



## Research Activities and News

by Snowden Taylor, research committee chair

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# Clock Making & Labor History in Connecticut: Hours of Work

by Mary Jane Dapkus (CT)

According to the company's 1833 work rules, between October 1 and March 1 of each year, employees of the Henry Terry clock factory of Plymouth, CT, arrived for work at 6 a.m. and stayed until 8 p.m., for a total workday of 14 hours. This seemingly draconian schedule adjusted to 5:30 a.m. to 7:30 p.m., still a 14-hour workday, for the remainder of the year.<sup>1</sup>

The lengthy workday for Terry's clock factory employees was not an anomaly but indeed the norm for wage laborers in New England factories of the early nineteenth century. The Journeyman Carpenters and Joiners Society of Hartford, CT, may have been the first New England trade organization to negotiate a 10-hour workday for its dues-paying members, which it accomplished in 1836. In 1844 members of the New England Work Men's Association resolved to petition its respective state legislatures to prevent corporations from requiring more than a ten-hour workday. It was not until 1855, however, that the ten-hour workday for "mechanical or manufacturing establishments" became law in Connecticut. At the same time, the state legislature also passed laws forbidding the employment of children under age nine in factories and forbidding anyone under the age of 18 to be required to work more than 11 hours per day.<sup>2</sup>

Following the 1855 legislation, Connecticut clock and watch factory

workers labored under the ten-hour legal workday limit for the next 81 years. It was not until the passage of the Walsh Healy Public Contracts Act of 1936 that the eight-hour workday, 40-hour workweek with overtime time pay after 40 hours, minimum wage and health and safety standards became state law.<sup>3</sup>

### References

1. M. J. Dapkus, "Henry Terry vs. Matthews et al.: Order and Work Rules in an Antebellum Connecticut Clock Factory," *Watch & Clock Bulletin*, No. 385 (April 2010): pp. 207-209.
2. Nelson Burr, *The Early Labor Movement in Connecticut 1790-1860*. (West Hartford, CT: self-published, 1972): pp. 12-23.
3. Joseph M. Tone, "A Brief History of Connecticut Workingmen and How They Pioneered Better Working Conditions, Higher Wages, Shorter Hours and Social Security," *Monthly Bulletin of Progress of Labor in Connecticut* (September 1955): pp. 5-12.

### "Whither the Clock?" A Possible Philip Smith (NY) Prototype?

By Russ Oechsle (NY)

The Chair and this writer received photos of an interesting—but unidentified—Empire-case clock earlier this year. At the request of the Chair, I hope to provide review, com-



TOM ZIMMERMANN

**Figure 1.** Unidentified Empire-style, column and cornice case clock as presented for study. Case features mahogany and ash veneers. Dial and lower tablet glass are missing.

mentary, and an assessment of the most likely origin of the clock.

The clock in question, which, for dramatic effect and differentiation we will call Clock X, is shown in Figure 1. Photos of this clock are courtesy of Tom Zimmerman (NH) and described as follows:

**Movement:** As seen in Figure 2, the plates of the movement found in

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TOM ZIMMERMAN



**Figure 2.** Unidentified 8-day brass time and strike movement found in Clock X. Plates are cast brass. Back plate is solid.

Clock X are of cast brass, with a round top with splay-leg design of attractive simplicity. The plates are supported by three pillar posts: one at the peak and one at the bottom of each of the movement legs. The front plate has two tombstone-shaped cutouts flanking a center bar. The back plate is of the same overall shape as the front but solid. The 8-day movement has five-wheel time and strike trains. The escape wheel is on the front plate secured by a tapered retainer. The pinions are all cut steel. The movement features a brass lifting piece that is pushed up by pins on the idler wheel to activate the strike. The movement sits on a seat board. Gear trains are as follows:

**Time Side:**

- Great Wheel: 65T / 10L
- First Wheel: 60T / 10L
- Second Wheel: 50T / 10L
- Third Wheel: 40T / 10L
- Escape Wheel: 45T / 10L

**Strike Side:**

- Great Wheel: 65T
- First Wheel: 60T / 10L
- Second Wheel: 60T / 10L
- Third Wheel: 60T / 10L
- Fan: 10P

The owner of the clock reports that the clockmaker made some changes in positioning the pivots for

a number of gears in the strike and time trains, giving the impression that this is a one-off, experimental, or prototype movement.

**Case:** This case would undoubtedly fit comfortably in the pages of Lee Davis's fine NAWCC Supplement 18, Spring 1991, entitled *The Greek Revival Influence on American Clock Case Design and Empire Clock Case Development*. The clock is a 38-1/2" high (base of feet to top of cornice); 7-5/8" deep and 22-5/8" wide at the cornice, classic Empire-style case, complete with cyma curve cornice, unusual carved panel of a fruit basket in the arch in the frieze, full round columns with Ionic caps and turned bases, heavy paw feet and (again unusual) carved acanthus leaf curtain molding between the feet. While the majority of the case is veneered in flame mahogany, the case features figural veneer of what is thought by the owner to be yew veneer cut across the grain to present a contrasting appearance on the front edges of the cornice top and base, capital blocks and the strip between the two doors.

As found, the clock lacks a dial and a tablet in the lower door. The clock has a black and white lithograph of "Napoleon Crossing the Alps," likely a product of D. W. Kellogg & Co. of Hartford, CT, pasted on the interior of the backboard, almost certainly intended to be viewed through a clear or curtained lower tablet, which gave the print a two-dimensional look.

Lacking any label attribution, clues from the case and movement design and construction will have to be relied on to make an educated guess as to the maker of this clock.

