

(No Model.)

2 Sheets—Sheet 1.

H. C. THOMSON.
ELECTRIC ANNUNCIATOR.

No. 525,874.

Patented Sept. 11, 1894.

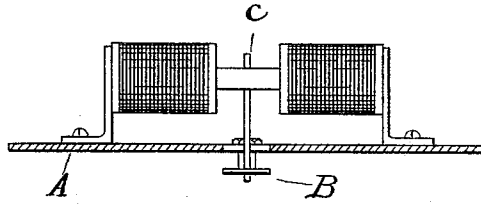
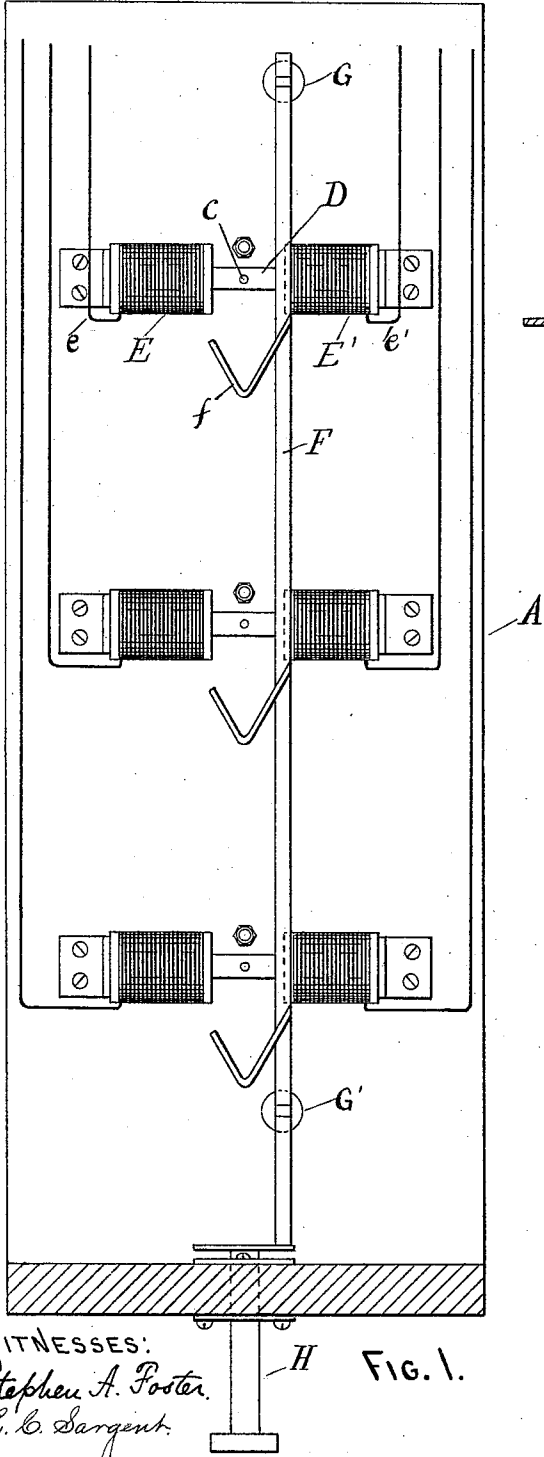


FIG. 2.

WITNESSES:
Stephen A. Foster.
L. C. Sargent.

FIG. 1.

INVENTORS:
Henry C. Thomson
by *J. P. Payson*
his atty.

