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British Horology Chapter 159 of the National Association of Watch and Clock Collectors

## THE GRETTON PROJECT

By Dennis Radage

T
hose of you who subscribe to the British Journal "Antiquarian Horology" will no doubt be aware of the Gretton Project. I have posted a Project Update in that journal twice a year for the past four years.
The Gretton Project is a cooperative effort between myself and Warner Meinen of the Netherlands. We are both Antiquarian Horology Society (AHS) members and met through letters published in that journal. Our objective is to write a book about the $17^{\text {th }}$ century clockmaker Charles Gretton (1648-1731). The project is not so simple since Gretton was an early English clockmaker, practicing back in the last quarter of the $17^{\text {th }}$ century and the first quarter of the $18^{\text {th }}$ century. Records and documentation at that time were sparse indeed. Further, Warner lives in the Netherlands, and I live on the west coast of Canada. Communications are by email since we are nine hours time difference apart, further, our visits to the UK are governed by available time and having sufficient resources to cover travel and living costs. Never the less, the project has been making steady progress since its initiation back in 2007. I have been fortunate enough to be able to have visited the UK for this project every year since the beginning. A fifth visit is already scheduled for February/March 2011. Given the noted constraints, it is not too difficult to appreciate that progress is naturally slow and expensive. The project is clearly one of passion and determination since the possibility of making a profit is very remote. My wife Laila joined the team in June 2010 as our amateur genealogist and specialist in styles and social history. Laila is a decorating consultant by profession.
The book will be produced in as high a quality as is possible. We


| Officers and Editor of <br> British Horology Chapter 159 <br> Richard Newman, President <br> 21562 Nelson Road <br> DeKalb, IL 60115 <br> rpnewman@yahoo.com <br> Phone 6302076616 <br> Dennis Radage, Vice President <br> 2515 Marine Drive <br> W. Vancouver, BC <br> Canada V7V 1L5 radage@telus.net <br> Phone 6049211666 <br> Marion Krajewski, Secretary <br> 8711 Durbin lane <br> Crown Point, IN 46307 <br> Bm177@sbcglobal.net <br> Phone 2197698247 <br> Peter Stipanovich, Treasurer <br> 706 Duncan Ave. Apt. 1517 <br> Pittsburgh, PA 15237 stipanovich@roadrunner.com <br> Phone 4404769776 <br> Deena Mack, Editor <br> 644 Geise Road <br> Attica NY 14011-9514 <br> dmack18@rochester.rr.com <br> Phone 585-591-1343 <br> British Horology Times - BHT <br> Is a newsletter of British Horology Chapter 159 of the National Association of Watch and Clock Collectors. <br> BHT is published 3 times yearly. <br> Correspondence and manuscripts should be sent to the Editor. Applications for membership and payments of dues should be sent to the Treasurer. <br> Annual membership costs: USA $\$ 5.00$ <br> Canada $\$ 5.00$ <br> Overseas $\$ 6.00$ in US funds or equivalent. | OUR NEXT MEETING <br> Will take place at the <br> Mid Winter Regional <br> Daytona Beach FL <br> Feb. 24-26 2011 <br> Friday at 3 p.m. <br> Table of Contents <br> The Gretton Project <br> by Dennis Radage <br> President's Message <br> by Richard Newman <br> Editor's Corner by Deena Mack <br> Workshop Notes: Dial Conundrums <br> by Dennis Radage <br> How to Replace a Barrel Hook by Tom Mostyn <br> Opinions expressed in articles in this newsletter are those of the writers and are not necessarily endorsed by the Chapter and/or by the newsletter and/or by the National Association. |
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## President's Message:

Our first meeting of 2011 will be at the Florida Mid-Winter Regional at Daytona Beach. We will be flying the Union Jack at Ken Johnston's table where you will be able to find information on our Chapter and applications. Please bring a friend over and help sign them up. At 5 bucks a year, this is one of the best values around. The presentation will be on watchmakers in $18^{\text {th }}$ century America and the impact of hostilities with England on the colonial watchmaking trade. Prior to the presentation, I plan to take a few minutes to discuss the chapter's website and solicit feedback on enhancements that you would like to see. If you have not visited the site recently, please take a look and tell us what you think. It can be found under the Member Central section on the NAWCC home page (NAWCC.ORG), or directly by entering the following address into your web browser: http://community.nawcc.org/NAWCC/Chapter159.

