W. H. CROWELL.

ELECTRO-MAGNETIC ANNUNCIATOR.

No. 173,447. Patented Feb. 15, 1876.

Fig: 1.

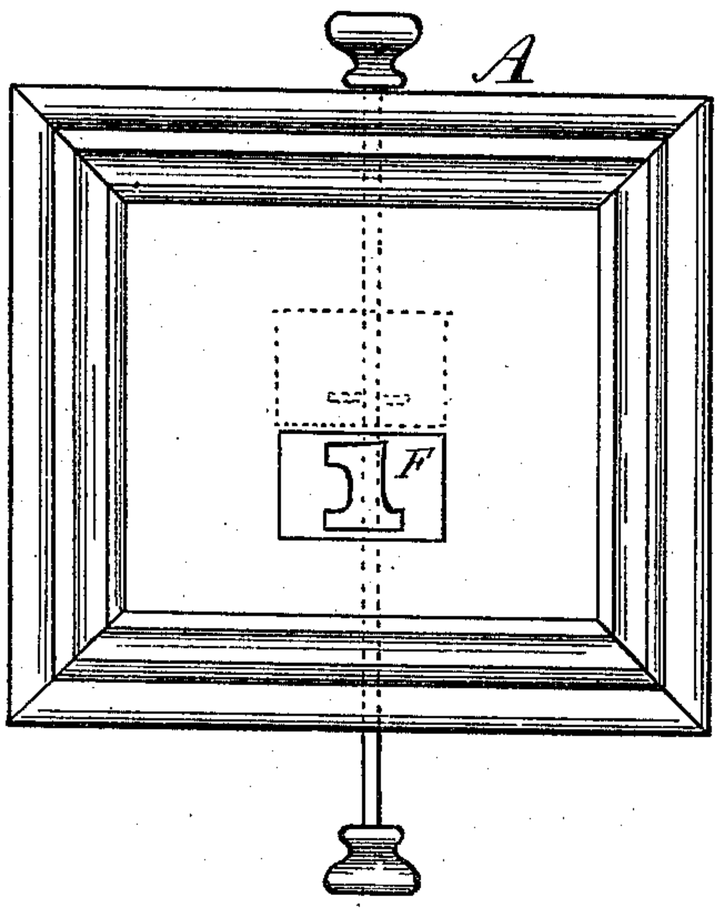
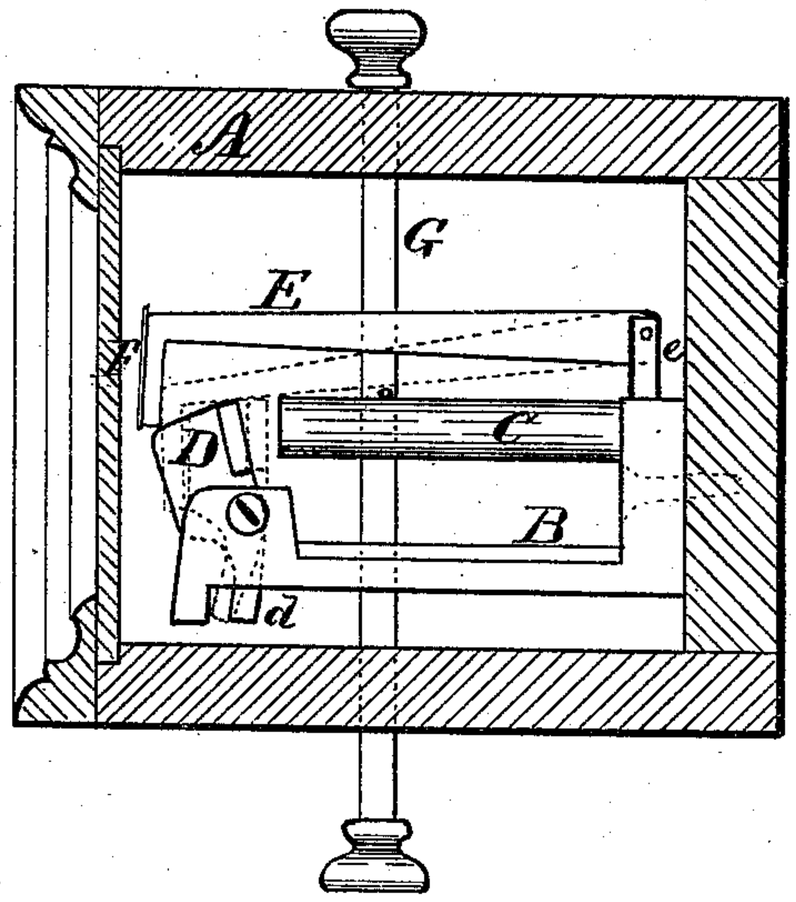


