J. E. Buerk,

Watchman's Time Detector,

No. 45,048, Patented June 6, 1865.

Fig. 1.

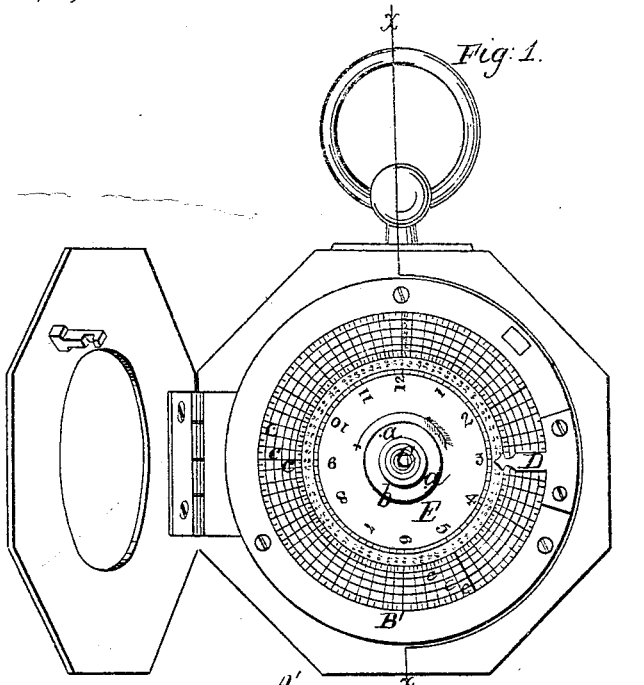


Fig. 2.

Fig. 3.

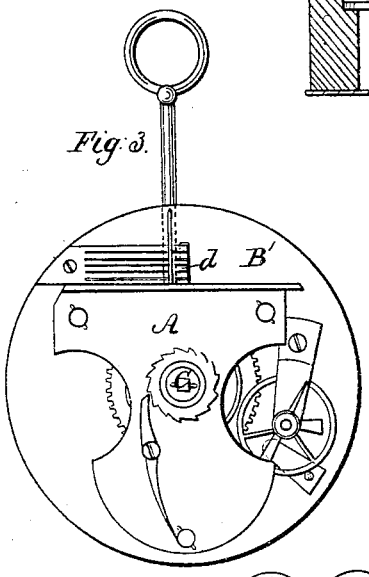


Fig. 4.

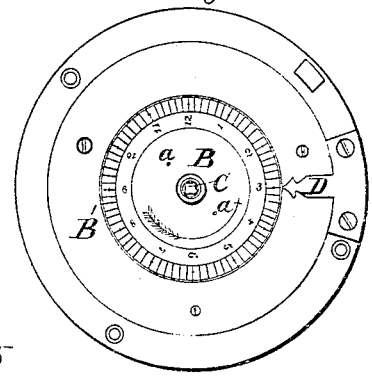
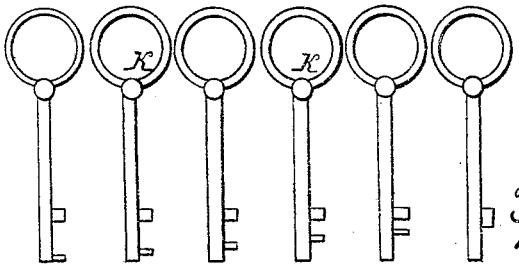


Fig. 5



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UNITED STATES PATENT OFFICE.

JACOB E. BUERK, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN WACTHMEN'S TIME-DETECTORS.

Specification forming part of Letters Patent No. **48,048**, dated June 6, 1865.

To all whom it may concern:

Be it known that I, JACOB E. BUERK, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Watchman's Time-Detector; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a face view of this invention. Fig. 2 is a vertical central section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is an inverted plan of the movement. Fig. 4 is a face view of the same. Fig. 5 is a diagram representing the keys necessary for the operation of this invention.

Similar letters of reference indicate like parts.

This invention relates to an improvement in that class of watchmen's time-detectors on which a patent has been granted to John Buerk, January 1, 1861. In that case a strip of paper is used stretched on the circumference of a drum, to which a rotary motion is imparted by a clock or watch movement, and a series of spring-points serve to perforate this strip according to the time when these points are operated by a series of keys of peculiar shape. On the strip are marked the hours corresponding to hours on the dial of the clock or watch, and the time when one or more of the spring-points have been actuated can be ascertained after the strip has been taken off. This construction necessitates a drum in addition to the ordinary clock or watch movement, whereby the expense of the mechanism is increased, and, furthermore, the operation of applying and removing the strips of paper is tiresome and requires much care. These difficulties are avoided by using a clock or watch with a stationary index and revolving dial. On this revolving dial are fastened removable dials of paper or other suitable material, with a series of circles corresponding to the positions of the spring-points, and these spring-points are concealed under the stationary index. By inserting one of the keys and turning the same round, the paper dial is pierced by one or more of the spring-points, and the time when this takes place can be ascertained by examining said dial when the watch or clock is opened. The perforations in the paper dial are made from below, under the stationary hand, leaving a slight barb on the upper surface, and a similar perforation cannot be produced, even if the watch or clock be opened, except the paper dial is taken off.

A represents a clock or watch movement made in the ordinary manner, and provided with a revolving dial, B, which is mounted on the center shaft, C, in place of the ordinary hands, and which rotates under the stationary index D. The dial is marked with figures from 1 to 12, and it revolves once in twelve hours. From this dial project two or more points, *a*, which serve to retain a false dial, E, of paper or suitable material, and this dial is held in place by a disk, *b*, which slips over the center shaft, and which is provided with little holes or sockets, to correspond in number and position to the points *a*. The paper dial E is marked with figures from 1 to 12, like the main dial, and with a series of concentric rings, *c*, corresponding in number to the stations in the beat. The paper dial shown in the drawings is marked with six rings, to correspond to six different stations. The spaces between the rings *c* correspond in number and position to a series of spring-points, *d*, the points of which are situated under the index D and made to project through a slot in the dial-plate B'. When left to follow their own elasticity, said spring-points do not reach above the surface of the dial-plate; but they are so arranged that one or more of them can be forced up simultaneously and made to penetrate the paper dial, different keys K being provided, each of which serves to raise one of said spring-points or a combination of two or more of them. One of these keys is intended to be fastened by a chain or other suitable means to a post or other fixed part on each station in the beat of the watchman, and the watchman carries the watch. On arriving at a station he inserts the key, and by turning the same a perforation is produced which gives a record of the time when the watchman has visited the station. The watch of course is intended to be locked, so that the watchman cannot get at the paper dial in order to produce fraudulent perforations to cover a neglect of his duty, and the keys, simple as they look, are so shaped

that they cannot easily be imitated, for the slightest difference in the height or position of the bit would produce a different action.

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

1. The use of a false revolving dial, E, in combination with the stationary index D and spring-points *d*, constructed and operating substantially as and for the purpose set forth.

2. Producing the perforations on the paper dial or its equivalent from the inside out instead of from the outside in, as before.

J. E. BUERK.

Witnesses:
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