BHT has a new series, developed by Dennis Radage, that we are calling Workshop Notes. The concept is to provide a forum for members to share observations or interesting experiences while working on a clock or watch in their workshop. Topics can cover just about anything related to horology that would be of interest. If you've come across an interesting movement, unusual engraving or dial, or even a repair technique, we want to hear about it! All we need is a brief write-up and a good picture or two. ~Rich

## Lets meet our officers for 2011

On the left is president Richard Newman with our enthusiastic secretary Marion Krajewski, enjoying the Midwest regional last August in Indiana.

On the right is a familiar face, Dennis Radage who provides our newsletter with many articles of merit.


## Editor's Corner:

It is cold and blustery but I am not complaining. The east coast including New York city is getting pounded amidst blizzard warnings.

I have been busy in the shop constructing a suspension for the hooded clock I bought last year. It is coming along slowly and I have been learning some new skills.

Pictures of your favorite clocks are needed for the newsletter. Send them to me via email or postal mail. Tell us what it is and when you got it.

Rich tells me I need to run a photo of myself. It is nice to have a face to put with a name. Now if you see me at a regional, I will expect you to stop me and say hi. ~Deena


## Workshop Notes: BRASS DIAL CONUNDRUMS

By Dennis Radage
With appropriate care, the average brass dial can be expected to maintain its condition for well in excess of a quarter of a century. While the environment where the clock is kept certainly plays an important role in its longevity, it is the owner's care which will ultimately determine the dial's fate.

Most clock owners (and I am not including either novice or avid collectors in this category) likely own just one or two antique clocks. These clocks may have been inherited, given as a gift or purchased to compliment their home.

Such owners have often grown up with antiques, or at least a selection of vintage items that decorate their home. They wax and polish their furniture, wash and clean porcelain and glass and of course polish the brass; brass candle sticks, door handles and door knockers, brass mantle ornaments as well as brass utensils. Of course, for these individuals, brass, like silver, must be bright and shiny and Brasso (or similar cleaners) has been the household standard. The brass dial longcase clock did not escape this regular cleaning ritual. Innocently, the brass dial, traditional $17^{\text {th }}$ and $18^{\text {th }}$ century ones as well as the one featured here had their chapter rings, spandrels and as much other detail as could be accessed polished with Brasso or a similar product. Such cleaners are abrasive, they remove tarnish but also deposit themselves in all crevices and behind the chapter ring and spandrels. This is evidenced by the dried white coating behind these components. Subsequent cleaning with any liquid re-vitalizes the cleaner which now retains the moisture and begins to etch through silvering and gilding. It also initiates bronze disease, the greenish, coppery powder that is the result of the brass corroding. This corrosion can often be seen on many brass clock case and dial components.

Only by completely stripping the dial, properly cleaning away all of the residue, possibly re-silvering then lacquering will prevent further degradation of the brass parts.

The subject dial, as indicated, is a turn of the century (1900) brass dial with applied silvered chapter ring, applied and silvered subsidiary seconds dial, applied pierced brass spandrels and applied upright Arabic chapter numbers. The moon phase dial, not shown here, is of the painted form, but has an applied silvered scale to the arch.

Incorrect cleaning has removed most of the silvering from the chapter ring, the subsidiary dial, the globes and the moon phase arch scale Figure 1.

The residual dried Brasso type cleaner can be seen on the base dial plate after the removal of the chapter ring and spandrels etc. In its liquid form it had penetrated the spandrels and ran behind the chapter ring, sub. dial and moon phase scale Figure 2.

