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."[1] This article was essentially a reprint of Packard's article presented to the Boston Clock Club on March 2, 1935.[2] An interesting 1960 article by Charles S. Parsons gives movement layout and plate diagrams for eight New Hampshire Mirror Timepieces.[3] Four time-and-strike Mirror Clocks are examined in another Parsons article.[4] 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.[5]

Figure 1A. Unidentified New Hampshire Mirror Clock. Note stenciling on frame. Upper glass is an old replacement. See text.

LARRY TRIPLETT (2).

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.[6] 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,[7] shows 17 of "our" clocks, none with evident case stenciling, and two with alarms. The final book, perhaps the best, by Charles S. Parsons,[8] 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.[8] Note in Figure 1A the gilt stenciling in each wide section of the door frame between the split turnings. Parsons, page 29,[8] 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

Figure 1B. Right end of top of clock of Figure 1A.

LARRY TRIPLETT (5).

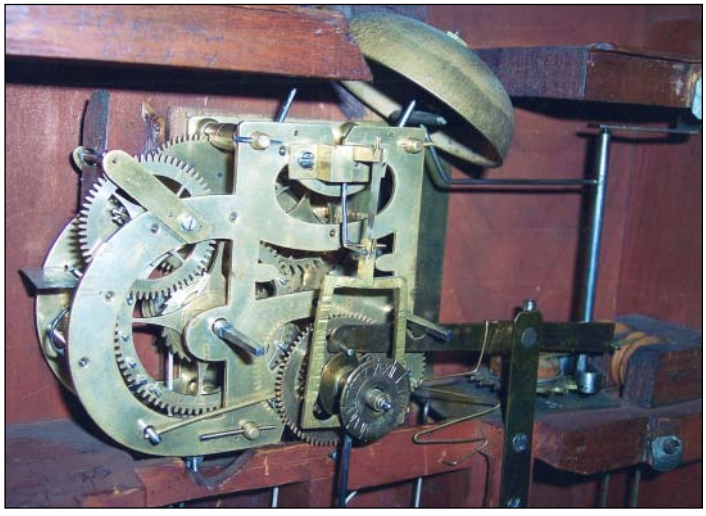
Figure 1C. Left side of clock of Figure 1A showing hook fastening.

Figure 1D. Door wide open, showing interior of clock of Figure 1A. Note, left to right, strike, time, and alarm cords and weights. Dial repainted some 40 years ago. See text.

Figure 1E. Weights, probably lead, of clock in Figure 1D.

Figure 1F. Weights as shown in Figure 1E but with strike weight turned over to show cutaway.

Figure 1G. Presumed brass 8-d. movement within the case of clock of Figure 1A. Left to right are strike, time, and alarm trains.

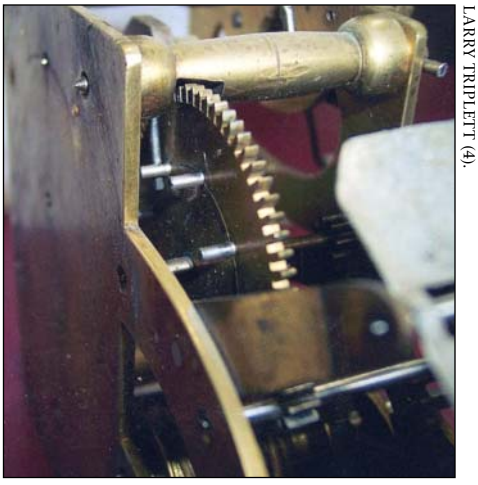


case, and Figure 1C pictures the door latch on the left side. All the wooden parts of the case exterior appear to be in the untouched original finish.

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 showin 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

Figure 1H. Clock of Figure 1A with movement removed. Strike cord hooks to bar of center and time cord hooks into hole at right.



LARRY TRIPLETT (4).

Figure 1K. Detailed view of the upper right square corner in Figure 1I, looking left into movement, showing the strike #2 pin wheel with its pins engaged by the hammer tail. Note the cutaway of the movement post.

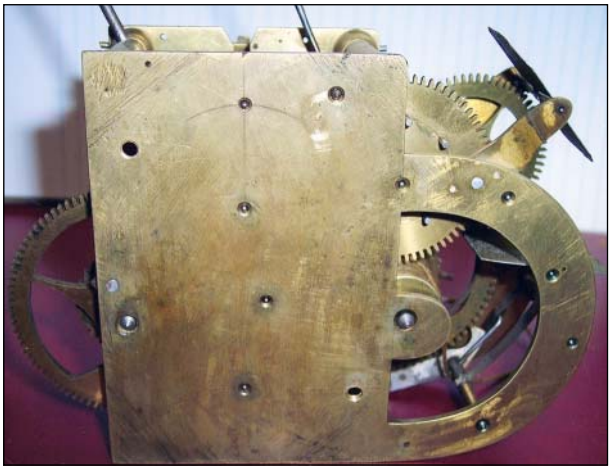


Figure 1I. Back of time-and-strike parts of movement, removed from case as shown in Figure 1G. Time train starts with great wheel at left, then goes up the center for time #2, #3, and #4 (escape); top is ancher arbor. Strike starts with great wheel at center of semicircle, then around the semicircle for #2, #3, and #4 (fly). Note extra fly at upper right, and two strike control arbors at last two pivots around semicircle. See text.

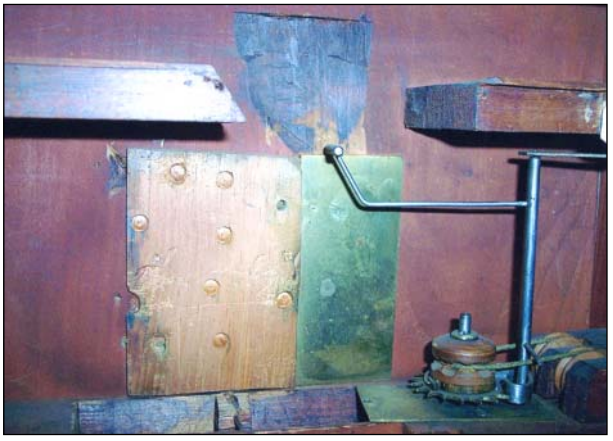


Figure 1J. Clock of Figure 1A, with time-and-strike movement removed, parts of alarm movement remaining. Clock is held in case by two machine screws, which are inserted from the outside of the back, pass through the two holes in the wood spacer, and enter the two holes shown in Figure 1I.

