



# British Horology Times

NAWCC CHAPTER 159

## News FROM CHAPTER 159

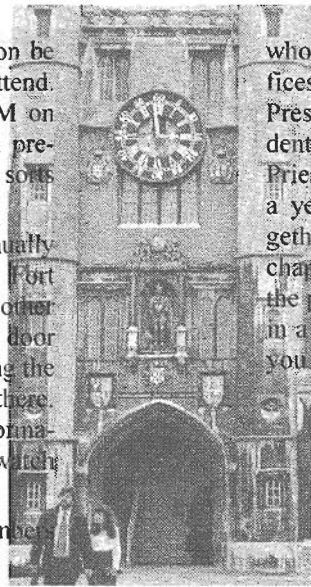
The 2003 national convention will soon be here and I encourage all members to attend. Our chapter is scheduled to meet at 2PM on Friday, July 4. Dr. Killian Robinson will present a talk on Irish clocks. He collects all sorts of Irish timepieces.

You may recall that our chapter annually co-hosts the Southern Ohio regional in Fort Mitchell, Kentucky. We just completed another successful event. Our chapter donated a door prize, helped out in several events including the auction, and held our regular meeting there. Hank and Marge Farrer presented an informative slide show on the history of pocket watch crystals.

Congratulations to Chapter 159 members

who were recently elected to national offices. They are John Hubby, 1st Vice President; Tom McIntyre, 2nd Vice President; Bill Keller, Director and Phil Priestley, Director. Speaking of elections, a year from now we will be putting together a slate to select new officers for our chapter. It is never too early to step up to the plate to volunteer to serve your chapter in a leadership role. Please let me know if you are interested: [FDeIGreco@aol.com](mailto:FDeIGreco@aol.com)

*-Frank Del Greco*



←Turret clock at Trinity College, Cambridge, England by John Smith & Sons

### EDITORS CORNER

Publishing British Horology Times is a team effort. There are upwards of 140 members of the team. What's involved?

Producing the articles and material (the writers do that and we are lucky to have many of them); making them fit on a certain number of pages in some kind of order (the editor does that— it's a juggling act); proof reading (editor); putting it all in electronic form that the company who does the printing can handle (editor); hauling it off to the printing company making sure that they understand the details of what's wanted: printing, inserting, folding, and staying within budget (publisher); stuffing the envelopes (publisher).

And here's the surprise — in a discussion with Bernie Pollack almost 4 years ago, he found out that the job of getting envelopes, making address labels and sticking on stamps was a time consuming chore for the publisher. "I can do that," said Bernie and ever since Bernie has furnished the stamped and addressed envelopes (no labels— addresses neatly printed right on the envelopes). "What a help that is," says the pub-



Bernie Pollack, good samaritan extraordinaire

lisher with a heavy sigh as he performs his last effort for that issue: sealing the envelope flaps, bundling and carting the whole thing off to the post office.

There is one more task: opening and reading the newsletter upon arrival, and all 140+ members of the team do that.

*-Paul Odendahl*

## THE TOWER CLOCKS OF ENGLAND

Frank DelGreco (OH) describes this exceptional once-in-a-lifetime tour.

Photographs by Frank DelGreco

Two weeks prior to the Year 2000 seminar in London, 32 members of our chapter took an 11 day tour called *The Tower Clocks of England*. The tour was organized by English member Phil Priestley who found all the places to visit, and this author who found the U.S. and Canadian members interested in participating.

Our goal was to see tower clocks (or "turret clocks" as they are called in England) in their natural environment (i.e. working in churches and public buildings), and to learn a little about the different configurations. Plus we wanted to have lots of fun doing it.

There are literally hundreds of functioning tower clocks in England. The trick is to know the right people who can arrange for access to those clocks. For that we are indebted to Phil Priestley, Brian Sparks of Warwick, Chris McKay (chairman of the turret clock section of the AHS), and Reverend David Birt of London for making those arrangements.

Our tour of tower clocks began with a visit to the Clinton House in Baddesley, a home surrounded by a moat and filled with secret rooms used to hide priests during the days of their persecution. The stable outside the moat had a fully functional two-train tower clock in the hay loft.