Figure 1

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## How to Replace a Barrel Hook

By Tom Mostyn

The following explains how to replace a barrel hook on clocks that have mainsprings contained in the barrel. It can be done using basic hand tools, although a lathe can be beneficial, but not necessary. Typically the barrel hook will be loose and although sometimes can be tighten by peening the outside edges, care must be exercised, since in most cases the hole may be enlarged from the hook working free. The total cost to do this replacement is less then $\$ 1.00$ and results in a high quality professional repair.
The tools required are found in every shop with the exception of possibly screw taps, which are available from big box stores and at marts for 3.00-5.00
The first step is to remove the barrel hook. This is accomplished by using a punch placed on the outside of the barrel hook and tapping on it to knock it out. Once the hook is removed, proceed to the second step. find the appropriate screw tap. In the case of a French barrel, a $6 / 32$ NC (National Course) or 6/40 NF (National Fine) tap is perfect in most cases. On fuzee barrels a much larger tap, such as a tap size of 8 or 10 may need to be used.
Third step is to take an appropriate FLAT HEAD screw, length is not important since the surplus will be cut off, although it cannot be longer than the diameter of the barrel. I prefer stainless steel for this, however, regular steel screws work just as well. Put the screw in a vise or other holding device and file the screw slot off till you have a flat smooth head. Using a lathe to do this will speed up the process, but not required.
The final part, put the screw inside the barrel and thread it through. Long nose pliers work well if you have large fingers. Once through, use a pair of regular pliers and tighten the head tight against the inside of the barrel.
Next using a jewelers saw, or a hack saw cut the excess threads off as close to the outside barrel as possible without scratching the barrel. You can use some very thin shim stock to slip over the screw before starting the sawing if you want.
Take a piece of $1 / 2$ " or larger round stock and place in a vice. Slip the head of the hook on top of this and lightly tap (peening) around the edges of the outside screw (hook). You don't need to do this hard since the threads are supplying the necessary tightness. If you want, after completing this step, put a drop of super glue around hole and wipe off the excess.
Using a fine file and some fine sandpaper, finish the exposed hook smooth. The only difference between this process and the original is in the original the hook was a rivet and not a screw.
I have used this method in fuzee barrels that contain a spring $21 / 2$ " wide and have had no problems with the hook coming loose.
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are planning it to be hardcover, full color images and we will illustrate as many Gretton clocks and watches as we are able to locate. We expect to fill between $400 \& 500$ pages in a book that is $11 "$ high by $9 "$ wide. We only expect a print run of about 1,000 copies.
The process for collecting information, and in planning each UK trip, has been quite methodical with a huge degree of up front scheduling for local travel, visits and in obtaining permission to photograph. We have promoted the project in all horological journals in the UK as well as in similar journals in the Netherlands and of course in the Bulletin. We asked that all owners of Gretton timepieces contact us. We also searched through all available horological books, magazines and journals. We then contacted all likely museums, auction houses and dealers. There was never a flood of responses, but there has been a steady flow of contacts and support from the beginning. We have been fortunate in that
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everyone, whether private, business or museum have supported us and allowed us to photograph their timepieces. Mind you, it did take extensive lobbying and calls from prominent references to get some parties to open their doors, so to speak, but when they did, there was cooperation from the onset.
To date we have identified 125 Gretton clocks and watches distributed as follows: longcase 58, spring 40, lantern 3 , watches 23 and one lone dial. Of these we have been able to locate 64. This means that we know the owner and the whereabouts of just 64 of the 125 identified pieces. Confidentiality has been a key issue. It was slow at first to build credibility, but now we seem to have gained the full trust of all owners. There are those such as dealers, auction houses and museums who insist on being openly credited and referenced in the book. We know of clocks in Canada, The Netherlands, Argentina, Hong Kong, Iran, Spain, Germany, the USA and of course many in the UK. We have personally visited all known owners in the UK including private individuals, estates, dealers, museums and National Trust properties. In each case we have been fortunate enough to have been able to personally photograph each piece using our own equipment. This means carrying an impromptu studio to each location with lights, stands, backdrops, tripods, cameras, staging equipment, light tents and a large selection of tools, clamps, tape, blue tack and so on. In many cases we removed the movement from the case so as to photograph the movement itself. Watches are relatively easy to photograph as are the majority of spring clocks. However, many longcase clocks had to be photographed where they were. Some against bright orange or yellow walls, others screwed to the corners of a room and some on a stair landing with less than four feet clearance in front. In some cases we just had to accept the fact that the best photo could be gained by using a point and shoot, hand held camera and flash. So the world is not perfect, but we do have images of otherwise unavailable clocks. To date we have taken in excess of 13,000 digital images of Gretton's work. With each visit we do try to document specifications, type, size, style etc. While we note alterations and incorrect modifications or additions, much of this will not make the book. We must be sensitive to the owner and where he acquired the clock. In quite a few cases we are able to track a clock back through several dealers and auction houses, often the clock emerges somewhat different from when the previous owner had it. We therefore tend to focus on the clock as it is today. With all visits we are careful to get a photo release form signed, this allows us to publish the photos in our book as well as to use images associated with the project, such as promotion.

