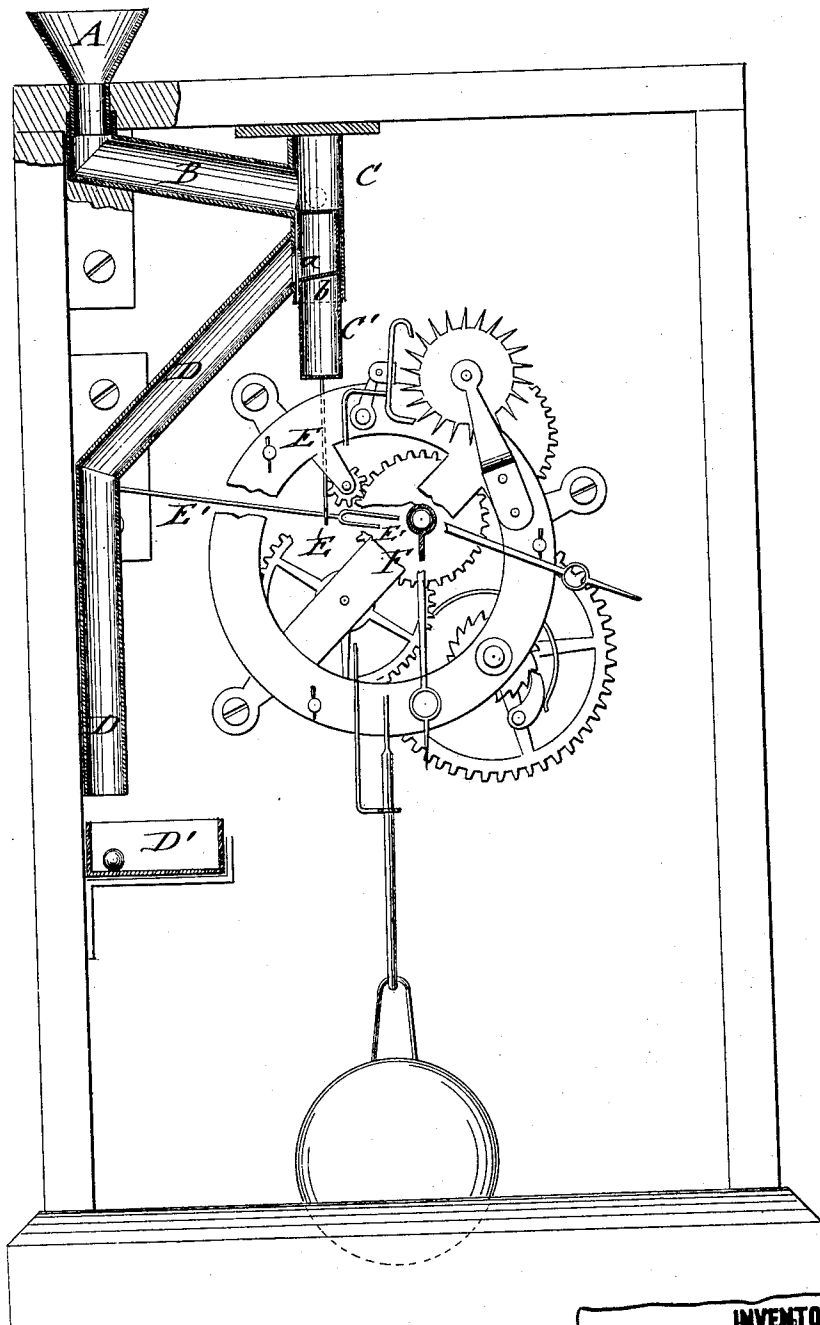


A. A. CONE.

WATCHMAN'S TIME RECORDER.

No. 177,691.

Patented May 23, 1876.



WITNESSES:

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UNITED STATES PATENT OFFICE.

AUGUSTUS A. CONE, OF STAUNTON, VIRGINIA.

IMPROVEMENT IN WATCHMEN'S TIME-RECORDERS.

Specification forming part of Letters Patent No. **177,691**, dated May 23, 1876; application filed May 1, 1876.

