12A

Westclox



A CENTURY PROGRESS



Where good timekeeping begins

Here is where good timekeeping begins for millions of people who rely on dependable Westclox products.

In this great factory, covering acres and acres, the same precise standards of workmanship that make Big Ben worldfamous for long life and reliability, are applied to the building of all Westclox.

The Westclox name, a guarantee of quality and value, appears not only on Big Ben, but on Baby Ben with quiet tick and soft or loud alarm, and on a complete line of alarm clocks...spring driven models from \$1.25 up: electric models from \$2.25 up...also on the Pocket Ben watch, the Dax watch and on automobile clocks and electric wall clocks.

WESTERN CLOCK COMPANY La Salle, Illinois

Chicago: 55 East Washington St.
New York: Western Clock Company Incorporated
107 Lafayette St.
San Francisco: Schloss Manufacturing Co.
523-525 Mission St.

The Art of Timekeeping

PORTY ONE years ago, during the 1893 Chicago World's Fair, a small beam of light left the Star Arcturus and started on its long journey toward the earth. It reached here just in time to start last year's 1933 Century of Progress.

Our ability to measure the length of time it has taken this little ray of light to come way over here is most astounding, but just as astounding is time itself.

From as far back as early cave man with his crude rope clock, the art of timekeeping has progressed through the ages. There have been periods during which the sundial, the water clock, (clypsedra or water thief), the sand-glass, the oil clock, and the pendulum clock were used, until now we have the present day hairspring escapement.

The development of this art to such a point that man's movements are governed by timekeepers, proves its importance. How would we know when to catch a train or meet a friend without timepieces to determine the moment? Years later, after early stages of timekeeping had been passed through and while people were still struggling with oil clocks, it happened that a young man, Galileo, was sitting in the cathedral of Pisa watching the slow, even swing of a chandelier hung from the high roof of the church. The evenness of the swing attracted his attention and he finally decided it could be applied to keeping time. This was the birth of the pendulum clock. Soon afterwards the hairspring was found.

Today we have another clock, the electric clock. It is interesting to note that the electric clock doesn't keep time itself. Correct time is kept by a master clock at the power house. In other words this is not a new way of telling time.

Just as methods of keeping time have improved in the past, so will they continue to develop and improve in the future. Western Clock Company, which has produced many millions of reliable timepieces, is ready to follow such trends and to continue to produce quality timekeepers.



Sun Dial

The sun dial was one of the earliest methods of keeping time. Used as early as 1400 B. C. by ancient philosophers, its invention marked almost the beginning of the art of telling time.

The principle upon which the sun dial worked was as follows:

As the sun moved over head, the shadow cast by the slanting arm moved accordingly. Since the sun's course through the heavens is nearly the same from day to day, it was a simple matter to mark off divisions on the base which would serve as time intervals, later known as hours.

Of course, this dial was only practical when the sun was shining and couldn't be used at night. Also allowances had to be made which would compensate for seasonal changes.



Candle Clock

One of the ingenious methods of telling time indoors was the candle clock. It was about 800 A. D. that Alfred the Great contrived a time-piece based on the principle that when properly protected and made, a candle would burn evenly and at a constant rate.

Accordingly, lines or marks put at regular intervals would show approximately how much time has passed.

The advantage of this type of clock over the sundial was two-fold. It could be used indoors and it gave light.

On the other hand, it was quite expensive to keep up and a bit unreliable and troublesome because of the constant attention it required.



Sand Clock

As early as 1100 A. D. when William, the Conqueror, was in power—the sand clock (or hour glass) was in use.

The sand clock consisted of two glass bowls which were connected by a narrow neck. When a carefully measured quantity of sand was sealed in the bowls—it took a definite length of time to go from one to the other.

As a convenient unit of time was one hour, most of the ancient sand clocks were for that length, which probably is the reason they are also called hour glasses. Today we have them for half hour, fifteen minute or three minute periods.

An hour glass was a step forward in the art of keeping time because it was portable, more accurate and inexpensive to keep up.



Oil Lamp Clock

With the discovery of fuel burning lamps came the oil clock. Used about 1490 when Columbus was expounding his theories on America, it was quite practical and less trouble than the earlier timepieces.

Oil put in the glass bowl at the top burned through the wick on the left. As the oil burned and its level fell lower and lower, graduations on the side of the glass marked off intervals of time.

This timepiece had several advantages. In the first place it took less attention than previous timepieces—also it was easier to read and was a more accurate recorder of time.



Water Clock

Following the oil clock came the water clock or "Clypsedra," meaning "Water Thief," which was in use during the year 1620 when the Mayflower compact was signed.

