



# British Horology Times

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

## Blue Moon by Tom Spittler

The lunar period is about 29 1/2 days. That would be the time from one full moon to another. Our calendar month is 30 or 31 days except for poor February. This means that every so often a month can have two full moons, usually in the months with 31 days, with one full moon very near the beginning of the month and the other close to the end. That second moon has been given the name, "Blue Moon." And since these blue moons don't come around very often, events that also don't occur very often are said to occur, "Once in a Blue Moon!"

The clock pictured is an oak, caddy top clock dating to the 1760s and it had a 'blue moon.' It is a type of clock with a penny moon rather than a normal rolling moon in the dial arch. It was made by Benjamin Barlow the son of clockmaker Edward Barlow (1699-1776). Benjamin Barlow was baptized on July 14, 1736 and was very likely also born in 1736. He would have apprenticed at age 14, probably to his father, and would have started work on his own when he was 21 (1757) or shortly thereafter. There are several Barlow clockmakers in the greater Manchester area and he could well have served as a journeyman, possibly for one of them, before starting work on his own.

In any event, Benjamin seems to have worked on his own at two locations, Ashton-Under-Lyne and Oldham. Both of those places are about 5 miles east of the city-center of Manchester and about 2 miles north and south of each other. We know he worked out to the Nag's Hear Inn in Oldham in 1771, and his second child was baptized in Oldham in 1778. Oldham is a larger place than Ashton-Under-Lyne so it is likely he worked in the smaller Ashton in the 1760s prior to moving to the Inn in Oldham in the 1770s. This clock with the blue moon is from Ashton. Of the seven known Benjamin Barlow clocks, two are from Ashton and five are from Oldham.

Moon dial longcase clocks actually have two moons with one





being on display while the other is hidden, awaiting its turn. Usually the moon faces are identical. One of the moons on this clock is the normal moon in a bright-night sky. The second moon is very rare. It is actually a moon in a dark cloudy-night sky, but the artist painted it blue, and so, it's a Blue Moon. I have seen pictures of a clock or two with a blue moon, but this is the only one I've ever touched.

The second unusual feature of this clock is the carved crest on the trunk door. I always feel any carving on any 18th century English clock is very, very suspect. However, this crest is very convincing and was carved when the door was made and I truly feel the door absolutely dates to the 1760s. Therefore, I feel the crest is original.

This clock retains its original mercury fire gilding on the center of its brass dial as well as the spandrels. Looking closely at the close-up photos of the two penny moons, bits of the oxidized brass dial are visible along the bottom edge of the opening around the moon where the gold has worn off and the brass turned dark. This gold is 250 years old and it is a wonder some restorer has not gotten after it and turned it to polished and lacquered brass. The look of the original gold can not be duplicated, especially not by plating.

Most of the information used in this article came from Edmund Davies' book *Greater Manchester Clocks & Clock-makers* which I find to be a wonderful new book available from Mayfield Books. \*



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### **British Horology Times - BHT**

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Chapter 159

**President's Message:** Last month's BHT was an exercise to determine if it was feasible to do it in color and lessons were learned. After looking at many options it was resolved that in the future we would send it out in Black and White by mail and subsequently post the Color version as a PDF file on our web-site. This way you can enjoy the newsletter in full color and print anything that interests you. We do have a presence on the NAWCC web-site but we do need someone to maintain it and I desperately need a volunteer to help. If you would like to be our IT person please contact me – you would be doing a great service to the Chapter.

We started our season in Florida. Betty Brown was unable to attend as her Husband Clyde has severe respiratory problems and cannot travel – we wish him well and thank Betty for many years of service as our Chapter Hostess. Attendance at the Regional and our meeting was down from previous years due to the economic climate and the change in venue. Dennis Radage gave a splendid presentation with many more illustrations than in the published account – thank you Dennis.

For many years now Sam Kirk has maintained our web site and we have had many new members join the Chapter as a result. In the future it will be maintained by HQ. Thank you Sam for all your time and talent you have given to the Chapter.