**Movement Analysis:** The gear trains in this movement closely match those found in movements produced by S. B. Terry in Bristol, CT (F. H. McMillan, "Silas B. Terry's Early Eight-Day Shelf Clocks" *NAWCC Bulletin*, No. 117, pp. 838-843), Philip Smith of Marcellus, NY (1833-1842) (both the "strap" and the "Swiss cheese" movement versions), and those produced by Marshall & Adams (1834-1836) and E. W. Adams

(1836-1837) of Seneca Falls, NY. (See discussions of each of these makers in Oechsle and Boyce's *An Empire in Time—Clocks and Clock Makers of Upstate New York* (Columbia, PA: NAWCC, 2003).

It appears likely that both of these Upstate New York makers showed their appreciation of S. B. Terry's ingenuity by copying it, but their movements differ in a number of significant ways from S. B. Terry's and each other—enough to provide, in the words of Ken Roberts, "little doubt...that these [Smith and M&A] movements were original products [of these firms]." (Kenneth D. Roberts, *The Contributions of Joseph Ives to Connecticut Clock Technology 1810-1862* [Fitzwilliam, NH: Ken Roberts Publishing Co., 1988]: p. 159).

The Marshall and Adams' movements featured lantern pinions rather than cut steel, so it appears unlikely that these firms produced this movement. Visual comparisons between the gear blanking used in the Terry "strap" and Smith's four basic movement types (see *An Empire in Time*, p. 118) show that the gears most closely resemble those produced by Smith. Only Smith produced movements matching the gear counts, gear blanking, and pinion type found on Clock X. Only the escape wheel gear count in Clock X differs from the counts found in the Smith strap and Swiss cheese movements, with a 45T escape wheel versus 42T on the standard Smith movements. That Clock X also features a "lifting piece" to activate the strike has been noted. This feature was used by Smith, with minor variations, on each of his four "standard" movements (see *An Empire in Time*, pp. 117-118).

**Case Analysis:** On first glance, this case reveals itself as an exceptional, perhaps even a special or presentation, model of the classic Empire-style case produced by numerous Connecticut and New York State makers in the mid and late 1830s. Based on the analysis of the movement above, it appears most likely that this is an Upstate New York product. If so, it



can be differentiated as follows.

A number of Upstate New York brass shelf clock makers were born and quickly or soon thereafter succumbed in the period in the mid to late 1830s during which Greek Revival influences gained prominence in architecture and furniture (and thus clock) design. Primary among those producing full column and cornice cases were Smith, Marshall & Adams and E. W. Adams and Abner Jones (1825-1835) of East Bloomfield, NY. (As noted above, for discussions of each of these makers, see respective sections of Oechsle and Boyce's *An Empire in Time*.)

Jones can be eliminated from the discussion, as the few column and cornice Empire cases of his late production identified to date each far exceed the dimensions of this clock, and no Jones clock has been found with any more than a minor variation of his standard movement. While Marshall & Adams' 8-day movements were featured in distinctive full column and cornice cases, they used beveled, not cyma curve, moldings on their cornice tops, whereas Philip Smith (so far as identified) only used

cyma curve moldings on his full-size column and cornice cases.

Further clues are gained by noting that at least one other "late" Smith clock has been identified with nearly identical carved curtain and paw feet treatment on the base. This clock, seen in Figure 3, had its movement (see Figure 4 and discussion below) described in the February 1996 "Answer Box" column (*NAWCC Bulletin*, No. 300 [February, 1996]: p. 99), but the case was not shown. This clock ("Smith I" for reference) has key case dimensions ranging from identical to only 3/8" different from those of Clock X, despite the differing door treatment. The design of the entablatures (fancy term learned by reading the Davis publication noted above) is essentially identical between these two clocks, as are the Ionic capitals and, as noted, the base treatment. One can see from Figure 5 that Smith

I features carved base return blocks behind the paw feet, which serve to support the case in place of rear feet. Clock X, as first reported to the writer, lacked any back feet, and the owner reports that glue marks indicate that the clock likely once featured return blocks as well.

The cases of Smith I and Clock X differ in several respects. For example, Smith I actually contains a Smith label, whereas Clock X has the lithograph on the backboard. Smith I has octagonal columns versus full round columns on Clock X, but both column versions have turned bases and Ionic caps. Smith I has a standard (for Smith) veneered panel in the arch, whereas Clock X features a wonderful carved variation. Despite these differences, the preponderance of the evidence strongly suggests that the Clock X case was a Smith product.

The use of a lithograph on the backboard, typically used with a lower tablet with curtain treatment to allow the lithograph to be seen through the glass, is found on some Connecticut clocks and the majority of Marshall & Adams and E. W. Adams' full-size column and cornice cases. It is, however, known to be found, albeit rarely, on Smith cases. This writer has seen at least two Smith or Smith-attributed cases with curtained glass treatment, and one of these, the Smith "attributed" case, features a curtained reverse-painted



RON HULL.



RUSS OECHELE.

**Figure 4, above.** Eight-day brass time and rack and snail strike movement found in the Smith clock shown in Figure 3. This is identified as a minor variation of a product of C. & N. Jerome, ca. 1837-1839. At least two Smith or Smith-attributed cases have been found with these similar movements.

**Figure 3, left.** Column and cornice clock by Philip Smith, Marcellus, NY, ca. 1837. This is a labeled Smith clock with many case similarities to that of Clock X, including overall dimensions, case construction, and the carved curtain molding on the base between carved feet.

**Figure 5, below.** Closeup of the carved side blocks that serve to support the Smith case in Figure 3 in place of back feet. Clock X appears to have originally had the same type of block—now missing.



RON HULL.

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tablet almost exactly matching those found on Marshall and Adams' cases, and a lithograph on the backboard.