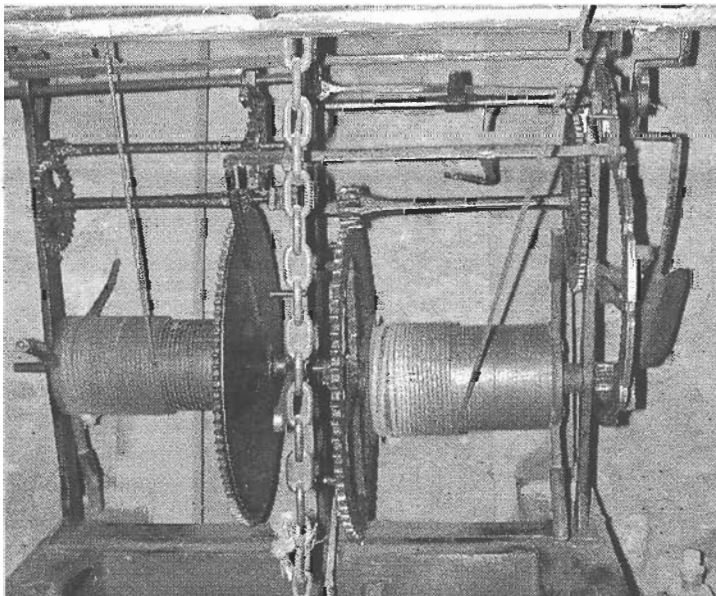


Figure 2. Door frame style tower clock, trains side-by-side.

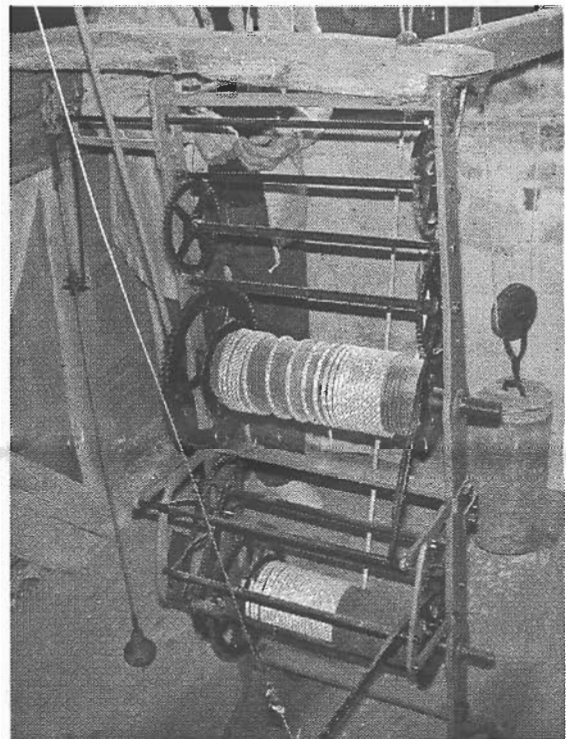


Figure 1. Door frame style tower clock, one train above the other.

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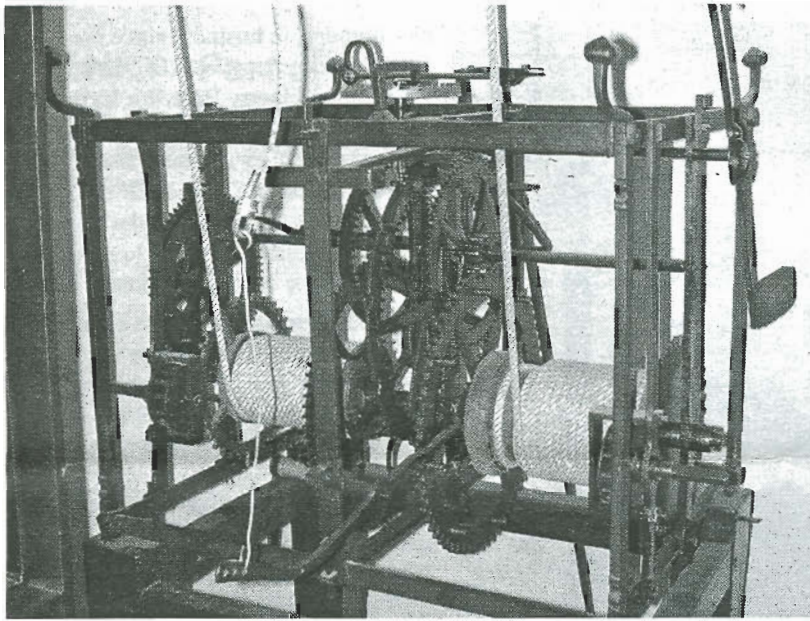


Figure 3. Posted "birdcage" construction with time and strike trains positioned end-to-end.