The National this year brings to an end our three year cycle and we will be electing new Officers for the Chapter. Dave and Julie Kern, who have done a wonderful job as Treasurer and Secretary respectively. I will also be stepping down and so there are three posts to fill. I will be trying to put a slate together (assisted by Roger Gendron and Frank DelGreco) but we are a democratic organization and if you have aspirations please let me know. Thank You Ken Johnston. \*

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**Editor's Corner:** The last issue of BHT was as much a surprise to me as it was to all of you. I hope you loved it like I did. Our President Ken Johnston took it upon himself to devote many hours into the new look. When I took over as Editor, I was cautioned not to change things, as the membership prided itself on tradition. Perhaps we are on our way to new traditions..... I like the new look, but I am one of the chapter's newest members. Let us know how you feel.

Around here where I live, the Groundhog, or Woodchuck, is given the important task of predicting the weather. On February 2nd of each year, he is carefully watched as he emerges from his underground hibernation to see if he detects his shadow or not. If



6 more weeks of winter. If not, Spring is said to be right around the corner. Well folks, the Woodchuck saw his shadow, so I need to keep the long underwear on for 6 more weeks. I guess that is OK by me, it gives me more opportunity to read up on clocks.

My research into the Frederick Pearce/Seth Thomas clock has grinded to a halt. The feelers I put out for information have not provided much news yet. Internet searches have not yielded any results either. I am still hopeful to find out what this timepiece was used for, and will report back to you when I do

We have two interesting articles from Tom Spittler and Bruce Forman and I thank them for submitting them. I so enjoyed learning about the Saggerson family and their wheel cutting shop. Bruce did a super job of writing, and the pictures are truly worth a thousand words.

Send me a few words about what you collect. You don't have to be an English major or an award winning photographer. Sharing our interests and knowledge is what its all about. In a future issue I hope to share the story of my new shop. Perhaps not 100% British, but hopefully something you will like to see.  
Deena. \*

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## British Horology Chapter 159 Financial Report. December 31, 2009 by Dave Kern

2009 showed a Net Income of \$57 compared with \$214 last year. Revenue was \$775 compared with \$741 last year. 2009 as well as 2008 showed less than normal revenue because we deferred dues for one year, the effects of which overlapped two years. We still showed a net income for both periods. 2010 will be challenging because we have most of our Member's dues expiring either at the end of '09 or '10. In addition, although we have managed to keep Newsletter cost down, we are trying to add some quality by using some color which is more expensive. Our major expenses are for printing and mailing of the BHT.

We had 139 Members at 12/31/09, versus 140 last year. We will continue to make the effort both to get new members and retain members. Dues stayed the same at \$5 per year and barring any major operational change, should continue at that level.

We had \$4,992 in the bank at 12/31/09, the Chapter's only asset.

Respectfully, Dave Kern, Treasurer, Chapter 159. \*

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**2010 Program Schedule:** British Horology Chapter 159 meets three times a year, at the Florida Regional, at the Southern Ohio Regional and at the National. The program schedule for 2010 is as follows:

**Southern Ohio Regional, April 8 – 10:**

“A Clay Musical Clock” The story of a clock that was presented to Caroline of Ausbach, the Queen Consort of George II, in 1736 and is now in the Colonial Palace of North Carolina.” by Ken Johnston.

**2010 National in York PA June 16 – 20:**

“Captain Cook, Venus and a Great Discovery” by Philip Priestley

If you are planning to attend the Southern Ohio Regional or the National, be sure to attend the British Horology Chapter 159 meeting so as not to miss any of these great presentations. We look forward to seeing you there. Dennis Radage. \*

# NINETEENTH CENTURY WHEEL BLANKING DIES

By Bruce R. Forman

Little has been written about the use of blanking dies to produce watches in the nineteenth century but blanking-out parts was the only method that could have produced the thousands of fusee watches made in Great Britain. One firm that supplied this trade for nearly 100 years was the Saggerson family of wheel cutters located in Prescott, England, Figure 1.