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 flys? "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

LARRY TRIPLETT (4).

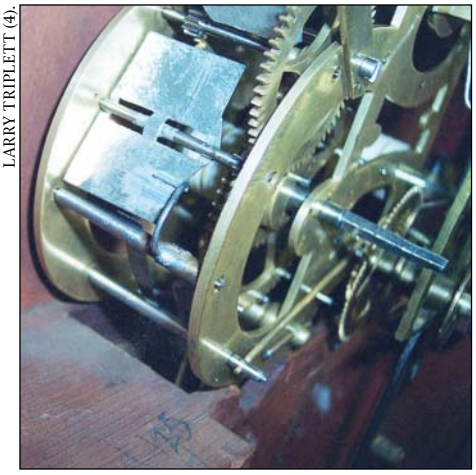


Figure 1L. Top rear view of movement of Figure 1G, showing the ordinary fly and its #4 strike arbor, with a stop pin coming up from the upper strike control arbor.

Figure 1M. Strike and time movement of Figure 1G, removed from case, and most of motion work removed, showing important parts of strike and time trains. See text.

Figure 1N. Lower part of strike and time movement of Figure 1G, removed from case, showing hole at bottom where the strike trip wire attaches. See text.

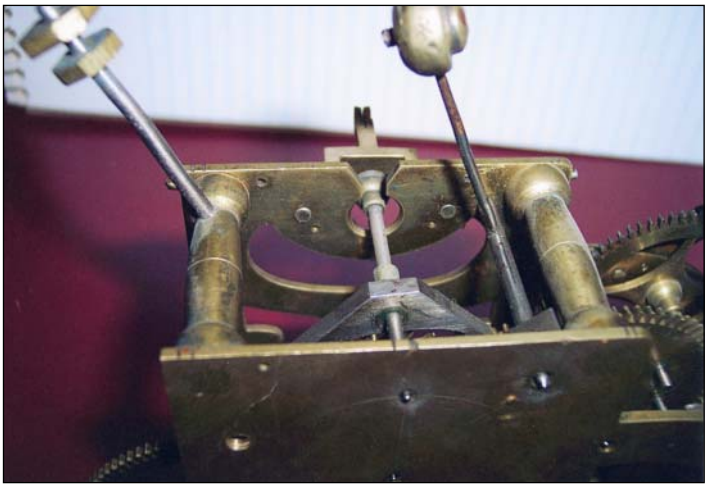


Figure 1O. Upper back of strike and time movement of Figure 1I, the bell stand wire and the strike hammer.

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 1I 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 1I 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 1I, but now identified. Right is the hammer wire and left is the support wire for the bell. Figures

Figure 1P. Bell as seen in Figure 1G with hammer in normal rest position.

Figure 1Q. Same as Figure 1P with hammer about to hit the bell.

LARRY TRIPLETT (4).

Figure 1S. Parts of the alarm train as seen in Figure 1G. See text.

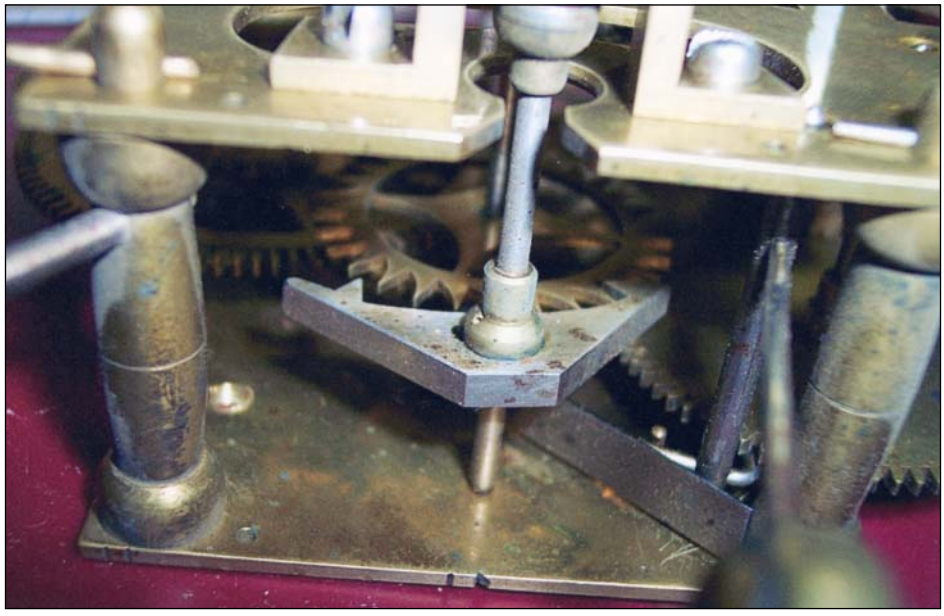


Figure 1R. Top of movement of Figure 1G showing the anchor engaging the escape wheel.

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

Figure 1T. Lower part of time mechanism seen in Figure 1S. See text.

LARRY TRIPLETT

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 up 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.[9] He is now virtually unknown, and received only five lines in a 1993 article on past presidents.[9] He introduced himself in the August 1959 *Bulletin*[10] 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,[10] 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.

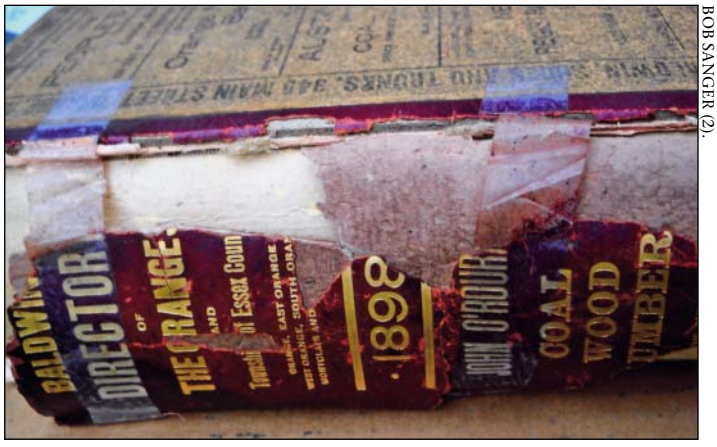
Larry would appreciate comments on the maker and any other features of his clock from readers.

