Dwarf clocks, standing only about four feet in height and occasionally referred to as grandmother or half-clocks, represent a successful adaptation by a number of rural early nineteenth-century clockmakers fighting for a diminishing share of the trade in a changing climate. Under pressure from inexpensive Connecticut wood-movement clocks and from the expansive network of the Boston makers, southeastern Massachusetts’ clock technicians like Joshua Wilder (1786–1860) and Reuben Tower (1795–1881), along with cabinetmaker Abiel White (1766–1844) countered with a more affordable product than the outmoded tall-case clock that had been their staple.

The first few years of the nineteenth century represented the heyday of tall-case clock manufacture in Massachusetts, although with a price tag of between $65 and $75, they were a luxury few households could afford. Roxbury (now part of Boston) clockmaker Simon Willard’s (1753–1848) development of the less expensive “patent time piece,” or banjo clock, patented in 1802, changed the industry; it quickly became the choice of Boston area consumers. But because Willard permitted only his inner circle of former apprentices and relatives to make clocks based on his design, clockmakers outside his circle were forced to develop their answer to the banjo clock. Although limited numbers of dwarf clocks were produced in other regions, most were made on Boston’s South Shore in the towns of Hanover and neighboring Hingham, where hundreds were produced. The clocks ranged
considerably in sophistication, from simple pine examples with time-only movements to elegant mahogany cases with fretwork and French feet. The latter design, often housing more complicated time, strike, and alarm mechanisms, beautifully reproduced in half-scale the stylish full-size tall clocks.

South Shore artisans such as Hanover’s John Bailey II (1751–1823) and his apprentice Joshua Wilder of Hingham continued to sell tall clocks, even as Roxbury/Boston clockmakers turned increasingly to the less expensive banjo. Yet the growing price differential demanded that the Hingham and Hanover craftsmen develop a more competitive product. Few selling prices for dwarf clocks are recorded, but one example with a bell-top design sold for $35 in 1815 (Fig. 1) and one with a fretwork-top sold for $42.50 in 1819 (Fig. 2). South Shore artisans continued to offer the form until the mid-1820s, when cheap mass-produced shelf clocks from Connecticut forced these craftsmen into other areas such as retail sales, jewelry, and repair work. Yet, from about 1810 to 1825, Joshua Wilder, Reuben Tower, John Bailey II, (1751–1823) and others within the Bailey School developed and refined what has become one of the most prized examples of American clock making.

The two earliest known dwarf clocks from Southeastern Massachusetts incorporate engraved brass dials, which dates them to the late eighteenth century; their design is also different from later examples. One clock (Fig. 3), made by Samuel Rogers (1766–1838), dates from about 1790 to 1800, well before most others were produced. Inscribed “Samuel Rogers / Marshfield” and housed in a mahogany case with a low broken-arch pediment terminating in carved pinwheel rosettes, its case closely relates to the earliest tall clock style used by Hanover clockmaker John Bailey II, to whom Rogers had been apprenticed. Plymouth clockmaker Caleb Leach (active ca. 1776–1800) made another early brass dial dwarf clock between about 1780 and 1800, housed in a pagoda top mahogany case. Hanover clockmaker Calvin Bailey (1761–1835) recorded in his account book the purchase of at least one dwarf clock case from Hingham cabinetmaker Theodore Cushing (1776–1855). Two early dwarf clocks by Bailey are known with cases that are attributed to Cushing. With fretwork-tops and removable hoods, they are exceptions that stand apart from the fretwork-top clock cases discussed below. One includes an inscription dating it to 1800, the other appears to date from circa 1805.

The next generation of dwarf clocks consists of a small group of round-dial clocks dating from about 1805 to 1815. Housed in simple pine cases, they bear the names of either John Bailey II or his brother Calvin Bailey. The painted dials from this group have been found to be in poor condition on every clock examined, perhaps an indication of improper paint application or surface preparation.

A few clocks dating from the same period incorporate kidney-shaped dials of the type found on Massachusetts shelf clocks being made in Boston at that time. They are housed
in pine cases that were likely originally painted. One example made by John Bailey II dates from circa 1810 (Fig. 4) and features a removable hood and a time-only brass movement. The dial is decorated with a finely painted patriotic scene depicting Lady Liberty.

More sophisticated mahogany examples began to appear about 1815, and for about the next ten years, during which tall-case clock production in Massachusetts was almost entirely phased out, dwarf clock output in the Hingham area was significant. The three craftsmen most responsible for the development of the dwarf clock were Hingham clockmakers Joshua Wilder, Reuben Tower, and cabinetmaker Abiel White. Wilder, known to have made seventy-one dwarf clocks, was the most prolific maker. His likely apprentice Reuben Tower, with twenty-four known examples, was another prominent maker. The two clockmakers were friends and neighbors along Main Street in Hingham. They purchased their dials from Boston dial painters, crafted similar brass movements, and employed the same case maker; consequently, their clocks, save for the inscription on the dial, are indistinguishable from one another.