The original shop is still standing but the tools it once contained have long since been scraped or dispersed through-out several public and private collections. Aside from the wheel cutting engines used in their business, Saggerson also had a large quantity of die sets to punch-out the many wheel blanks before cutting, Figure 2.

The author has a collection of about 100 die sets from the Saggerson shop and this hoard is probably only a small sample of their original inventory. The quality of these dies vary greatly but it appears that the earlier made dies were crude and fabricated from old files; file serrations can still be seen on their surface. Files were made of high quality tool steel and the author also owns an early wheel cutting engine with a frame that was made from an old file. Some dies in the collection appear to date from a more modern era when the die bodies were all made to a standard size. Several of these are unfinished with their locating pins and closing screws fabricated, but the die hole has not yet been drilled. This made more efficient their production and a raw die blank could be completed on short notice when a new size watch wheel was needed, Figure 3.

Three separate operations were needed to make a spoked wheel blank. The first step was to blank-out a round disc from a sheet of brass, Figure 4. Blanking dies for this task were easily made as they were simply a hole bored into the die, as shown in Figure 2. A small piece of brass was clamped through using a hammer or press. Before the spokes could be punched, a center hole was added using a fly press and an open stump, Figure 5 & 10. Fly presses were commonly used to punch holes in metal and were used extensively well into the early



Figure 1. The Saggerson shop as it appears today in Prescott, England. (Photo courtesy of David Grace)

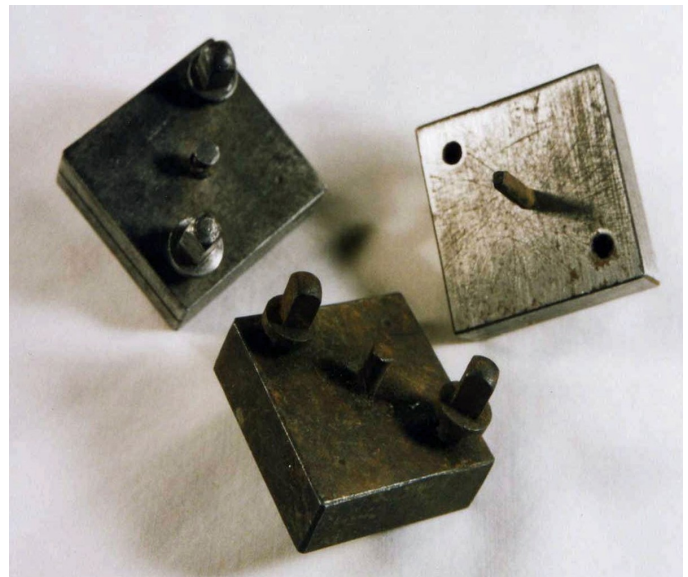


Figure 2. A Saggerson die set on the left and a modern example made by the author on the right

twentieth century. The center holes in the watch wheels were small in diameter (some only 0.020 inches) and fit a fit provided in the spoking dies used to center the blank. The hole was also necessary for mounting the wheel to the wheel cutting engine.

Dies used to blank-out the spokes were more complicated to make than those used to make the round wheel blanks. The rough die was first drilled to the diameter of the interior wheel rim. Once this was done a bar with a star cross-section was driven into the hole. The star was the rough profile of the inner spokes of the wheel. The die plates were probably separated by a piece of thin metal. This could be removed which allowed a gap between the plates in which a saw could be inserted to cut the star in half. This left half the bar in each plate but both were aligned to each other. The star bar was then finished flat on either plate face in a lathe or with a hand file. Once reassembled the star was filed to the finished size of the spokes. The three stages of making a spoked die is shown in Figure 6.

Punches were made to fit these opening. These punches were hand filed and because of slight variations were not necessarily interchangeable between different spoke holes in the die. This meant that each punch must be kept in the proper spoke hole during the assembling and disassembling of the die, a somewhat awkward task. Often a thin sheet of brass (about the same thickness as the wheel blank) was added between the plates. This ensured that when the blank was clamped the die faces would clamp evenly as the brass deformed slightly. Without this brass shim, the dies can cock slightly if the pressure on the thumb screw bolts is not applied evenly. Often the area around the wheel was relieved to create more clamping force near the rim, Figure 7.