The loss of the original dial for Clock X is unfortunate for the restoration of the clock and problematic in terms of finalizing the case and movement attribution. The appearance of a dial on this clock consistent with those distinctive versions used by Smith would serve to seal the case as it were. A comparison of the configuration of the winding arbors relative to the center arbor on Clock X and those of the "standard" Smith movements might provide some insight, but those dimensions were not available to the author at the time of this writing.

Just to muddle things further we should note, as seen in Figure 4, that Smith I does not contain a movement attributed to Philip Smith, but rather an 8-day cast-brass, rack and snail strike movement of 1837-1839 vintage produced by Bristol, CT, clockmakers C. & N. Jerome! Speculation on this point can lead one in many, and confusing, directions, but on the face of it, one could conclude that after the economic depression of 1837 Smith was in such dire financial straits that while he could continue to make a small number of cases he lacked, at least for a time, the resources to produce his own movements.

That Smith was barely scraping by in the 1837-1841 period is supported by evidence produced in his bankruptcy hearing held in early 1842 when creditors from as far back as 1833 lined up to recover whatever assets they could (see *An Empire in Time*, pp. 119-120). In this scenario, the production by Smith of one or a few one-off movements using left-over gears and parts as he battled against insolvency might gain credibility.

## A Simon Willard Musical Bracket Clock

by Doug Cowan (OH)

One of the greatest pleasures in horology is to help "discover" something previously unknown to modern-day clock and watch collectors. An invitation to examine a musical bracket clock and to "give an opinion" provided just that opportunity. The most sensational aspect of the clock (Figure 6) was the signature upon the dial—Simon Willard, Roxbury! (Figure 7). Knowing the tendency of clock forgers to place America's most famous clockmaker's name on various anonymous American period clocks, I was suspicious. Besides, I think that no examples of Simon Willard spring-powered bracket clocks are known, let alone a musical one!

A Simon Willard timepiece or clock is, to American collectors, the very most desirable possession. Thus, an opinion on this clock had to be given carefully. "Too much for me," I said, and then, with the kind permission of the owner, arranged to examine the clock in the company of several expert collectors and dealers during a meeting of the NAWCC's British Horology Chapter. The question: Is this a legitimate clock, or a forgery? Here's what we saw:

Except for the dial, the clock closely resembles an English musical bracket clock of the late 1700s.

Every three hours it plays one of seven manually selected tunes on 13 bells using 13 hammers. It strikes the hours on a separately mounted 14th bell. The tunes are "101 Psalm"; "Listen to the Voice of Love"; "The Ploughboy"; "Flowers of Edinburgh"; "Dead of the Night"; "Barbadoes Bells"; and "Brittons Strike Home." The musical array is mounted in what Mr. Ord-Hume has called the parallel configuration (Figures 8 and 9) actually looks quite similar to a circa 1810 Thwaites & Reed musical movement. The triple fusee movement has four pillars and an engraved, but not signed, backplate (Figure 10). The es-



**Figure 6, above top.** Simon Willard musical bracket clock.

**Figure 7, above.** The dial signature: "Simon Willard/ROXBURY".

capement is verge, but the detached pendulum and the crown wheel and pallets may have been replaced.

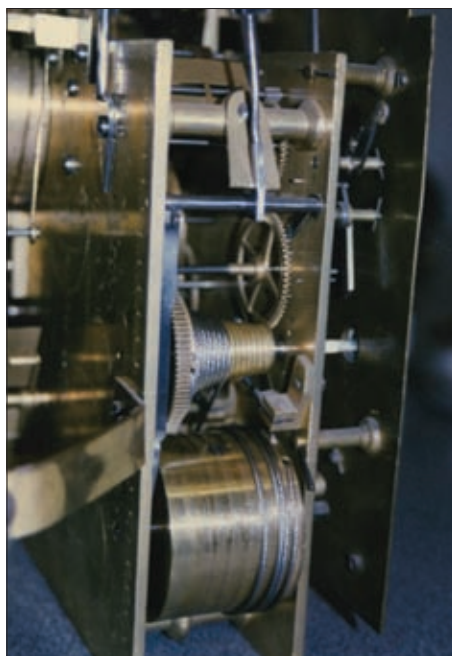
There also is evidence that the suspension bar has been lengthened so that the pendulum will swing past the awkwardly placed fly for the musical train. As a result, the pendulum cannot be tied down and must be removed whenever the clock is moved.

The case is a mahogany veneered bell-top. It appears to be a conven-





**Figure 8.** Top rear movement view showing some of the bells.



**Figure 9.** Left rear movement view.

tional 1780s English example, right down to the feet and attractive side frets (Figure 11). There does not appear to have been a handle or a finial on the top. At some later date, the inside of the front door has been hollowed out to make room for the oversized handle of the current winding key.

The “American personality” of the clock shows on the dial. Instead of chapter rings for the dial, chime/not chime, and tune selection circles, we have solid brass discs. These appear to be original, as there is no sign under them of any other fitments. The Arabic minute engravings are at the quarters only, whereas one would expect to see five minute numerals on an English clock.

The horologists assembled concluded that the clock is mostly in original condition and may have been marketed from Simon Willard’s shop. The movement and case are definitely English, circa 1775-1795.

