W. IMHAEUSER.

WATCHMAN'S TIME-DETECTOR.

No. 192,334. Patented June 26, 1877.

Fig: 1

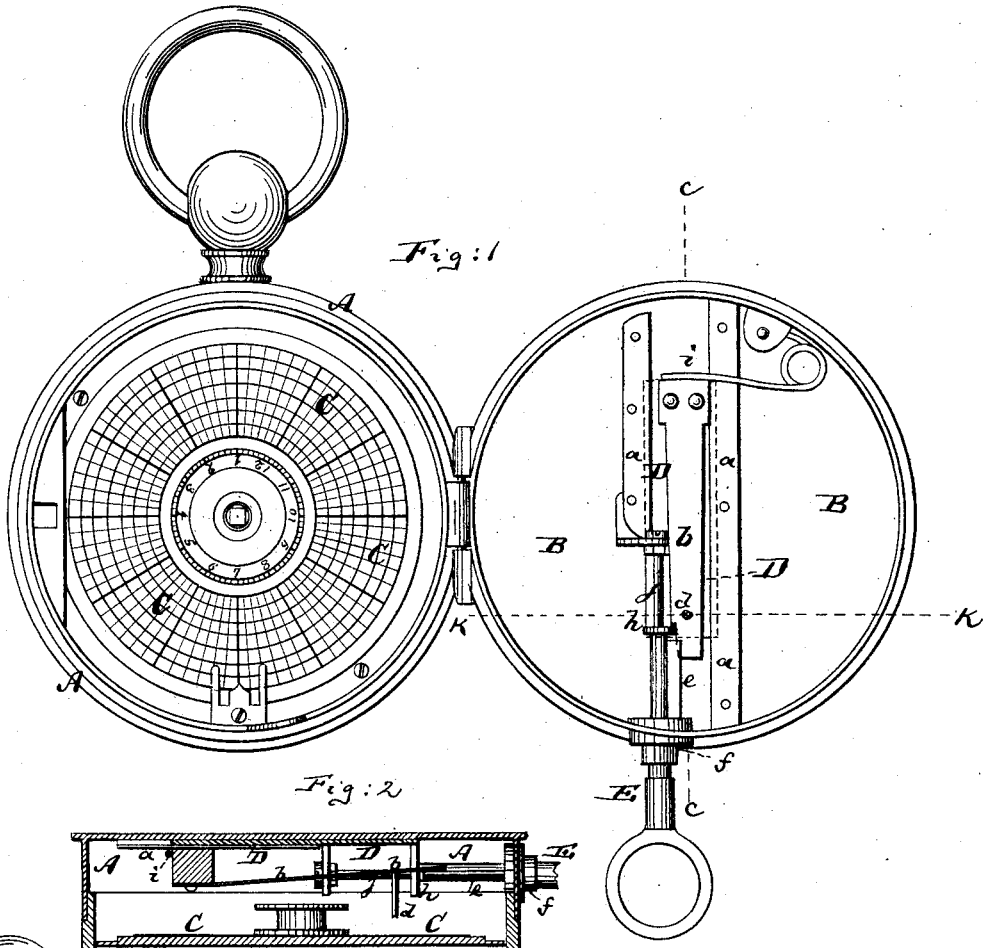


Fig: 2

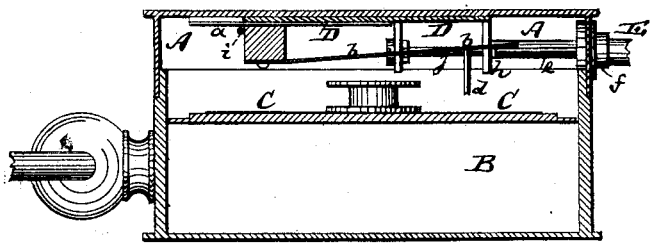
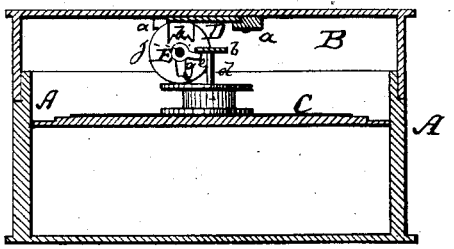


Fig: 3



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM IMHAEUSER, OF BROOKLYN, NEW YORK, ASSIGNOR TO ELISE IMHAEUSER, OF SAME PLACE.

IMPROVEMENT IN WATCHMEN'S TIME-DETECTERS.

Specification forming part of Letters Patent No. **192,334**, dated June 26, 1877; application filed May 23, 1877.

