Research Activities and News

by Snowden Taylor, research committee

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A New Hampshire Mirror Clock

Larry Triplett has sent excellent photos and some descriptive details of a New Hampshire Mirror Clock, the name not ensuring that it was made in New Hampshire. The Chair claims no expertise in such clocks, and has failed to find an expert. The first Bulletin article to discuss these clocks was Donald K. Packard’s “New Hampshire Mirror or Looking Glass Clocks.” This article was essentially a reprint of Packard’s article presented to the Boston Clock Club on March 2, 1935. An interesting 1960 article by Charles S. Parsons gives movement layout and plate diagrams for eight New Hampshire Mirror Timepieces. Four time-and-strike Mirror Clocks are examined in another Parsons article. The above, and several more showing only one or two New Hampshire Mirror Clocks, have all been found using the first volume of the Bulletin Index.

Beyond the above articles, descriptions of New Hampshire Mirror Clocks seem to have shifted to books. Three have been carefully examined. The first is the book by Lester Dworetsky and Robert Dickstein. Nine New Hampshire Mirror Clocks are shown. None of them appears to have stenciling on the case, and one has an alarm. The second book, by William H. Distin and Robert Bishop, shows 17 of “our” clocks, none with evident case stenciling, and two with alarms. The final book, perhaps the best, by Charles S. Parsons, pictures about 30 New Hampshire Mirror Clocks, none with obvious case stenciling, and 4 with alarms.

Summarizing, we can say that New Hampshire Mirror Clocks rarely have case stenciling and seldom have alarms.

Figure 1A is a front view of Larry’s clock, measuring 31¾” h. x 16” w. x 5½” d., and 3” inside depth, which is well over the average size of those listed in Parsons’ book. Note in Figure 1A the gilt stenciling in each wide section of the door frame between the split turnings. Parsons, page 29, says, “Stencilling on New Hampshire cases is extremely rare.” Larry says that the upper glass is an old replacement with some flaking, and that the mirror looks original. Figure 1B shows the right end of the top of the clock of Figure 1A.
case, and Figure 1C pictures the door latch on the left side. All the wooden parts of the case exterior appear to be in the untouched original finish.

The inside of the case, door open, is displayed in Figure 1D. The interior of the wooden case has apparently received a medium red wash at sometime. Larry says that the dial is original, but was repainted some 40-odd years ago. Comparison with Figure 1A shows that it all fits well. To the Chair, the clips, two at each side of dial, do not look old. On the interior back of the clock, below the pendulum ball, is a “regulator” plate, not recognized as to maker. Below and to the right of the dial, one sees three sets of cords and weights. From left to right, these are strike (5 lb. 4 oz.), time (9 lb. 1 oz.), and alarm (1 lb.), respectively, the first two being simply compounded. The strike and time weight are mostly hidden by two small slats that, according to Larry, can be slid up and down to give access to the weights. The two large weights, as normally hang, are shown in Figure 1E. However, the strike weight is largely cut away, as shown in Figure 1F when that weight is turned over. Such cut-aways are sometimes used to avoid contact with other parts (see Reference 8, p. 227), but this does not seem to apply to the present clock. More on this later.

The clock movement is shown in Figure 1G, with the alarm movement to the right. The strike and time part is 4½” w. x 4” h. x 1½” d. Note the minimal linkage between the alarm parts and the main movement. Both winding arbors wind clockwise, but the cord on the strike (left) side winds back to front, while that on time (right) side winds front to back. The fixed end of the strike cord probably has a hook on its end, which, according to Larry, hooks onto the rod shown in the middle of Figure 1H. The fixed end of the time cord definitely has a hook on its end, which can be seen in Figure 1G, hooked into a hole in a brass plate, just to the right of the time side of the movement. That hole, empty, can be seen
in Figure 1H to the right of the rod for hooking the strike cord.

It is possible to trace out the trains fairly well. The strike great wheel can be seen in Figure 1G, behind its wind arbor, with its ratchet and barrel further behind. Note that this wheel is also the count wheel, using the system of pins rather than slots. The tip of the “count hook” can be seen between the 2nd and 3rd pins, so preparing to strike 2 o’clock when it hits the 3rd pin. Above the great wheel at least two other wheels can be seen. Figure 1I shows the full back plate of the movement. Note the two screw holes, utilized when the movement is to be attached to the clock by means of two machine screws from the back, passing through an intervening wooden plate. See also Figure 1J. Here in Figure 1I everything is left-right reversed compared to Figure 1G, and the arbor of the great strike wheel is at the center of the semicircular part of the plate, just as it was in Figure 1G. The second strike arbor must be that of the hammer-pin wheel, directly above the start strike wheel arbor. Another view of this wheel can be seen in Figure 1K, showing the strike pins and the “tail” of the hammer engaging the pins. Note that a slot has been cut into the movement pillar to give room for the pin wheel. This can be seen in Figure 1G also. Back to Figure 1I, the movement pillar, hammer wire, and hammer arbor pivot can all be seen in the upper right (in this view) corner of the rectangular part of the movement. For the moment, ignore the fly and its two cocks which stick out at the upper right. The next strike train pivot, the 3rd, must be the one to the right (in this view) of the pin wheel pivot. The next strike arbor, the 4th, is the one southeast of the 3rd, where another fly blade can be seen. So the 4th arbor is the “regular” fly arbor, the last one of the strike train.

