(No Model.)

W. C. DILLMAN.

ANNUNCIATOR.

No. 456,803. Patented July 28, 1891.

Fig. 1.

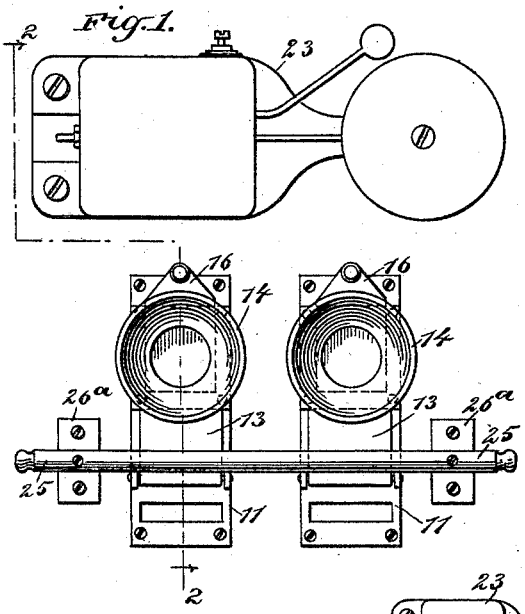


Fig. 2.

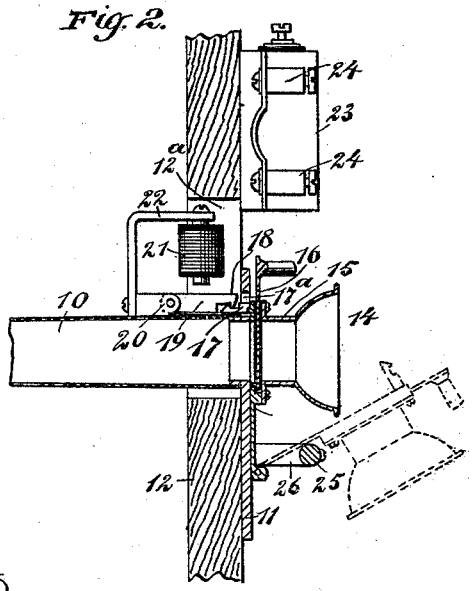


Fig. 3.

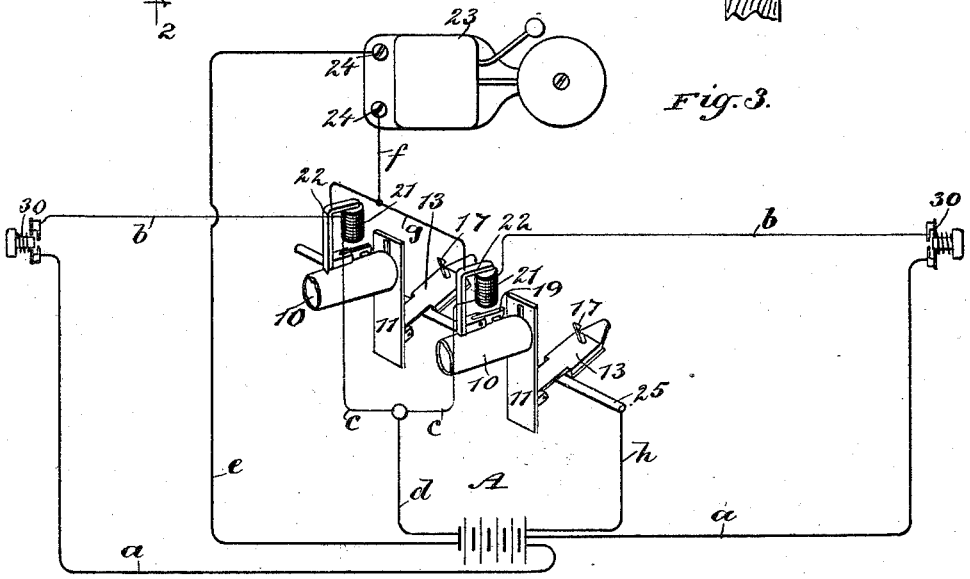
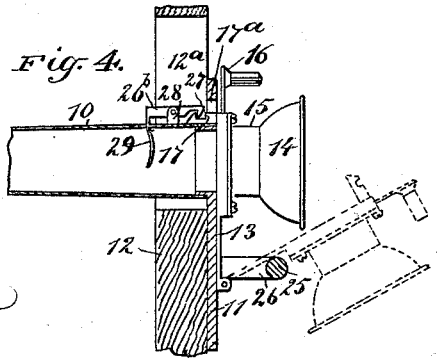


Fig. 4.



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ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 456,803, dated July 28, 1891.

Application filed May 6, 1891. Serial No. 391,739. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. DILLMAN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Annunciator, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of annunciators which are used in connection with speaking-tubes. These speaking-tubes are usually arranged in a building, so that the tubes connecting with the various rooms will all center at a common point, usually the office, and in case a party in a distant room desires to speak with the office it is necessary to give some kind of a call and to indicate which tube is to be used.

The object of my invention is to produce a simple electrical device which will operate positively and which will clearly indicate the tube to be used.