The dial seems American, and at least one expert said the dial signature looked correct. It should be noted that we did not disassemble the movement to seek further clues. Several other facts support the possible Willard connection to this clock:

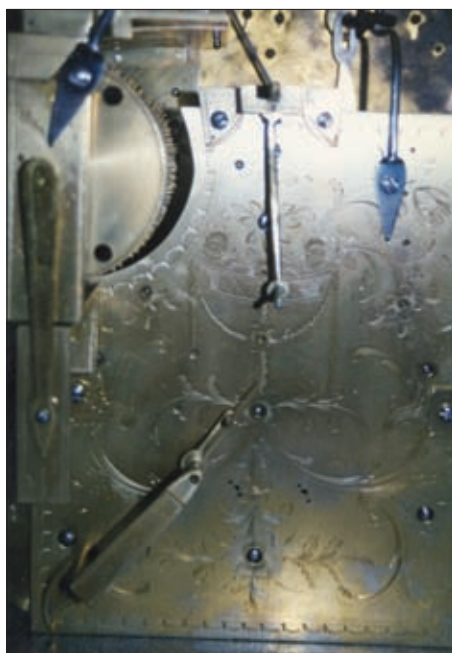
The period is right. Simon Willard

moved to Roxbury near Boston, MA, in 1783 and was already an established maker and retailer.

The dial is original to the clock, and the Willard signature seems correct. The quarter hour minute numerals resemble those painted on his dial clocks circa 1800.

In 1796 Willard advertised “spring clocks of all kinds” and “chime clocks that will play six tunes.”

In 1792 he sold a seven-tune musical longcase clock. At last report, it was not known whether he made the



**Figure 10.** Engraved back plate.

movement or imported it from England.

Slightly earlier, in 1773, Simon’s brother, Benjamin, also of Roxbury, advertised musical watches and clocks, playing seven tunes, with a psalm for Sunday, as does the bracket clock.

Several researchers have proposed that Simon Willard had close ties with English clock, barometer and clockwork roasting jack designs, and that even his famous banjo clock design was influenced by English barometers. One brave soul thinks that some original condition Willard long-cases contain English movements. Needless to say, this is not a popular idea to those who want Willard clocks to be 100 percent American made.

Is this musical clock truly from Willard’s shop? We will probably never know, but it is not hard for me personally to believe that Willard, receiving an order for a complex clock type that he did not routinely make, would “finish” and sell a perfectly sound English one.

He did just that with roasting jacks, and the market was there. American-made musical bracket clocks were sold by Connecticut makers as early as the 1780s.

Finally, it would be most helpful to have readers’ suggestions concern-



**Figure 11.** Right side case view.

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ing the possible maker, assuming that the clock is English. I didn't see any identification on the movement, so I don't think that it is Thwaites & Reed, who in any case usually provided six, rather than seven tunes. Ideas may be forwarded to the author, via this Research Column.

### J. S. Turner Patent Automatic 8-Day Alarm Clocks

By Peter Gosnell (UK)  
and Snowden Taylor (NY)

The pages of the Research Column have contained automatic 8-day alarm clocks before. Now discussed are movements utilizing Jonathan S. Turner's patent of July 13, 1852 (see appended Figures 24A-24C); they are probably the earliest patented so far.

Turner's alarm has been discussed previously.<sup>1</sup> The brief text is on pp. 81-82; a photo is on p. 87. The alarm timepiece is said to be manufactured by "Jerome," but this is ambiguous. If labeled "Jerome & Co.," it was most likely manufactured by the New Haven Clock Co.

The movement example (in the American Clock and Watch Museum collection and referred to as the ACWM movement from now on) is within a small OOG case measuring 18-1/2 x 11-3/4 x 4 inches (see Figure 12). Figure 13 is a more detailed shot with the case door open and dial removed to show the ACWM movement within as well as its large bell<sup>2</sup> and remains of the label.<sup>3</sup> Figures 14 and 15 are closeups of the ACWM movement's front and back plate, respectively, while Figure 16 is a left front 3/4 view of the same. Notice how this movement is loosely based on the New Haven Clock Company's "Y" plate 8-day time and strike spring-driven movement<sup>4</sup> but with a modified bottom plate section, having two large round holes, which accommodates the alarm escape wheel and the hammer's pallets/verge; the alarm escape wheel is driven directly off the alarm great



**Figure 12.** J. S. Turner's patent automatic alarm timepiece, in ACWM's small OOG case; most probable maker, New Haven Clock Co. See text.



**Figure 14.** Movement of timepiece of Figure 12. Note two, not one, slots in count wheel. See text.

wheel. It was noted that the rest of the ACWM movement's alarm train wheels and detents are the same as the "Y" plate's striking train wheels and detents except for the following differences:

1. The alarm second wheel's lantern pinion is of a larger diameter and has 12 trundle wires (see Figure



**Figure 13.** Timepiece of Figure 12, door open and dial removed, showing bell and mostly unreadable label below, and movement above. Best guess as to movement manufacturer could be New Haven Clock Co.



**Figure 15.** Back of movement of Figure 12. Note rim of alarm great wheel narrower than that of time great wheel. See text.

- 17) instead of the usual 8 found on the "Y" plate time and strike movement (probably to increase the train's duration in this application).

2. The count wheel on this example only has two slots; these regulate the duration for which the alarm





**Figure 16.** Left front  $\frac{3}{4}$  view of movement of Figure 14, showing alarm detent in notch of alarm set wheel. Note two notches in drop slot disc of alarm third wheel. See text.



PETER GOSNELL/COURTESY ACWM (3)

**Figure 17.** Left back  $\frac{3}{4}$  view of movement of Figure 14 showing 12L pinion of alarm second wheel; in contrast, will have 8L pinion on second time wheel. See text.



PETER GOSNELL/COURTESY BOB CARTER.

**Figure 19.** Bob Carter's J. S. Turner patent automatic alarm timepiece in round Gothic (beehive) case, made by New Haven Clock Co. All internal features identical to timepiece of Figure 20.