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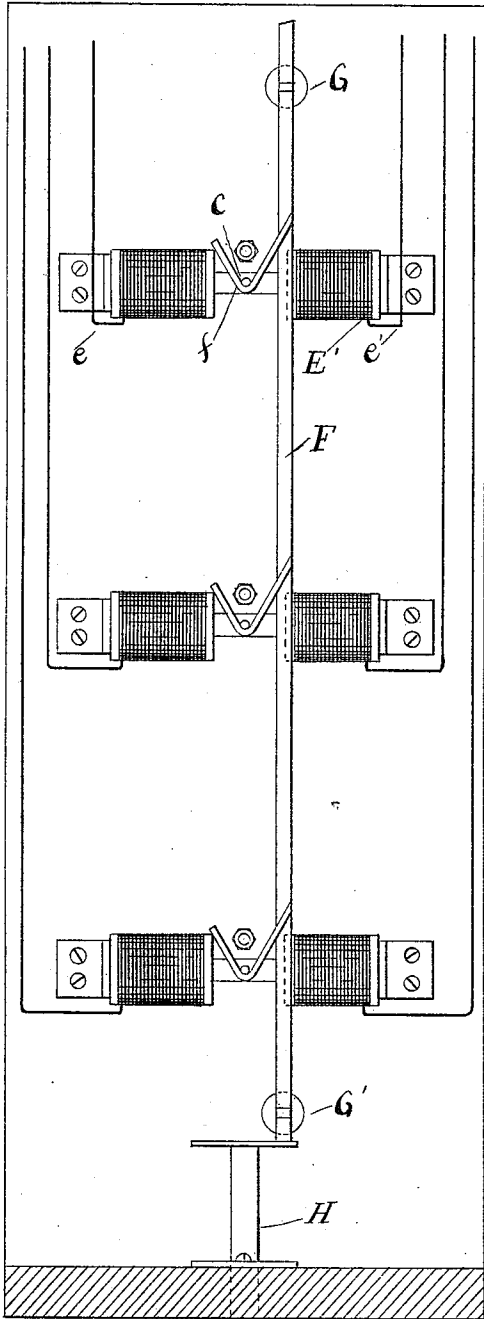


FIG. 3.

WITNESSES:
Stephen A. Foster
L. C. Sargent.

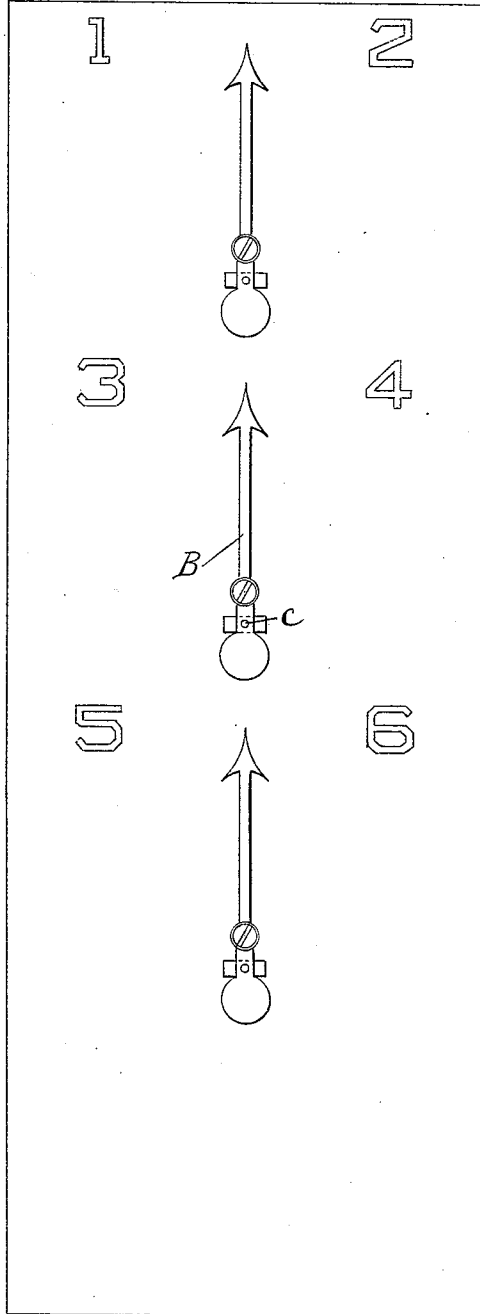


FIG. 4.

INVENTORS:
Henry C. Thomson
by
Edw. P. Rayson
his atty

UNITED STATES PATENT OFFICE.

HENRY C. THOMSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
ELECTRIC GAS LIGHTING COMPANY, OF MAINE.

ELECTRIC ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 525,874, dated September 11, 1894.

Application filed July 2, 1894. Serial No. 516,278. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. THOMSON, of Boston, Massachusetts, have invented a new and useful Improvement in Electric Annunciators, of which the following is a specification.

My invention relates mainly to annunciators in which the index-fingers are manually restored to position; although a part of my entire annunciator admits of use without other means than the electrical device for restoring the index-finger, as will be shown later on.