Documenting Gretton's history has been quite difficult. Since Gretton was a member of the Worshipful Company of Clockmakers (WCC), and Master in 1700, certain information was easy to obtain. We know that he was born in Claypole, Lincolnshire in 1648 , he then moved to London in 1662 at the age of fourteen to take up apprenticeship there. Why he chose clockmaking when there were no other clockmakers in the family is unknown. However, it should be noted that there were great changes occurring in the UK at that time. The pendulum had been introduced into England just four years earlier, the Restoration occurred in 1660 and the Royal Society was formed in 1662 . Gretton seems to have had an eight year apprenticeship then likely practiced as a journeyman for another two years before being released in 1672 . He was an apprentice in England through the Plague of 1665 and then through the Great Fire of 1666.

Gretton became an eminent and well respected clockmaker. It seems that he became quite wealthy, owning land and several properties both in London and in Lincolnshire. He was married twice and had several children, his first wife likely dying while giving birth. None of his children took up clockmaking. However, his eldest son earned a Doctor of Divinity from Cambridge University. Considering that Gretton's father could not sign his own name, instead using a mark, the Gretton's clearly moved up the social and academic ladder very quickly.
We have traced his parent's wills in the Lincolnshire archives, his children's wills in the Essex Records Office, Gretton's own will from the National Archives and more information from the Metropolitan Archives (London) and of course from the WCC at Guildhall.

Researching and compiling a book about a $17^{\text {th }}$ century clockmaker continues to be a major undertaking. There are rewards and of course disappointments, but no regrets. Much of the work is now focused on selecting images for the book and then mastering Photoshop. There are still a few clocks and watches left to photograph and more information to research at the archives. The internet has been a great asset for us, in communicating and for research. Note that much of this report has been intentionally written in generalities. For the complete story you will need to wait and purchase a copy of the book. A draft is expected by the end of 2011 with publishing sometime in 2012.
I have included a few images of Gretton's masterful workmanship. Many other examples can be found in the major museums of London, Oxford and Liverpool, some are with dealers but the majority remain in private collections around the
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The dial components must be re-silvered, but not without first removing each Arabic chapter number. This is a slow and critical process that must be executed with great care so as not to break any of the brass wire studs that are welded to the rear of each number and which are bent flat behind the dial so as to hold the numbers and chapter ring in place Figure 3.

The base dial plate was cleaned bright then lacquered making sure that the fine foliate centre engraving was at its best. The brass spandrels and each brass chapter was cleaned and lacquered. The chapter ring, sub. dial and moon phase scale were all silvered and lacquered. The chapters were then carefully replaced and the whole dial re-assembled Figure 4. The dial is again looking in the manner of the original maker.

This restoration work should last in excess of a quarter of a century. I will likely never see it again. The rest is now up to the care of the newly educated owner.

Figure 3


Figure 4


## (Continued from page 6)

world. Four of Gretton's clocks once formed part of the famous Wetherfield Collection of clocks, but unfortunately we have not been able to locate any of these clocks. Gretton would have made very many more clocks and watches than we have been able to identify, many would have been lost or destroyed, however it is our belief that many more still exist in private collections. Creating awareness is a difficult issue, all of the readers of all horological magazines and journals represent just a fraction of one percent of the potential owners of such clocks, owners who may have inherited a clock, used a designer to accent their home or purchased just a single clock. By far the majority of such owners have never read a horological journal and are not collectors. Accessing these owners therefore is next to impossible. As always, we would appreciate hearing from anyone who identifies a so far unknown Gretton clock or watch. Thank you.


Above: Gretton Longcase hood and dial
Below: Gretton enamel watch



Above: Charles Gretton signature
Below: Possible dust cover for book


