ON TIME IN AMERICA

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In 1786 it was proposed that the Salem schools should start at one in the afternoon. Not only did that prevent the children from going swimming when they were “too much crammed with animal food,” but at that hour public notice of the time was given throughout the town. So few families owned clocks and watches, it was explained, that there was no other certain time for collecting the children. Undoubtedly there were more timepieces in early American households than such a statement seems to indicate, but they were not commonplace or, as life was organized, particularly necessary.

That is far from saying that early New Englanders were indifferent to time. Even the April Fool’s Day pranks of Boston children were, to such representative Puritans as Samuel Sewall, not naughty or a nuisance, but “an abuse of precious time; . . . a profanation!” It was God’s time they wasted—a gift from heaven to be improved on earth. That basic attitude has persisted remarkably in the American tradition. Although we have substituted the “discipline of the timepiece” for the urgent religious discipline that distinguished early New England society, the moral obligation to save time remains unaltered.

The general lack of timepieces may have been no great inconvenience to the early colonists, but they were quick to acquire good ones when they could, and household inventories during the second half of the seventeenth century list them with increasing frequency. A clock was at least a decorative addition to the household, and one has a feeling that while ownership was so limited it was perhaps as smart to be on time as it is to be fashionably late now that anyone can own a cheap watch.

Shortly after the colonies were first settled the whole science of horology was revolutionized by the application of the pendulum to clock movements. Indeed the pendulum clock, with a few other scientific instruments, such as the barometer, the telescope, and the microscope, also developed in the seventeenth century, marked the practical beginning of all the exact sciences. As an improvement in timekeeping the new arrangement almost immediately superseded earlier contrivances. It was widely advertised and the first newspapers printed in the colonies urged that old-model clocks be “turn’d into Pendelums.”

An early lantern clock, thus converted, may be seen in the room from the Samuel Wentworth house in the American Wing. It is typical of the brass clocks that were imported into the early colonies from England and Holland. Although at least one clockmaker was work-
ing in America as early as 1638 and the craft was well established in the larger towns by 1700, most of the clocks used here during the seventeenth century came from abroad.

A much more unusual version of the same sort of clock (illustrated on page 105) has recently been installed in a neighboring gallery (M 22). It almost duplicates the other in design, but here the pendulum was incorporated in the original construction—a “modern” improvement that shows in two little winged openings on either side of the case to provide space for the bob to swing back and forth in its arc. How little in the way of precision was expected or wanted, however, is betrayed by the single hand which moves against a dial showing nothing smaller than the quarter hours. The clock probably was no model of constancy either. But by the aid of a sundial clock time could always be checked against solar time with a table of equations to compute the difference between the two.

Clocks achieved a more reliable accuracy in the late seventeenth century when the value of a longer pendulum with an anchor escape ment was recognized. Minute and second hands became almost standard equipment, and often usefulness was further served by dials showing the day of the month and the phase of the moon—special conveniences when printed calendars were unknown and almanacs not always available.

Clocks also increased enormously in price, for to protect the pendulum against interference, as well as to protect the movement against dust and dirt, a tall case was almost indispensable. Practically at once clocks took on a general appearance that they retained for over a century. The more or less standard arrangement as it had quickly evolved by the early 1700’s is illustrated by four “grandfather” clocks that have also been recently

LEFT: an inlaid cherrywood clock case by James Dinsmore of Hopkinton, New Hampshire. Dinsmore’s label is pasted inside the door. The initials on the base suggest that he had the works made for his own use. The clock dates from about 1800. Rogers Fund, 1943
installed in galleries of the American Wing.

For all the general conformity, however, the cabinetwork of each case is highly distinctive, as the photographs make clear. One case bears the label of James Dinsmore, cabinetmaker of Hopkinton, New Hampshire, and, most unusual, his initials inlaid in script on the base. Another, with a movement by Aaron Willard, Jr., may well be the cabinetwork of John Doggett of Roxbury, Massachusetts. But the makers of the other two cases, as more usually happens, remain anonymous. The construction and detail of all four, however, reaffirm our knowledge that early America's most accomplished cabinetmakers made cases on order from either the clockmaker or the purchaser of the movement. Contemporary prices bear this out, for a good case often cost as much or more than the works it protected. Even the cheaper clocks with wooden movements that were so successfully developed in Connecticut during the eighteenth century were, when decently cased, too expensive for widespread popularity.