We visited eight provincial churches in two days. These churches were all built between 950 and 1400 AD. Most were originally built with bell towers; the clocks were added later, ca 1500-1800.

The clocks we saw were of several types: door frame style, either one frame above the other (Figure 1); or trains side-by-side (Figure 2); posted ("birdcage") construction with the time and strike trains positioned either end-to-end (Figure 3); or with trains side-by-side (Figures 4 and 5); flatbed (Figure 6); or cast frame (Figure 7). Although all clocks we saw in towers had pendulums, some of them were originally fitted with verge and foliot escapements. You will recall that the pendulum was first applied to clocks around 1656. Some of the clocks we saw were older but had been converted to pendulum regulation for improved timekeeping.

We climbed a lot of towers to see clocks. Just how does one get up into a clock or bell tower in a church built before Columbus discovered America? Most church towers had spiral staircases made of stone. The stone steps were pie-shaped, two feet

wide if you were lucky, and often well-worn (read "rounded over"). Imagine climbing those stairs, but wait—there were no handrails, windows or lights. In many cases it really didn't matter if you went up or down those staircases with your eyes opened or closed.

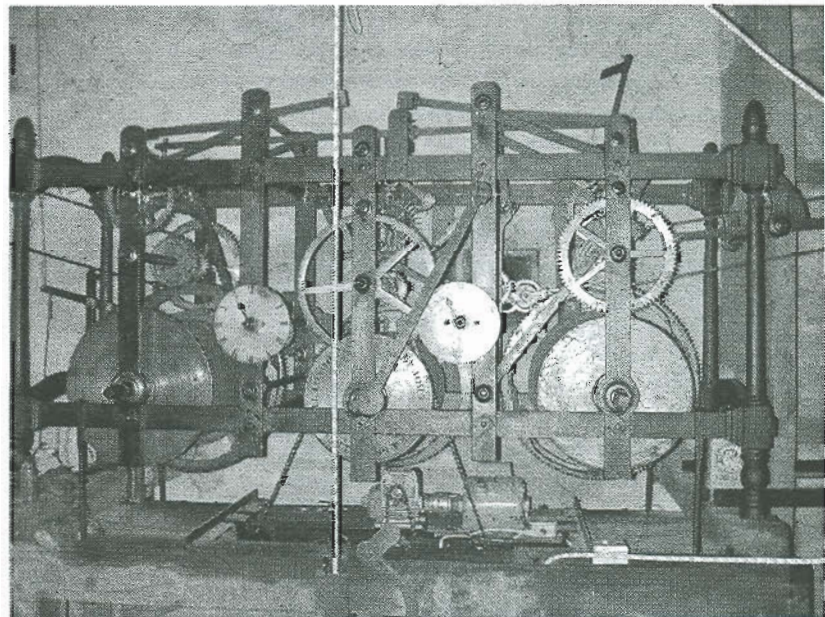


Figure 4. Posted "birdcage" construction with trains positioned side-by-side.

The tour moved to Salisbury. We visited Stonehenge and, of course, the Salisbury Cathedral. There are two clocks in the cathedral. The original foliot-regulated clock, purported to be the oldest in England (ca 1385), was located on the ground floor in the church for all parishioners to see. It is still running. The "newer clock" (ca 1883) is up in the tower and we climbed 300+ steps to see it.

It was very interesting to see the structural details of a large cathedral as we climbed above what is seen by parishioners (for example, the top side of a gothic ceiling). It was equally amazing to see how modern repairs were married with the original work to hold these old churches together.

We visited a number of other churches with clocks, including some with "jacks". (Jacks are mechanical figures on the sides of buildings that do such things as strike bells or blow trumpets.)