The operation of this clock was quite simple yet more complicated than the previous time tellers. The round tank on the right was filled with water which dripped from a spigot at the bottom of the tank into the pan below.

As the water level dropped lower and lower, a float in the tank also dropped, lowering the chain which in turn moved the single hand on the front of the dial.

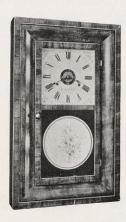
The water clock was important because it introduced the dial and hand system of telling time which is so familiar to us today.



Dutch Alarm Clock

This interesting old Dutch clock is one of the earliest alarm clocks known—it is the type of clock that was in use during 1676 when William Penn was dealing with the Indians. The most important feature of this very early clock is the real dial and two hands—one to show the hour—the other to show the minutes.

A third hand is placed on the center post to act as the alarm set. By means of this the trip is released so that the alarm rings at an appointed hour.



Seth Thomas Mantle Clock

This early Seth Thomas (or Terry) clock was used about the time the land concessions for the foundation of Chicago were signed.

Early pendulum clocks like these had wooden movements which were run by weights. The clock is carefully cased in a beautiful walnut cabinet which is a separate unit from the movement.

The pendulum escapement was invented by Galileo who happened to notice the even swing of a lamp in the Cathedral at Pisa. During one service this young man decided that such phenomena could be used for keeping time.

This discovery was applied about half a century later in making an astronomical clock.



Early Westclox Alarm

This early Westclox alarm clock was one of the first timepieces manufactured by this company. Clocks similar to this one were in vogue forty years ago and undoubtedly were in use during the last Chicago Exposition.

The hairspring escapement used in this movement was a very great improvement indeed. It reduced the cost involved and at the same time did away with the weights which were heavy and cumbersome.

The development of the hairspring made it possible to reduce the size of movements so that pocket watches and wrist watches were practical. After this clock came the electric movements which we know so well.

The Westclox Family of 1934



Fortune-Beautifully styled, black case nickel trim. 4½ in. high. Steady alarm. \$1.45

Baby Ben—3¼ inches high. Quiet tick. Loud or soft alarm control. Made in black and nickel and in brown and copper. \$3.95—Lum. \$3.95





Big Ben Chime Alarm
—Two voiced alarm. First he
whispers, then he shouts. 5½
inches high. Quiet tick. Made
in two finishes, black and
nickel and Butler and nickel,
\$3.50—Luminous \$4.50



Black with nickel trim. 4 in. high. Gives brief warning alarm then rings again 10 minutes later. \$2.95



Big Ben Leg Model—7 inches high. Steady and intermittent alarm. \$2.95



Black Knight—Thin model finished in black with nickel trimming. 4½ inches high. Luminous. \$2.25



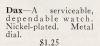
America—Stands 4½ inches high. Steady alarm. Green case with nickel trim. \$1.75

Bantam—Different in design...curved back, smoothly rounded. Artistic half circle base. 434 inches high. Steady alarm. Made only in green with black base. \$1.25





Pocket Ben—An exceptionally fine timekeeper.
Non-breakable crystal.
\$1.50





Handbag Watch— Lustrous jet black case, gold plated trimmings. Conveniently tucks into any handbag. The easel, packed with each watch, transforms it into a boudoir or desk clock.

\$2.95

Electric Clocks



Ben Bolt—Thin model electric alarm. 4 inches high, Black finish with nickel trim. Manual starting motor, forward motion only. Steady alarm. \$2.95



America Electric Alarm Black case with nickel trim. 4½ inches high. Low speed motor, manual starting. Movement rubber mounted. Steady alarm. \$2.25



Big Ben Electric Alarm Model 820—5¼ inches high. Black composition case. Steady alarm. Synchronous self starting motor, insulated against noise.

Plain dial \$4.95 Luminous 5.95



Big Ben Electric Alarm Model 840—Solid mahogany case. 534 inches high. Synchronous self-starting motor. Insulated against noise. Steady alarm. \$5.95

Electric Wall Clock Thin model. 634 inches in height and width. Low speed motor. Simplified manual starting. Made in Ivory and Green. \$3.50



Auto Clocks



Pull Wind Mirror Auto Clock No. 763—Wind this clock by merely pulling down the button. Three or four gentle pulls completely winds clock. Non-glare mirror, 7 inches long. Dust-proof, oneday movement. \$2.95



Auto Clock No. 720

—Gray lacquer finish.
Embossed case. Fits
any car. \$1.95



Mirror Auto Clock No. 761—Compact and attractive. Non-glare mirror, 7 inches long. One-day movement. \$2.25