Is this the Oldest Watch In the World?

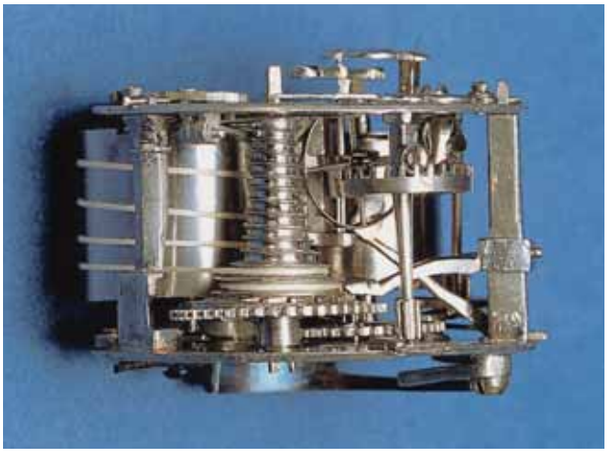
The Melanchthon Watch from 1530

by Greg Kinkead

IN ISSUE #53, we introduced the Towson Watch Company which, under the shared leadership of master watchmaker George Thomas and mechanical engineer and talented watchmaker, Hartwig Balke, is helping to successfully establish a revival of watchmaking recognition in the United States with an extraordinary line of high-quality mechanical wristwatches. Recently, the Maryland-based Towson Watch Company completed the restoration of perhaps the oldest watch in the world. Here is an inside look at the challenging feat.

At present, only two dated watches from the beginning of the sixteenth century are known. The earlier, which dates back to 1530, belonged to well-known Protestant reformer Philipp Melanchthon (1497-1560). The most important colleague of Martin Luther, he was a key figure in the reform of the German school and university system and was given the honorary title of "Praeceptor Germaniae" ("Germany's Principal Teacher").

One of only a handful of sixteenth century timepieces for which the owner can be identified and the only one to have belonged to an important Renaissance intellectual, the Melanchthon is not only the earliest dated watch, but it is also the earliest known example of a ball-shaped watch. Spherical in form with a diameter of 48 mm, the watch's case is made from engraved and gilded pierced brass, while the personalized inscription, "PHIL. MELA.



GOTT. ALEIN. DIE HER. 1530" (Philipp Melanchthon. To God alone the honor. 1530) is placed around the bottom of its exterior between the three circular feet.

A loop on its top allows the watch to be worn on a chain while the three feet on its bottom allow it to be set down on a flat surface without rolling. The chapter ring displays twelve hours in Roman numerals, each with a raised button for telling time in the dark. The inside ring rotates to set the alarm and uses Arabic numerals from one to twelve while an additional set of Arabic numerals from thirteen to twenty-four is engraved on the outside of the dial.

The watch has a single steel hour hand with a portion of its tail missing.

When George Thomas, co-owner of TWC and renowned throughout the industry as an expert on antique historical watches, first received the Melanchthon Watch, the movement was in bad shape and was not in working condition. Thomas' knowledge of the old watches of that period, his studies of photographs of watches and small clocks from that century and research done on literature about watchmaking in 1530 led him to the realization that some mechanical parts were not authentic. For example, the movement contained parts crafted from brass, untypical for that time period and there were parts in the time mechanism (results of an earlier repair job) that were not originals.

Top Left: A view of the completely restored inner mechanisms of the Melanchthon Watch.

Top Right: An inside view of the Melanchthon Watch after restoration.

Bottom Left: In order to enable long-time preservation, cat gut in the fusee train was replaced with nylon monofilament line because of the hygroscopic nature of the gut.

Bottom Right: The Melanchthon Watch has a single steel hour hand, with a portion of its tail missing. When closed, a loop on its top allows the watch to be worn on a chain.

The striking train with its smaller barrel was in good original order and the case and hemispherical bell were for the most part in good condition, requiring only minor makeup and preservation work.

Immediately, the experienced watchmakers at TWC disassembled the movement and removed all unoriginal components. This turned out to be a trying endeavor as the ratchet wheel, the side of the mainspring barrel, the balance cock, the potence, and a few screws and levers underneath the plate were all made of brass. In addition, the balance wheel was incorrect and the replaced mainspring had broken into several pieces. It was also evident that various pivot holes in the plates for the fusee, barrel and wheels for the two trains had been opened and that new brass brushings had been riveted into the holes by a previous repairman.

"We set out to use all original parts even if they had to be repaired, to put the movement back into original condition by producing parts exclusively by hand, to put it back into running order and to enable preservation for the next 100 years," said Balke.

Timekeeping was not an issue because it would mean that original parts would have to be replaced by new ones. Watch movements from that time period were made only from iron—no brass was involved and so, the new balance cock, bar balance, ratchet wheel, counter potence and barrel wall were all hand-made from iron using a saw, file, gravers and small pieces of Arkansas stone. These few items were constructed from samples of early sixteenth century small table clocks from southern Germany and images and photos of the few remaining watches of that period.

The unoriginal brass brushings were pushed out of the plates, replaced by round iron pieces of low carbon content with a tight seat and then riveted into the plates. "It was important to make the lines invisible where the material of the plate met the material of the plug," said Balke.

George Thomas, left, and Hartwig Balke, right, co-owners of the Towson Watch Company.

The wall for the mainspring barrel was made from a flat piece of iron, bent, hand-finished and calibrated to fit the original parts. The bottom and barrel wall were soldered together (a special kind of solder was used to make the transition invisible).

To repair the broken-off regulator, an entirely new top piece had to be made and soldered to the remaining part. Again, detailed hand-finishing was required to obtain the original appearance.

The pig's bristle in the regulator, acting as a device to change the amplitude of the foliot's oscillations, was taken from a high quality paintbrush, purchased from a painter's store while the three screws, holding regulator, balance cock and counter-potence needed to be replaced by new handmade screws.

At the same time it was evident that a new click spring had to be made because the old one was no longer in existence. (To produce click springs from high carbon steel is not a big deal these days; however, to make it the old way with the old appearance is a challenge).

To create a long click spring in which the range of elastic deformation is somewhat wide, cold forging was utilized since that was actually the method of the old days.

In order to enable long-time preservation, cat gut in the fusee train (of which only small pieces survived) was replaced with nylon monofilament line because of the hygroscopic nature of the gut.

In all, the Melanchthon Watch was under restoration for six months, two thirds of which was occupied by researching the authentic timepieces of the early sixteenth century.

Today, the restored Melanchthon Watch is in a collection of The Walter's Art Museum in Baltimore, Maryland, where it will become a part of a permanent historical display of early clocks and watches scheduled to open in 2004. ○