References

1. Donald K. Packard, "New Hampshire Mirror or Looking Glass Clocks," *NAWCC Bulletin*, No. 26 (December 1948): Reprint pp. 530-535.
2. Albert L. Partridge, Ed., "Proceedings of the Boston Clock Club 1934-1940" (March 2, 1995): pp. 42-46.
3. Charles S. Parsons "Examples of New Hampshire Timepieces," *NAWCC Bulletin*, No. 88 (October 1960): pp. 362-369.
4. Charles S. Parsons, "New Hampshire 'Strikers'," *NAWCC Bulletin*, No. 95 (December 1961): pp. 11-26.
5. *Master Index to the Bulletin of the National Association of Watch and Clock Collectors, Inc.* [Volume I, through whole number 287, December 1993].
6. Lester Dworetsky and Robert Dickstein, *Horology Americana* (Roslyn Heights, NY: Horology American, Inc., 1972): pp. 98-107.
7. William H. Distin and Robert Bishop, *The American Clock* (New York, NY: E. P. Dutton & Co., Inc., 1976): pp. 252-261.
8. Charles S. Parsons, *New Hampshire Clocks and Clockmakers* (Exeter, NH: Adams Brown Co., 1976): pp. 26-28, 154-156, 195-241, 259, 263-264.
9. Amy J. Smith, "A Brief History of the NAWCC Presidency, 1943-1993," *NAWCC Bulletin*, No. 287 (December 1993): p. 711.
10. "The President's Message" and "Chapter News," *NAWCC Bulletin*, No. 81 (August 1959): pp. 566, 620-622.
11. "Obituary-James E. Conlon," *NAWCC Bulletin*, No. 30 (October 1949): Reprint p. 707.
12. Brooks Palmer, *The Book of American Clocks* (New York, NY: The Macmillan Co., 1964).
13. Sonya L. & Thomas J. Spittler, and Chris H. Bailey, *American Clockmakers and Watchmakers* (Fairfax, VA: Arlington Book Co., Inc., 2000).
14. Paul J. Foley, *Willard's Patent Time Pieces* (Norwell, MA: Roxbury Village Publishing, 2002): p. 266.

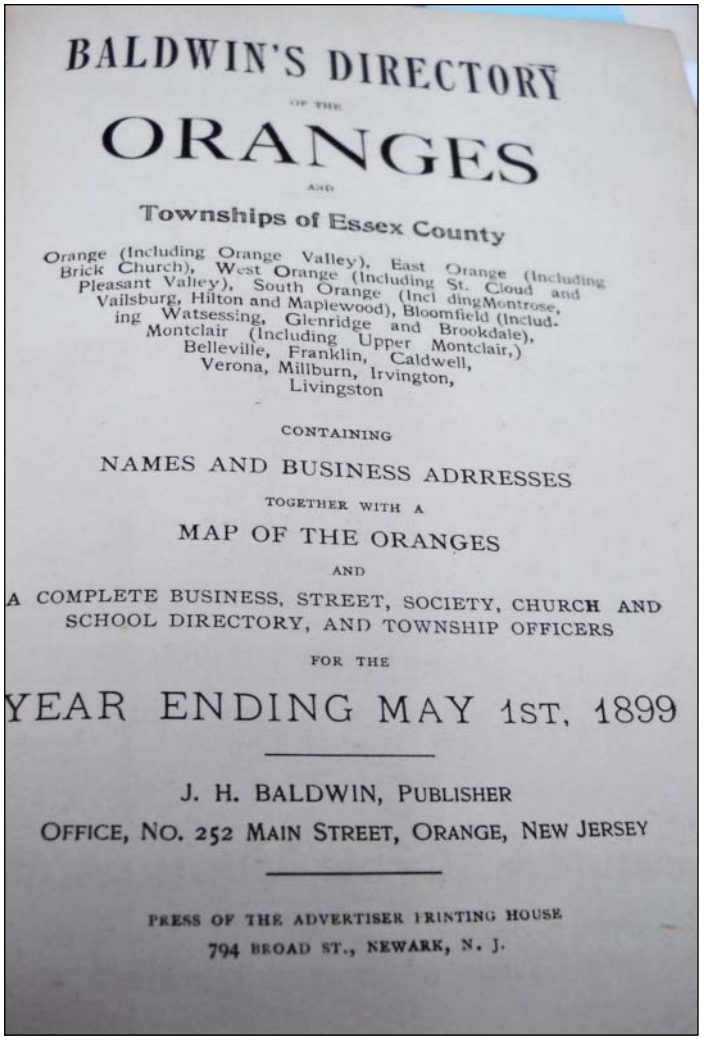
Baldwin's Directory of the Oranges, NJ, 1898

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



BOB SANGER (2).

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



BALDWIN'S DIRECTORY

OF THE

ORANGES

AND

Townships of Essex County

Orange (Including Orange Valley), East Orange (Including Brick Church), West Orange (Including St. Cloud and Pleasant Valley), South Orange (Incl dingMontrose, Vailsburg, Hilton and Maplewood), Bloomfield (Includ. ing Watsessing, Glenridge and Brookdale), Montclair (Including Upper Montclair,) Belleville, Franklin, Caldwell, Verona, Millburn, Irvington, Livingston

