

(No Model.)

F. W. ROSS.
ANNUNCIATOR.

No. 513,956.

Patented Jan. 30, 1894.

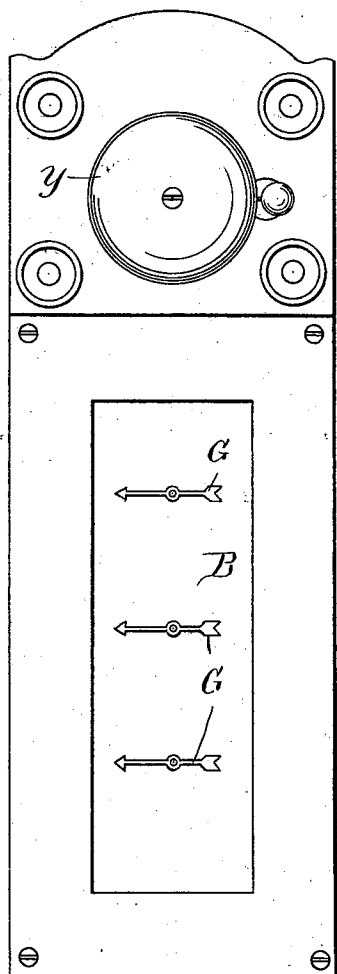


Fig. 1.

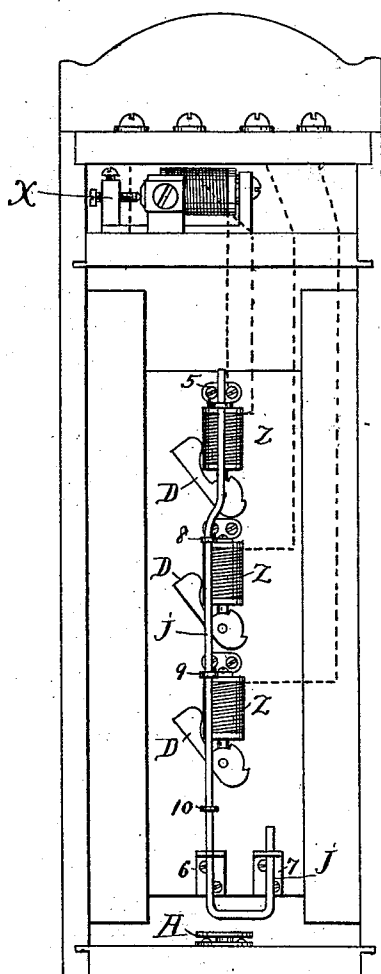


Fig. 2.

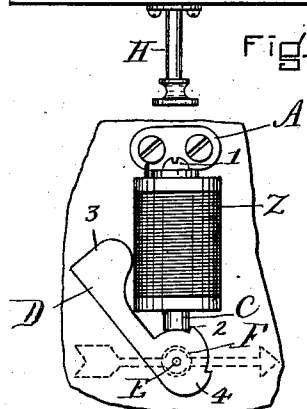


Fig. 3.

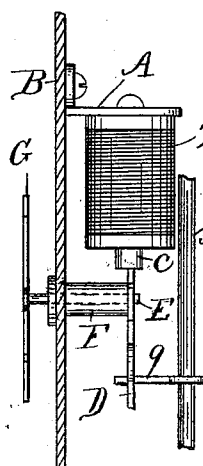


Fig. 4.

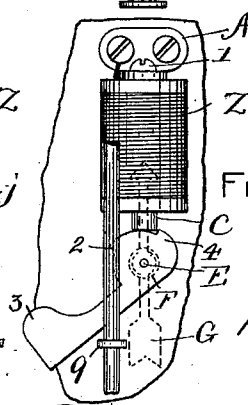


Fig. 5.

WITNESSES.

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Fig. 4.

INVENTOR.

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FREDERICK W. ROSS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
ELECTRIC GAS LIGHTING COMPANY, OF MAINE.

ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 513,956, dated January 30, 1894.

Application filed October 6, 1893. Serial No. 487,372. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. ROSS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Annunciators, of which the following is a specification.

This invention relates to improvements in electric annunciators in which an index-hand is controlled by a lever and a lever controlled by a magnet whose armature releases the tilting lever when desired, and at other times holds it normally in position. Several of such annunciators are usually used together, each being placed within a case which has a face through which protrudes a spindle on which is mounted the index-finger, the rotation of said spindle being controlled by said lever while it is held in normal position by the armature of a magnet, as above stated. The electric wiring and connections for one or more of such electrical annunciators will be readily understood by those familiar with the art without further description.

