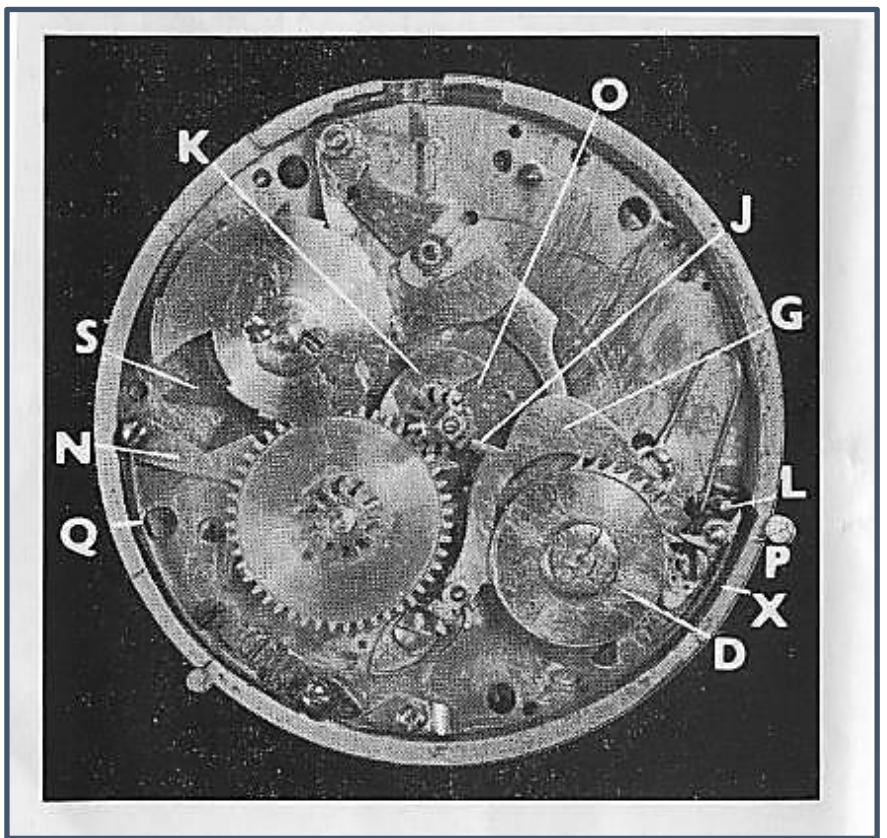


Figure 7: The Quare movement ready to strike. Plate II from Wadsworth's 1965 article (courtesy of Richard Watkins of Kingston, Tasmania, Australia)

The Lowndes repeater movement is certainly a contemporary of the Quare movement but it has no 'surprise piece' nor an 'all-or-nothing' device. These two 'complications' (later developments perhaps?) are required to prevent erroneous quarter striking near the hour, and to preclude an erroneous number of strikes at an hour by inadequate pressing of the pendant.

The description in the Antiquarian Horology Society magazine article provided a basis for understanding the function of the striking action; ie, hours followed by a short interval and then the quarters with the same hammer; and of the missing elements of the striking work.

Notably, in the Lowndes repeater movement the hour rack and the quarter rack are in different planes; the latter being above the former. No known pictures of the detail of the underside of a similar quarter rack have been located.

Accordingly, reconstruction of the striking train has been started with the guidance of the BHI specialist, Mr Jim Arnfield. He advised that the quarter rack has a "touch piece" under the quarter rack, to be collected by the hour rack after the hours have been struck. He generously provided more advice of a similar movement and a sketch of its possible form. Armed with his advice and the surviving hour rack with its small protruberances; prototypes of the quarter rack and two tiered pallets were made (*Figures 8 & 9*). The hour rack and quarter rack rotate about different centres, so the geometry of these and a replacement quarter rack and missing pallets provided a challenge to achieve a successful action of the hammer.



Figure 8: Lowndes Repeater Movement with prototype Quarter Rack



Figure 9: Prototype of the quarter rack and dual pallet for the Lowndes repeater movement

As the bell would have been mounted on the original case, now missing, the satisfaction of hearing the striking work in action is perhaps something for the future.

Whether the Lowndes repeater movement is one of the earliest implementations of quarter repeater striking is open to speculation. However, the strong similarities of Mr Kynett's Lowndes watch movement and the Lowndes repeater movement, and the quality of the time train with its tulip pillars, fretted back cock, verge escapement etc leads me to conclude that the movement in question is a very early version of a quarter repeater pocket watch which has had its case removed for its scrap metal value and the movement discarded.

In addition to the repeater movement reconstruction activities an associated 'fantastic find' was brought to mind by the generous gift of the Sotheby's catalogues on English Watches from a colleague in Chapter 72. The Sotheby's catalogue also has examples of the Daniel Quare dials of these early watches (*Figure 10*).



Figure 10: Copy of Daniel Quare pocket watch picture from Sotheby's Catalogue 7 July 2016

Some 30 years ago I acquired a silver dial 'in the rough' which has all the characteristics of the Quare dial shown in the Sotheby's catalogue (*Figure 11*). It has the repousse centre and vacant cartouche for a maker's name, Roman hour numerals, arrow tick marks at the hours and diamonds at the half hours of the chapter ring: The only identified deficiency was the lack of the engraved minute numerals in the discs at the hours; viz, 60, 5, 10 etc. A specialist engraver has undertaken that task (*Figure 12*).


Hand styles of the period by Quare were also identified in the Sotheby's catalogues. Tulip, and Beetle and Poker, styles were in fashion. Beetle and Poker hands have been crafted for the

Lowndes movement using the method of turning a ‘dumbbell’ from a rod of silver steel and then filing away most of each side to leave a flat blank for drilling and filing to shape (*Figure 12*).

The missing movement parts have been fabricated and the missing tooth in the minute wheel replaced (*Figure 13*).



*Figure 11: Silver Dial “in The Rough” (left); Figure 12: Engraved Dial with 5 Minute Numbers and Replacement Hands (middle); Figure 13: Replacement runner number 3 – the rate of striking is adjusted by the degree of meshing of the third runner wheel and the mass balanced pinion (right)*

This is still a ‘work-in-progress’ and one which would not have been possible without the generosity of members of the various horological communities with their contacts and advice for which I am very grateful. 

## **Assistance Requested ..**

### **A Question about Winding Barrels on English Longcase Clocks**

*By Frank Del Greco (Ohio)*

I noticed an interesting phenomenon about the winding barrels on English longcase clocks and I was wondering whether it is just a coincidence.

I have two London longcase clocks, one from 1685 and another from 1738. In both clocks, the weight lines wind from the nonratchet wheel end of the winding barrels toward the ratchet wheel ends. The other day I was looking at two provincial English longcase clocks, one from around 1780 (Manchester) and another from the mid-1800s (exact origin unknown). In both clocks the weight lines wound from the ratchet wheel end of the barrels toward the non-ratchet wheel ends. I then check about six clocks at a friend’s house and, with one exception, they all followed the same pattern I found for London vs. provincial clocks.

I got to wondering whether there was some sort of convention or rule or whether each clockmaker arbitrarily decided how to set up his winding barrels.

Someone told me it was done one way or the other to prevent the weights from interfering with the pendulum bob, but I think that is a fallacy. Does anyone know or have any ideas? 