



## Mosaic

This issue: articles from the *British Horology Times*, the newsletter of British Horology Chapter 159.

MOSAIC CONTENT SOUGHT: Please submit NAWCC Chapter newsletter stories and articles and news published elsewhere about NAWCC chapters or members. HOW TO CONTRIBUTE: Send contributions to the editor at [ddeLUcca@nawcc.org](mailto:ddeLUcca@nawcc.org) or NAWCC, Inc., 514 Poplar St., Columbia, PA 17512-2130, c/o the Publications/Mosaic.

# It Pays To Be Caught in the Rain

This story was previously published in the November 2010 *British Horology Times*, No. 51.

by Richard Newman

I purchased my first British timepiece about 25 years ago while on a short vacation to England. After spending a few days in London, I hopped a train to see some of the North Country, finishing up in Edinburgh. It was there that I ducked into an antique shop to escape a driving rain and first saw the sundial pictured here. I was immediately smitten by the carved swirls, angel with wings at the top, and apparently original gnomon. The price was reasonable. The problem was how to get this 40-plus-pound souvenir back home to the States! But with my mind made up, I returned with my backpack later in the day, fastened a small cardboard box on top of the gnomon to protect both it and my backpack from otherwise certain damage, and carefully packed it into the backpack's cavity surrounded by clothes for protection.

I quickly learned that the hard part was negotiating the pack onto and off of my back in a controlled fashion. With street map in hand, I headed slowly and deliberately to the Edinburgh train station. At Heathrow the next day, the airport security screener called his pals around to see the crazy American who had a "brick" in his carry-on luggage. I don't think I, or my back, will ever forget that day.

Before the age of watches and clocks, sundials were the primary means for telling the time for thousands of years. Hundreds of books were written about sundial designs and associated technical observations, before clocks and watches became more prevalent in the latter part of the eighteenth century. Interestingly, sundials remained very popular until the late nineteenth century as a reliable means to correct or confirm that one's pocket watch was keeping good time.

According to the antique store proprietor, this vertical sundial came from the area around Fife and was likely several hundred years old judging from the wear, perhaps

Richard Newman's 40-pound souvenir and first sundial.



Closeup view along the top of my sundial. While there is wear along the upper right from years of enduring the elements, you can still plainly see the angel's facial features and wings.

early eighteenth century. Whether true or not is still a mystery to me, but it has had a sheltered and rather distinguished life in my home ever since. I would certainly appreciate if any of the members can tell me more about it or have any further insights.

# Time Well Spent

This story was also previously published in the November 2010 *British Horology Times*, No. 51.

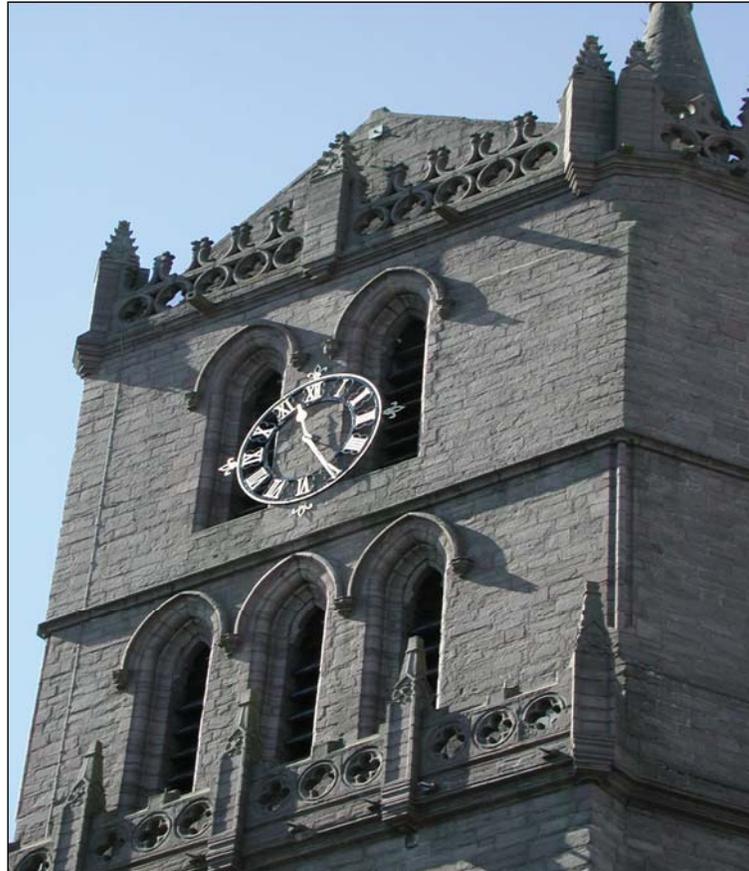
By Frank Del Greco (OH)

During the 2010 Chapter 159 tour of England and Scotland, our coach (bus) stopped in Dundee, Scotland, so we could view the HMS *Discovery* and spend some time in the town on our own as we wished.