CONTAINING

NAMES AND BUSINESS ADRRESSES

TOGETHER WITH A

MAP OF THE ORANGES

AND

A COMPLETE BUSINESS, STREET, SOCIETY, CHURCH AND SCHOOL DIRECTORY, AND TOWNSHIP OFFICERS

FOR THE

YEAR ENDING MAY 1ST, 1899

J. H. BALDWIN, PUBLISHER

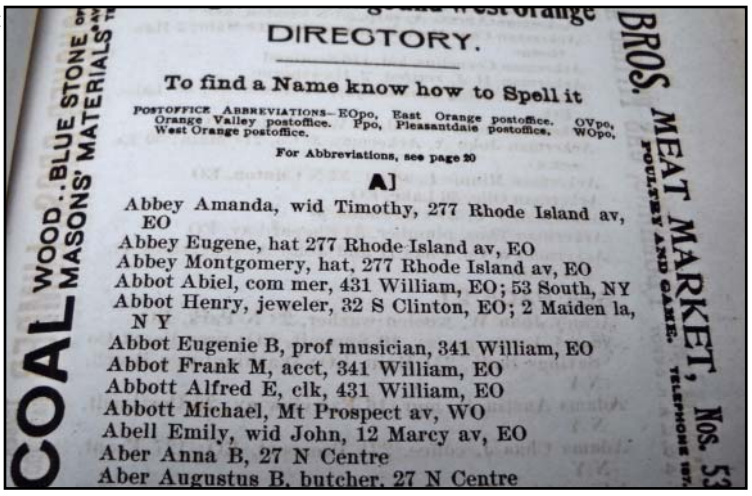
OFFICE, NO. 252 MAIN STREET, ORANGE, NEW JERSEY

PRESS OF THE ADVERTISER PRINTING HOUSE

794 BROAD ST., NEWARK, N. J.

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

BOB SANGER (4).


DIRECTORY.

To find a Name know how to Spell it

POSTOFFICE ABBREVIATIONS—EOpo, East Orange postoffice. OVpo, Orange Valley postoffice. Ppo, Pleasantdale postoffice. WOpo, West Orange postoffice.

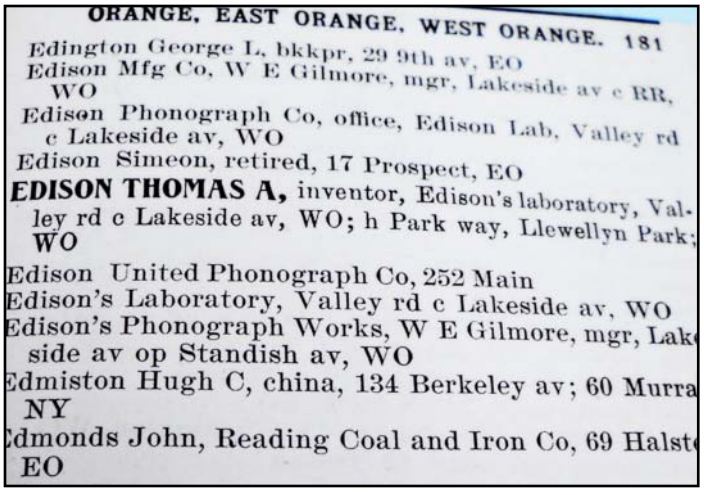
For Abbreviations, see page 20

A]

Abbey Amanda, wid Timothy, 277 Rhode Island av, EO
Abbey Eugene, hat 277 Rhode Island av, EO
Abbey Montgomery, hat, 277 Rhode Island av, EO
Abbot Abiel, com mer, 431 William, EO; 53 South, NY
Abbot Henry, jeweler, 32 S Clinton, EO; 2 Maiden la, N Y
Abbot Eugenie B, prof musician, 341 William, EO
Abbot Frank M, acct, 341 William, EO
Abbott Alfred E, clk, 431 William, EO
Abbott Michael, Mt Prospect av, WO
Abell Emily, wid John, 12 Marcy av, EO
Aber Anna B, 27 N Centre
Aber Augustus B, butcher, 27 N Centre

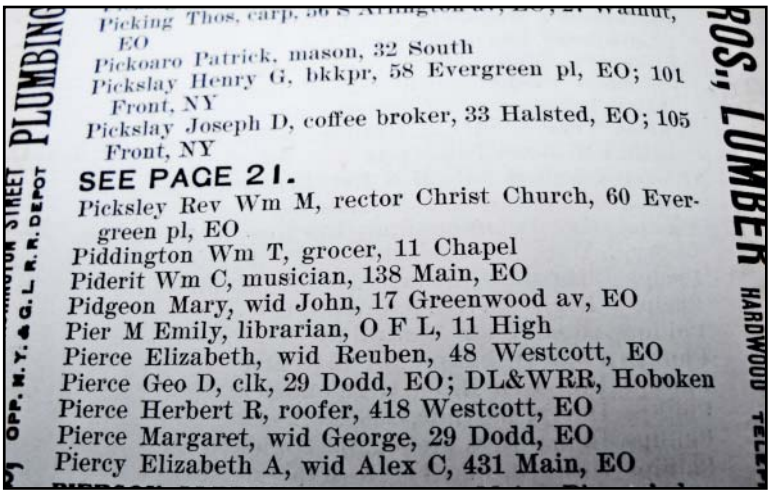
COAL WOOD..BLUE STONE MASONS' MATERIALS
BROS. MEAT MARKET, Nos. 53
POULTRY AND GAME.

Figure 2C. The start of the "A" section for the Orange, East Orange, West Orange, NJ, portion of the Directory of Figure 2A. Note Henry Abbott, jeweler, of East Orange and New York City, a noted horologist. See text.


ORANGE, EAST ORANGE, WEST ORANGE. 181

Edington George L, bkkpr, 29 9th av, EO
Edison Mfg Co, W E Gilmore, mgr, Lakeside av c RR, WO
Edison Phonograph Co, office, Edison Lab, Valley rd c Lakeside av, WO
Edison Simeon, retired, 17 Prospect, EO
EDISON THOMAS A, inventor, Edison's laboratory, Valley rd c Lakeside av, WO; h Park way, Llewellyn Park; WO
Edison United Phonograph Co, 252 Main
Edison's Laboratory, Valley rd c Lakeside av, WO
Edison's Phonograph Works, W E Gilmore, mgr, Lake side av op Standish av, WO
Edmiston Hugh C, china, 134 Berkeley av; 60 Murra NY
Edmonds John, Reading Coal and Iron Co, 69 Halst EO

Figure 2D. More of the same portion of the Directory as in Figure 2C. Note Thomas A. Edison with about six related entries, mostly in West Orange, NJ.