Fig: 2.



Witnesses.

Geo. W. Tibbitts

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Inventor.

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UNITED STATES PATENT OFFICE.

WILLIAM H. CROWELL, OF MAPLE CITY, MICHIGAN, ASSIGNOR OF ONE-HALF HIS RIGHT TO H. A. CROSSLEY, OF CLEVELAND, OHIO.

IMPROVEMENT IN ELECTRO-MAGNETIC ANNUNCIATORS.

Specification forming part of Letters Patent No. **173,447**, dated February 15, 1876; application filed October 18, 1875.

To all whom it may concern:

Be it known that I, WILLIAM H. CROWELL, of Maple City, in the county of Leelenaw, State of Michigan, have invented a new Electric Annunciator, of which the following is a specification:

This invention relates to a new construction of electric annunciators, and consists of the combination, with an electro-magnet and armature, of a pivoted lever or latch, arranged so as to latch and hold or retain the armature in a perpendicular position by dropping so as to bring a hook on the end of said latch down in front of the armature; the said latch also having a numbered plate attached to the forward end, which is brought into view through a transparent place in the glass front by the dropping of the said latch; the above-named armature being hung in its frame with a stop so as to keep it from direct contact with the magnet. The aforesaid latch is again raised by means of a vertically-sliding rod carrying a pin which lifts the latch, and, when thus lifted, allows the armature to fall back by its own gravity; then the end or hook of the latch rests on the top of the armature again, concealing the number from view.

To enable others to fully understand the construction and operation of my invention, I proceed to describe the same in detail, with the aid of the accompanying drawing, in which—

Figure 1 is a front view. Fig. 2 is a vertical section, showing the working parts.

A, Figures 1 and 2, is the box or case of the annunciator, having a glass front, with transparent places for showing the numbers. B is a cast-metal frame, secured to the back of said box, which supports the electro-magnets by the cores C, and also in the front end of which is pivoted the armature D. The lower end of said armature has a lug or projection, *d*, which strikes against the frame and thus prevents the armature from coming in contact with the cores C when the electrical circuit from the battery is closed. E is a latch lying above the magnets and pivoted at the rear end to a post, *e*, fixed in the frame B, the front end being bent downward in the form of a hook, which rests on the top edge of the armature D when the armature is away from the magnet, which hook, however, holds the armature up after the circuit is broken. To the front end of said latch E is attached a numbered plate, F, which is brought into view behind the transparent opening by the falling of the front end of the latch when released from its rest on the armature by the attraction of said armature to the magnet.

To again raise the latch a vertical rod, G, is provided, which passes through the bottom of the box up by the side of the latch, and is provided with a pin on one side, which, when the rod is pushed up, lifts the latch, thereby releasing the armature, which falls back by its own gravity, and again allows the latch to rest thereon.

Having described my invention, I claim—

The above-described electro-magnetic annunciator, consisting of the frame B, magnet C, armature D, having a stop, *d*, the rod G and plate-bearing lever E, which is pivoted at its rear end to a post, *e*, and arranged above and to rest upon the armature, and be operated thereby, and by the rod G, substantially as shown.

W. H. CROWELL.

Witnesses:

ANDREW SQUIRE,

GEO. W. TIBBETTS.