As a tower clock enthusiast, I immediately spied a tall church steeple with four skeletonized dials. I went to the church, St. Mary's, and looked for a way to get in to ask someone about the clock. I realized that I was under a time constraint—it was 11:15 a.m. and the coach would leave Dundee promptly at 1 p.m.

Most of the doors of the church were locked shut with no handles or knobs on them. I found a door near the steeple with a doorbell. I rang it and waited. And I waited. No answer. Finally, I walked about three quarters of the way around the church and found another door with two doorbells. I rang them both. And I waited. And waited. I pushed them again, and after another long wait a man emerged who identified himself as the janitor. I introduced myself, told him I research turret clocks, and was interested in getting some information about the church's clock. He informed me that he knew nothing about the clock, as it belonged to the City Council—not the church—and that I might find some information at the city's museum. I asked for directions, which he gave me as quite straightforward, although he admitted that he had never been there. It was now 11:30 a.m.

I hoofed it down to the place



Tower clock in Dundee, Scotland.

where he said the museum was, only to find that there wasn't one there. I looked at a large map posted nearby and found the location of the City Council in an area called the City Centre. It wasn't far away so I walked there. I saw a door to the left of the huge courtyard labeled "City Council," and went in. I found myself in a stairwell with a lift (elevator). A sign read "Personnel—First Floor; General Information—Third Floor." I took the lift (which only holds four people) to the third floor but found the office door locked. I took the stairs down to the first floor and entered the personnel department, where I found a counter, a buzzer, and a stack of job application forms. I rang the buzzer. A young man came from a back room and I asked about the clock. He said that I needed to see Ian, the

archivist. "I'll get you his telephone number," he said, and disappeared into the back room. After what seemed like forever (remember, I was under a time constraint) he reappeared and told me he would take me to see Ian. We left the building, walked across the courtyard at a brisk pace, and entered another building. It was now 11:45 a.m.

At a door at the end of a long hallway, he pressed a buzzer and a woman appeared who took me to see Ian in the archives room. Ian looked old enough to be shelved with the rest of the materials there. I told him what I wanted. After I signed in, he started producing materials. The first was a published book that contained excerpts of City Council

meetings going back centuries as dictated by the book's author to a transcriber. It contained much information about who the various men were who through the ages took care of the steeple clock (there were actually three clocks in that tower over the last 450-plus years). But that wasn't what I wanted. It was now 11:55 a.m. In a flash Ian had another booklet on the history of Dundee, including a discussion of the steeple clocks. Success! Here are the details:

The first clock was made in 1543 by William Purves of Edinburgh. It was a "substantial clock weighing 113 stones" (1,582 lbs). Obviously, it had a foliot escapement. (Purves died before 1560.)

The clock lasted only five years as it was destroyed by the English with fire along with part of the tower. The

tower was rebuilt and a new clock—again with a foliot escapement—was made by David Kay of Edinburgh in 1553. It was “pounded out of wrought iron and of barely satisfactory quali-

ty,” with two large stones for weights, although the City Council paid 200 pounds Sterling for it. It drove a single hand on one dial that faced east.

In 1862 a new, three-train clock with Westminster chimes was made by James Rattray of Nethergate, Dundee, and remains there today. It is one of the largest turret clocks in Scotland, and its five-legged gravity escapement with 13-foot pendulum keeps the clock to within three to four seconds a week. Supposedly, the 1553 clock was left in the tower and remains there to this day.

The new clock drove four wooden dials, each nine feet in diameter. Then in 1884, the City Council decided that the wooden dials detracted from the architecture of the steeple. They were replaced with 11-foot diameter skeletonized dials that remain today.

I found that once a year, sometime in September, there are public tours up the steeple.

I left the archives at 12:15 p.m. and still had enough time to grab a bite to eat before the coach left.



Early longcase, ca. 1690.

## The English Longcase Clock

by Dennis Radage

This article was previously published in the November 2004 *British Horology Times*, No. 34.

