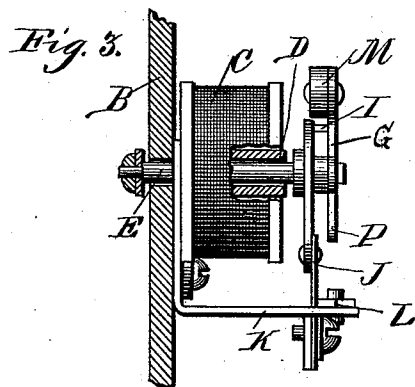
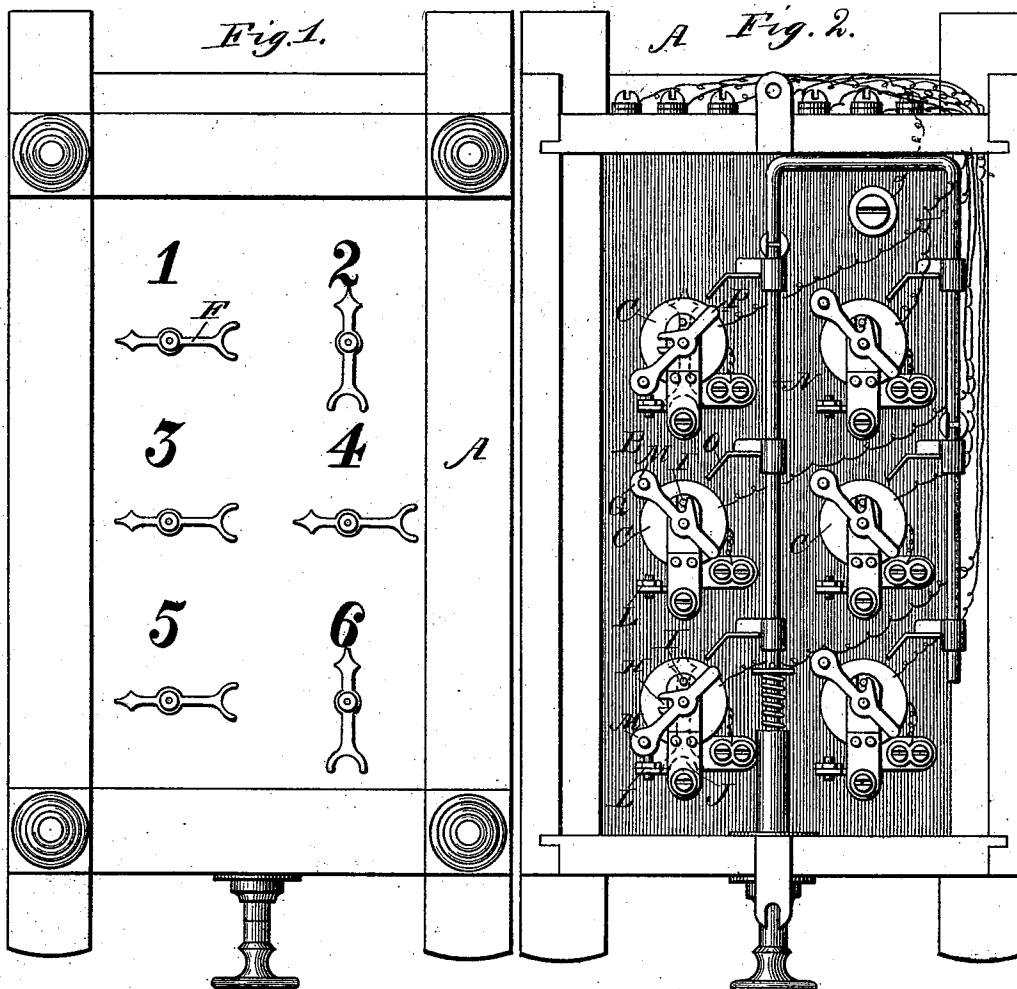


(No Model.)

F. RITCHIE.
ANNUNCIATOR.

No. 392,970.

Patented Nov. 13, 1888.



Witnesses.
W. Rossiter.
W. W. Elliott.

Inventor.
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Atty.

UNITED STATES PATENT OFFICE.

FOSTER RITCHIE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE RAILWAY
TELEGRAPH SUPPLY COMPANY, OF SAME PLACE.

ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 392,970, dated November 13, 1888,

Application filed April 25, 1887. Serial No. 235,970. (No model.)

