

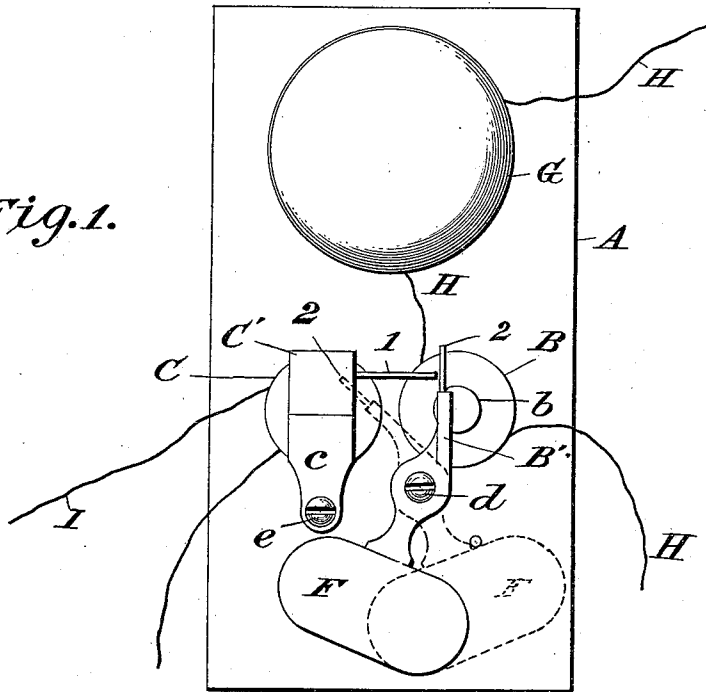
(No Model.)

T. W. LANE.  
ELECTRICAL ANNUNCIATOR.

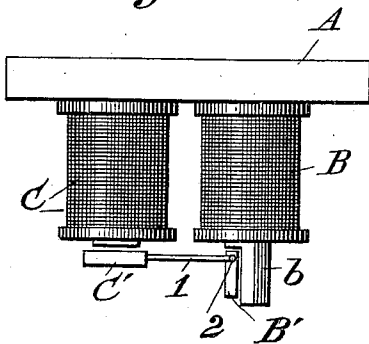
No. 473,121.

Patented Apr. 19, 1892.

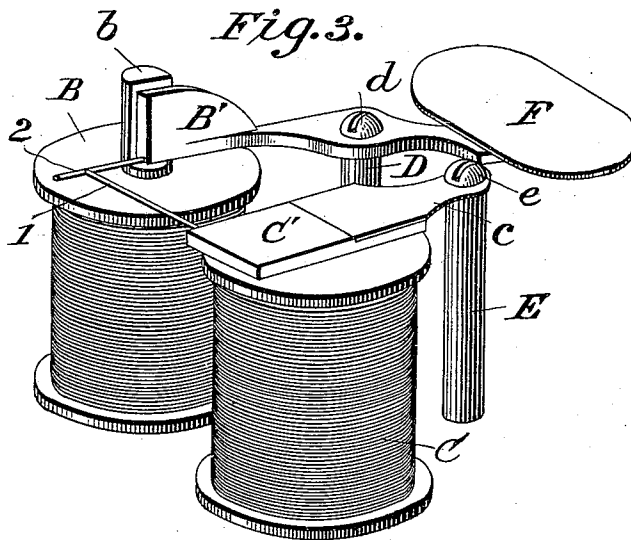
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*Charles H. Hansen*  
*Stephen A. Foster*

*Inventor:*

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# UNITED STATES PATENT OFFICE.

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## ELECTRICAL ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 473,121, dated April 19, 1892.

Application filed December 15, 1890. Serial No. 374,848. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS W. LANE, a citizen of the United States, residing at Boston, Massachusetts, have invented a new and useful Electrical Annunciator, of which the following is a full and complete description, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of the apparatus in position. Fig. 2 is an end view. Fig. 3 is a perspective plan looking down and diagonally across the apparatus.

My invention relates to that class of annunciators used in hotels and wherever reports or signals are desired from several chambers or other places.

My invention consists, first, in an electrical gravity "setback," broadly considered, as a new device for this class of apparatus, and, second, in the construction and adaptation of the devices and elements making parts thereof.

So far as I am aware an electrical setback—*i. e.*, the means by which the disk or tag upon which the announcement is made returns to a normal position—has never before been made, except with or containing a polarized armature for the magnets, and its operation by constant reversals of the polarity of the magnet, or by using a magnet-core which is either permanently magnetic or temporarily so after the current in the helix ceases, as in Letters Patent No. 435,440; but under my invention both the armature and the magnet-core are made of soft iron, which cannot be rendered magnetic after the current ceases, but only while it is passing through the helix. Mechanical setbacks depend upon a rod or other physical means for manually restoring the signal-disk to position. My invention does away with both physical means for manually restoring the signal-disk and a polarized armature operated by reversing the polarity of the magnet and at the same time provides an apparatus which is less expensive to make and less likely to get out of order and in all its manipulation and action much more satisfactory.