Returning to the fly and its two cocks in the upper right of Figure 1I, how and why two flies? “How” is easy: it is driven by the 3rd wheel, just as the regular fly is. Larry’s answer to “why” is that the 5 lb. 4 oz. weight
driving the strike train was needed to overcome the inertia of starting, but once in motion the train turned too fast, and another fly was added to slow it down. That could be correct, but the Chair would suggest that the 2nd fly was a corrective add-on. To complete the strike train, Figure 11 has two more pivots beyond that of the standard fly. These correspond to the normal two strike control pivots, with their wires, found in most U.S. striking clocks of the era. We will not try to untangle this in detail, but note in Figure 11 that on the lower strike control arbor one can see the “count hook” from the back, and other items. In Figure 1G one can see a wire reaching up to the standard fly from the upper control arbor. Larry says there is a stop pin soldered to that fly arbor, seen in Figure 1L. Figure 1M shows that there is a small strip of brass projecting from the lower strike control arbor with a wire and pin on it, and a hole in its end. The hole is also seen in Figure 1N. This hole is for attaching a wire, which, when pushed up, trips the strike. Such a trip wire, attached, can be seen in Figure 1G and also in Figure 1D where it is hanging, slightly crookedly, with the compounded strike cord at left. In normal striking, tripping the strike must be done automatically. In Figure 1N, for example, we have established that pushing upwards at the point where the little hole is would trip the strike. Note that that would rotate the lower strike control arbor slightly counterclockwise, thus raising the nearly horizontal wire attached. Examining that wire, note that, as pictured, it is resting on a pin located just before the wire passes under a wheel. It also passes under a second, smaller wheel. These are the hour wheel and the minute “pinion” of the motion work. The smaller wheel is attached to the minute arbor, turning once per hour. A pin on the back of this wheel could raise the wire once per hour, initiating the strike. Figure 1O is a top quarter back view of the movement, showing the same two upward projecting wires as Figure 11, but now identified. Right is the hammer wire and left is the support wire for the bell. Figures
1P and 1Q show the head of the hammer above the left-hand member of the dial support boards. In Figure 1P the hammer is in its normal rest position; in Figure 1Q it is in the position just prior to hitting the bell.

The time train is easier to sort out than the strike. Figure 1M is a front quarter bottom view of the movement, removed from the case. All the motion work has been removed (except for the intermediate wheel and its pinion, just in front of the time winding arbor), leaving the bare minute arbor sticking up between the two winding arbors. Looking through the opening, one sees the great time wheel engaging the pinion at the lower end of the minute arbor, showing that the minute arbor is also the 2nd arbor. Below the pinion is the second wheel which is seen to be driving a pinion on another wheel, the bottom one of this stack of wheels. The associated arbor, the 3rd arbor, penetrates the front plate between the two winding arbors, just a little to the left of where the minute (2nd) arbor passes by. Just beyond and a bit to the right of the 3rd arbor, one can see the upper end of another arbor, the 4th (or escape), with its pivot penetrating the plate. Using Figure 1I to check, and recalling that this is a back view, the great time wheel is seen at left. In the center of the square part of the back plate, one sees a roughly vertical line of pivots. The first three from the bottom are the pivots of the 2nd, 3rd, and 4th (last) time arbors. At the top of the line is the pivot of the escape pallet arbor, which is not “counted” as it has no wheels and pinions. See Figure 1R for a view of the pallets engaging the escape wheel. The front pivot is seated in the bridge, just outside the field of view. Figure 1G shows the bridge, with the pivot hole, the split stud holding the upper end of the pendulum, and the crutch wire coming out from behind the bridge and engaging the pendulum rod. Below is the “keystone” to avoid contact between the pendulum and the hand arbors.

