(No Model.)

E. BERMAN.

WATCHMAN'S TIME DETECTOR.

No. 331,759. Patented Dec. 8, 1885.

Fig. 1.

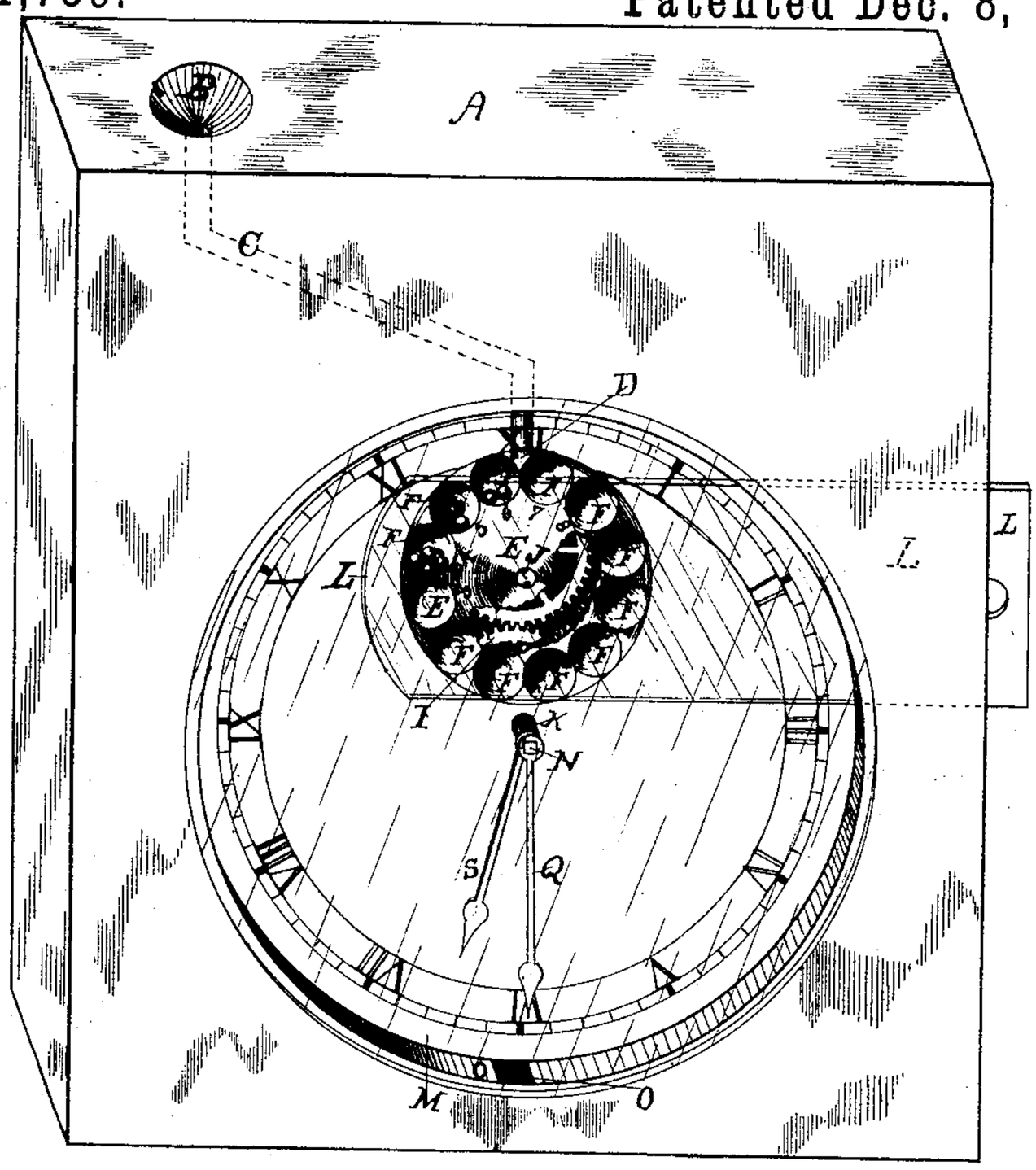
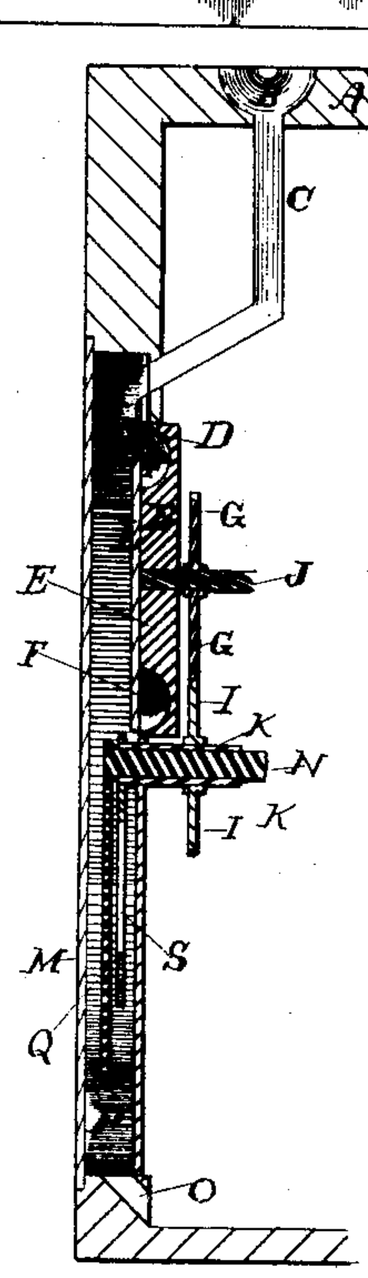


Fig. 2.