**Figure 18.** Upper part of movement of Figure 16 again showing alarm detent playing on notched rim of alarm set wheel. Here it is in warning position. See text.



but no such firm existed. The upper part of the label matches that of the two above clocks, but the lower part is partly hidden behind the bell and out of focus. The movement appears like the two above examples, and it has one slot in the count wheel. The case is sharp Gothic (steeple).

Bob Carter's (UK) and Keith Datchler's (UK) examples of the J. S. Turner patent alarm timepiece in round Gothic style cases, identical in all respects, except for differing tablets, have also been investigated (see Figures 19 and 20). However their movements show differences to the ACWM movement example detailed above. The Keith Datchler example will now be used to illustrate these differences. Figure 21 is a shot of this clock's backboard, removed from the case, to show the KD movement and bell<sup>7</sup> with label behind. Figure 22 is another shot again of this clock's label with the bell removed; note how this is a different styled label to that found within the ACWM example

sounds (see Figure 14). In contrast, the patent drawing in Figure 24A pictures a count wheel with just one slot.<sup>5</sup>

3. The cam behind the alarm setting disc on the cannon tube activates a primary alarm detent which lifts the secondary alarm detent to allow the train to run to warning in the usual way (see Figure 18). The movement therefore does not need or have the usual primary striking detent on its minute arbor.

4. The drop slot disc has two slots

(see Figure 16). Ordinarily, the drop slot wire will encounter the leading slot, and then leave the alarm striking system in warning. The second slot will allow the alarm train to unlock a short time after its last sounding, and then relock on the first slot, 12 hours after this same last sounding thus ensuring the alarm only rings once every 24 hours.

Another Turner patent alarm timepiece was advertised for sale on eBay in January 2009.<sup>6</sup> It was said to be marked "Chauncey Jerome & Co.,"

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PETER GOSNELL/COURTESY KEITH DATCHLER (5)



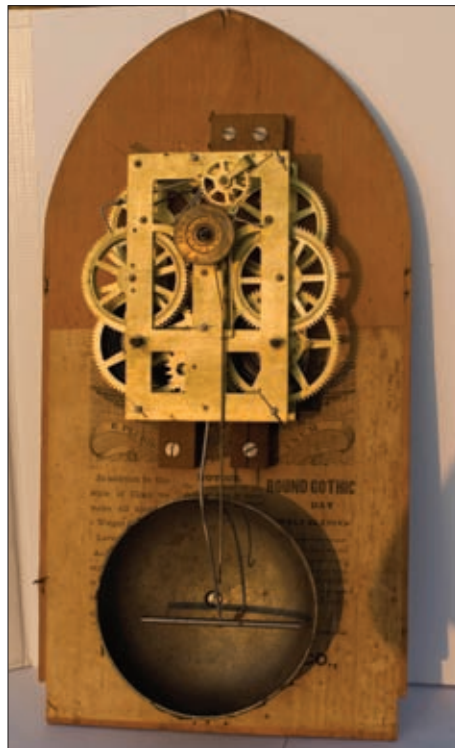
**Figure 20.** Keith Datchler's J. S. Turner timepiece. All internal features identical to that of Figure 19.



**Figure 22.** Label of Figure 21 with bell removed, showing full label of New Haven Clock Co. Note that "NOTICE" is printed twice. See text.



**Figure 24.** Right front  $\frac{3}{4}$  view of movement of Figure 21. Note the new style escape cock (compare to old style Figure 14).



**Figure 21.** Backboard and fittings from timepiece of Figure 20 showing label and bell, below, and movement, above. Note square (not round as in Figure 13) apertures at bottom.

and how the "Notice" to inform the owner how the minute hand should never be turned backwards has been printed for a second time to ensure it can be seen above the large bell. Figure 23 is a left front  $\frac{3}{4}$  view and Figure 24 a right front  $\frac{3}{4}$  view of the



**Figure 23.** Left front  $\frac{3}{4}$  view of movement of Figure 21. The alarm escape wheel has holes to save brass. Note one, not two, slots in count wheel, and two notches in drop slot disc of alarm third wheel. The rims of both time and alarm great wheels are about the same width. See text.

KD movement. The following differences between this KD movement model and the previous ACWM movement were noted:

1. The KD movement has two square lower apertures in both plates instead of the round holes found on the ACWM movement (compare Figures 23 and 24 with Figures 14, 15, and 16).

2. Author PG, having personally inspected both of these movements, also believes the front and back plates on this KD movement may well be of thinner brass to those on the ACWM movement. The fact that the KD movement additionally has extra bushes for the great wheel arbors (both front and back) supports this belief (compare Figures 23 and 24 with Figures 16 and 17).

3. The alarm escape wheel on the KD movement has holes (to save on brass) while the ACWM movement has none (compare Figure 23 with Figure 16).

4. The count wheel mounting collar riveted to the front plate on the KD movement has both its rivets radially opposed to each other while on the ACWM movement they do not line up with the collar's center (compare Figures 23 with Figure 14).

5. The alarm great wheel rim is narrower than the great wheel gong rim on the ACWM movement, probably due to the same punch and die having been used to punch out both wheels' crossings coupled with the fact that the overall diameter of



the alarm great wheel is smaller to accommodate its correct depthing with the larger alarm second wheel lantern pinion (see Figures 14, 15, and 17). On the KD movement, which again has a smaller diameter alarm great wheel, for exactly the same reason as has just been detailed above, different punch and dies have been used to produce the crossings on each wheel, respectively, with the result that both great wheel rims are approximately of equal width (see Figure 21). This would result in less brass being used for the great wheel gong on the KD movement.