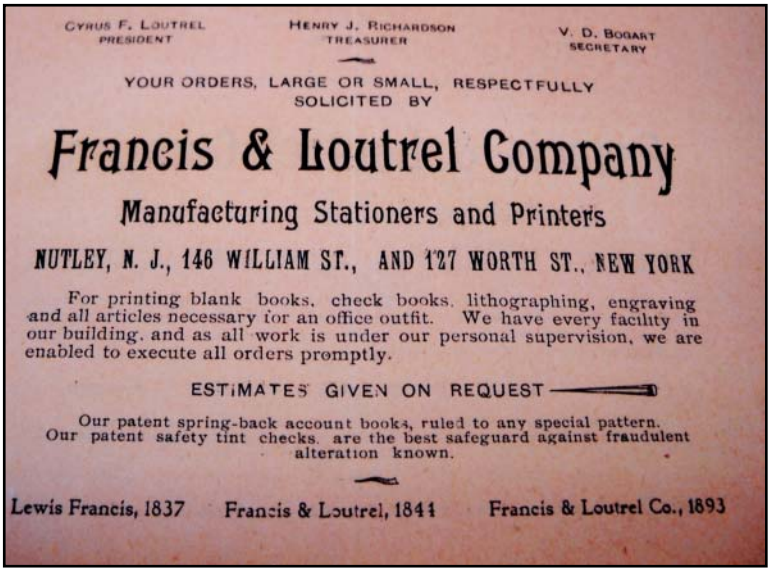

Picking Thos, carp, 56 S Arlington av, EO
Pickoaro Patrick, mason, 32 South
Pickslay Henry G, bkkpr, 58 Evergreen pl, EO; 101 Front, NY
Pickslay Joseph D, coffee broker, 33 Halsted, EO; 105 Front, NY

SEE PAGE 21.

Picksley Rev Wm M, rector Christ Church, 60 Evergreen pl, EO
Piddington Wm T, grocer, 11 Chapel
Piderit Wm C, musician, 138 Main, EO
Pidgeon Mary, wid John, 17 Greenwood av, EO
Pier M Emily, librarian, O F L, 11 High
Pierce Elizabeth, wid Reuben, 48 Westcott, EO
Pierce Geo D, clk, 29 Dodd, EO; DL&WRR, Hoboken
Pierce Herbert R, roofer, 418 Westcott, EO
Pierce Margaret, wid George, 29 Dodd, EO
Piercy Elizabeth A, wid Alex C, 431 Main, EO

PLUMBING
OPP. N.Y. & G.L.R.R. DEPOT
ROS., LUMBER HARDWOOD

Figure 2E. Continuing same portion of Directory as Figures 2C and 2D; note Geo. D. Pierce, clerk, presumably of the DL & WRR in Hoboken, NJ. See text.


CYRUS F. LOUTREL, PRESIDENT — HENRY J. RICHARDSON, TREASURER — V. D. BOGART, SECRETARY

YOUR ORDERS, LARGE OR SMALL, RESPECTFULLY SOLICITED BY

Francis & Loutrel Company

Manufacturing Stationers and Printers

NUTLEY, N. J., 146 WILLIAM ST., AND 127 WORTH ST., NEW YORK

For printing blank books, check books, lithographing, engraving and all articles necessary for an office outfit. We have every facility in our building, and as all work is under our personal supervision, we are enabled to execute all orders promptly.

ESTIMATES GIVEN ON REQUEST

Our patent spring-back account books, ruled to any special pattern. Our patent safety tint checks are the best safeguard against fraudulent alteration known.

Lewis Francis, 1837 — Francis & Loutrel, 1844 — Francis & Loutrel Co., 1893

Figure 2F. Advertisement for Francis & Loutrel Co. of Nutley, NJ, and Worth St., NY. Note, at bottom, previous names and dates. As "Francis & Loutrel" at 45 Maiden Lane, NY, the firm was a major printer of clock labels for Seth Thomas. See text.

3 for Abbott's watch stem-winding attachments; and References 4 and 5 for his Calculograph. Bob also sent Figures 3A and 3B of his Calculograph.

Again in "BALDWIN'S DIRECTORY", same section, Figure 2D shows the six listings for Thomas A. Edison and his companies, mostly in West Orange, NJ.

Figure 2E shows a listing for Geo D. Pierce, a clerk in East Orange, presumably working for the DL & WRR (Delaware, Lackawanna, and Western Railroad, now defunct for some years) of Hoboken, NJ. Figure 4A, sent by Bob, shows a stamp of that company, reading in reverse, "D. L. & W. R. R. CO / TREASURER'S / OFFICE".

An advertisement of "Francis & Loutrel Company" from "BALDWIN'S DIRECTORY" is presented in Figure 2F. Note the addresses in Nutley, N. J., and Worth St., New York, above, and former names and dates below. "Francis & Loutrel" starting date "1844", and location 45 Maiden Lane, New York, was the printer for many Seth Thomas clock labels; also, less often, for H. Welton & Co., and American Clock Co.[6]

More, later, on Bob's clocks.


BOB SANGER (3).

Figure 3A. A Calculograph, "MADE BY CALCULOGRAPH CO / HARRISON, N.J. / U.S.A." The Calculograph was a Henry Abbot invention and enterprise. See text.

Figure 3B. Serial Number 17093, from instrument of Figure 3A.

Figure 4A. A stamp, reading, in reverse "D.L. & W.R.R. CO / TREASURER'S OFFICE". See text.

References

1. William C. Moodie, Sr., "A Vignette … Henry Abbott, Horological Inventor Extraordinary," *NAWCC Bulletin*, No. 90 (February 1961): p. 584.

2. Henry Abbott; Rudy Luttkus, Ed., "Excerpts from Recollections of Elapsed Time," *NAWCC Bulletin*, No. 145 (April 1970): p. 284.

3. Michael C. Harrold, "American Watchmaking, 1850-1930," (*NAWCC Bulletin* Supplement No. 14, Spring 1984): pp. 103-104.

