No. 648,249. Patented Apr. 24, 1900.

E. EPPNER.

TIME DETECTOR FOR WATCHMEN.

(Application filed Aug. 29, 1899.)

(No Model.)

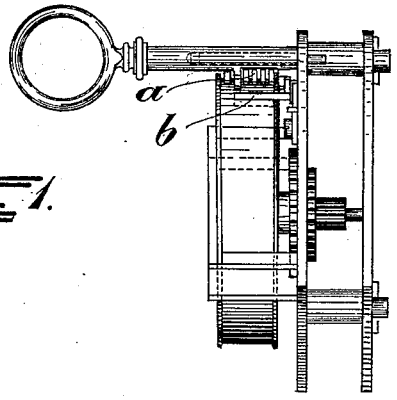


Fig. 1.

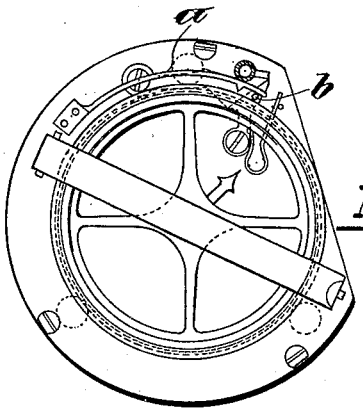


Fig. 2.

Fig. 3

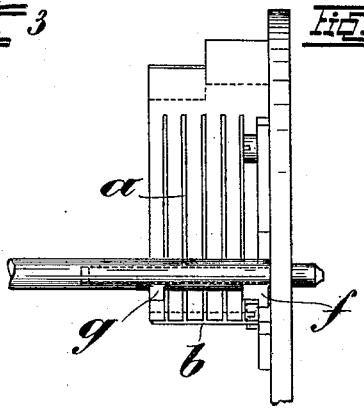


Fig. 4.

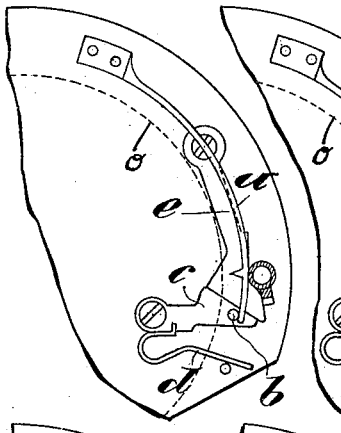


Fig. 5.

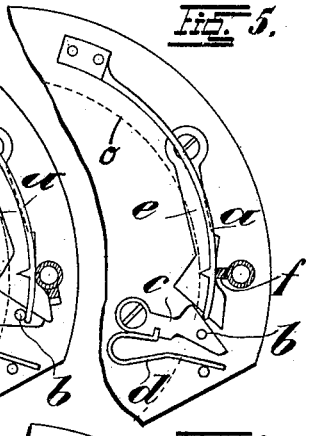


Fig. 6.

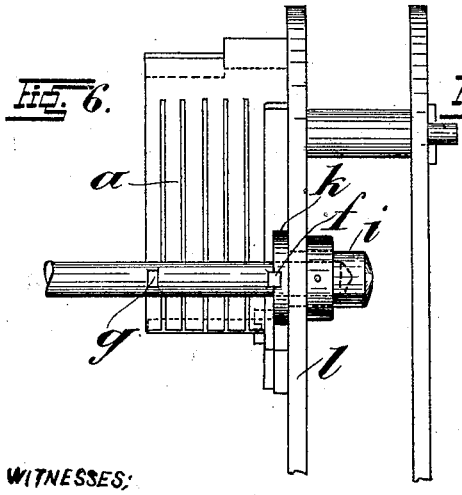


Fig. 7.