Weymouth cabinetmaker Abiel White was responsible for making the majority of the cases for these clocks. The success of the dwarf clock form can be directly tied to White’s ability to create a simple, affordable, yet attractive case. His relationship with Joshua Wilder was established while Wilder was apprenticed to John Bailey II, who purchased clock cases from White. Together they created distinctive clocks by incorporating elements already in use elsewhere. The small-scale tombstone dials were already being manufactured in Boston for shelf clocks made by David Wood of Newburyport. The bell-top design, which appears on the majority of these dwarf clocks, was copied from Massachusetts shelf clocks. The shorter pendulum, allowing for a smaller case, was borrowed from the banjo clock.

All known examples of southeastern Massachusetts dwarf clocks are equipped with eight-day movements constructed of brass (occasional examples run for slightly less than the full eight days). The less costly pine-cased models typically include only one winding hole in the dial, indicating a simple time-only movement. The mahogany cases almost always contain a more complicated movement; often with an alarm mechanism, occasionally with a full time-and-strike miniaturized tall clock movement. A second winding hole in the dial denotes either an alarm or a striking movement.

Dwarf clocks were available in two case forms—those with a “bell-top” (Fig. 5) and those with an arched top and fretwork, here termed a fretwork-top (Fig. 6). The bell-top model was constructed of pine or mahogany, with approximately equal numbers of each surviving. Virtually all of the cases for these clocks can be attributed to the shop of Abiel White. Most of the pine cases were originally painted; in some instances, they were stained or mahoganized to look like a more expensive wood. The “hood” on the bell-top clocks is not removable, so access to the movement, weights, and pendulum is gained through a full-length door in the back of the case (Fig. 7), a technique White used on all his bell-top cases. The rear door is sometimes removable but is typically hinged, often with simple bent-wire cotter-pin hinges secured with a wire hook or turn latches. Most of these bell-top clocks have original iron hangers on the back, suggesting they were hung on the wall like a banjo clock. But the hangers may simply have stabilized the clock as it sat on a shelf or table against the wall; no original bracket-type shelves of the period have been found.

The most elaborate of the known bell-top cases is fitted with a Boston painted dial and an eight-day time-and-strike movement (Fig. 1). Made by John Bailey II in 1815, an inscription inside the door states the price at thirty-five dollars. Although Bailey was one of the first clockmakers in the region to make dwarf clocks, he made very few. This popular bell-top design was still in use by Reuben Tower after 1822 when he was in Kingston, Massachusetts.

A rare Joshua Wilder clock with bell-top case (Fig. 8) has survived with its original grain-painted decoration. It has an eight-day time-only movement. White made the pine case between about 1816 and 1820, which features a bell-top with a central plinth supported by scalloped corner brackets. This
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Fig. 7: View of inside of clock shown in figure 5. Photography by Laslo Bodo.
scalloped bracket design occurs on virtually every bell-top case made by Abiel White. The painted decoration, with mock inlay and banding, was common on the clock cases and furniture he made; his account book contains several charges to customers for painting furniture or clock cases. White created the imitation line inlay by dragging a tool such as a thin piece of bone through the outer layer of wet paint on the surface, exposing the lighter base color below and thus creating the illusion of light wood line inlay. Close examination of White’s pieces that no longer have their original paint often reveals the telltale indentations left in the wood from applying heavy pressure during this process.

The slightly later Wilder clock shown in figure 5, made between 1819 and 1824, retains its original painted surface combining grain decoration and sponge painting. This pine case is also attributed to Abiel White. White used the same cutout foot without an applied bracket to simplify construction on later examples of both tall and dwarf clock cases. This clock features an eight-day brass time-and-strike movement and removable back board (fig. 7). The movement saddle board rests on two wedge-shaped cleats that are nailed to the case sides, a treatment typical of all of White’s dwarf clock cases except those with removable hoods. Another typical feature is the one-piece case sides that run from the top board to the bottom board, with thick boards glued to their outsides to add the additional width of the base section. A single thick board applied to the front stiles adds additional thickness to the front of the base in the same way. A simple “waist” molding is applied to the top edge of these boards. The same molding, sometimes just slightly different, is applied just under the dial door to create the illusion of a separate hood. The construction of these cases is ingenious in its simplicity.

The fretwork-top cases are made of mahogany in all known examples except one. They were made with two different foot styles, bracket feet and French feet. The bracket-foot style was made with a full-length door in the back, just as the bell-top models were. Within a year or so of making the bracket-foot clock shown in figure 2, White was producing the French-foot cases with removable hoods. The bracket feet on this clock reflect a stylistic transition, the taper at the bottom coming closer...
to a French-foot. The case includes the same fretwork pattern he used on most of his bracket-foot and French-foot cases. The brass works movement is eight-day time-and-strike; the clock is accompanied by an original bill of sale (Fig. 9).

A Reuben Tower dwarf clock with a miniature tall clock time-and-strike movement features a mahogany case built by Abiel White between 1817 and 1822 (Fig. 10). The case is veneered with nicely figured mahogany. The push-button latch, notched into the dial door of this clock, can be found on many Abiel White cases.