6. An extra hole can be seen on the upper left side of the front plate on the KD movement (probably to be used with an alternative independent alarm in a different application (see Figure 23); the ACWM movement example has no such hole.

7. The shape of the escape cock is of the earlier style in the ACWM timepiece (Figure 14) while that of the KD is of the later style (Figure 24).

To conclude, these ACWM and KD movement examples, being representatives of slightly different models<sup>8</sup> designed for this J. S. Turner alarm application suggest that the company or companies produced this patent alarm for a longer period than was at first anticipated, or else produced these alarms for two shorter periods separated by a longer period.

**Notes**

1. D. H. Shaffer, *A Survey History of the American Spring Driven Clock 1840-1860* (NAWCC Bulletin Supplement No. 9, Winter 1973).

2. It was noted that this bell was made of bell metal.

3. This appears to be the same label as in the clock of Reference 1. Some label fragments say "New Haven," but the ambiguity as to the manufacturer is not resolved.

4. Snowden Taylor and Peter Gosnell, "Research Activities and News," *NAWCC Bulletin*, No. 372

(February 2008): p. 66.

5. It is now thought, from a careful study of the available photographs, that the second slot on this ACWM example could have been filed-in later to cut the duration for which the alarm sounds by half (normally about 45 seconds with just one slot); all other examples appear to have one slot.

6. Sale item 260342725123.

7. The bell on this movement was made from cast iron rather than bell metal.

8. All the data presented above suggests the movements with two square lower apertures in both plates may well have been manufactured after the movements with two round apertures in both plates.

**Appendix**

Figures 24A-24C show the three pages of J. S. Turner's U.S. Patent No. 9123 "ALARM CLOCK," patented July 13, 1852. Figure 24A shows the diagram sheet and Figures 24B and 24C show the upper and lower parts of the text, respectively.

J. S. TURNER.  
Time-Alarm Clock.

No. 9,123.

Patented July 13, 1852

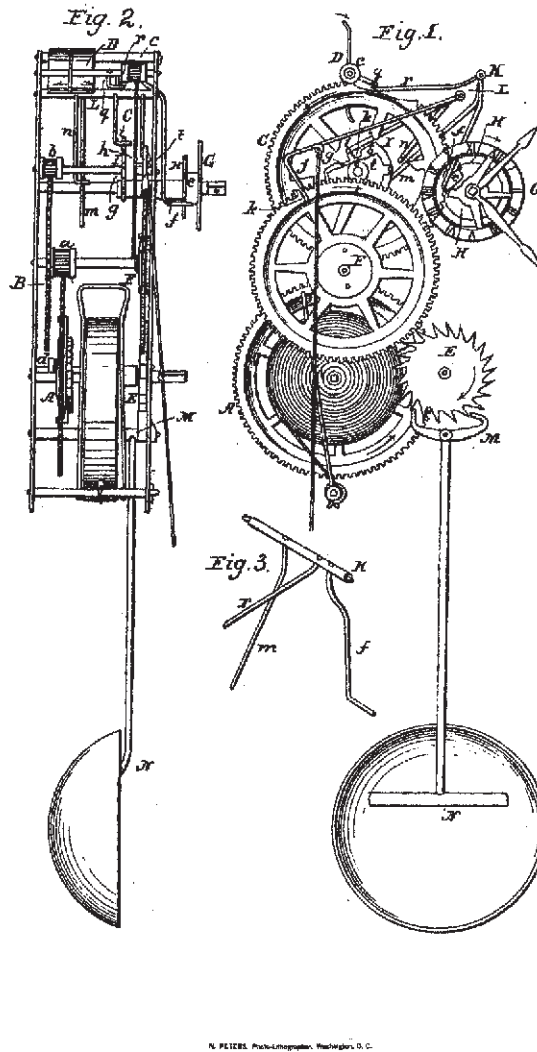


Figure 24A. Diagram page of L. S. Turner's U.S. Patent No. 9123.

# UNITED STATES PATENT OFFICE.

JOHNATHAN S. TURNER, OF NEW HAVEN, CONNECTICUT.

## ALARM-CLOCK.

Specification of Letters Patent No. 9,123, dated July 13, 1852.

To all whom it may concern:

Be it known that I, JONATHAN S. TURNER, of the town and county of New Haven, in the State of Connecticut, have invented a new and useful Improvement in Alarm-Timepieces; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, which make a part of this specification, in which—

Figure 1, is a front view, or elevation, of the gearing of the alarm part, with the front plate removed, showing the double notched cam, and the locking apparatus. Fig. 2, is a side view, or elevation of the same. Fig. 3, is a view of the upper lock shaft.

My improvement consists in so constructing the alarm part, that it will give alarms for eight days, (or more,) with once winding. And so that it will give but one alarm in twenty four hours, or while the hour hand is making two complete revolutions.

I make the time piece in any of the ordinary ways, or otherwise, and the alarm part with an ordinary train of wheels and pinions, as seen at A, B, C, and a, b, c, and a pallet wheel, E, with its pinion, d, Fig. 2, and count wheel, F, Figs. 1 and 2.

I make a dial to set the alarm in the ordinary way, as seen at G, Figs. 1 and 2, to the back of which I attach a snail, H, Figs. 1 and 2, into the notch, e, of which the lifting, or drop, wire, f, Figs. 1, 2, and 3, falls to let off the alarm.

On the arbor, and attached to the collet, of wheel, C, I fix a cam, I, Figs. 1 and 2, in which I make two notches, or spaces, as seen at g, and h, Figs. 1 and 2, in which the detent, i, falls to prevent the alarm by allowing the count wire, j, to fall into the score, or space, k, Fig. 1. And I make two lock shafts, K, and L, with three wires, for detents, lifters, &c., in each, as seen in Fig. 1.