Following the Annual General Meeting of Chapter 159 in Oklahoma in July, 2004, Dennis Radage, a member of Chapters 159 and 121, and current chair of the National Program Committee, gave us some history about the rise and fall of English domestic clockmaking, focusing on the longcase clock. Dennis kindly provided the following brief summary of his talk:

There were English-made domestic clocks in use before the pendulum (ca. 1658), the most familiar being what is now referred to as the lantern clock: wall hanging, weight-driven and using a balance wheel regulator with verge and crown wheel escapement. These components took a long time to appear. The toothed gear was in use around 300 BC; then the verge and folio escapement appeared more than a millennium and a half later, about 1300. Leonardo de Vinci experimented with the pendulum in 1494, and then Galileo applied this to horology in 1637. However, it was the Dutchman Christian Huygens

who in 1656 successfully built a practical solution for the clock. Fromanteel then brought the secrets of the pendulum to England and by circa 1660 verge and crown wheel pendulum-regulated bracket clocks and then longcase clocks were being made. These first longcase clocks had a short bob pendulum, similar to those of the bracket clock. It would be another ten years or so before the first long seconds-beating pendulums were applied, following the invention of the anchor recoil escapement. Certainly the longcase was not originally intended to protect the pendulum.

English longcase clocks dominated from 1660 to about 1860, but never completely disappeared. Longcase clocks were still being made, but in lower numbers, right into the twentieth century during Edwardian times.

The pendulum, the catalyst so to speak for the introduction of accurate clocks, was introduced just before the Restoration of Charles II in 1660. While clockmaking was at a stand-



Early brass dial, ca. 1690.



Brass dial, ca. 1705.

still during the civil war from 1642 to 1647, the restoration of the monarchy brought about a more luxurious way of life and an increased interest in science. The demand for fine clocks increased and in 1675 Christopher Wren built the Royal Observatory for the purpose of finding a method for determining longitude at sea.

Just as East, Fromanteel, Knibb, Tompion, and others were approaching their prime, the Plague (1665) and then the Great Fire (1666) severely hampered clockmaking, putting more than half of the clockmakers out of business. It was not until the 1670s with the rebuilding of London that commerce and clockmaking returned to normal.

Early longcase clocks were ebony veneered and had an architectural pediment. It is said that this design is that of Sir Christopher Wren, who had a longcase weather clock made with an architectural pediment. These early clocks had a brass dial, narrow chapter ring, winged cherub spandrels, were weight driven, and had a verge and crown wheel escapement with a short-bob pendulum regulator.

The invention of the anchor recoil escapement in circa 1670, with its narrow rocking arc, allowed for the

design of the long seconds-beating pendulum. Rack striking appears about 1675, and by the early years of the eighteenth century just about every mechanical feature found in clocks in the next century was already developed and in use.

Features found in early clocks, such as the dial type, square or break arch, the numbering system, spandrel designs, and engraving styles, along with case features, such as the rise-up hood, convex and concave under hood moldings, etc., are all good dating features. Case finishes also help in dating, from the early ebony veneers through marquetry, walnut, oak, mahogany, and the lacquered styles.

Longcase clocks quickly became the specialty of provincial makers. While London makers made both bracket clocks and longcase clocks, provincial makers tended to focus mostly on longcase clocks. Provincially made longcase clocks quickly outnumbered those made in London. The traditional open cut swan neck pediment became a provincial icon, often with a center brass finial. Other than the early carved cresting, London clocks are rarely, if ever, seen with a swan neck pediment.

By mid-century, circa 1750-60,

mahogany-veneered cases started to become popular and dial engraving became simpler, with the loss of features such as the inner quarters circle and the half hour markings. The white dial was introduced in 1772 and dominated dial types by circa 1800.