Special die sets were also made for crossing-out crown wheels and contrate wheels, Figure 8. Many wheels could be made in a single hour using these simple tools but large volumes were required to make a decent living in a highly competitive market.

The Saggerson shop used these traditional methods of wheel production from their founding in about 1826 until the business closed in the early



Figure 3. Raw die blanks before finishing.

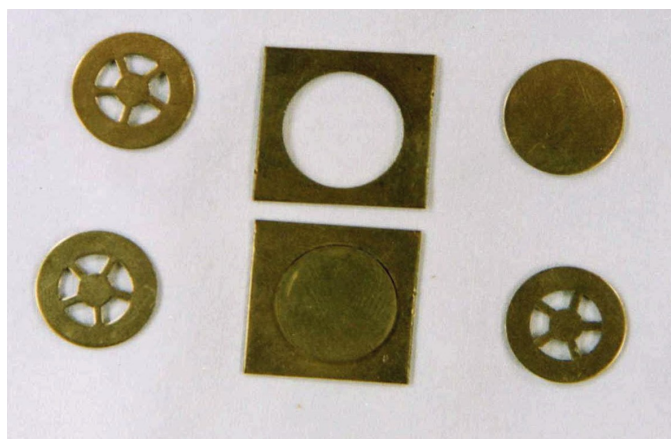


Figure 4. Examples of wheel blanks.



Figure 5. A fly press punch used to make the center hole in the wheel blank.



1900s. As the demand for English watches decreased, the firm spent most of its later life supplying replacement escape wheels of all sorts for the repair market; this included the chronometer and duplex type. A sample of their products is shown in Figure 9.

One wholesale account Saggerson supplied was the firm of R. Haswell & Sons. They were founded in 1812 and located at 39 Moreton End Lane, Harpenden, Herts (formerly of Clerkenwell) and were suppliers to the horological and kindred trades. James Eric Haswell (d. 1967) knew that his firm had considerable business dealings with the Brothers Saggerson before his time, and until the 1<sup>st</sup> World War.

He visited the last surviving Saggerson in 1915 when business was getting very drab. Saggerson was dying of consumption and had nobody working with him. He had his machines wrapped in cozies and only a few escape wheels to cut and was said to be giving up the business. When asked by Haswell what he was going to do with all of his nice tools, Saggerson's morbid reply was "Oh! I think I'll just drop 'em down the bottom of a coal mine". Later, Haswell heard that Saggerson did go out Sunday afternoons and throw bits and pieces over the hedges during his walks.

Although some small pieces of the Saggerson shop may still lie buried under hedgerows the shop remained virtually intact following the death of the last Saggerson; then the shop passed to a daughter.

The British antique tool dealer Charles Alex stopped by the Saggerson compound in 1967 and was greeted at the door by a woman who seemed to have been expecting his arrival. She invited him in believing he was the local scrap merchant there to clear away some old tools from the shop. The lady of the house had died about a month earlier and the executors were settling the estate. The wheel cutting shop was still very much intact and looked as though it had not been touched for some 60 years.

The only exception was a large can that had been filed from the many compartments storing the carefully sorted watch wheels held in inventory. The executors were segregating the "valuable" brass from the other equipment and one can only guess how many thousands if not millions of small watch wheels filled this tin that weighed some thirty pounds. Mr. Alex promptly bought

