(No Model.) 2 Sheets—Sheet 1.

W. C. DILLMAN.

ANNUNCIATOR.

No. 458,947. Patented Sept. 1, 1891.

Fig. 1.

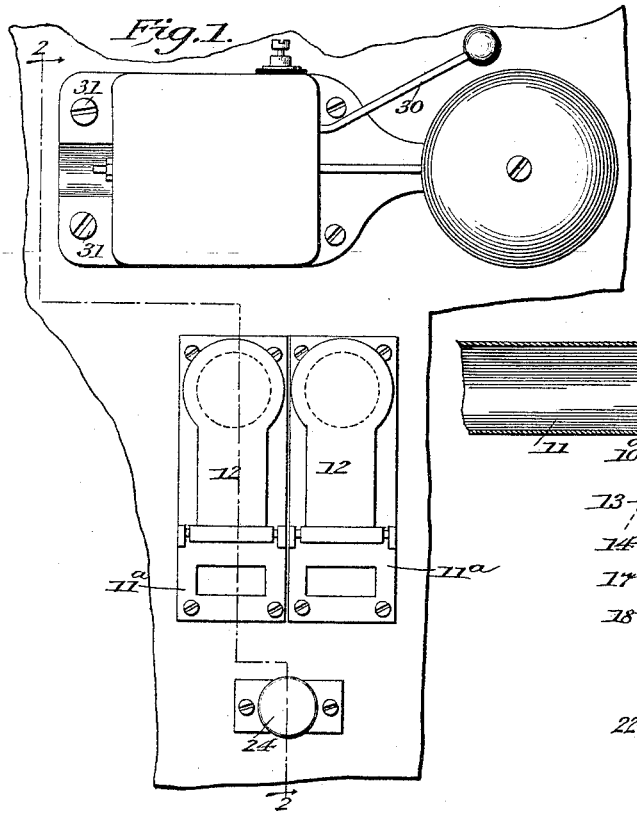


Fig. 2.

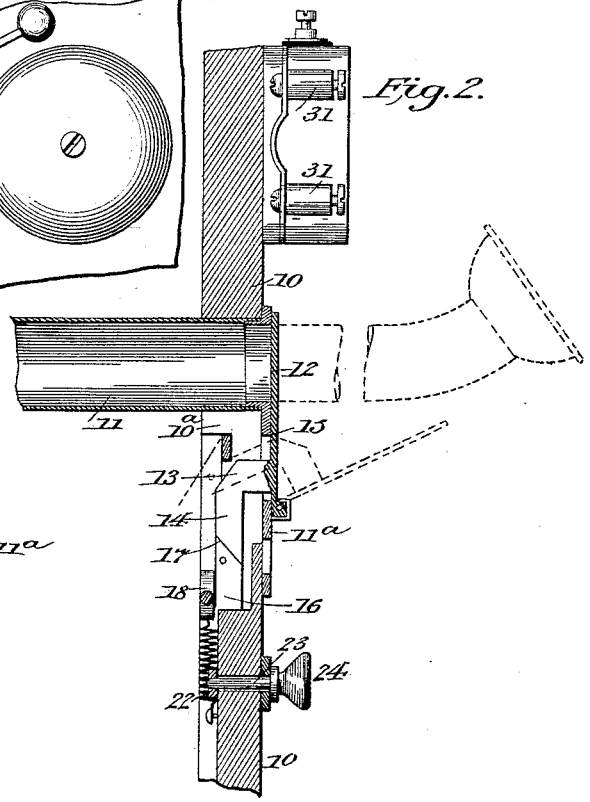
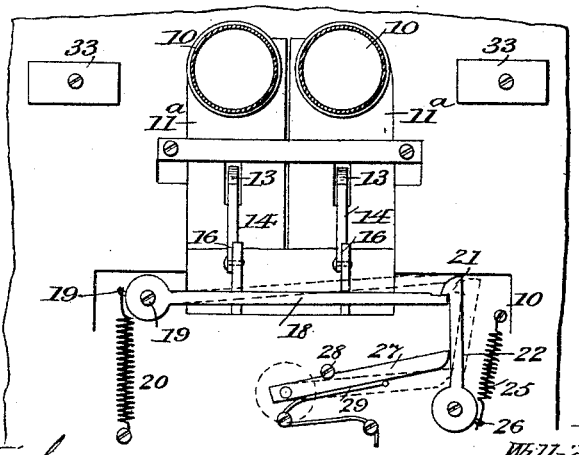