The design of the cases changed when, in the late eighteenth and the early nineteenth century, ingenious Yankees devised a mechanism that could be inexpensively housed. Up until the Revolution not many clockmakers in this country were highly specialized craftsmen. Some who went by the name were Jacks-of-all-trades who included clock repairing and assembling among their diverse occupations. Others were men, like David Rittenhouse, who combined skilled mechanical ability with distinguished scientific ability. In the New World the division of labor was rarely sufficiently great to divorce any one class entirely from work with its hands, or to commit those who worked with their hands to an unrelieved dependence on narrow manual routine. Until wider markets and reduced labor costs could

**RIGHT:** a mahogany case enclosing a movement by Aaron Willard, Jr., of Boston, whose handsomely engraved label is pasted inside the door. The decoration in the arch (see p. 109) dates the clock about 1812. Purchased with funds from the Pulitzer Bequest, 1942.
be found, intensive specialization didn’t pay. The quest of a cheaper clock to reach such a market was accelerated by the Revolution and by the Embargo and Nonintercourse Acts of Jefferson’s administration. In 1802 Simon Willard developed his “Improved Timepiece,” the banjo clock as we know it, which both as to outer design and inner arrangement was a distinctively American creation. It was conveniently small, attractive, and relatively inexpensive when not lavishly decorated. But so long as the brass mechanism had to be laboriously cast, hammered, and finished by hand the clocks could never be downright cheap. When a few years later Eli Terry first manufactured wooden clocks by machinery, then adopted the idea of interchangeable parts, and finally reduced his product to the size of his famous Pillar and Scroll Shelf Clock, the Yankee peddler, with his legendary powers of persuasion and unique trading organization, had an item he could hawk without trouble all over the country.

At the same time veneer and mortising mills and circular saws operated by water power reduced the cost of the smaller case needed for the newly devised movements far below former costs. By the mid-nineteenth century common shelf-clock cases could be manufactured for less than fifty cents. Markets expanded rapidly in America but stopped short of overseas outlets. The trip across the ocean swelled and warped the wheels and gears of wooden clocks. When, however, another Connecticut Yankee, Chauncey Jerome, adapted the simplified mechanism to the rolled brass that became commercially available in the 1830’s, cheap American clocks won markets around the world.

The development of such mass-produced, commonplace timekeepers was, in a sense, doubly symbolic of American experience. In
1768, when Gawen Brown of Boston devised a "superb stately Town-Clock... [with] a curious mathematical Pendulum" that could be altered the 3500th part of an inch, few besides astronomers and the horse-racing gentry felt the need of precise timing. Bostonians were more interested in the intricate perfection of the machinery than in any convenience it might serve.

But, as Veblen has pointed out, invention is the mother of necessity, and accurate clocks probably suggested more needs than they at once satisfied. During the colonial period the clock was the most complicated and efficient machine in ordinary use, and it appealed to the practical strain in Americans. In this country the need to save time—to save labor and the high cost of labor—added expediency to a moral urge. The mechanism of the clock and the tools that contrived it contained the seed of modern machinery. The regular automatic performance of the clock was inevitably carried over in principle into the labor-saving, mechanized production of the American System. Although the "Lawes and Libertyes" of 1648 that made it a punishable offense to waste time—particular caution being given such potential loafers as "common coasters, unprofitable fowlers [poor shots], and tobacco takers"—are no longer on the books, the time once saved in the name of Christian virtue is now saved in the name of practical efficiency. Perfect timing—that colloquialism of a mechanical age—underlies our machine production, our transportation system, and by extension our national habits of thought.

Dial painting on a Willard clock of the capture of the British frigate "Guerriere" by the American frigate "Constitution" on August 19, 1812