A. B. LYMAN.

Annunciator

No. 206,681. Patented Aug. 6, 1878.

Fig. 1.

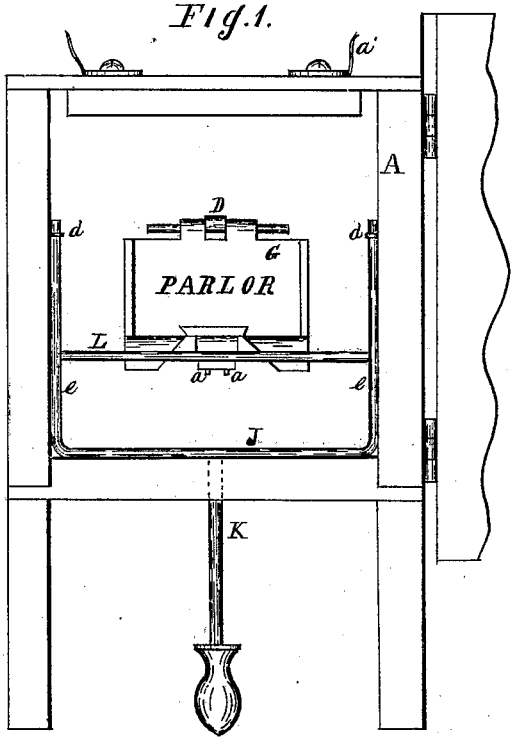


Fig. 2.

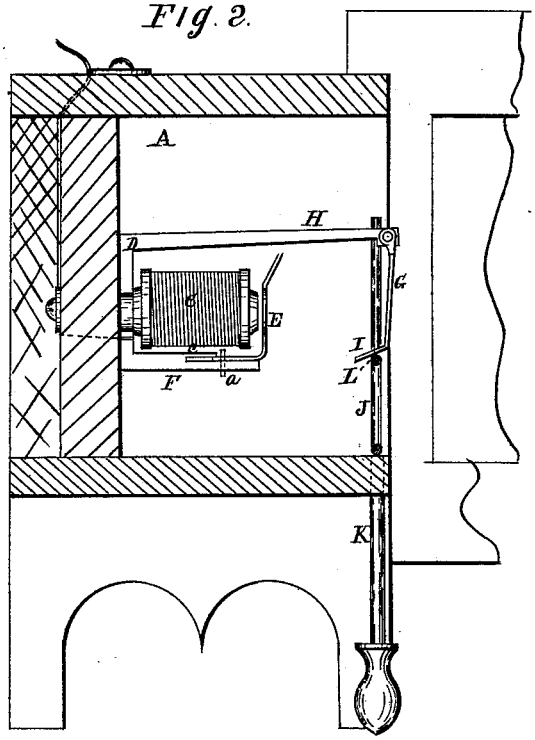


Fig. 3.

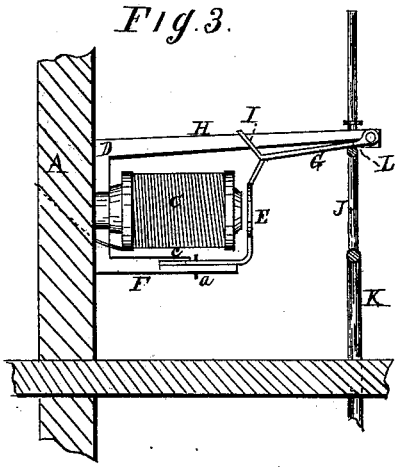
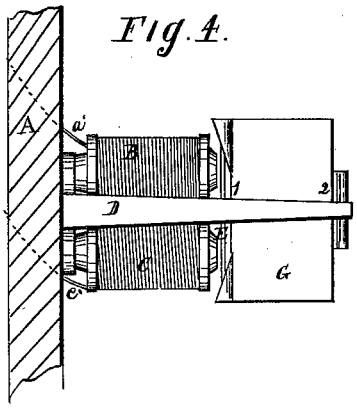


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN ANNUNCIATORS.

Specification forming part of Letters Patent No. **206,681**, dated August 6, 1878; application filed June 28, 1878.

To all whom it may concern:

Be it known that I, ADELVIN B. LYMAN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Electric Annunciator; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a front view of the instrument with the door open, showing an inside view of the works. Fig. 2 is a side view of the inside, partially in section. Fig. 3 is a sectional side view, showing a different position of the works than shown in Fig. 2. Fig. 4 is a plan view of a section of the works detached from the case.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to an electric annunciator; and the object of the improvement is to prevent the armature used in connection with the magnets from becoming disengaged from the name-plate supported thereon by a jarring of the wall to which the annunciator is secured, by a slamming of a door, or otherwise than by the attractive influence of the magnets. To this end a bent armature is used attached to the arm of the bracket holding the magnets by certain pins and a slot, substantially as hereinafter set forth.