4. Tom Blizzard, "The Answer Box – Time Recorder," *NAWCC Bulletin*, No. 219 (August 1982): p. 443.

5. R.A., "The Answer Box—Calculograph Time Recorder," *NAWCC Bulletin*, No. 247 (April 1987): p. 138.

6. Paul Heffner, "Printers Directory."

An Unmarked British Jerome, J.C. Plimpton & Co. Movement with Solid Cut Pinions

by Peter Gosnell (Eng)

Figures 5A and 5B show front and back plate views, and Figures 5C and 5D, 3/4 side plate views of a loose movement that has recently been found. This movement extends what we already know of J.C. Plimpton & Co.'s clockmaking activities in Liverpool, England.

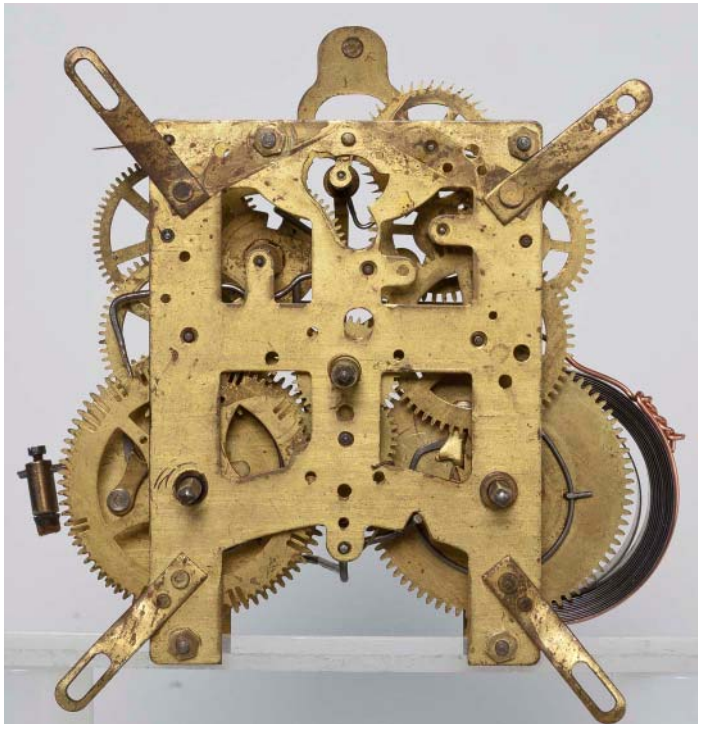

PETER GOSNELL (2).

Figure 5A. Front plate of movement of unidentified British Jerome/J.C. Plimpton & Co. loose movement. Note movement fixing lugs and solid great wheels.

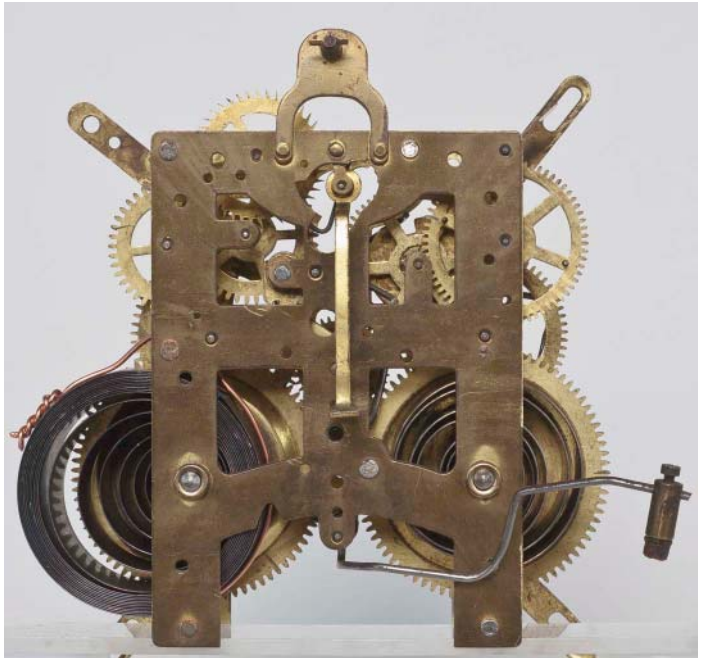


Figure 5B. Back of movement of Figure 5A. Note lacquered back plate and horseshoe-shaped pendulum bracket.

PETER GOSNELL (4).

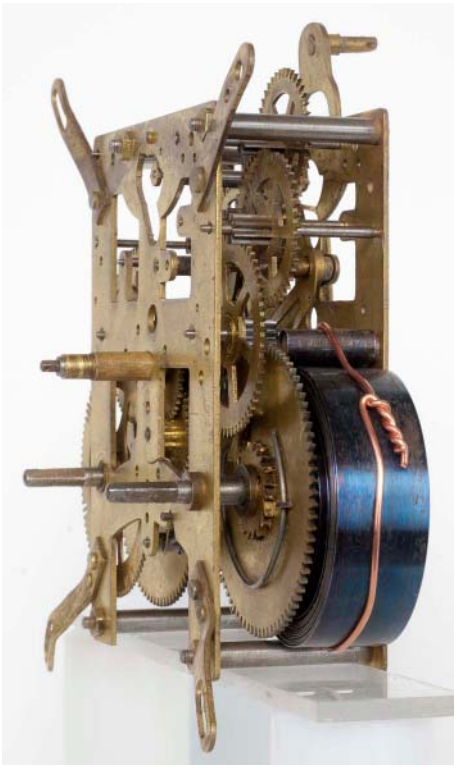


Figure 5C. 3/4 front, right view of movement showing going train with solid cut pinions throughout. Note small plain minute-hand square.

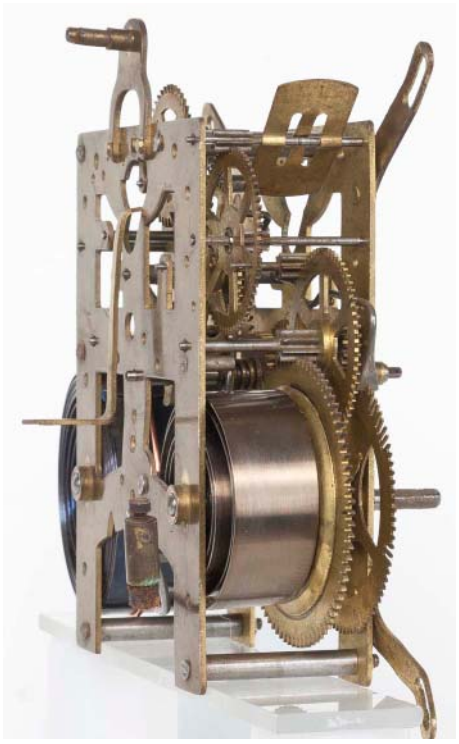


Figure 5D. 3/4 back, left (strike) side view of movement showing striking train with solid cut pinions throughout.