Speaking of bells, we typically were able to climb into bell rooms to see anywhere from one bell that

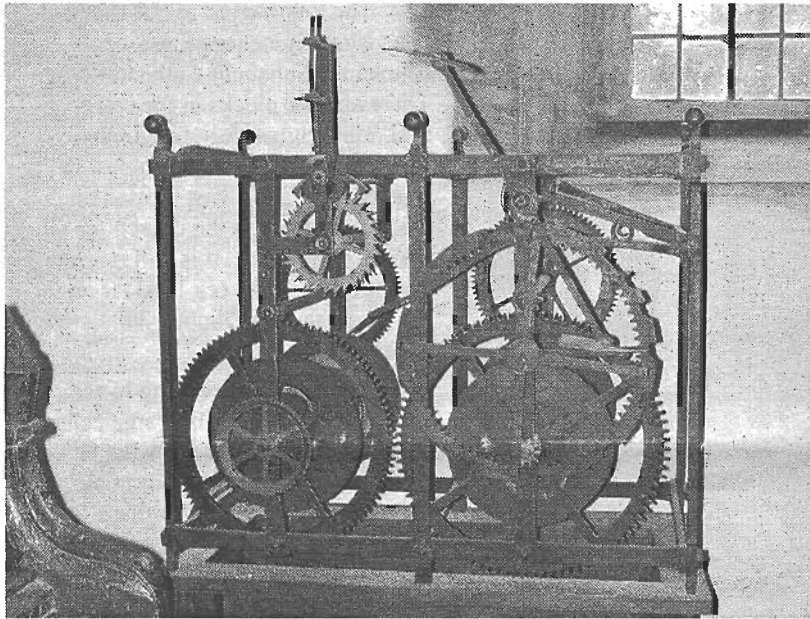


Figure 5. Another example of posted "birdcage construction with trains side-by-side.

struck the hours to a dozen bells that were driven by mechanical carillons connected to the clocks.

We visited the Willis Clock Museum — an unusual place indeed. Three brothers decided to get into the cider business. After buying their first cider press sight-unseen (a 15-foot tall monstrosity), they decided to create a cider press museum (yes, you read that correctly). Finally, they decided to add a clock museum. It was quite impressive, with many tower and longcase clocks.

We headed for London and visited a number of churches including St. Paul's Cathedral. (This author personally climbed all the way to the top — 531 steps.) We even visited a Jaguar dealership that had the original tower clock from St. Peter's church in its office. The clock had been burned in a massive fire at St. Peter's where it fell 60 feet. It was hauled off for scrap but later rescued from the dump and restored by John Wilding.

We visited the Whitechapel

bell foundry, in business since the 1400s. Whitechapel cast Big Ben and the original Liberty Bell. We learned that when bells are made to a specific musical note, they are cast "sharp"; then the inside rim of the bell is turned on a huge vertical lathe to reduce wall thickness, thus lowering the tone to the correct frequency.

Our tour culminated in a climb up Westminster tower where we stood six feet from Big Ben when it struck 12 noon on October 25.

All in all we visited more than two dozen churches, public buildings, private collections and museums and saw several dozen tower clocks. We did a lot of stair climbing. We averaged over 300 steps up (and another 300 down) each day. You might say that studying horology is good cardiovascular exercise!

We again wish to thank our hosts: Phil Priestley, Brian Sparks, Chris McKay and Rev. David Birt for their expertise and hospitality. The tour was one that we will remember for a very long time. ①

Frank DelGreco can be counted on to give us fresh, interesting reading. He is president of Chapter 159.

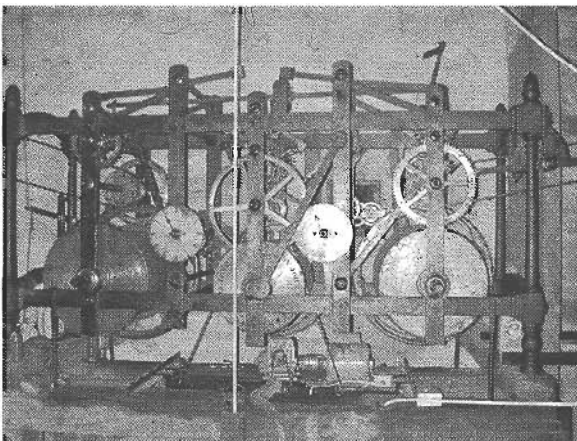


Figure 6. Flatbed frame.