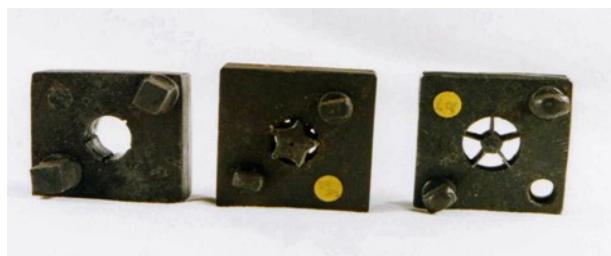


Figure 6. The three stages of making a die for

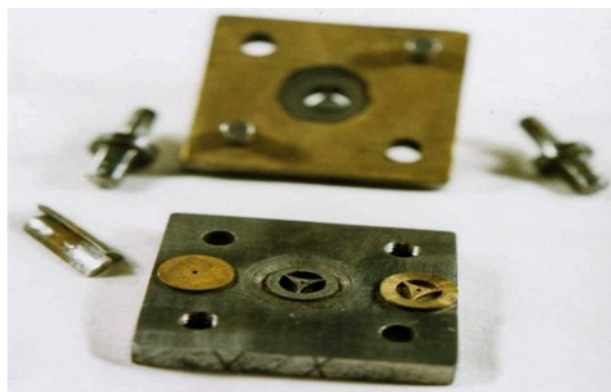


Figure 7. A die opened to insert a wheel

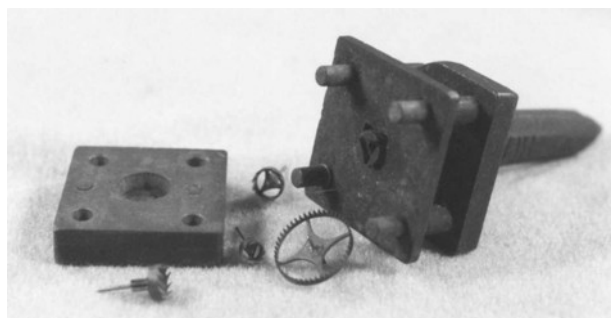


Figure 8. Crown wheel die set.

the “valuable” brass and other shop contents many of which have now been donated to museums or have found their way to private collections.

Although the primitive blanking methods used by the Saggersons changed little over the 100 years they were in business, American watch factories continued to develop blanking methods to a much greater level of precision. The Hamilton Watch Company in the 1900s had many small press operations in their Lancaster watch factory. Everything from gear blanks to watch dials and plates started life as blanks.

Dies were often used with a sub-press that allowed for greater precision. Without these developments it would not have been possible to produce the many high quality watches in America at such a reasonable cost. Although a nearly forgotten tool, the foundation of the mass-produced watch as we know it today, can be traced to the die and punch, the same technology used some 200 years ago in Great Britain during the era of the fusee watch. \*

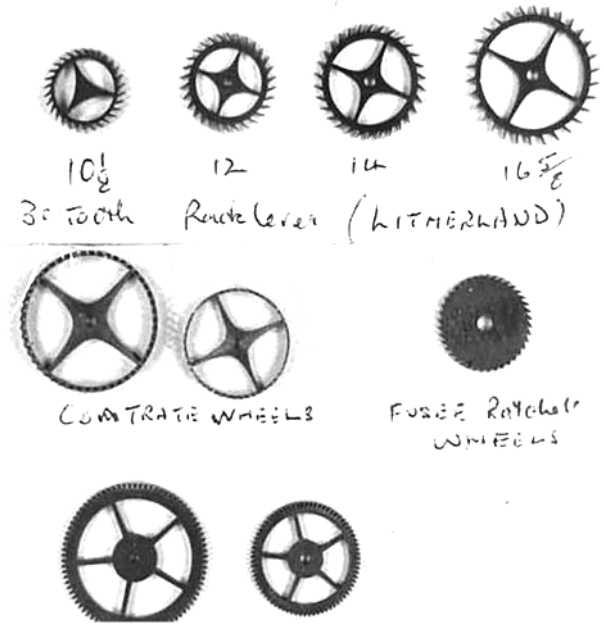


Figure 9. A small sample of the wheels cut in the

**OUR NEXT MEETING**  
 Will take place at the  
 Drawbridge Inn Hotel  
 At the  
 Southern Ohio Regional  
 April 8-10 2010  
 Program by  
 Ken Johnston



Figure 10. Ball and fly press used to punch center holes in wheel blanks.