Figure 5E. Front detail of 2nd wheel going from movement of Figure 5A, wheel riveted to its wheel collet.

Figure 5F. Rear detail of 2nd wheel going from movement of Figure 5A showing solid cut pinion with wheel collet behind.

Figures 5C and 5D show how this movement employs solid cut pinions throughout both its going and striking trains; this has never been seen before on any movement belonging to this movement group.

Figures 5E and 5F are more detailed shots of this movement's 2nd wheel going and it can be seen how the wheel is still mounted on a separate collet that has been driven along the arbor so that it is adjacent to the cut pinion; the 2nd wheel striking uses exactly the same constructional technique.

Figures 5G and 5H are again more detailed shots of the 4th wheel going. This wheel is directly mounted onto the end of the solid cut pinion—a constructional practice that has always been used in European clockmaking on movements with solid cut pinions. All other train wheels in this movement, except for the 2nd wheels that have already been described above, are mounted directly onto solid cut pinions in this same way. This requires a smaller wheel center hole for mounting when compared with mounting a wheel onto either the back of a lantern pinion or separate collet. Figure 5H shows the 4th wheel going mounted onto the pinion end but a marked ring of 8.2 mm diameter can just be seen. This ring is the same size that the wheel's center hole would need to have been if the wheel was to have been mounted, more usually for these movements, onto the back of a lantern pinion. This is the only wheel on this movement that displays this marked ring and may possibly indicate that the center holes were being formed individually on such movements at this time, and that this particular wheel almost had a larger hole formed in it for mounting onto the back of a collet or lantern pinion.

It has also been observed on this movement that the 3rd and 4th wheels going and the escape wheel all have just 5 spokes (see Figures 5G and 5H again) even though they are in fact exactly the same sized wheels, with the same wheel counts (except for one tooth difference on the escape wheels) as the corresponding wheels found on a British Jerome / J.C. Plimpton mahogany mantel clock with a movement where the escape wheel is between the plates, and the wheels are believed to have been made by the New Haven Clock Co.[1] (See Tables 1 and 2 for wheel counts, measurements, and characteristics of the movement under discussion, and a movement the parts of which are believed to be made by the New Haven Clock Co.[1]) A further inspection of these 5 spoke wheels on the 3rd, 4th, and escape wheels in the going train of our featured movement has revealed that they have a crossing-out size that has not as yet been found on any probable New Haven Clock Co. manufactured movement. For crossing-out size comparison, Figure 5I shows three 4th wheels going put side by side. From left to right: (a) the 4th

Figure 5G. Front detail of 4th wheel going from movement of Figure 5A, showing solid out pinion and 5-spoked wheel.

Figure 5H. Rear detail of 4th wheel going from movement of Figure 5A showing wheel riveted directly onto end of its solid pinion. Note 8.2 mm dia. marked ring. See text.

PETER GOSNELL (3).

Figure 5I. Three examples of 4th going wheels. Left to right, they are from our featured moment, a "Gordon" model clock movement believed to be 100-percent U.S. as made by New Haven Clock Co., and a movement with a "U.S.A" (No BRITISH MANUFACTURE) New Haven Clock Co. logo within a mahogany mantel clock case with a "British Jerome" logo. See text.

Table 1 — British Jerome / J.C. Plimpton & Co.—Subject Clock
(with Escape Wheel between the Plates)

	Counts	Wh. Dia.	Cross.	Cross. Dims.	Ct. Hole	Thickns.	Teeth
Gt. Wh. Going	80-20r	60.7	none		9.8	1.41	cut
2nd Wh. Going	60-8cp	42.7	6	11.9x8.0	8.2	0.9	cut
3rd Wh. Going	42-8cp	32	5	10.0x4.4	4.8	1.07	cut
4th Wh. Going	42-7cp	32	5	10.0x4.4	4.8	1.05	cut
Escape Wh.	42-7cp	31.8	5	10.0x4.4	4.8	0.9	cut
Min. Drive Arbor	26-12	18.3	none		4.3	3.15	cut
Intermed. Arbot	36-10	22.6	none		6.7	1.06	cut
Cannon Wh.	40	23.7	none		6.1	1	cut
Gt. Wh. Striking	80-20r	60.7	none		9.9	1.45	cut
2nd Wh. Striking	64-8cp	40.6	6	11.8x8.0	8.2	0.94	cut
3rd Wh. Striking	66-8cp	38.2	6	11.8x8.0	8.4	0.9	cut
4th Wh. Striking	66-6cp	28.4	6	11.9x8.1	3.5	0.84	
Fly Arbor	-6cp						
Count Wheel		55.9	5	21.1x11.1	8.2	0.61	p-o

Cross. = number of crossings; Cross. Dims. = crossing-out dimensions: longest length x radial width; Ct. Hole = center hole; r = great wheel ratchet teeth; cp = cut steel pinion leaves; p-o = punched-out teeth. All measurements in millimeters.