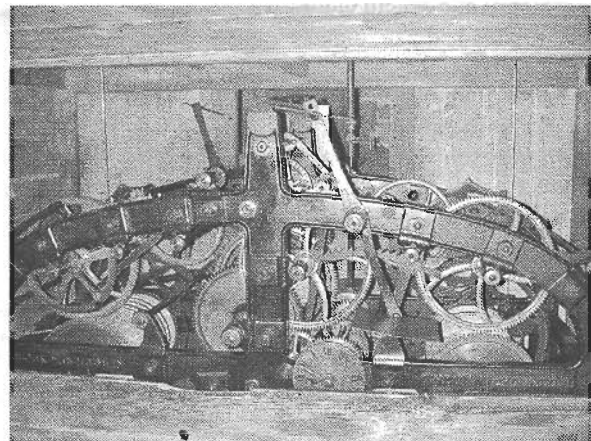


Figure 7. Cast frame.

## HENRY - Part 8

Abridged from *The First Henry*, copyright © by The Royal Archivists. Used with permission.

Henry and Tom Tompion exchanged masters and have had an unexpected encounter with the King of France. They didn't realize it, but their time in France was drawing to an end. **Paul Odendahl (LA)** continues the tale.

Six months went by. The two masters, Huygens and Marti-not were, respectively, happily and grudgingly pleased with the exchange of apprentices. Then Tom and Henry agreed that they had met their needs for education in France. They heard that there was no longer a health threat in London. They took their leaves from their masters on 29 August 1666 and began to make ready to depart France.

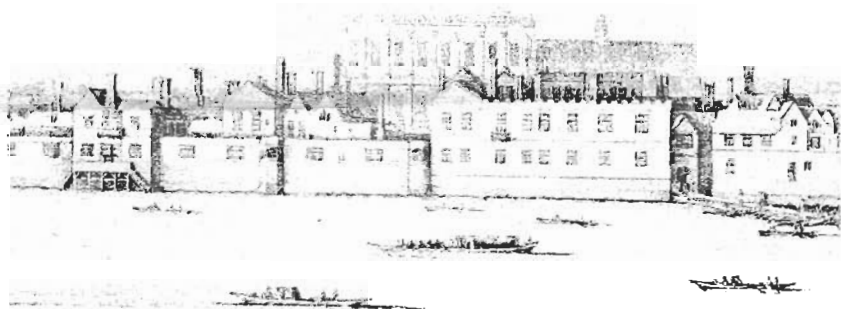
They were in for a surprise. While still at the pension two days after they bade farewell to their masters, two letters arrived in the morning post. One for Henry and one for Tom. Each contained the same things: a note from the master of each and fifty livres. The notes were short, gave thanks and explained that the money was to help with their passages home.

"They have got together," exclaimed Henry.

Henry had executed his own little surprise. The day before, he



They fit both Henry and the King



Whitehall Palace. Henry and Tom landed at the dock at right.

had packed up his new Model boots and left them at the apartment of Mr Huygens, with a note asking that they be transmitted to the King.

Thus Louis XIV, King of France, received one of the most cherished gifts of his reign: a recently cleaned, well worn pair of English New Model Army boots.

The homeland island was clearly visible on the bow. In Calais on Sunday, 2 September 1666, Henry and Tom had used most of their windfall to purchase space on a boat from Calais to London. They crossed a strangely smooth, almost glassy Dover Strait and sailed through the mouth of the Thames. When they passed Gravesend they were surrounded by England and they felt at home. They relaxed on deck and talked about what was in store for them. The calm didn't last long.

When the boat reached Greenwich the pall they had noticed in the western sky turned out to be smoke and there was a mounting gale. Passing the Tower they saw the fire to starboard. The boat captain docked just downstream from Whitehall and found a crowd at the dock wanting passage out of London.

Henry and Tom quickly disembarked and saw that the streets were filled with excited Londoners. They couldn't see fire but heavy smoke was issuing from the city. At once they decided to proceed to the shop of Edward East in Fleet Street.

