(No Model.)

A. E. BRIGGS.

ELECTRIC ANNUNCIATOR.

No. 327,997. Patented Oct. 13, 1885.

Fig. 1.

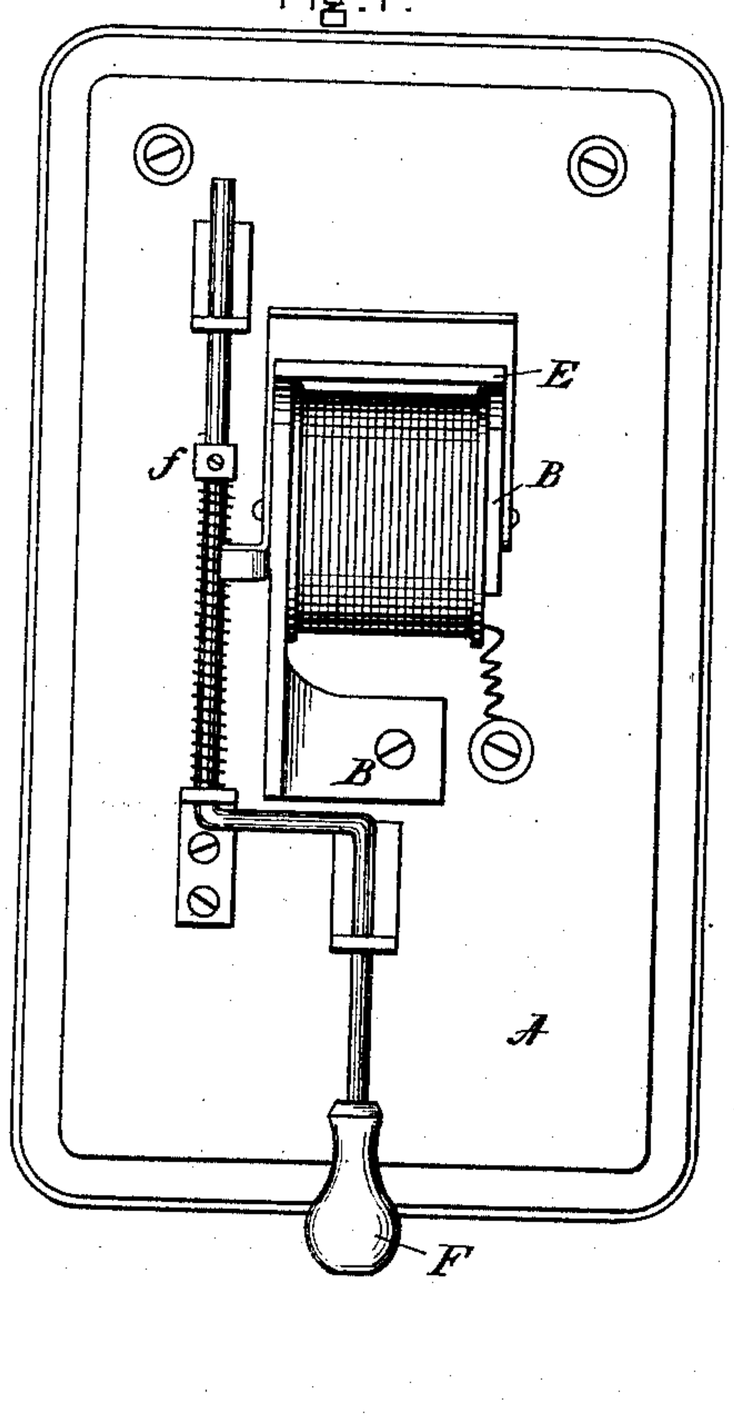


Fig. 2.