To this end my invention consists in certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation showing the general arrangement of the tubes at a point where they are centered. Fig. 2 is a vertical section on the line 2 2 in Fig. 1. Fig. 3 is a diagrammatic view showing the connections of the various parts and showing in perspective the mechanism at the lower ends of the tubes, and Fig. 4 is a broken detail sectional view of a modification of the device.

Each tube 10 enters a plate 11, which is supported upon the wall 12 in the ordinary way, and each plate carries a swinging leaf 13, which is pivoted at its lower end and which carries a mouth-piece 14, having a short tube 15 adapted to connect with the main tube 10, and the short tube is provided with a common form of slide-valve 16. The leaf 13 has on its inner side and just above the main tube a projecting catch 17, which when the leaf is in a vertical position extends through a slot 17^a in the upper end of the plate and engages a catch 18 on the end of an armature 19, which armature is arranged immediately above the main tube and in a slot 12^a in the wall or partition 12, and the armature is pivoted at its rear end, as shown at 20, and is arranged immediately below a magnet 21, which is supported in the slot 12^a of the partition upon a hanger 22.

An electric bell 23 of common form is arranged at any convenient point adjacent to the ends of the tubes and is provided with the usual binding-posts 24, by means of which connections are made with it.

In front of the mouth-piece 14 and a little below the same is a horizontal rod 25, which is supported upon arms 26, which arms are secured at their inner ends to flanges 26^a, and the latter are supported on the main wall 12.

It will be noticed that when the armature 19 is lifted it will release the catch 17, and the weight of the mouth-pieces 14 will cause the leaves 13 to swing forward and close the circuit through the bell, as hereinafter described; but it is not necessary that a magnet should be used to release the leaves 13, and in Fig. 4 I have shown a modified means of releasing the leaves. The catch 17 in this case engages a catch 27 on the end of a horizontal bar 26^b, which bar is centrally pivoted on lugs 28, carried by the main tube 10, and the inner end of the bar 26^b is provided with a depending fan 29, which projects through a slot in the main tube 10 and is arranged in the path of the wind. It will be seen that when a person blows through a tube from the opposite end the wind will strike the fan 29 and move it outward, thus tilting the bar 26^b and releasing the leaf 13.

A push-button 30 is arranged at the upper ends of the speaking-tubes when the leaves are to be electrically released, and the connections are as follows: A battery A connects by means of a wire *a* with the push-button 30, and the push-button connects by a wire *b* with a magnet 21, and the magnet connects by means of the wires *c* and *d* with the battery. It will thus be seen that each magnet 21 is in an independent circuit of its own and is adapted to be operated by a push-button arranged near the upper end of the tube over which the magnet is fixed. It will thus be seen that when the push-button is pressed

the current will flow through the wires just alluded to, and when the magnet 21 is energized it will lift the armature 19 and release the leaf 13, thus allowing the leaf to fall upon the contact bar or support 25. This closes another circuit, which is from the battery A through the wire *e*, the bell 23, the wire *f*, the wire *g*, one of the hangers 22, one of the tubes 10, a plate 11, a leaf 13, the contact-bar 25, and the wire *h* back to the battery. Consequently when a person at the upper end of a tube desires to speak with a person at the lower end he presses the push-button, thus releasing the leaf 13 at the lower end of the tube, and when this strikes the contact-bar 25 it closes the circuit through the bell, and the bell will continue to ring until the leaf is again thrown up, when it will break the circuit and will be held by the catches 17 and 18. The leaf which is down will indicate the tube in which a person is to speak.

The device shown in Fig. 4 operates in the manner above described, except that the leaves 13 are released by a blast of air, instead of by a magnet and armature.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. An annunciator for speaking-tubes, consisting, essentially, of a swinging leaf arranged at the mouth of the tube and carrying a mouth-piece, a catch to hold the leaf in a raised position, means for releasing the catch, and an electric bell arranged in a circuit which is closed by the dropping of the leaf, substantially as described.

2. An annunciator for speaking-tubes, comprising a swinging leaf arranged at the mouth of the tube, said leaf carrying a mouth-piece and having connections with one pole of the battery, a contact-bar arranged in front of the leaf and connected with the opposite pole of the battery, and an electric bell included in the battery-circuit, substantially as described.

3. An annunciator for speaking-tubes, comprising a swinging leaf arranged at the mouth of the tube and provided with a mouth-piece, said leaf having connections with one pole of the battery, a catch to hold the leaf raised, electrically-operated means for releasing the catch, a contact-bar arranged in front of the leaf and connected with the opposite pole of the battery, and an electric bell included in the battery-circuit, substantially as described.

4. In a device of the character described, the combination, with the main tube, of a swinging leaf pivoted at the mouth of the tube and carrying a mouth-piece, a catch secured to the inner side of the leaf and adapted to enter a slot in the leaf-support, an armature pivoted at the inner end of the catch and provided with a catch to engage the leaf-catch, an electro-magnet arranged above the armature, and a push-button arranged at the upper end of the tube and adapted to control the current through the magnet, substantially as described.

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