My improvement consists in the construction and arrangement of the index-magnets, and their combination with the index-fingers; and also in the construction of the restoring or lifting device.

My improvement will be understood by referring to the annexed drawings, in which—

Figure 1 is a view of the apparatus in a normal state of rest, constructed with six points to be indicated, and three index-fingers, requiring a lifting device. I have not shown a gong and its magnet which are a usual part of such apparatus. Fig. 2 is a plan of my apparatus when only two indicating points and one index-finger are to be used, and in which no lifting device is required, as the helices will serve its function each for the other. In the drawings, the double core of two helices oscillates back and forth according to which helix is energized. Fig. 3 shows the lifting device elevated after any sliding armature has been abnormally attracted into one of the helices, in which case it will gear with a pin upon said armature, and thereby bring it back to normal position. Fig. 4 is the face-plate, having the points 1 to 6.

Similar letters and figures of reference refer to the same parts in all the drawings.

The construction of my apparatus is as follows:—In an ordinary annunciator case is the face-plate A, the index-fingers B, loosely pivoted upon the face-plate. A rod C runs through the face-plate and also through the movable armature-core D, and the index-fingers B. The helices E E' are properly supported upon the face-plate as by the standards e e'; and the said armature-core of each is adapted to play back and forth in said helices. The

rod C projecting beyond the armature-core is adapted to gear with the lifting device F when that is used. This lifting device F is a straight rod or bar, having the hook-shaped catches f, whose apices are so formed and placed that the extension of the rod C will lie therein when the armature-core is in a raised position. This lift F slides in the standards G G' and is elevated by means of the handle or push-piece H.

The operation of my invention is as follows:—When the ordinary push-button, not shown, for instance for point 1, is pressed to admit electricity from a battery, the current energizes the bell magnet, thereby causing the bell or gong to ring in the well known way, whereupon the current passes into, for instance, the helix E' of the upper magnet, corresponding to point 1, which, being energized, retracts the armature-core, thereby throwing the index-finger over to point 1, Fig. 1, upon the index-plate. If an annunciator is desired for only two points, it will not be necessary that the index-finger be returned until it is desired that the index-finger point at 2; and when the opposite helix for point 2 is energized, the armature-core will be retracted into that helix E', and the index-finger pulled over to point 2; but in cases as shown in Fig. 1, where there are more index-fingers, it is essential to have each index-finger restored to position before any other index-finger is used; otherwise confusion would arise from two or more index-fingers pointing at the same time to different figures. In order to restore the index-finger to position, the push piece H is used to raise the lifting rod F and its hook f will catch the rod C projecting beyond the armature lever, and carry the armature-core and also the index-finger to normal position.

Having thus described my apparatus, I claim—

1. In an electric annunciator having a proper case and face-plate, the combination of an index-finger loosely pivoted upon the face-plate, two helices properly attached to the back of the face-plate; a sliding armature-core playing back and forth in the two helices, a pin or rod rigidly penetrating said arma-

ture-core and running through the face-plate and the index-finger, all substantially as described.

2. In combination with a battery, battery circuit, and proper push-buttons, a two-point annunciator composed of an index-finger loosely pivoted to the face-plate and normally pointing at one of two points to be indicated, two opposite helices and a sliding armature core playing between the two, all so combined that said finger will normally point at the figure of the face-plate corresponding with the magnet last energized, substantially as described.

3. An electric annunciator composed of a proper frame and face-plate, one or more couples of helices, properly attached to the back of the face-plate, an armature-core for each couple of helices arranged to play back and forth in the same, a pin perforating each armature-core, running through the face-plate,

and gearing with each index-finger, and also projecting backwardly beyond the helices, combined with a lifting device composed of a push-piece and a rod or bar having hook-shaped catches, adapted to gear with each armature-core pin, all substantially as described.

4. In an electric annunciator, an index-finger in combination with a couple of helices so arranged as to admit of one armature-core sliding between the two, a sliding armature-core so arranged, and a rod or pin running at right angles through said armature-core, and gearing with the index-finger, substantially as described.

In witness whereof I have hereunto set my hand this 13th day of April, 1894.

HENRY C. THOMSON.

In presence of—

STEPHEN A. FOSTER,
EDW. P. PAYSON.