Table 2 — New Haven Clock Co. Movement—Reference 1 Clock
(with Escape Wheel between the Plates)

	Counts	Wh. Dia.	Cross.	Cross. Dims.	Ct. Hole	Thickns.	Teeth
Gt. Wh. Going	80-14r	60.7	6	19.6x11.1		1.27	p-o
2nd Wh. Going	60-8tp	42.9	6	13.8x9.4	8.2	0.87	p-o
3rd Wh. Going	42-8tp	32	6	9.5x5.5	8.2	0.82	p-o
4th Wh. Going	42-7tp	31.9	6	9.4x4.5	8.2	0.76	p-o
Escape Wh.	41-7tp	32.5	6	9.5x5.8	8.1	0.76	cut
Min. Drive Arbor	26-12	18.3	none		3.9	3.11	cut
Intermed. Arbot	36-10	22.7	5	8.8x4.5	5.1	0.71	p-o
Cannon Wh.	40	23.7	5	8.4x4.6	5.1	0.7	p-o
Gt. Wh. Striking	80-15r	60.7	6	19.5x11.2		1.28	p-o
2nd Wh. Striking	64-8tp	40.5	6	11.5x8.3	8.2	0.85	p-o
3rd Wh. Striking	66-8tp	38.6	6	11.6x7.5	8.2	0.7	p-o
4th Wh. Striking	66-6tp	38.5	6	11.7x7.6	8.2	0.68	
Fly Arbor	-6tp						
Count Wheel		56	5	21x11	8.2	0.6	p-o

Cross. = number of crossings; Cross. Dims. = crossing-out dimensions: longest length x radial width; Ct. Hole = center hole; r = great wheel ratchet teeth; tp = trundle wire lantern pinion leaves; p-o = punched-out teeth. All measurements in millimeters.

wheel going from our featured movement; (b) the 4th wheel going from the New Haven Clock Co. movement with an outside escape wheel within the Mission wall clock "Gordon" with a U.S. label previously featured[2]; and (c) the 4th wheel going from the probable New Haven Clock Co. parts of the movement of Reference 1. (See Tables 1 and 2.) From an extensive search of other accessible movements it has now been discovered that this same 5 spoke crossing-out pattern found on our featured movement has also been used on just the escape wheels on the British Jerome / J.C. Plimpton & Co. movement in an oak mantel clock case featured in Reference 3, as well as on the British Jerome / J.C. Plimpton & Co. type loose timepiece movement featured in Reference 4, and again on the escape wheel of Ted Powell's British Jerome / J.C. Plimpton & Co. movement in an oak mantel clock case featured in Reference 5.

PETER GOSNELL (2).

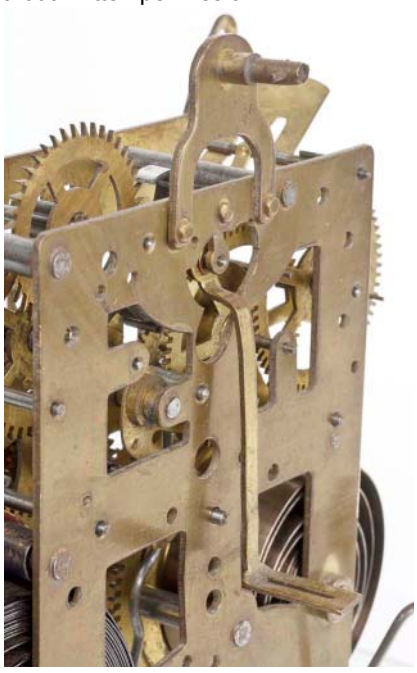


Figure 5J, right. Inside face of front plate of movement of Figure 5A showing intermediate wheel assembly fixed directly to the plate by blued machine screw.

Figure 5K, far right. Crutch and pendulum stud of clock of Figure 5A, the formed crutch made up from punched-out and bent-up flat brass strip, and the pendulum bracket of horseshoe shape. Note escape wheel's crossing-outs. See text.

This new movement example also has a horseshoe-shaped bracket, with pendulum post, riveted to the top of the back plate (see Figures 5B, 5D, and 5K). This part has only been seen once before on the movement of Reference 3.

Notice how the striking hammer is positioned on the left-hand side of the movement (as seen in Figure 5A), suggesting this movement was originally housed in a case with restricted space below the movement for the gong. This hammer location has been seen just twice before on British Jerome / J.C. Plimpton & Co. movements, once in a tambour-cased example featured in Reference 6, but a little different, and in a grandmother mission-cased example featured in Reference 7.

As can be seen in Figure 5C this movement has a small plain minute-hand square that is only 2 mm across the flats. Again this has only been seen once before on the movement of Reference 3.

From Figure 5A it can be noted how the upper right-hand movement fixing lug has two holes rather than the more commonly found extended slot as seen on this movement's other three fixing lugs. This pattern of two-holed fixing lug has only been seen once before on the movement of Reference 3.

Figure 5J is a view of the inside face of our featured movement's front plate. Observe how the intermediate wheel assembly has been fixed directly to this front plate by a blued machine screw. This method of attachment has only been seen once before on the movement of Reference 3.

Figure 5K shows this movement's crutch that has been fabricated from a punched-out and then bent-up flat brass strip, having a rectangular shaped foot with closed pendulum slot. This part has only been seen twice before, once on the movement of Reference 3, and also on Ted Powell's movement.[5]

To date this movement is unique in employing solid cut pinions throughout both its going and striking trains. Our featured movement also has six other probable Plimpton manufactured components (as have been detailed above) that have all been seen on the movement of Reference 3. This movement was and still is considered of possibly early manufacture by J.C. Plimpton & Co. and thus this new movement also possibly is too. Perhaps the use of solid cut pinions was tried out by Plimptons for only a short time in order to try to "Anglicize" these movements. More research is still needed to see if the use of the 5-spoke crossing pattern found on this movement's upper going train wheels was in more widespread use; any information on this from interested readers with examples of these movements would be welcomed by the Research Committee.

References

1. Peter Gosnell, "Research Activities and News," *NAWCC Bulletin*, No. 347 (December 2003): pp. 793-795, Figures 18E and 18F.

2. Peter Gosnell and Snowden Taylor, "Research Activities and News," *NAWCC Bulletin*, No. 383 (December 2009): pp. 724-725, Figures 2A-2D.

3. Peter Gosnell, "Research Activities and News," *NAWCC Bulletin*, No. 388 (October 2010): pp. 580-582, Figures 3-7.

4. Peter Gosnell and Snowden Taylor, "Research Activities and News," *NAWCC Bulletin*, No. 393 (August 2011): pp. 458-460.

5. Edward Powel, "Research Activities and News," *NAWCC Bulletin*, No. 321 (August 1999): pp. 507-510, Figures 5F and 5G.

6. Peter Gosnell and Snowden Taylor, "Research Activities and News," *NAWCC Bulletin*, No. 387 (August 2010): pp. 466-467.

7. "Research Activities and News," *NAWCC Bulletin*, No. 335 (December 2001): p. 803.