Now for the alarm: Look again at Figure 1G. To the right of center, note the vertical black iron bar attached with two screws. At its upper end, it is attached by a pivot to a horizontal black bar. At the left end of the horizontal bar, there is a pin sticking out. Just to the right of the pin, on the alarm hub, is a V-notch, just as on most alarm hubs. As the hour hand turns clockwise, it will carry the hub and the V-notch with it. In roughly 11 hours, the pin will fall in the notch, aided by the spring to the right pulling the bar down. At the far right end of the bar, one can just see the tip of an iron rod. This rod is released when the bar drops, and the alarm should start. In Figure 1S, the clock movement with its bell, together with the horizontal and vertical iron bars, have been removed. The iron rod, of which only the tip
was seen in Figure 1G, is now seen in full. It is attached to a long vertical arbor which is free to rotate a bit when not constrained by the horizontal bar. The lower end of the long arbor has a verge on it, and is seated in a brass plate. The upper end is seated in a cock, which, after a bend, is attached to the right end of the wooden dial support. See also Figure 1D at the upper right corner of the dial. Back to Figure 1S, up the arbor not far from the cock, note the leftward projecting wire. Note in Figure 1G that this is the alarm hammer wire, with the double-ended hammer under the bell. Again back to Figure 1S, and Figure 1T, an enlargement of its lower part, one sees on a short vertical arbor, 2 wooden disks, knurled on their facing parts, with a cord locked between the knurled faces. The verge on the end of the hammer arbor plays into the teeth of the alarm escape wheel. Note the lower disk and its click wheel above the escape wheel. If one pulls on the near cord to the right, the click prevents any rotation unless the verge oscillates, but if one pulls the far cord to the right, the knurled disks, with the pinched cord, will readily rotate clockwise. Both ends of the cord pass over pulleys into the interior of the clock, and can be seen at right of the dial in Figure 1D. The front cord runs to the alarm weight, and the back to a smaller counter-weight end for winding. Assume the alarm weight is wound up, and the iron rod on the alarm arbor is released; then the verge will oscillate in the alarm escape, the knurled disks will rotate counterclockwise with the cord; the alarm weight will go down; the counter-weight will go up; and the alarm will ring.

With all the references reviewed, and the features of the clock considered, one must conclude that this is a remarkable clock: the case because of its stenciling; the alarm because it is of a clever and unusual design; and the movement because of its very unusual design features, particularly in the strike features. None of these remarkable features was found in any of the clocks examined in the references. “Remarkable” does not mean “good” or “bad” per se. The stenciling on the case is attractive, and probably adds only pennies to the cost, so call it good. The alarm mechanism could probably be greatly simplified. A few are mentioned in the above references, although none are strictly comparable. Call the alarm in Larry’s clock a mild negative. Absolutely nothing was found in the literature anything like the basic time-and-strike movement, particularly the strike. Some features, such as the use of two flies, are so peculiar as to suggest they are corrective add-ons. These features add greatly to the cost of the clock, and, since the purpose of clockmaking at that time was to make a living, must be considered as failures. Of course, in the present day, these strange and unusual features may make a clock very desirable.

Larry says that part of the provenance of his clock is that it belonged to NAWCC’s seventh president, Alfred C. Scott, 1959-1961. He is now virtually unknown, and received only five lines in a 1993 article on past presidents. He introduced himself in the August 1959 Bulletin saying that he had been “instrumental in getting the Great Lakes chapter started.” That chapter held a meeting in his home on May 27, 1959, and photos from that occasion showed many of his clocks, but not the one now owned by Larry. Throughout his two-year presidency, he lived at 21 Newberry Place, Grosse Point Farms, MI.10

One last thing is worthy of mention. Reference 2 states, “... we stop to pay tribute at Lowell, Mass., to Eliphalet Horne to whom Nutting assigns the date 1832. Mr. Conlon has kindly brought over one of these clocks which is a striker with an alarm.” And also, “I wish to acknowledge my indebtedness to Mr. Conlon for his assistance in bringing the Horne clock and his photographs ...” On page 27 of the same book as Reference 2, one finds, “Mr. James E. Conlon of Boston”, surely the same man. In the “Index” (p. 1 of the same), we find three articles by Conlon listed, and in Reference 5 we find more. Mr. Conlon died December 31, 1948, in Brookline, MA.11 Similar referrals, in other publications than Reference 2, to Eliphalet Horne’s New Hampshire mirror clock, are found in References 1, 7, 8, and also 12 and 13 all seem to refer to James E. Conlon’s clock. Reference 14 gives a much more complete brief biography than any previous publication, but the only actual reference to a clock again seems to be that of Mr. Conlon. Summarizing, we have no idea what Mr. Conlon’s clock looks like inside and out, except that it is a New Hampshire Mirror Clock with strike and alarm, so attributing Larry’s clock to Eliphalet Horne seems a far stretch. Likewise, any suggestion that Alfred C. Scott
bought Mr. Conlon’s clock, while not impossible, is highly unlikely. Michigan is a long way from Boston.
Larry would appreciate comments on the maker and any other features of his clock from readers.

References
5. Master Index to the Bulletin of the National Association of Watch and Clock Collectors, Inc. [Volume I, through whole number 287, December 1993].

Baldwin’s Directory of the Oranges, NJ, 1898

Bob Sanger (NJ) sent a packet of several things, one of which was a group of photographs of “BALDWIN’S DIRECTORY / OF / THE ORANGES / AND / Townships of Essex County [NJ] / 1898”, as indicated on the somewhat battered spine, Figure 2A. The title page, Figure 2B, gives more details. In the section on Orange, East Orange, and West Orange, we can start with the As. Here we find “Abbott[,] Henry, jeweler, 32 S. Clinton, EO; 2 Maiden la, / NY” (Figure 2C). Henry Abbott was a noted horologist. See Reference 1 for a general biography; References 2 and

Figure 2A. Battered cover of “BALDWIN’S DIRECTORY / OF / THE ORANGES / AND / Townships of Essex County / [etc.] / 1898.”

Figure 2B. Title page of the Directory of Figure 2A.