To all whom it may concern:

Be it known that I, WILLIAM IMHAEUSER, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Watchmen's Time-Detecter, of which the following is a specification:

Figure 1 is a plan or top view of my improved watchmen's time-detecter, showing the lid opened. Fig. 2 is a vertical section through the same on the line *c c*, Fig. 1; Fig. 3, a vertical section through the same on the line *k k*, Fig. 1, the lid in the last-mentioned figures being shown closed.

Similar letters of reference indicate corresponding parts in all the figures.

This invention is intended as an improvement on the watchmen's time-detecter for which Letters Patent No. 172,630 were granted me January 25, 1876; and consists, principally, in substituting for the vibrating lever which connects with the spring-hammer a sliding hammer-carrier placed in the lid.

By this arrangement a dial having straight radial instead of curved subdivisions may be used, and the hammer caused to move in line with the radius of the dial, and other advantages secured.

In the drawing, the letter A represents the body or case of the time-detecter, and B the lid or cover of the same. The lid is usually hinged to the body, or otherwise so connected that it can be folded open, as in Fig. 1, or taken off to expose the paper dial or disk C to view. This paper dial or disk is, as usually, removable, and is, for use, secured within the shell A upon a plate or holder, to which rotary motion is imparted by clock-work concealed within the shell. When the lid is closed down upon the shell, as in Figs. 2 and 3, it may be locked thereto by a suitable lock, and can be unlocked by a suitable key.

D is a sliding plate or block, placed against the under side of the lid B, between guides or rails *a a*, that are fastened to said lid, as indicated, or set into a groove formed in the under side of the lid, the slide being so placed that it can be moved diametrically along the inner surface of the lid. The rails *a* partly underlap the slide D, and serve thereby to support it on, or rather hold it duly suspended from, the lid. The slide D is connected with a spring or vibrating hammer, *b*, in such manner that said hammer will follow said slide in its sliding movement, and yet be capable of an independent vibratory or up-and-down movement. The spring or hammer *b* carries a projecting pin, pointer, or marker, *d*, wherewith to pierce, indent, or mark the paper dial or disk from the outside inward.

A series of keys, E, are employed to operate the slide D and the spring or hammer *b*. Each key of the series pertaining to one instrument has a bit, *e*, differing in length from the bit *e* of every other key of the same series, and has also a shoulder, *f*, as shown. The distance between the shoulders *f* and the bits *e* is alike in all the keys of the same series; yet the bits varying in length, it follows that the distance between the shoulders and ends of the keys varies in all the keys. However, other kinds of keys may be used in connection with this invention.

The lid B is perforated to form a key-hole, *g*, as shown, through which the keys E can be successively introduced. The key, upon being inserted, strikes a projecting ear or lug, *h*, of the slide D, and pushes said slide inward in a radial direction, and compresses the spring *i*, by which the slide is normally pushed toward the key-hole. The longer the bit the farther will the slide D, and with it the spring or hammer *b*, be moved horizontally. As soon as the key has been properly introduced it is turned on its arbor or in the key-hole, so that its bit will come in contact with the spring or hammer *b*, and thereby vibrate the latter vertically, to throw or press its pointer or marker *d* into contact with the paper dial or disk C. A mark is thus made on the dial, indicating when the key was introduced, and, by its distance from the center of the dial or disk, the key with which the mark was made.

The dial C, when used, may be subdivided by radial curves, and also by concentric rings, in the usual manner, and as indicated in Fig. 1.

When, in place of the paper dial, a blank paper disk is used, a row of types or dies may be secured in the case A directly beneath the disk, to affect the paper when the same is pressed upon them by the marker or pointer *d*.

The lug *h*, which projects from the slide D, as stated, is, by preference, perforated, and caused to embrace the arbor *j*, on which the key slides and turns. This gives additional guidance to the slide, and facilitates, also, the proper operation of the key and hammer, leaving the spring-hammer in the same relative position to the bits of the several keys that are used to operate it.

I claim as my invention—

1. In a watchman's time-detecter, the combination of the lid or cover B with the slide D, and with the spring or hammer *b* attached thereto, all arranged to operate substantially as herein shown and described.

2. The combination of the lid B and slide D with the perforated projecting lug *h* and key-arbor *j*, substantially as herein shown and described.

3. The lid B of a watchman's time-detecter, constructed with a groove or guide-rails, *a a*, on its under side, to receive and guide the slide D, that carries the marking-hammer or spring *b*, substantially as herein shown and described.

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