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Regulator Contributed to the inaccuracy that the sixth Astronomer Royal John Pond reported with the clock. His thinking that the quantity of Mercury in the pendulum was wrong. By 1836 Dent, who came to service other clocks at the Observatory changed the Hardy escapement for a Dead Beat, rightly or wrongly, he signed "New Dead Beat Escapement by Dent" across the centre of the dial.

This lecture by Graham Dolan was a veritable mine of information on William Hardy which kept our members constant attention, and they showed it by an enthusiastic applause after question time.

Further information can be found on Graham Dolans website

<http://www.royalobservatorygreenwich.org/articles.php?article=1352>

Michael McDonnell

### FREE ADVERTISING FOR BRANCH MEMBERS.

Is there something you require, an obscure tool or clock part. We can try and help we have had great success in the past. Just contact Bill : -  
01543506195 or [electricwilliam@gmail.com](mailto:electricwilliam@gmail.com)

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## South London Branch British Horological Institute

Newsletter No. 539 FEBUARY 2024

Meetings are held on the 1st Thursday of each month

At The White Hart Barn (Godstone Village Hall)

Godstone Surrey RH9 8DU at 7.30 p.m. for 8 p.m.

#### INSIDE THIS ISSUE

NEXT MEETING

2024  
MEMBERSHIP

DECEMBER  
MEETING

George  
Daniels  
Dinner

JANUARY  
MEETING

Free  
advertising for  
Slbbhi members

[www.slbbhi.co.uk](http://www.slbbhi.co.uk)

*"Concentrate all your thoughts upon the work in hand. The sun's rays do not burn until brought to a focus." – Alexander Graham Bell*

### Next Month's Meeting at the White Hart barn

1st February 2024.

7:30 pm for an 8 oclock start.

Jon Clasper

'Early Rolex Watches'.

**Jonathan Clasper**, a recently retired Army Orthopaedic Surgeon, who specialised in Trauma and the upper limbs, working recently with the NHS at Frimley Park Hospital.

"I have always had an interest in watches, and from a young age saw a Rolex watch as the ultimate must have". Outside of medicine I enjoy history, and so the history of wristwatches, particularly their association with the military has always fascinated me.

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My talk will consider the early years of Rolex, mostly pre-1920. It is a time that isn't well understood but can be inferred by looking at the watches themselves. In particular I will show that many opinions that are published can't really be supported by the evidence. In particular:

It's difficult to actually define what an early Rolex wristwatch is.

Rolex were not the first wristwatch enthusiasts.

Rolex weren't the most successful wristwatch retailer pre-WW1.

Rolex benefitted from a change in the import law in 1907, and the demand during WW1.

Rolex did sell their own pocket watches.

A Rolex watch wasn't the premium product.

Rolex together with Aegler, were innovating right from the earliest days.

In addition, I will propose a way of dating the early Rolex watches, which allows their development to be followed.

## ANNUAL SUBSCRIPTIONS.

Branch Membership subscriptions are coming in at a steady rate with around 75% already received. Membership cards have been sent out to members who have paid (check the envelope if you didn't see it). If you received a membership form with this news letter it means I have not received your contribution yet. **If you have paid but not received your card please contact me.**

01543506195 or [electricwilliam@gmail.com](mailto:electricwilliam@gmail.com)

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with the Mural Circle that was being made for the Observatory for Edward Troughton. Maskelyne sadly did not live long enough to see it brought into use. At its completion in 1811 the Board of Ordnance, paid to meet three times a year, were presented with a bill for £325 which was objected to as being of considerable expense more than previous instruments. The Board consulted with such persons thought to give them information as to a proper price of such an instrument and that they thought Mr Hardy was under misconceptions of the verbal instructions given to him by the late Astronomer Royal. The Board is said to have awarded William Hardy £200 guineas for the Greenwich clock (£210).

William Hardy made a further four clocks for private individuals and Observatories, within the next 14 years. The Garnet hill Observatory, Glasgow. The Rev. William Pearson. Royal Observatory, Cape of Good Hope. Rev. Thomas Hussey.

Why were Hardy regulators more expensive than his contemporaries? Was this due to the amount of fine jewellery in the movement? the mercury compensated pendulum? The fine Dutch pan, Brass that Mr Hardy had acquired from the Board of Longitude that the celebrated Mr Harrison had used? Or more than likely the time it took to make four precision jewelled detents?