They did get to Fleet Street but not before an interruption. On the way they passed the Cross Keys, the shop of Edward Norris. The shop door was wide open and they noticed unusual activity inside. Pausing for a look, inside they saw fighting. The street was smoky but inside the shop was still clear and they saw that Edward Norris and his apprentice brother, Joseph, were apparently being attacked by six men. Looters! Immediately Henry used the only weapon he had at hand: his luggage. He smashed it into the head of the largest of the looters and knocked him out. Tom was quick to follow suit and a second looter sank to the floor. Now it was four against two. No, thought Henry, four against four — we're in it now. So they waded in. Henry noticed an appreciative smile and a nod of the head from Edward.

Joseph had a bloody face and was busily occupied sitting astride a looter face down on the floor. Picking up an unnoticed hammer from under the counter, Edward Norris went at the looter that was not engaged by Henry and Tom. The looter wheeled about and ran out of the door. As they could, the other three looters did the same. Then Edward Norris moved to stand in the doorway, brushed his hands together and surveyed the busy street as if to say, "Well, who's next?"

Joseph Norris had a four inch gash on his left cheek. Henry found the looter's abandoned knife on the floor of the shop and handed it to Tom. Then Henry went to his bag of luggage and got out his Sheffield dagger. Edward had come back into the shop and had bolted the front door. He motioned to them all to follow him. In back of the building there was a small courtyard. He explained to Henry and Tom that he and his brother had been engaged in

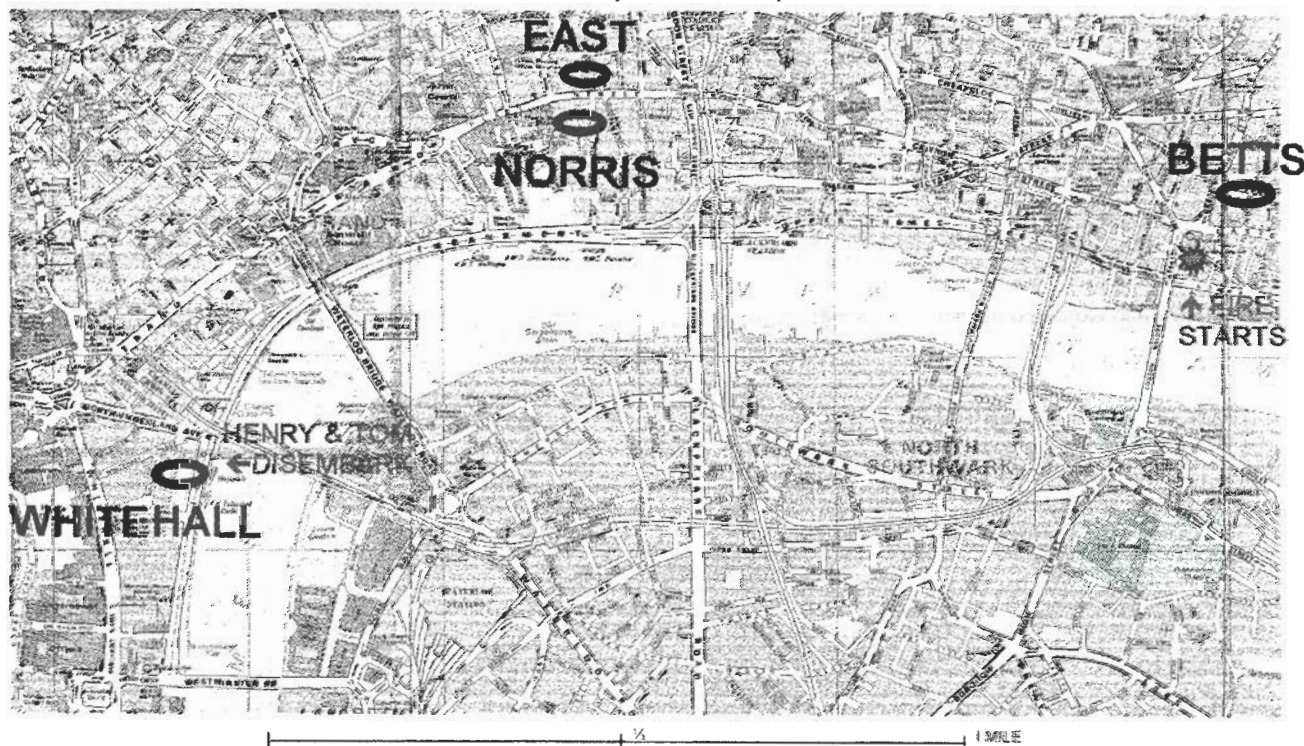
digging a hole in the ground next to the cess-pit, but not too close, when the looters entered the empty front shop through the unlocked front door.