I set the alarm by turning the alarm dial forward so as to bring the time marker on that dial directly under, or back of, the hour hand of the time piece, in the usual way of setting alarm dials, (as at 18 minutes past twelve, seen in Fig. 1.) And as this dial, G, and snail, H, (or their spring socket,) is slipped onto the socket of the hour wheel, (or that on which the hour hand is placed,) the alarm dial, and snail will be carried around with the hour hand, so that when the hour hand has advanced so much of a circle as from

p, to o, Fig. 1, the inclined plane of the snail will raise the lifter, or drop wire, f, so that the lifting wire, m, of the lock shaft, K, Figs. 1, 2, and 3, will lift the wire, n, of the lock shaft L, and thereby raise the detent, or count wire, j, from the score, or space, k, in the count wheel and the detent, i, from the notch, or space, g, in the double notched cam, so as to allow the gearing to move forward, (in the direction indicated by the darts,) until the wire, g, in the arbor of the fly pinion comes in contact with the detent, r, (which has also been raised, it being on the same lock shaft with, f,) which stops the motion of the alarm gearing, so that the whole will remain in the position seen in Fig. 1, until the hour hand has completed its revolution; when the lifting, or drop wire, f, will fall from p, to e, Fig. 1, thereby releasing the wire, g, from the detent, r, leaving the fly at liberty, but allowing the detent, i, to fall into the notch or space, h, in the cam, I, which detains the gearing in that position until the hour hand has again advanced a portion of a revolution equal to that from p, to o, Fig. 1, when all the detents will be raised as before described, and the fly pinion will be detained by the detent, r, as before described, until the hour hand has again completed its revolution, when the lifting, or drop wire, f, will again fall from p, to e, thereby releasing the fly pinion, as before described; at which time the detent, i, will fall on the inclined plane, s, of the cam, I, and prevent the count wire, j, from falling into the score, or space, k, Fig. 1. And as the detent i, passes up the inclined plane, s, or is raised by it, it raises the count wire, j, above the teeth of the count wheel, and while the count wire, j, rests between the teeth, the detent, i, cannot fall into the notches in the cam, I, and as the gathering pin, t, Fig. 2, in the collet of the wheel, C, will revolve the count wheel, F, one tooth by every revolution of the wheel, C, the alarm will continue as long as is required to effect a revolution of the count wheel, when the count wire, j, will fall again into the score, or space, k, and allow the detent, i, to fall into the notch, or space, g, in the cam, I. This count wheel, F, works on a socket in the usual way for striking the hour in clocks, and may be made of the size, and graduated, to suit customer.

The alarm is produced by the main wheel, A, working in the pinion, d, Fig. 2, of the

### Acknowledgments

We would like to thank the staff of the American Clock and Watch Museum, Keith Datchler OBE, and Bob Carter for allowing us access to their clocks. At the time of writing the ACWM example was on display in their Ogee Clock Exhibition.

### More on Wooden Tall Clock Seatboard Stampings

In this column in the October 2009 *Bulletin*, Chris Hansen (NY) presented information on two "Ireland" wooden tall clock movements, one a "Porter Contract" movement and one probably an immediate post "Porter Contract" movement, stamped "ED" and "P.P.B", respectively. At the end of the article, the Chair asked that readers report other such stampings.

The first reply was from Alvin C. Rupert (CA), who had asked "The Answer Box" (reported in the April 1977 *Bulletin*, pp. 201-202) about his "Ireland" (Style IIIb<sup>1</sup>) movement stamped "G P" on the edge of the seatboard. Jim Gibbs answered the request, but referred it to Chris Bailey, who wrote, "In only one case were the initials so impressed, coinciding even indirectly, with the clock-maker's name. These impressed initials on the seatboard apparently stand for the initials of the man who assembled the movement and since in a vast majority of cases we do not know the names of these men, their initials mean nothing to us ..."

Next to reply was Patrick Hagans (MI). He sent photos of a wooden tall case late improvement.



PATRICK HAGANS.

Figure 25A. Case (made by Patrick Hagans) of 30-hr. wooden tall clock movement, Ireland style with late improvement.

Figure 24B. First text page of L. S. Turner's U.S. Patent No. 9123.

2

9,123

pallet wheel, E, which acts on the pallets, M, which move the hammers, N, in the usual way for alarm time pieces.

The advantages of my improvement consists in so constructing the alarm part of any time piece, (or to be attached to any time piece,) by means of the double notched cam, &c., that it will continue to give alarms, for eight days, or more, with once winding, but it will only give an alarm once in twenty-four hours; and yet, so that it may be set to give the alarm at any time desired, (even in a few minutes,) by turning the alarm dial forward, more than twelve hours, when necessary.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the double notched cam, I, with the locking apparatus, K, and L, with their appendages, f, m, r, n, i, j, and g, when used in any kind of time pieces, for giving alarms at the time desired, and giving more than one alarm with once winding, when the whole is constructed, arranged and combined, substantially, as herein described.

JONATHAN S. TURNER.

Witnesses:

JOHN A. TURNER,  
R. FITZGERALD.

Figure 24C. Second text page of L. S. Turner's U.S. Patent No. 9123.





**Figure 25B.** Dial of clock of Figure 25A.



**Figure 25C.** Back of backplate of movement of clock of Figure 25A, typical for Ireland movements.



**Figure 25F, above right.** Probable "S" stamped near the right end of the seatboard of the movement of Figure 25C.  
**Figure 25G, above left.** Rubbing of probable "S" on seatboard of Figure 25F.