The object of my invention is to simplify and considerably cheapen the construction of an annunciator which I accomplish by doing away with the spring usually required to retract the armature, and also with expensive forms of the lever, and the helix.

My invention consists in the omission of hitherto essential parts, and in a different construction and combination of the elements made use of by me.

In the accompanying drawings which will illustrate my invention, similar letters and figures of reference refer to similar parts; and of said drawings, Figure 1. shows an ordinary annunciator case, and the face-plate and index-fingers. Fig. 2. shows the rear of such case, containing the operative apparatus for the above mentioned index-fingers. Fig. 3. is a front view, showing the helix; the armature-core, the standard in which rests the sleeve supporting the spindle which carries upon one end the index-finger, and upon the other the lever, all being shown as arranged when the apparatus is in normal position ready for use. Fig. 4. is the same as Fig. 3. after the magnet has been energized and the index-finger allowed to fall. Fig. 5. is a side view of Fig. 4.

To explain more in detail the construction; it will be easily understood how the above mentioned parts are connected with the face-plate of the annunciator-box. The standard A is fastened to the face-plate B by screws or otherwise. The helix Z may be a wooden spool attached to the end of the standard A by a small screw 1. The core C of the helix is movable within the same and always retained more or less within the spool Z, by the lever D, which lever D is mounted upon one end of the spindle E which is supported by, and rotates within the sleeve F. The lever D is in substantially the form shown and so constructed that when the apparatus is in a normal condition as in Figs. 1, 2, and 3, the core C will trip or catch in the ratchet 2, of the lever D. The extension 3 of lever D is made heavier than its extension 4. Upon the front of the face-plate is the index-finger G carried upon the opposite end of the spindle E.

The operation of the apparatus is very simple; when one of the helices as any spool Z is energized, its armature-core C will be drawn into the helix, and also above the ratchet 2 so that the heavier end of the lever D will drop and cause the spindle E of said lever to rotate, thus also turning the index-finger G, so as to cause it to point as desired, for whatever it is intended to indicate.

After any, or all, of the index-fingers have dropped, as thus explained, and it is necessary to restore it, or them, to position, this is accomplished by an ordinary lift which is shown in Fig. 2, consisting of the knob and shank H which, on being elevated, make contact with the wire or lever J, held in brackets 5, 6, and 7, and provided with the arms or tripping pieces 8, 9, and 10, one of which will come in contact with any released lever D after the same has fallen, as shown in Fig. 4. Pushing up this wire, J, provided with these arms, will at once restore the apparatus to a condition for use.

I have shown in the drawings, although it makes no part of my invention, a gong operated by a magnet which is connected with the battery wires so as to be energized by the same current that energizes any annunciator magnet. A part of this gong apparatus will be seen in Fig. 2, lettered X, and the bell will be

seen in Fig. 1, lettered Y. It is convenient and usual to have this additional attachment to call attention to the fact that the index-finger has fallen.

5 Having thus described my said invention, I do not claim broadly either the method of operation of the annunciator, or the apparatus itself, so far as shown in previous patents and especially in Letters Patent No. 392,970,
10 of November 13, 1888, to F. Ritchie, and No. 442,773 of March 4, 1890, to C. J. Hamilton, or No. 480,729 of August 16, 1892, to T. W. Lane—said patents being sufficient to indicate in general the state of the art—but

15 What I do claim as my invention, and seek to protect by Letters Patent, is—

1. In an electrical annunciator, the combination of a single helix vertically attached to the face-plate, a vertical armature-core of said
20 helix, a tripping lever having its ends of unequal weight, and one end provided with a lug or ratchet, a sleeve attached to said face-plate, an index-spindle one end carrying said tripping lever, an index-finger upon the opposite
25 end of said index spindle, all so combined that electrically energizing said helix and drawing said core farther within the same,

will release the tripping lever; all substantially as described.

2. In an electrical annunciator, a single helix 30 having a sliding armature-core and mounted vertically upon a face-plate; an unequally balanced lever carried upon a spindle, and having a ratchet adapting it to be tripped by said core; a sleeve attached to the face-plate 35 and a spindle within the same, one end carrying said lever, and an index-finger carried upon the opposite end of said spindle; all substantially as described.

3. In an electrical annunciator the combination of a vertical magnet and core movable 40 within its helix with an unequally weighted lever, adapted to be normally retained by said core; an index-finger, and a spindle properly mounted to carry said index-finger and said 45 lever; all substantially as described.

In witness whereof I hereunto sign my name, in the presence of two witnesses, this 30th day of September, A. D. 1893.

FREDERICK W. ROSS.

Witnesses:

C. T. DAVIS,
EDW. P. PAYSON.