Witnesses.

E. Leckler.

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per

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his attys.

UNITED STATES PATENT OFFICE.

ELIAS BERMAN, OF LOS ANGELES, CALIFORNIA.

WATCHMAN'S TIME-DETECTOR.

SPECIFICATION forming part of Letters Patent No. 331,759, dated December 8, 1885.

Application filed June 10, 1885. Serial No. 168,215. (No model.)

To all whom it may concern:

Be it known that I, ELIAS BERMAN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Watchmen's Time-Detectors, of which the following is a specification.

My invention relates to that class of devices adapted to indicate whether watchmen remain on duty regularly, and also to register the time at which employés entering or leaving their place of employment may deposit their time-checks, thus dispensing with the services of a time-check keeper.

The object of my invention is to construct a simple device of this description adapted to be connected at slight expense with the works of an ordinary clock. I accomplish this object by means of the device described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a front view of my improved time-detector. Fig. 2 is a vertical mid-section of the same, omitting the works of the clock, which lie to the rear of the cell-wheel.

A is the case. B is the mouth-piece of the check-tube C, the lower end, D, of which opens into the cells F in the cell-wheel E. G is a cog-wheel mounted on the arbor J, upon which the cell-wheel E is mounted. The cog-wheel G is of the same diameter as the cog-wheel I which drives the hour-hand, and it has the same number of cogs, so that the cell-wheel will revolve once each time the hour-hand S completes its circuit. Twelve or more semi-spherical concavities or cells, F, are arranged in a circle in the face of the cell-wheel E, which is mounted in a circular opening made in the dial of the clock, and is flush with the face of the dial. A glass plate, L, is mounted in grooves in the case so as to slide over the opening in the dial and close the mouths of the cells F. The cells F are numbered from 1 to 12, running in a reverse direction to the numbers on the face of the dial. There may be a greater number of cells, if desired, the same being consecutively numbered in a direction reverse to that of the numbers on the dial.

The checks to be used with my device are pellets differently colored or having numbers thereon to designate the different employés. The check-tube C is crooked, so that the cells cannot be tampered with by running an instrument—such as a wire—down the tube.

In the drawings, K is the arbor of the minute-hand Q. N is the arbor of the hour-hand S. M is the glass face in front of the dial, and O is an opening at the bottom of the rim P, to allow the pellets to pass out from between the dial and the face-plate.

The manner of using my improved time-detector is as follows: The clock being set in a place convenient of access, and the slide L being secured so as to prevent its being drawn out, the clock is wound and started. As the hands of the clock revolve, the cell-wheel E revolves in an opposite direction, bringing the mouths of the several cells consecutively in conjunction with the open end D of the check-tube C.

In setting the clock, care is taken to cause the hour-hand to point to the number on the dial which corresponds with the number of the cell into which the end D of the check-tube opens. As the watchman makes his rounds he places a pellet in the mouth B at intervals of time corresponding to the number of cells. If he is at his post all the time he will be enabled to deposit a pellet in each cell; but if he is not there the absence of the pellet in a cell will indicate his negligence.

When used as a time-keeper for employés, the manner of use is as follows: As the employés go to work, each drops one of the pellets of the number or color assigned to him in the mouth B, and it passes down the tube, and if the end thereof is in conjunction with one of the cells the pellet will pass into the cell and remain there in plain view; but if the hour has passed, so that the partition between the cells juts across the open end D of the tube, the pellet will be retained in the tube until the next cell is in conjunction with the open end D. If it is desired to mark half-hours instead of hours, twenty-four cells instead of only twelve are provided. If it is desired to mark quarter-hours, forty-eight cells are provided, and so on. When the checks have all been deposited for the day, an inspection of the cells through the glass slide L will show the time at which each workman deposited his pellet. The cells F are semi-

spherical in form, and consequently will discharge the checks contained in every cell whenever the slide is withdrawn from before their mouths or openings, no matter whether the cell is above or below the center of the wheel.

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

1. In a time-detector, the combination of the hour cog-wheel I, cell-wheel cog G, cell-wheel E, and glass slide L, substantially as and for the purpose set forth.

2. The combination, in a time-detector, of the slide L, the perpendicularly-mounted cell-wheel E, and the semi-spherical check-receiving cells F, arranged substantially as set forth, whereby the time-checks are caused to fall out of the cells whenever the slide is removed.

3. In a time-detector, substantially such as described, a vertically-mounted cell-wheel provided with semi-spherical cells in the face thereof, whereby the same is adapted to discharge its checks whenever the entrance to the cell is opened, whether such cell is above or below the center of the wheel.

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Witnesses:
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WM. W. WEED.