To all whom it may concern:

Be it known that I, FOSTER RITCHIE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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 a gravitating lever is automatically tripped and the fall of the free end thereof utilized to actuate an index-hand of the annunciator, so as to point out the number of the room from which the signal was sent.

The prime object of this invention is to simplify the construction of the annunciator by utilizing, in connection with the flexible but otherwise fixed armature, a hollow core of a magnetic coil as a bearing for a spindle, to one end of which is secured the index-hand and to the opposite end of which is secured the gravitating or weighted lever for causing a partial rotation of said hand. This object is attained by devices illustrated in the accompanying drawings.

Figure 1 represents a front or face view of an annunciator embodying my invention; Fig. 2, a rear elevation thereof; and Fig. 3, a detail view, partly in section, of a portion of the case and one of the magnets and its connections.

Similar letters of reference indicate the same parts in the several figures of the drawings.

Referring by letter to the accompanying drawings, A indicates the case of the annunciator, such as is commonly employed in devices of this class, provided with the usual metallic plate, B, on the front face of which are placed the numerals generally employed for designating the various rooms in the building.

To the rear face of the plate B are secured in any well-known convenient manner a series of electro-magnets, C, differing from the ordinary electro-magnets only in having hollow cores D, through which loosely work spindles E, the front ends of which project sufficiently through the plate B to have rigidly secured thereto the usual index-hands, F, by means of which the room from which the sig-

nal is transmitted is indicated by the annunciator. To the opposite or rear end of this spindle is rigidly secured a gravitating or weighted lever, G, standing normally in an inclined position and having provided therein at a suitable point a notch, H, into which projects a pin or stud, I, secured to the free end of a flexible armature, J, which said armature is perforated, so as to fit over and work independently of the spindle, one end thereof being secured at a suitable point to a bracket, K, in turn secured to the plate B or to any other suitable point. This bracket also has a lateral projection, L, against which the weighted end M of the gravitating lever strikes in its descent and is stopped thereby, the said projection being located relative to the lever in such manner that the index-hand shall make a quarter or at least sufficient turn to bring the said hand opposite the number on the face of the plate B indicating the room from which the signal is sent.

Suitable electric connections are provided between the annunciator and the rooms, so that the signal sent from any room will be transmitted to the proper electro-magnet, so as to indicate the number by the hand controlled by said magnet, and it will readily be observed that when a magnet is vitalized, as in the case of Nos. 2 and 6, the armature thereof will be immediately drawn in contact with the poles of the magnet, carrying with it its pin, and consequently disengaging the same from the notch in the lever, whereupon the gravity of the weight on said lever will cause it to fall, and thereby impart a corresponding and partial rotation to the spindle and index-hand for indicating upon the front face of the indicator from whence the signal was sent.

To return the levers to their normal position after the magnet has become devitalized, I employ a sliding bar, N, provided at intervals with laterally-projecting arms O, corresponding in number and location with the gravitating levers, which, when said bar is drawn down, engage the projecting ends P of such levers as have been tripped, forcing said ends down and correspondingly elevating the weighted ends thereof until the notched portion rides down the pin upon the armature

and the said pin springs into engagement with the notches, thereby again setting the device for reception of another signal, the lever of course being held in its elevated and normal position by reason of the engagement of the pin with the notch therein.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

- 10 1. In an annunciator, the combination of a magnet and index-hand, the spindle therefor having a common axis with the magnet, a gravitating notched lever fixed upon said spindle, a flexible but otherwise fixed arma-
15 ture, and a pin secured to said armature, said pin engaging the notched lever when the armature is demagnetized and disengaged from said lever when the armature is magnetized, substantially as described.
- 20 2. In an annunciator, a magnet, a spindle passing through the core of said magnet, an index-hand fixed upon one end of said spindle, and a weighted lever upon the other end of said spindle, in combination with a non-

pivoting armature detachably engaging said lever, substantially as described.

3. In an annunciator, a magnet, the spindle passing through said magnet, an index-hand upon one end of said spindle and a weighted lever upon the other end of said spindle, in combination with a flexible but otherwise fixed armature detachably engaging said lever, substantially as described.

4. In an annunciator, a magnet, spindle passing through said magnet, an index-hand upon one end of said spindle and a weighted notched lever upon the other end of said spindle, in combination with a flexible but otherwise fixed armature, and a pin on said armature for engaging the notched lever, which pin is disengaged from said lever when the armature is magnetized, substantially as described.

FOSTER RITCHIE.

Witnesses:

W. W. ELLIOTT,
WILL R. OMOHUNDRO.