PATRICK HAGANS (6)



**Figure 25D.** Right (time) side view of movement of Figure 25A.



**Figure 25E.** Left (strike) side view of movement of Figure 25A. The arrangements supporting the function of the hammer arbor are a later development in Ireland movements. See text.

clock; Figures 25A-25E show the case (made by Patrick), dial with hands, back of movement, right (time) side of movement, and left (strike) side of movement. The movement back shows a layout in the "Ireland" group, but the left (strike) side view shows, at left, that the hammer spring engages with a wire coming down from the hammer arbor above, and at right, a stud on the front plate engages with another wire coming down from above, not visible. This arrangement is a later development than the flat (triangular in cross section) cam at left, the usual "Ireland"

arrangement. But Reference 1 calls both arrangements "Ireland."

Patrick wrote about his clock (Figures 25A-25E): "I examined closely the seatboard of a 30-hr. tall clock movement that I purchased many years ago and restored. On the right hand side of the seatboard just above one of the holes (probably added at a later date) used to attach the seatboard to the clock case is what appears to be the letter "S" stamped

into the wood. See the attached Figure 25F. It has the same coloration as the rest of the unrestored portion of the seatboard indicating that it has probably been there since the movement was made. It does not look like there was ever another letter or letters next to this one so one needs to ask whether this was a real stamping or just a defect introduced by some other action. Difficult to say. Perhaps a second letter was underneath this where the hole is now at? I also took a rubbing [Figure 25G] and it certainly has the appearance of a stamped "S" suggesting it was introduced with a letter die stamp. Maybe others like it have surfaced ..."

Tom Spittler sent copies of his four data sheets listing stampings and other features of Southwest Ohio clocks, which he has maintained for over 12 years. Slightly condensed, these are given in Table 1. A few stampings can be associated with names, and these persons were employees of the indicated clock firms at that time. So, possible/probable associations are: AD-Anson Downs; ED-Ephraim Downs; OR-Orlistus Roberts; and TW-Thomas Watkins. ☐

#### Reference

1. Shepard Roberts, "Identification and History of Wood Movements in Tall Clocks, Paper II," *NAWCC Bulletin*, No. 160 (October 1972): pp. 682-694.

Table 1

**Stampings, etc., on Southwest Ohio Wooden Tall Clocks (no loose movements)**

Stamping	Seat Board Holes	Strike Control Pivots	Dial Attachment Holes	Number Observed	Description
<b>Read &amp; Watson</b>					
None				3	
None	Rectangular			3	
None				1	Poplar stamped H Moore
None	Rectangular			1	H. Moore type case, Masonic dial
None	Rectangular/square			1	Cherry, rectangular door, flat top
ED	Rectangular			1	Replacement New England case
OR (4 times)				1	Cherry, thin H. Moore type
<b>Read &amp; Watson, Cincinnati</b>					
None				2	
AD				4	
ED				2	
ED				2	Cherry, Federal
IW				1	
OR				1	
TW				1	
<b>A. Read &amp; Co.</b>					
OR (twice?)				5	Cherry, Federal
OR (twice)				1	Cherry, Federal
OR (twice)	Rectangular			1	Cherry, Federal
OR (twice)	Rectangular	All metal	3	1	Cherry, Federal, paneled base, walnut seatboard
OR (twice)	Round			1	Cherry, Federal, one unusual center finial, walnut seatboard
<b>Luman Watson</b>					
None				6	
None				1	Walnut with Watson label
None				1	Cherry, Federal, Elijah Warner, J. Dunn in chalk
None				1	Poplar, tapered base, black and salmon wiggle painted
None				1	Empire, inlaid
None	Rectangular			2	
None	Round			3	
None	Round			2	Cherry, Federal
None	Round			1	Cherry, Federal, turned feet
None	Round			1	Cherry, Federal, turned feet, dated 1828
None	Round			1	Poplar flat top
None	Square	All metal	2, ?	1	Walnut, paneled, flat top, hardwood seatboard
AD				2	
AD				1	Walnut, Sheraton turned feet, flat top, associated?
AD	Rectangular			1	
AD	Rectangular			1	Cherry, Federal, walnut seatboard
AD	Square	All metal	2, ?	1	Cherry, Sheraton turned feet, reeded columns, matchstick molding on base, hardwood seatboard
C				1	Empire carved columns
C	Round			1	Cherry, Federal
D/D	Rectangular			1	
ED				2	
ED				1	Cherry
ED				1	Cherry, Elijah Warner
ED	Square	All metal		1	Cherry, Federal, pine (?) seatboard
I (three times)				1	Cherry and poplar
IB	Round			1	Poplar, Federal
IP	Round			1	Associated New England case
IS				1	Original PA case, carved in base, Masonic dial
IS	Rectangular			1	Poplar, painted, not signed
IS	Round			1	Only movement with dial, hood
IS	Round			1	Cherry, mahogany trim, Federal, Elijah Warner
JP, and H. Blakeslee				1	Elijah Warner (may be same clock as next below)
JP, and H. Blakeslee	Round			1	Cherry, mahogany trim, Federal, Elijah Warner
JRS				1	Cherry, Federal
JRS				1	Cherry, Federal, A. Read & Co. type
JRS	Rectangular			4	
JRS	Square			1	Associated NJ case
JRS	Square			1	Spool-turned moldings, Sheraton feet, low arch
L (or I) S	Round			3	
LS	Round			1	Poplar, painted
LS	Round			1	Cherry, Federal
OR				1	Read & Watson H. Moore type
?S				1	
W	Round			2	
W	Round			1	Poplar, tapered base, black and salmon wiggle painted, swan neck
<b>O. Roberts</b>					
None				1	Cherry, arch top
None	Square			1	Cherry, Federal, roped trunk, inlays door and base