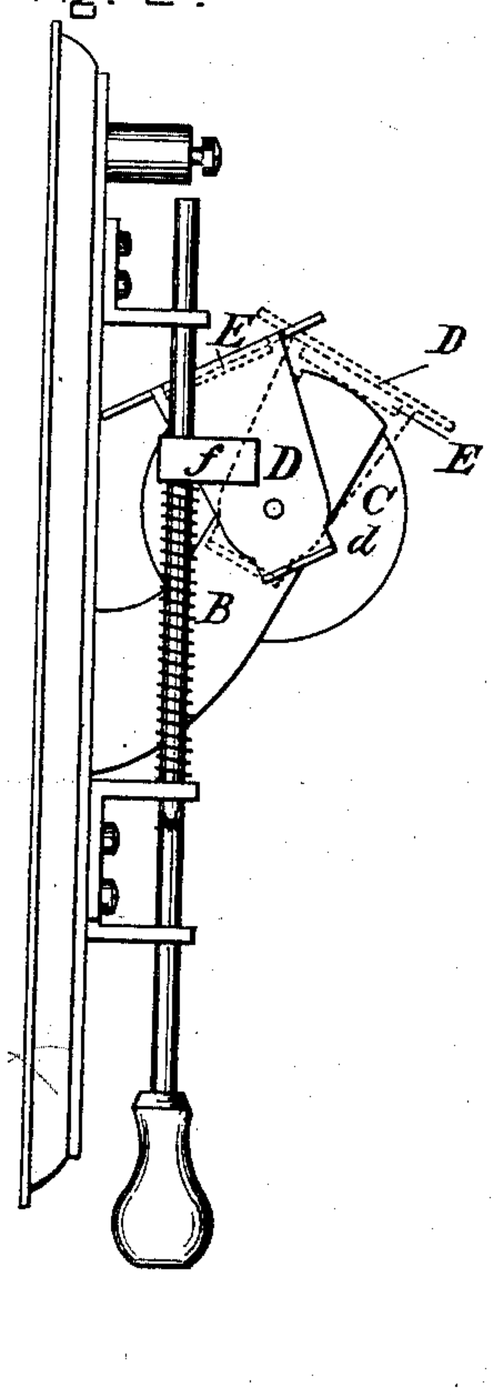


Fig. 3.

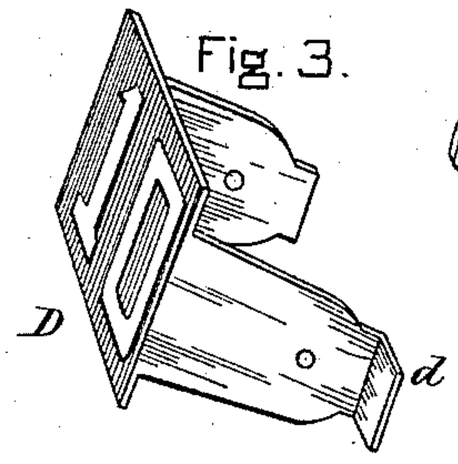


Fig. 4.

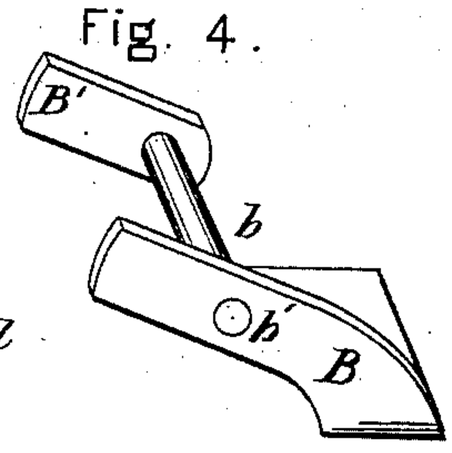


Fig. 5.

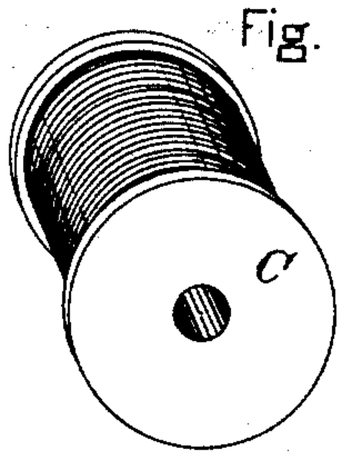
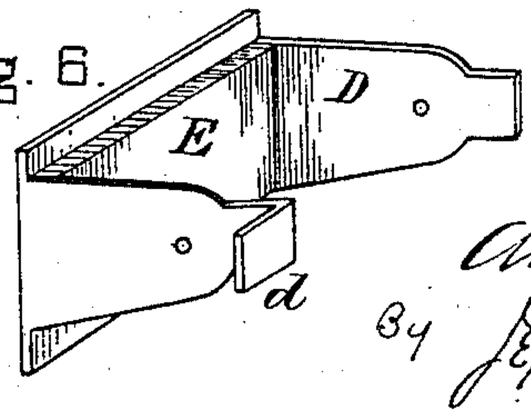


Fig. 6.



