

(No Model.)

G. F. RANSOM.
WATCHMAN'S TIME DETECTOR.

No. 266,518.

Patented Oct. 24, 1882.

Fig. 1.

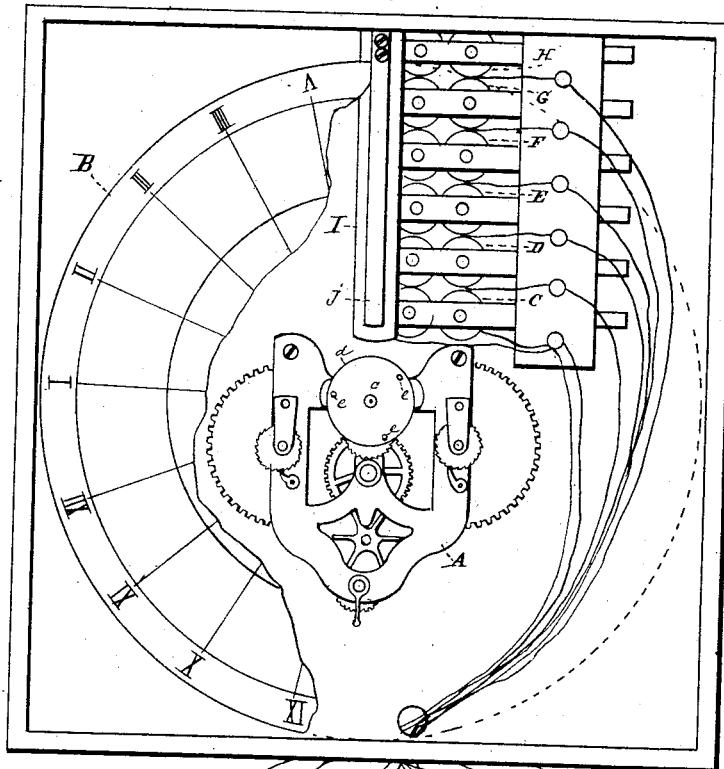


Fig. 3.

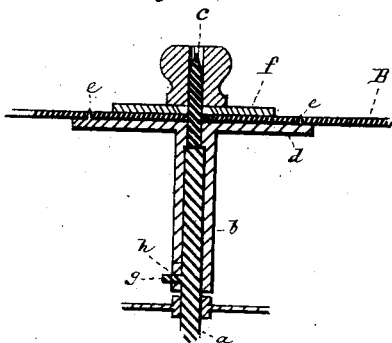
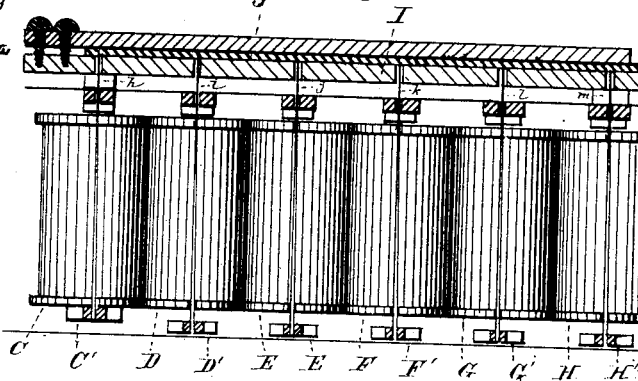


Fig. 2



WITNESSES

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GEORGE F. RANSOM, OF CLEVELAND, OHIO.

WATCHMAN'S TIME-DETECTOR.

SPECIFICATION forming part of Letters Patent No. 266,518, dated October 24, 1882.

Application filed March 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. RANSOM, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Watchmen's Time-Detectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to electro-magnetic watchmen's registers; and it consists in the peculiar construction of the same, as will be hereinafter fully set forth and claimed.

In the drawings, Figure 1 is a plan view of a device embodying my invention. Fig. 2 is a view in elevation of a series of electro-magnets and mechanism attached, showing more clearly the construction and operation of that part of the device which is operated by electricity. Fig. 3 is a detached sectional view of part of the clock-movement—viz., that part to which the dial is attached and by means of which it is revolved.

A is a clock of any suitable construction, which is provided with a post, *a*. (Shown in Fig. 3.) This post *a* is so geared to the clock-movement that it will make one complete revolution in twelve hours. Fitting over the post *a* is a sleeve, *b*, closed at its upper end and provided with a spigot or shank, *c*, extending therefrom. Secured to the upper end of the sleeve is also a disk, *d*, which is in turn provided with pointed pins *e e*, extending upward from its face. These pins *e e* act by engaging with the dial B (which is preferably made of paper) to cause said dial to revolve and prevent the same from slipping around the spigot or shank *c*. To keep the dial B more securely in place on the disk *d*, I provide another disk, *f*, which fits between the pins *e e*, its center being provided with a hole which fits snugly over the spigot or shank *c*. The sleeve *b* is prevented from turning on the post *a* by a pin, *g*, which engages with a slot, *h*, formed in the lower end of the said sleeve.

C, D, E, F, G, and H are a series of electro-magnets, which are provided with armatures C', D', E', F', G', and H', said armatures being hinged at their one end and provided at their free or movable end with needles or punches *h*, *i*, *j*, *k*, *l*, and *m*. These needles *h*,

i, *j*, *k*, *l*, and *m* are pivotally secured, each to its respective armature, and from thence passing upward through the lower of two guide-bars, I and J, said bars, I and J acting to guide and hold the dial in position to be pierced by the point of the needles. Wires are run from each of the several electro-magnets to different stations or parts of the building where push-buttons are placed to be operated by the watchmen.

The dial B is divided into spaces, as shown in Fig. 1, each space passing the line of needles in one hour, the post *a* being on a line with the said needles, as shown in Fig. 1. These spaces may, if desired, be subdivided into any number.

The operation of my device is as follows: The clock being wound up and a battery being placed in the circuit of the wires leading to the several electro-magnets, the dial B is placed in position on the disk *d*, and secured thereon in the manner hereinbefore explained, it being in such a position as to cause it (the said dial) to pass between the bars I and J, where it may be operated upon by the needles at stated intervals by causing the armature of one of the electro-magnets to be drawn upward, as shown at C, Fig. 2. This is done by pressing the push-button at the ends of the wires passing to the magnet above the said armature, which allows of the passage of the electric fluid through the said magnet and causes it to draw the armature toward it with sufficient force to pierce the paper.

What I claim is—

In a watchman's time-registering clock, the combination, with a clock-movement, a revolving dial connected therewith, and parallel bars located on opposite sides of the dial and radially thereto, of a series of electro-magnets having needles secured directly to their armatures, said needles being arranged radially to the clock-dial for piercing the dial on a radial line, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE F. RANSOM.

Witnesses:

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W. E. DONNELLY.