The most refined of all the dwarf clock cases are those with French feet like the one with an eight-day time-and-strike movement by John Bailey Jr. III (1787–1883) shown in figure 6. The son of John Bailey II, he typically signed his clocks “John Bailey Jr.” until his father’s death in 1823, thereafter sometimes dropping the “Jr.” This is one of three nearly identical cases attributed to Boston cabinet-maker Henry Willard (1802–1887). Made of mahogany and featuring decorative frets, removable hoods, and quarter columns on the waist, these French-foot models are perfect miniatures of the Roxbury/Boston-area Federal tall clocks. Yet, the date of the dwarf versions comes well after the popularity of their full-size urban models. The tall clocks were most popular prior to 1812, while the documented


**Fig. 11:** Dwarf clock, ca. 1820–1824. Works by Reuben Tower (1795–1881), probably Hingham, Mass. Case attributed to Abiel White (1766–1844), Weymouth, Mass. Mahogany with white pine and maple. H 50⅞ (including 3¼-inch original center finial), W. 11⅜, D. 5⅜. Painted dial made in Boston and inscribed “Reuben Tower”; “up” inscribed in graphite in one hand and “top” in another hand on outside of backboard. Courtesy of Winterthur Museum; bequest of Henry Francis du Pont. 1955.622. Photography by Laslo Bodo.
Fig. 13: Detail of clock shown in figure 12. Photography by Abby Sullivan Photography.
dwarf examples with French feet range between 1821 and 1824. The dial bears the inscription, “John Bailey / New Bedford” and thus represents the work of John Bailey Jr. III shortly after his 1824 move from Hanover to New Bedford.

A nearly identical case from Abiel White’s shop houses an eight-day time-and-strike movement by Reuben Tower (Fig. 11). Numerous graphite inscriptions that appear to include an illegible cabinetmaker’s name cover the backboard. One inscription reads “Clock case maker / of all kinds.” Of the twenty known examples of this French-foot type, seventeen have cases ascribed to Abiel White’s shop. Here, White’s techniques of construction mirror the methods of Boston and Roxbury case makers. For example, he adopted the common Roxbury practice of mounting the saddle board to horizontal support blocks, rather than directly to the upper edges of the waist sides.

In one of the last dwarf clocks made by Joshua Wilder (Fig. 12), the eight-day brass movement is of the time-and-strike variety, and the dial, as with all South Shore painted-dial dwarf clocks, was made in Boston. The mahogany case is attributed to Henry Willard, based on the construction similarities of this case and signed examples of his tall clock and Massachusetts shelf clock cases; the exceptional veneers point to a sophisticated craftsman. A cabinetmaker’s lot number “600” is stamped into the rail just above the large cove molding that supports the hood (Fig. 13). Similar stamped numbers can be found on many Henry Willard shelf clock cases. Hood sides with a diamond pattern of drilled holes, covered on the inside with fabric, in place of windows, is another Willard characteristic found on this case as well as that shown in figure 6. This case represents the latest style of the Hingham-area dwarf clocks. Its date of circa 1824–1830 is based on the dwarf clock with matching case made by Martial Shearman (1803–1831) around the time he moved from Hingham to Andover in 1824.

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1. Initially a Boston banjo clock sold for between forty-five and fifty-five dollars while a mahogany cased Hanover tall clock cost about sixty dollars. By 1813, the price of a Willard’s patent time piece had dropped to thirty-five dollars, by 1818 to thirty dollars, and by 1823 to twenty dollars. Dwarf clock prices never fell that low, but did remain a more affordable option than tall-case clocks. For more information see Paul J. Foley, Willard’s Patent Time Pieces, A History of the Weight-Driven Banjo Clock 1800–1900 (Norwell, MA: Roxbury Village Publishing, 2002), 8–9.

2. The Metropolitan Museum of Art, the Sylmaris Collection, gift of George Coe Graves, 1930 (30.120.49).

3. Bailey’s purchase of a dwarf clock case for $5.00 is recorded in Calvin Bailey’s account book (date illegible), 37, 1784–1824, National Clock and Watch Museum Library and Research Center, Columbia, PA. For information on cases attributed to Theodore Cushing, see forthcoming Brock Jobe, Gary R. Sullivan and Jack O’Brien, Harbor and Home; Furniture of Southeastern Massachusetts 1710–1850 (University Press of New England, 2009), 255–256.

4. These numbers are based on the author’s research, which includes examination of photographs from advertisements, articles, auction catalogues, and publications, as well as firsthand examination of a number of southeastern Massachusetts dwarf clocks.


6. The author is grateful to clock specialist Robert C. Cheney for sharing information on a dated Joshua Wilder dwarf clock that he handled.

7. The Shearman clock is illustrated in Sack, Fine Points of Furniture (1950), 129; this clock’s dial is inscribed “W Shearman/ Andover,” which is believed to be an incorrect restoration of a signature that should read: “M Shearman / Andover.”