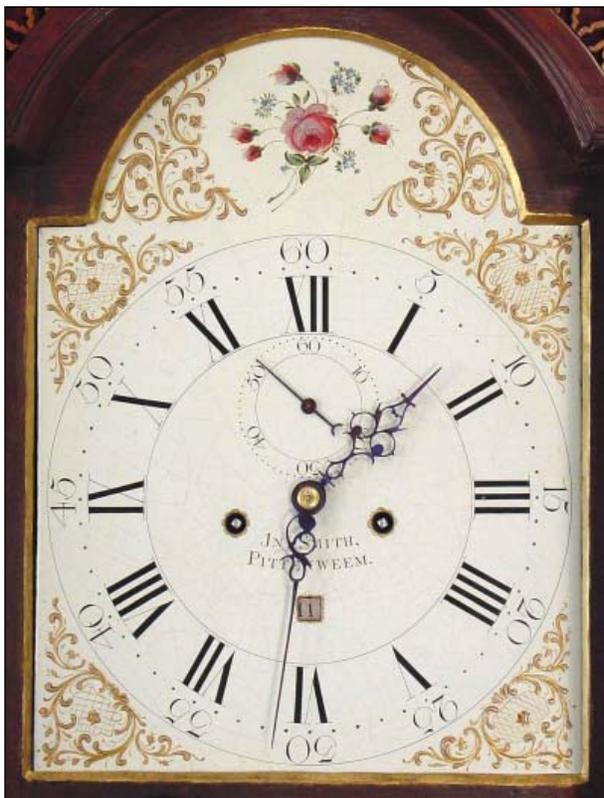
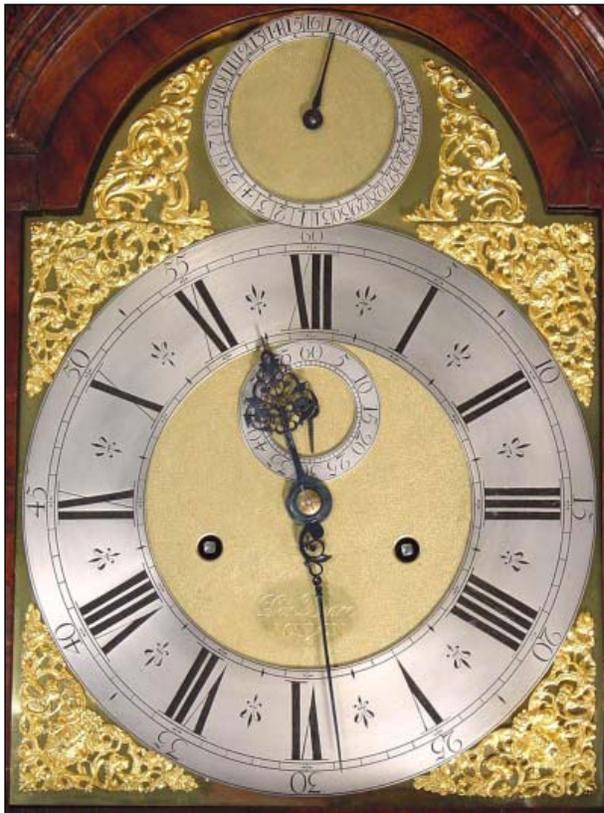
The cases of London longcase clocks usually conformed to one of a handful of distinct styles. These did not usually follow the furniture trends of the time, because the Clockmakers Company believed that since the movement is the key component, the case should not detract from it. For this reason, Chippendale and other such designs were never adopted; they were also considered too flimsy and difficult to mount a movement in. Provincial clocks, on the other hand, did adopt some decorative features of the major furniture makers.

By the early nineteenth century, London makers also started producing a distinct form of the longcase regulator, usually a simple design with a glass trunk door to view the mercury-filled "Graham" compensating pendulum. Provincial cases continued to be slender through most of the first quarter of the nineteenth century, but then as dial sizes in-

## Mosaic

creased beyond 12 inches to 13, 14, and 15 inches across, cases not only became taller to maintain some form of proportion but also got wider. By 1840-50, some provincial cases became quite wide, and some would say equally as ugly. Demand started to drop off, even though there was no specific longcase competition. Partly because of this perceived ugliness, and certainly aided by the onslaught of shelf and mantel clock imports from France, Germany, and America, longcase production almost ceased. London makers did continue to make longcases to order and continued to produce regulators, but the so-called 200-year dominance had come to an end.

To properly date a clock and confirm its authenticity, meaning that all of the major components, such as dial, movement case, etc., started out life together, requires a careful examination of each of the clock's components. As already indicated, the case features: decoration, veneer type, etc.; the movement type: wheels and collets; the striking method and escapement; and the dial type: engraving style, numbering system, spandrels, and hands, all are excellent dating features. Once a date is estimated, the maker can be researched from one of the many books on the subject. A great deal of additional information can often be found about the makers, their working times, their families, the places of birth and burial, etc., from provincial books on the subject.



**Top.** Break arch dial, ca. 1715.

**Above.** Early white dial, ca. 1780.



A clock with swan neck, ca. 1780; dial shown at left.

The talk concluded by describing a few of the wealthy individuals who purchased the early clocks. A summary of what to look for when considering the purchase of a longcase clock was given along with a list of recommended reference books.