The Hardy regulator at Greenwich was originally positioned on the Mural Circle subsequently being moved to its present position on a stone pier in 1823. Hardy always came to clean his own clock but perhaps this move or the setting up of Mr Hardy's

## Meeting report on the 4<sup>th</sup> January 2024

### Introduction by Duncan Greig

My First encounters with Hardy regulators were back in the 1980s. Derek Roberts held his second precision pendulum clock exhibition and John Martin was tasked with restoring a William Hardy clock with Roger Stevenson who made the missing detent pallets, Roger was present at our meeting. Fewer regulators were thought to exist at that point in time and they became a study of John Redfern which resulted in my belief the first computer aided graphic illustration, (CAD) of a detached escapement. Where is that illustration now. Circa 1993 an unsigned skeletonised table regulator emerged with the bare bones of what was presumed to be a Hardy type of escapement. So entranced with this, that the late Alan Weaving of the SLB BHI Millenium clock building team set his sights in reproducing this. Graham Dolan has made it his personal task to research the William Hardy regulators at the RGO and has contributed extensively to the Hardy story and help to dispel some of the Myths of the clock under the Transit Telescope. I am sure Derek Roberts would not have objected to some of the information having been published, proved to be wrong. He always said you have to put down what you have got and always embrace constructive criticism.

### Old myths, new insights

### The Regulators of William Hardy.

**GRAHAM DOLAN**

William Hardy persuaded the Board of Longitude in 1807 to run a trial at the Royal Observatory of a regulator escapement that he had recently invented and fitted to an existing clock by another maker. Its performance was such that the 5th Astronomer Royal Nevile Maskelyne, ordered a bespoke clock from Hardy for use

Meeting held on the 7th December 2023

GEORGE DANIELS MEMORIAL LECTURE.

### The revolutionary Breguet clock

(pendule a trois roues) No111

**Oliver Cooke MBHI**

Chairman Trevor Keast introduced us to Oliver Cooke, Curator of Horology at the British Museum. Oliver recounted the occasion early in his career when he mistakenly introduced Johan ten Hoove to our past President as "Sir" George Daniels. Oliver divided his talk into five different parts. Initially history gave us a summary of Breguet's (1747-1823) family, his customers and the earlier horological achievements, his involvement with the "Perpetuelle", self-winding mechanism for watches, the coiled gong for repeat work, parachute shock absorption, the perpetual calendar, and the Tourbillion. Breguet married Marie-Louise Lhuillier shortly before setting up his business at the Quai d'Horologe in 1775.

Oliver took us on a deviation with the description of a Subscription watch, Breguet No 267 of which there are about 700, with his secret signature. A watch that came to the British museum in 2018 with spare glasses made for the Duke of York, son of George III. An explanation of a constant force Astronomers clock and how in a letter to his son the pendule sympathetic was conceived to keep the fame and fortune of the business. Oliver illustrated the operation of the mechanism, how the clock will wind and synchronise a pocket watch placed upon the cradle, at the top, overnight. Oliver also delved into the operational practices of Breguet and how he was constantly thinking of methods of reducing friction within his Chronometer

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manufacturing, giving us an amusing example using lawnmower blades to illustrate the overlapping power transfer from double barrels to a single pinion.

At the height of his career Breguet employed 100 workers with a turnover of 400,000 francs. The business continues to operate today, manufacturing high quality watches.

Before coming to the main subject of the lecture, the three-wheel clock. The idea of the pendule a trois roues, was conceived by Breguet in 1787 and the drawings for the clock were deposited in a sealed envelope with the Académie Royal des Sciences in 1788.

About two years into the French Revolution, {1789-1799} a friend, Jean-Paul Marat, secretly warned Breguet that he was next on the waiting list for Madame Guillotine. In 1793 he beat a hasty retreat to Neuchatel, Switzerland, and workshops at Locle where he carried on with his business and with his design work. Before his return to Paris 1795, demanding back his home and workshops at the Quai d 'Horologe. In exchange he would direct a factory in Versailles to the production of military timepieces. This was to be the brilliant final part of his career where many of the designs, inventions, conceived in Switzerland were manufactured. The records of the House of Breguet show only ten of the three-wheel regulators were made over a period of forty years. Breguet purchased the first made and presented it to Record on his London agent which sold at a loss and the last to be made was kept by the Breguet family.

Circa 1795, made in Paris France, Breguet's three-wheel clock No 111 was passed to the British Museum by HMRC in 2015 being settlement of a private inheritance tax liability. Eight day going, the great wheel (240 teeth to a pinion of 8) rotates once in twenty-four hours, and there is also a Calendar ring assembly. The lower dial bears two silvered rings, the outer for the

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Gregorian Calendar and the Inner for that of the Revolutionary Calendar. It has two driving weights and temperature compensation and ambient temperature indication.

George Daniels worked on the clock and made three replicas with the permission of the Breguet foundation.

Oliver gave us a very complete description of Breguet and this attractive clock which can be viewed at The British Museum.

Duncan invited questions from the members who also recalled anecdotes, much to the pleasure of the audience. This was followed by the presentation of our special oils and a show of appreciation from all present.

M J McDonnell

## The George Daniels Dinner

As you will see in the annual programme the dinner is to be on the **18th March**.

The Menu/booking form will be available at the next meeting (1st February) Please collect a form and fill it in asap. And return to Alan Westgate. If you are unable to make it to the meeting the forms will be available on the website. Or contact me and I will get one to you,

Bill Horan 01543506195