

No. 172,630.

Patented Jan. 25, 1876.



Inventor:

Wm. Imhaeuser
by his attorney
A. Briesen

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. **172,630**, dated January 25, 1876; application filed January 7, 1876.

To all whom it may concern:

Be it known that I, WILLIAM IMHAEUSER, of Brooklyn, Kings county, New York, have invented an Improved Watchman's Time-Detector, of which the following is a specification:

Figure 1 is a top or plan view of my improved watchman's time-detector, showing the lid folded open. Fig. 2 is a vertical section of the same closed, the line *c c*, Fig. 1, indicating the plane of section through the lid. Figs. 3 and 4 are plan views of two of the keys used therein.

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

This invention has for its object to improve and simplify watchmen's time-detectors of the class containing a rotary dial or paper disk; and consists more particularly in placing within the folding lid of the instrument a hammer or pointing or marking instrument, which is capable of vibrating in two directions, as hereinafter more fully described.

Similar devices have been previously used in the bodies of the time-detectors beneath the rotating dials or disks; but I have found that by placing these double-vibrating marking devices into the lids above the dials or disks the construction of the time-detector is materially simplified, and that the parts are readily inspected and exposed to view by merely opening the lid, and are, therefore, also less liable to interfere with the clock-work from which the dials or disks receive their rotary motion.

In the drawing, the letter *A* represents the body or case of my improved time-detector, 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 rotary 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 Fig. 2, it is locked thereto by a suitable lock, and can be unlocked by a suitable key. *D* is a lever pivoted to the under side of the lid *B* by a vertical pin, *a*, and connected with

a spring or vibrating hammer, *b*. The lever *D* is capable of vibrating in a horizontal direction around the pin *a*, while the spring or hammer *b* is capable of being sprung or vibrated in a vertical direction. The spring or hammer is connected with the lever *D* in such a manner as to follow it in its horizontal vibration. 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 E*, are employed to operate the lever *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 shoulder *f* of one key is as far from the bit of such key as the shoulder *f* of every other key of the series is from its respective bit. Yet, the bits varying in length, it follows that the distance between the shoulders and ends of the keys varies in all the keys. The lid *B* is perforated to form a key-hole, as at *g*, through which the keys can be successively introduced. Each key is pushed in until its shoulder *f* strikes the lid, which determines the distance to which the key can be introduced. The key upon being inserted strikes the lever *D* with its bit *e*, and thereby vibrates it in a horizontal direction, and compresses a spring, *h*, by which the lever is normally held near to the key-hole. The longer the bit the farther will the lever *D*, and with it the spring or hammer *b*, be vibrated horizontally. As soon as the key has been properly introduced it is turned on its shaft, 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 in the dial, indicating the time 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 paper dial, 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 will have to 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*.

I claim as my invention—

In a watchman's time-detector, the combination of the lid or cover B with the vibrat-

ing lever D, and with the marking spring or hammer *b*, said lever being pivoted to the lid B, substantially as herein shown and described.

WILLIAM IMHAEUSER.

Witnesses:

ERNEST C. WEBB,
F. V. BRIESEN.