The four of them made short work of the hole digging. Edward produced oiled skins and lined the hole. Then they commenced carrying clocks, parts and tools to the hole, and lastly they placed record books and papers on top of the pile. More oiled skins covered it all and then they shoveled the excavated soil on top until there was a neat mound.

Henry and Tom then left Edward and Joseph to defend the Cross Keys by themselves and resumed their search for Edward East's shop. They found him and the new Mrs East overwhelmed. Mr East had a wheeled cart but no horse. He was carrying his wares and tools from the shop to the cart on the street. Mrs East was trying to stand guard while Mr East was inside gathering up the things for the cart. The fire was very visible now. They could see it up the

hill beyond St Paul's. Henry organized the four of them: Henry would stand at the cart in the street and load it. His dagger visible. Tom would carry the objects from the shop to the street and put them down next to the cart. Mr East would gather things in the shop or direct Tom to get them. Mrs East would remain in the shop to keep things calm, and she could go up to the living quarters to set out any personal belongings that needed moving.

When the cart was filled enough a blanket was tied over it and Henry and Tom turned into horses. Mr East had space in Whitehall. Henry and Tom pushed and pulled the cart to the safety of the palace. Thank goodness it was downhill. After they unloaded, they brought the empty cart back to the shop on Fleet Street. It took three trips for the hardware and another for the papers and personal belongings. By that time it was well past 2 AM on the morning of 3 September 1666. Henry and Tom had been up since



The locations of firefighting activities of Henry and Tom from 2 to 5 September 1666 superimposed on a modern map.

dawn the day before and, aside from a light breakfast, had no food and very little to drink. The Easts and the two boys collapsed on the floor of the East workroom at Whitehall Palace.

The fire was now raging in the east.

**H**enry and Tom awoke about midday on 3 September 1666. Everything was disorganized in the palace so they simply explored as much as they wanted to. Edward East found them in the ballroom in late afternoon. It was obvious that he was worried. But he didn't forget his manners: "Mrs East and I thank you both for helping save our belongings and my shop clocks and tools. We know that we could not have managed that alone. Yet here we are safe and sound, if tired, in our refuge. You must also be tired but I will ask you to consider doing more. "There is word now that the fire started over by London Bridge. My friend, Samuel Betts, dwells above his shop in Lombard Street very close, I think, to where the fire started. I am worried about him because he is about my age and if the fire is threatening him I don't know how he could cope. Would you both have the energy to do me the favor of accompanying me to his premises? He might need help."

Henry and Tom immediately said that they would be happy to go and so the three of them set off on foot. They proceeded up the Strand and on Fleet Street they were relieved to see that the East premises had not been broken into and as yet had not burned, although the fire was closer than it was the previous day. As they approached St Paul's the smoke was thicker and being blown in their faces by the stiff southeast

gale. The street was crowded with fleeing people. Beyond St Paul's they tried to go up towards Cornhill but the street was blocked by the rubble of demolished houses. There were groups of men trying to make a fire break and they were carrying all the torn down wood into the street. Using great caution and at a much slower pace the three made it to Lombard Street. The fire was now raging to their right and they could see ahead that it had leapt across Lombard Street and was moving northwest. It was difficult to see the details of houses or people because of the thick smoke and their breathing was affected. But they plunged on.

"Here!" shouted Mr East and he turned in to the burned doorway of the Betts establishment. Samuel Betts had found the old stone cottage in Lombard Street some 20 years previous and because it was unlike the other wooden structures in the area he paid a premium for it but thought the security was worth it. Inside the smoke was so thick that visibility was not more than two yards. The smoke was issuing from the burning first floor joists and there was more smoke being blown in from outside. The roof was already gone.