Some of the details of my construction can be varied, and the exact form shown is not exclusive of others in which my invention

may be embodied without departing from its scope.

I will now refer to the drawings and explain its construction and operation.

In Fig. 1, A represents a supporting-block of wood or proper material. The two electromagnets B C are attached to the block A by screws whose heads may be sunk in the back of the block or by other proper means. The armatures of the magnets are constructed from soft iron and are sustained by two posts D E, (which may be similarly attached to the block,) to which they may be held by washers and screws *d e*, as shown in the drawings. The magnet B has about one-half of its core *b* projecting beyond the magnet, and its armature B' is pivoted in said post D and formed with its upper portion adapted to fit against the core *b*, while below the post it is extended and adapted to carry the announcing disk or tag F, which is to be so weighted or controlled that when the annunciator is free to swing upon said post D it will swing away from the core *b* and assume a normal position, as shown by the dotted lines in Fig. 1. Upon the top of the armature B' is fixed the pin or rod 2, or the armature is extended for purposes which will appear later on. The magnet C has its armature C' attached to a springy piece of metal *c*, which in turn is attached to the post E by a screw *e*, as shown, in such way as to be normally at a short distance from the magnet-core. This armature C' is extended into or carries a small rod or pin 1, which is so arranged as to bear against or lie on pin 2 of armature B' when the apparatus is in the condition shown by dotted lines, Fig. 1; but when armature B' is attracted to the core *b* said pin 1 shall catch pin 2 and thereby retain armature B' in position, as shown in Fig. 2.

G represents the bell of an ordinary electric gong requiring no particular description.

H represents the line-wire coming from the chamber or place where signal is to be given, which passes through the electric gong onto the magnet B and thence to ground.

I represents the line-wire from the hotel-office or place from which signals are to be attended to and the apparatus restored to normal condition.

In Fig. 2 the contacts made by the pins 1

and 2 is shown when the core *b* has attracted the armature *B'*. In Fig. 3, enlarged to more distinctly disclose the apparatus, the pins are also shown in contact, as in Figs. 2 and 1, by the lines which are not dotted.

The operation of my invention is as follows: The apparatus is as shown by the dotted lines in Fig. 1, the armature *B'* hanging free. By means of a push-button in the chamber or point to be signaled from a current is admitted from a battery (not shown) over the wire *H*, which may or not run through a magnet (not shown) of an electrical gong *G*, energizing that magnet and ringing the gong to attract attention. Thence the current passes by *H* to the magnet *B*, making its core *b* magnetic and enabling it to attract the armature *B'*, whereby the tag *F* is swung into view in the annunciator-case, disclosing the number of the room from which the signal comes or any other announcement. When the armature *B'* reaches the core *b*, the pin 2 slips behind pin 1 and is thus locked into that position, causing the tag to remain in view until released, as shown further in Figs. 2 and 3. The person in charge of the apparatus may now, by means of a push-button at any convenient place, as a hotel-office, admit an electric current from the battery (not shown) over the wire *I* to magnet *C*, whose core attracts the armature *C'* toward the magnet and causes the pin 1 to disconnect from pin 2, whereupon gravity or other proper means causes the armature *B'* to swing on the post *D* back to the position shown in Fig. 1 by the dotted lines.

It is evident that many points may be signaled from, and so tags for many rooms be included in the same case, as is usual, and operated by a single battery, of which, except

when the battery is in operation by the closing of a circuit, the waste is almost imperceptible.

Having described my invention, what I claim is—

1. In an electrical annunciator, in combination with a gravity-signal tag and a magnet properly arranged to operate the same, an electrical setback composed of a magnet, armature having a spring connection, supporting-post therefor, and a proper locking device, substantially as shown.

2. An electrical annunciator composed of one magnet, a supporter for the armature, an armature with proper extensions to carry a weighted tag or visual signal, a tag properly connected therewith and a second magnet, a supporter for its armature, and an armature with a proper extension arranged to lock the first armature when that is attracted by the first magnet and to unlock the first armature upon the second armature being attracted by the second magnet, so as to allow the signal to fall by gravity, substantially as shown.

3. In an electrical annunciator, the combination, with the gravity-drop *F* and a magnet properly arranged to operate the same, of the magnet *C*, support *E*, armature *C'*, spring-piece *c*, and pin 1, as and for an electrical setback, as described and shown.

4. The combination, with a proper base *A*, of the magnet *B*, armature *B'*, pin 2, support *D*, weighted visual signal *F*, and the magnet *C*, armature *C'*, pin 1, spring-piece *c*, and support *E*, properly adapted for electrical connection, substantially as described.

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Witnesses:

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