To all whom it may concern:

Be it known that I, AUGUSTUS A. CONE, of Staunton, in the county of Augusta and State of Virginia, have invented a new and Improved Watchman's Time-Recorder, of which the following is a specification:

The accompanying drawing represents a sectional front elevation of my improved watchman's time check or recorder.

The object of my invention is to provide for clocks of any kind a simple, cheap, and reliable time check or recorder, that may be attached to any clock at small cost, so as to indicate whether the watchman has regularly attended to his duty at the proper time.

The invention consists of the connection, with one or more spurs or catches of the main pinion of a clock-train, of a forked spring and rod that govern a sliding cylinder, which communicates by a side aperture with the mouths of an entrance and exit tube, through which a ball, thrown in by the watchman at the proper time, is conveyed to a receptacle in the clock-case.

In the drawing, A represents a funnel at the top part of the clock-case, which opens into an inclined tube, B, that communicates with a stationary cylindrical tube, C, attached to the inner top part of the clock-case. The cylindrical tube C communicates by a second aperture, below the opening of the inclined tube B, with a second inclined tube, D, that leads to a receptacle or drawer, D', of the clock-case. A sliding cylinder, C', with closed top and a side opening, *a*, equal in size to the apertures or mouths of tubes B and D, slides inside of the fixed tube C, and has, at the lower edge of the aperture, an inclined diaphragm or plate, *b*. The bottom part of the sliding cylinder C' is connected by a rod, E, with a spring, E', which passes through an eye, or is otherwise attached to the rod E. The spring E' is rigidly secured at one end to a suitable support, and made in the shape of a fork at the opposite free end, the forked end being engaged by one or more radial spurs or catches, F, of the main pinion of the clock-train, according to the frequency of the visits of the watchman within an hour.

When the catch F engages the forked end of the spring E' the same is raised, and there-

by the cylinder moved in upward direction, until its aperture coincides with the mouth of the upper inclined tube. As the pinion continues to turn, the catch is released from the forked end, when the spring pulls at once the sliding cylinder back to its former position, bringing its aperture back again to the opening of the lower inclined tube. The catch or catches are so arranged on the pinion that the sliding cylinder is raised some time before the time at which the watchman has to visit the clock. At the fixed time he drops a small ball into the top funnel, from which the ball is conveyed through the inclined tube into the sliding cylinder, and carried down with the same on the release of spring by the catch, and then, finally, through the lower inclined tube to the receptacle.

By counting the balls in the drawer, the beats of the watchman may be readily controlled.

When the ball is inserted previous to the required time, when the sliding cylinder is in motion the ball will strike against the cylinder and lodge in the upper tube B, where a small pin or rest may be provided, that prevents the ball from rolling down when the cylinder is in raised position. The next ball, when inserted at the proper time, will only displace the first ball while taking its place in the tube, so as to indicate, by the missing of one of the balls, that the watchman has not attended to his duty at the proper time. If a ball is put in while the cylinder is down, it will lodge on the top of the sliding cylinder and be raised with the same, to be carried against the top of the fixed cylinder, and interrupt, by the pressure on the catches, the motion of the clock, indicating thereby, also, failure of the watchman to visit the clock at the proper time.

The ball may be taken out from its position at the top of the sliding cylinder by releasing the catch from the spring and turning the clock; or the ball may be made to roll into the upper tube, the cylinder being then raised, so the ball is conveyed to the drawer.

The watchman cannot tamper with the time-recording device, which, on account of its few and simple parts, is not liable to get out of order, and forms a cheap attachment to clocks,

compared to the more or less expensive time-check at present in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an improvement in time checks or recorders for clocks, the combination of an inclined upper and lower ball-conveying tube with a stationary guide-tube and a ball-transmitting cylinder, that slides in the guide-tube by the action of the clock train at certain fixed time, to take up and convey the balls to a suitable receptacle, substantially as and for the purpose specified.

2. The combination of the upper inclined

tube and the lower inclined tube, opening into a fixed guide-cylinder, with a sliding cylinder, having aperture corresponding with the mouths of the tubes, and an inclined ball-transmitting diaphragm, substantially as specified.

3. The combination of the sliding cylinder by a connecting-rod and spring, having forked end, with one or more catches of the main pinion, substantially as and for the purpose described.

AUGUSTUS AARON CONE.

Witnesses:

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