There was no use trying to negotiate the burning stairs. There could be no living thing in those first floor flames. So they started a search, as best they could, on the ground floor. Pieces of burning timber had fallen to the floor and in one place a whole section of the first floor had collapsed. Providentially it had fallen leaning against the lower wall and the tent-like space beneath it was where the finished Betts clocks were stored as Mr East pointed out to Henry and Tom. They found a timber which was not too hot to handle and used it to pry the fallen section so they could have a look inside. Tom

pried and held the tension while Mr East stuck his head inside. Not so much smoke in here.

"Quick," shouted Mr East. "I think I see someone in there. But be easy and don't let the section fall flat. Let's move it just enough to gain entry."

They did and Mr East was the first to go in. Henry and Tom waited. It was a one-way passage. They heard shuffling and grunting and presently...silence. Henry went in.

"Tom," he called, "Mr East has collapsed. There is someone else in here. I am going to drag Mr East to your opening. When you can, grab and pull him out. Then I will go after the other." All this was said with much coughing and gasping. Breathing was difficult.

After both bodies were pulled from the "tent" Henry and Tom didn't know what next to do. Tom waited for a plan from Henry. Before one could be formulated the unknown body started moving and making noises. He was conscious and Tom asked, "Are you Mr Betts?"

It was Mr Betts all right but he didn't answer the question. He sat up and began gesturing with his hand toward the tent, saying "Clock!"

"New black clock!" he repeated and waved his hand pointing at the opening in the tent. Then he started choking.

The men understood and Henry went back through the entry to see if he could find a black clock in the blackness of the tent.

When Henry emerged with the clock, which was neither burned nor damaged from the falling timbers, he found Mr East sitting up, choking.

"Let's get out of here," said Tom.

Henry put down the black clock and they helped the two older men to their feet and out of the door. Outside the smoke was still very

thick but the wind was moving the air so it was possible, if difficult, to breathe. Without further speech the boys started helping the men walk away.

"No!" exclaimed Mr Betts. And waving and pointing again toward the shop door croaked, "Clock! Clock!"

"All right," said Henry, "I'll get the blasted clock although it will make our return more difficult."

This was the first and the last time that Henry used an oath about a clock. Tom was appalled. He looked at Henry and without a word took the clock from him, tucked it under his arm and set off with Mr Betts.

Henry understood the look. "I'm sorry," he mumbled.

The return to Whitehall was accomplished without problems. The quality of the air improved as they went but the smoke followed them almost to Whitehall. They were subjected to derision as they fell in with others making their exit from the burning areas.

"Ay! What time is it, friend?", and

"Worried about time, are ye?"

They all were too tired to even answer. They encountered a piece of luck on Ludgate Hill. A party of the King's men with an empty wagon drawn by two horses was just turning around after making a delivery of clean clothing for Charles II. They learned that Charles was visiting the affected areas to show sympathy for his people. The wagon master had ventured as far as he thought he should take the horses. The clothing was to be hand carried on to Charles. One of the armed soldiers on the empty wagon recognized Mr East as having been pleasant to him at the palace. Seeing how the four were struggling to keep walking, he conferred with the wagon master and then told the four to climb aboard for the return to Whitehall. When Mrs East greeted them at the palace it was not with open arms. She later called them the black, sooty ragamuffins, and declared that Mr East was the blackest of all. They admitted that they must have been a sorry sight with burned clothes, singed hair, and Mr Betts bloodied head. On his part, Mr Betts stated that the only thing in the group acceptable to enter a palace was the new black clock.

Thus, for the second day in a row Henry and Tom fell asleep well after 2 AM. The date was 4 September 1666. ①

To be continued



Paul Odendahl carries on with his tale.



Mona has sent in her application to be our new secretary. Says she can file and sort and keep the editor from losing things. She will work for free. We need more members to send in publication material so we can add Mona to the staff and start her filing, sorting and keeping.

**NEXT MEETING**

In Charlotte NC, Friday, July 3, 2003, at 2PM. Consult your program for location. Hope you will plan to attend.



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No, you don't have to look again- there's no Mart. It's going wanting.



The "black clock" made by Samuel Betts and salvaged from the fire by Henry and Tom. 1666.