In the drawings, A represents the case in which the working mechanism is arranged. Said mechanism consists of a pair of helical magnets, B C, Fig. 4, supported in a horizontal position in a bracket, D, and whereby the magnets are secured to the back of the case, as shown in Figs. 2 and 4. Said magnets are ordinary spool-magnets, and of which E is the armature or lever. The lower end of the armature is loosely attached to the arm F of the bracket by pins *a*, which are driven tightly in the arm, but loosely in the end of the armature. The holes in the armature, through which the pins pass, are larger than the pins, to permit the armature to vibrate. The armature is prevented from falling forward by having the lower end inserted in a slot made in the arm F, so that the finger *e*, Fig. 3, above the slot will project over onto the end of the armature, and thereby prevent it from tipping forward; hence the armature will be held in an upright position in respect to the ends of the magnets, as shown in the drawings, while at the same time it will be free to vibrate toward the magnets when attracted thereby, and by virtue of its own weight it will fall back therefrom, when the attraction ceases, by breaking the circuit of the battery.

A slight forward bend is given the upper end of the armature to increase its tendency to fall forward, and that it may more readily pass under the name-plate G when lifted in position to be supported by the armature. Said name-plate is hinged to the end of the arm H of the bracket. The lower edge of the plate is bent inward, forming an inclined plane or flange, I. The middle portion of the flange is more or less cut away to permit the plate to be lifted close to the under side of the arm of the bracket, as shown in Fig. 3. The width of the plate from 1 to 2, Fig. 4, is a little more than the distance from the hinge of the plate to the armature; hence, on lifting the name-plate to a horizontal position, the edge 1 thereof will strike the armature and push it toward the magnets; but it will immediately fall back by its own gravity when the plate has passed above the armature, which latter will be supported thereon in a horizontal position, or nearly so, as shown in Fig. 3.

The name-plate is lifted from its position shown in Fig. 2 to that shown in Fig. 3 by a lifter consisting of a wire frame, J, Fig. 1. The two sides *e e* of the frame are held in position by staples *d*, through which they slide on being pushed upward by the stem K, secured to the lower bar of the frame, and whereby the lower part of the frame is retained in proper position. Said stem passes through the bottom of the case, and is operated on the outside for lifting the name-plate to a horizontal position.

It will be observed that the flange of the name-plate rests against the inner side of the bar L; hence, on pushing up the lifter, the name-plate will be moved inwardly by the bar by virtue of the incline of the flange, and which will continue to be pushed upward by the bar of the lifter to the position shown in Fig. 3, in which position it is retained by the armature, as aforesaid, while the lifter will

drop down out of the way to permit the fall of the name-plate when required. The magnets, armature, and name-plate are all arranged in and secured to the bracket; hence there can be no displacement of these parts one from another in consequence of the wooden case shrinking or being otherwise affected by the weather.

Having described the construction and arrangement of the annunciator, the practical operation of the same is as follows: In the event the instrument is to be used in a hotel it should be placed in some convenient place within sight of the clerk. The wire *a'*, Fig. 4, is connected to the electric battery used in connection with the instrument, and the wire *c'* is carried to some part of the building, (for instance, the parlor,) and then attached to the button or key whereby the circuit is opened and closed in the ordinary way. The wires being properly connected, the name-plate is then pushed up by the lifter to the position shown in Fig. 3, in which position it is supported by the armature. Now, on manipulating the key or button in the parlor the circuit is closed, the armature in consequence is attracted by the magnets, and thereby withdrawn from under the name-plate, which will then fall down and hang before the opening in the door, through which it is seen by the clerk or others, who thereby learn by the word "parlor," seen on the plate, that personal attention is needed in that room, or in any other room or place that may be read on the name-plate, as wires may be run to any one or all of the rooms in the building, and connected with the name-plate in the annunciator placed in the office, each plate respectively bearing the name or number of the room from which the summons is sent.

The instrument can be easily adapted to private dwellings, and in that case may be arranged to sound an alarm by causing the name-plate to be shown and a bell to ring. To this end the button or key for closing the circuit should be adjusted so that the door or a window will operate it on being opened. In this use of the instrument it should be placed in the bed-room or other place where the inmates may be alarmed by the sounding of the bell.

It will be observed that no screws are used in adjusting the armature to the magnets, the adjustment being made by simply bending more or less the arm F of the bracket. The armature also has a firm and solid stop for its downward motion; hence it is not liable to be disabled by adjusting-screws getting loose.

The weight of the armature being mainly on one side of its connection with the arm of the bracket, it will not, in consequence of a trembling or jarring of the wall to which the annunciator is secured, be easily disengaged from its connection with the name-plate, but which, however, will be readily disengaged therefrom by the attraction of the magnets, and as readily recede from the same, in virtue of its own gravity when the magnets cease to attract it; hence there can be no untimely dropping of the name-plate, as is not unfrequently the case in instruments having the name-plate insufficiently supported by the armature.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In electric annunciators, the bent armature E, attached to the arm F of the bracket by pins *a a*, held tightly in said arm, and being loose in the holes of the armature through which they pass, and having the end of said armature inserted in a slot under the finger *c*, substantially as described, and for the purpose specified.

2. The name-plate G, hinged to the arm H of the bracket, and provided with a flange, I, in combination with the armature and magnets, substantially as described, and for the purpose set forth.

3. The combination of the magnets B C, bracket D, name-plate hinged thereto and provided with a flange, I, armature E, attached to said bracket by pins *a a*, and slot under the finger *c*, all constructed and arranged to operate, in relation to each other, substantially as described, and for the purpose set forth.

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Witnesses:
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