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UNITED STATES PATENT OFFICE.

ARTHUR EDWARD BRIGGS, OF BOND HILL, OHIO.

ELECTRIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 327,997, dated October 13, 1885.

Application filed April 10, 1885. Serial No. 161,870. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR EDWARD BRIGGS, of Bond Hill, Hamilton county, State of Ohio, have invented a new and useful Improvement in Electric Annunciators, of which the following is a specification, reference being had to the accompanying drawings, forming part of the statement of invention, in which—

Figure 1 is an elevation of my annunciator. Fig. 2 is a side view of my annunciator, showing the upper and lower positions of the armature and number-shield. Figs. 3 and 6 are views in perspective of my armature and number-shield. Fig. 4 is a view in detail of my electro-magnet. Fig. 5 is a view of the bobbin holding wire coil.

Similar letters of reference in the several drawings denote the same parts.

My invention relates to electric annunciators, and, reference being had to the accompanying drawings, is constructed as follows:

To a base-plate, A, Fig. 1, the soft-iron standard B, Fig. 4, is attached by a screw. A soft-iron rod, *b*, about three-eighths of an inch in diameter, is driven into a hole, *b'*, in the standard B, and a piece of soft iron, B', is driven onto its other end, the bar *b* being shouldered at each end to adapt it to be fitted into these parts. Before the piece B' is driven onto the rod *b* the bobbin *c*, Fig. 5, is slipped over the said rod, or a coil of insulated wire may be wrapped about the rod *b* itself before the pieces B and B' are attached to it. When a current of electricity passes through the coil, the rod *b* and the pieces B and B' become magnetic, as is well known. An armature and shield-bearing swing, D, having the lug *d*, constructed of any non-magnetic material, (I use copper,) is attached to the ends of the bar *b* by rivets, as shown in Fig. 1. An armature, E, of any suitable magnetic material, is soldered to the swing on the under side. When in position, the surface of the armature is as close to the end surfaces of the plates B and B' as it can conveniently be brought without touching. On the upper surface of the swing D the annunciator-number is pasted or otherwise fastened or impressed.

A pull or return rod, F, is secured to the base-plate A, as shown in Fig. 1, in such relation to the lug *d* of the swing D that its projection *f* serves as a stop for the swing when in its lower or annunciating position. The swing is returned to its upper or non-annunciating position by pulling the rod F down, the projection *f* engaging with the lug *d* of the swing.

The operation of my invention is as follows: Reference being had to Fig. 2, the armature and shield swing D is shown in full lines in its upper or non-annunciating position, and no current is passing through the coil of the bobbin *c*. When a current is made to pass through the coil in the usual way, by making a connection by means of a push-button, the bar *b* and the pieces B and B' become magnetic, and affecting the armature E brings it up and over the said pieces B and B' until a line through its center coincides with a line through the center of said pieces. The position at this time of the armature is such that its gravity will ordinarily, even when the current is on, carry it down to its lower or annunciating position, and such that when the current is broken it necessarily falls to its lower position. When in its lower position the lug *d* of the swing D is resting against the projection *f* of the rod F, and the swing is returned to its upper position by pulling the rod F, which is furnished with a retracting-spring.

In annunciators heretofore made, which have come under my notice, it has been usual to use two coils to weight the armature, and to make the armature and annunciating-shield in separate pieces.

It will be observed that my construction is much more simple and cheaper, that the parts are fewer, and that weights and springs on the armature are avoided.

I claim as new—

1. In an annunciator, in combination with an electro-magnet having pole-pieces, substantially as described, a stirrup-shaped shield carrying an armature and pivoted below its center of gravity in rear of said pole-pieces, substantially as set forth.

2. In an annunciator, in combination with

an electro-magnet having pole-pieces, substantially as described, a stirrup-shaped shield-swing, D, having armature E and stop-lug *d*, and pull-rod F, having projection *f* and retractile spring, substantially as set forth.

3. In an electric annunciator, an armature and shield swing journaled to the axis of the electro-magnet and adapted to be drawn by the action of the magnet on the armature into annunciating position, substantially as shown and described.

The foregoing specification of my invention signed by me this 27th day of March, A. D. 1885.

ARTHUR EDWARD BRIGGS.

Witnesses:

ISAAC KINSEY,

JOSEPH COX, Jr.