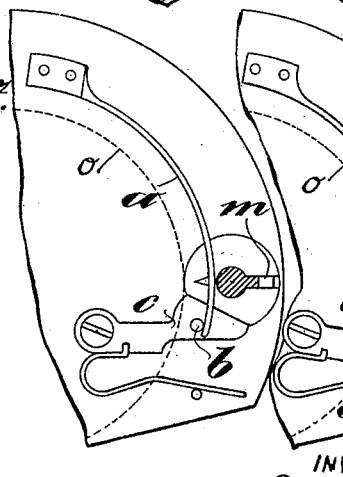
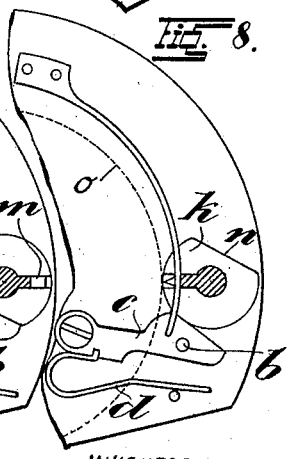


Fig. 8.



WITNESSES:

Thomas Howlett

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ATTORNEYS

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EMIL EPPNER, OF BRESLAU, GERMANY.

TIME-DETECTOR FOR WATCHMEN.

SPECIFICATION forming part of Letters Patent No. 648,249, dated April 24, 1900.

Application filed August 29, 1899. Serial No. 728,862. (No model.)

To all whom it may concern:

Be it known that I, EMIL EPPNER, watchmaker, of Königstrasse 3, Breslau, German Empire, have invented new and useful Improvements in Time-Detectors for Watchmen; and I declare that the following is a full and clear description of the same.

This invention relates to an arrangement of portable time-detectors for watchmen by means of which the reliability of such apparatus is greatly increased. For this purpose a stop is arranged below the mark-pins to be actuated first by a key before the mark-pin can be pressed down.

The annexed drawings illustrate the object of the invention.

Figure 1 is a watchman's time-detector supplied with the new device in side view, and Fig. 2 in front view. Figs. 3, 4, and 5 show the object of the invention on a larger scale. Figs. 6, 7, and 8 suitably show the arrangement for a full key, while Figs. 1 to 5 show the arrangement for a hollow key.

a are the spring-fingers, carrying mark-pins, and *b* is a pin arranged below these mark-pins. The pin *b* is attached to a turning-piece *c*, pressed by a spring *d* against the wedge-shaped surface of a turning-lever *e*. The key, whether it be a full or a hollow key, is provided with two bits. The one bit *f* is arranged at the end or near thereto and when the key is turned correspondingly causes the part *e* to be pressed in, which will swing the part *c* on its pivot and move the pin *b* out of the path of the spring-fingers. The lateral projection or projections coming in contact with one or more of the fingers will press the same inward until the mark-pins carried thereby perforate the strip, (indicated by the dotted line *o*.)

If one uses a full key, it is advisable to choose a construction similar to that shown in Figs. 6, 7, and 8. The key is guided at the rear by a cap *i*, provided with a front plate *k*, which is turned by the key. The disk *k* has an incision *m*, into which the key-bit *f* is inserted. As soon as the key is turned the cap *i*, with the disk *k*, will also be turned. The disk is not perfectly circular, but cut off tangentially. This flat part *n* is adjacent to the oblique surface of the lever *c* when in a state of rest. As soon as a turning of the key and the disk *k* takes place the lever *c* is moved aside by the circular part of the disk *k*, in consequence of which the pin *b* is drawn out of the path of the fingers, so that in continuing to turn the key by means of the bit *g* the pressing down of the corresponding mark-pin may take place. The pin *b*, coacting with the operating parts therefor, constitutes a lock for the spring-fingers adapted to be operated to free said fingers when the proper key is used.

I claim—

1. The combination with the spring-fingers and mark-pins carried thereby of a locking-pin, a pivoted piece carrying the same, a movable piece adapted to operate said pivoted piece, a key for operating the former piece, and means for pressing the pivoted piece into engagement with the movable piece.

2. The combination with the spring-fingers and mark-pins carried by the same, of a stop-pin normally in the path of said fingers, a pivoted piece carrying said pin having an inclined edge, and a movable piece with means for operating the same adapted to operate on said edge to move said pin out of the path of said fingers.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EMIL EPPNER.

Witnesses:
WILHELM WEIDNER,
HERMANN BARTSCH.