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

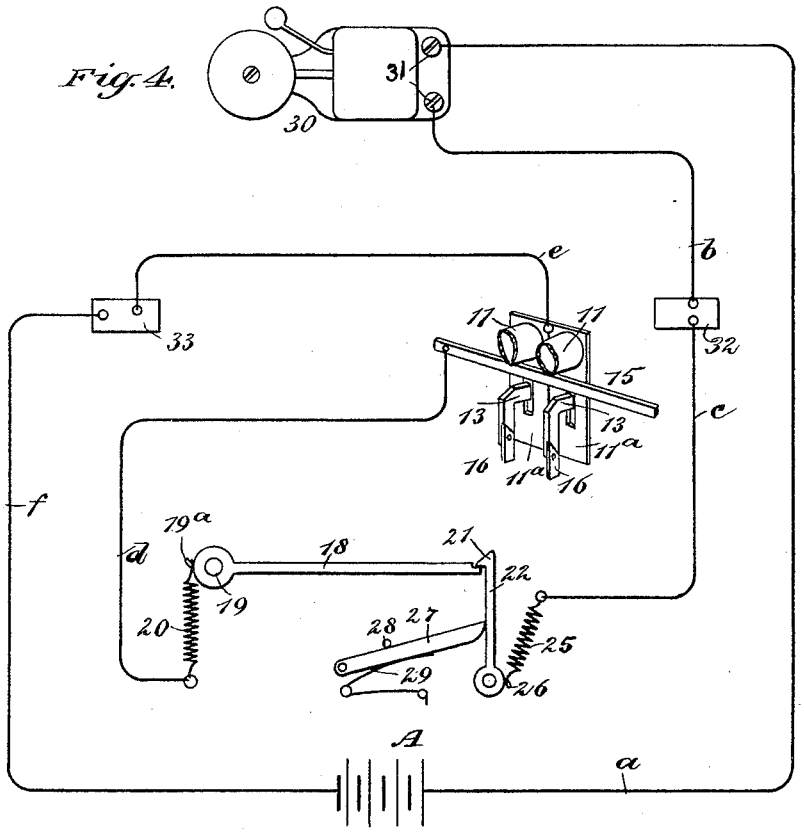


Fig. 5.

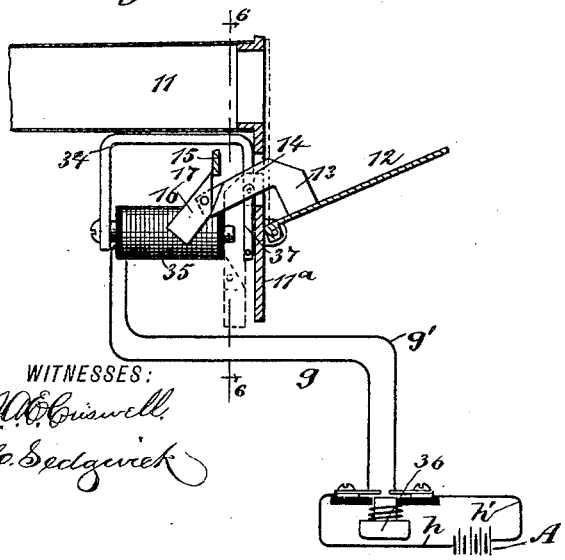
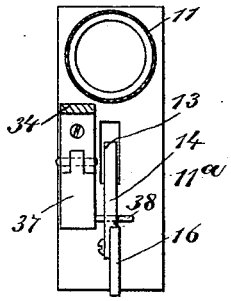


Fig. 6.



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ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 458,947, dated September 1, 1891.

Application filed May 6, 1891. Serial No. 391,740. (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 annunciators such as are used in connection with speaking-tubes; and the object of my invention is to produce a simple and positive annunciator which is adapted to be operated from the upper end of a tube and which will clearly indicate which tube is to be used. It will be noticed that speaking-tubes are usually arranged in a building so that they center at a common point, and the annunciators are arranged at this point, so as to tell which tube is to be used and avoid confusion.

To this end my invention consists in an annunciator constructed substantially as 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 device. Fig. 2 is a vertical section on the line 2 2 in Fig. 1. Fig. 3 is a rear elevation, partly in section. Fig. 4 is a diagrammatic view showing the electrical connections of the various parts. Fig. 5 is a vertical section of a modified form of the invention; and Fig. 6 is a rear vertical sectional view on the line 6 6 in Fig. 5.

10 represents the wall on which the centered ends of the tubes 11 are supported, and these tubes branch off to various portions of the building in the usual way. The mouths of the tubes are normally closed by swinging leaves 12, which are pivoted on plates 11^a, secured to the front of the main wall 10, and the leaves 12 have near their lower ends and on their inner sides inwardly-extending arms 13, which are bent downward at their inner ends, as shown at 14, so that the main portions of the arms will, when the leaves are closed, extend parallel with the plates 11^a. The upper corners of the arms 13 are cut away, as best shown in Fig. 2, so that in swinging they will clear the contact-bar 15, which is arranged immediately above them, and pivoted to the lower ends of the arms are contact-blocks 16, said blocks having elongated rear ends 17, which extend well upward and which are adapted to contact with the bar 15, as shown in Fig. 5. It will be noticed that the abutting ends of the arms 13 and blocks 16 are cut diagonally, so that they will close nicely together, and when the leaves 12 are closed the arms 13 and blocks 16 appear almost like a single piece, as shown in Fig. 2.

A circuit-breaking bar 18 is supported on the wall 10 immediately in the rear of the blocks 16 when the blocks are in their normal position, said bar being pivoted at one end, as shown at 19, and the bar is held raised by a spring 20, one end of which is secured to the wall 10 below the circuit-breaking bar and the upper end of which is secured to a stud 19^a on the end of the circuit-breaking bar and in the rear of its pivot. The circuit-breaking bar at its free end is recessed slightly on the upper side and is adapted to engage the catch 21 on the upper end of the vertical arm 22, which arm is secured at its lower end to a rod 23, which extends transversely through the wall 10 and terminates at its front end in a button 24, by means of which it is turned. The arm 22 is held so that the catch 21 will engage the circuit-breaking bar by a spring 25, the upper end of which is secured to the wall 10 and the lower end of which is secured to a stud 26 on one side of the lower end of the arm 22. The current from the battery is sent through this arm 22 and through the circuit-breaking bar in a manner hereinafter described, and it will be seen that by turning the button 24 and rod 23, so as to remove the arm 22 from the circuit-breaking bar 18, the circuit will be broken. The arm 22 is held in a vertical position against the stud 26 by a latch 27, which at its rear end is pivoted on the wall 10 and at its forward end presses against the arm. The upward movement of the latch is limited by a stud 28 and it is normally pressed upward by a spring 29, which is arranged beneath it.

An electric bell 30 of common form is arranged adjacent to the lower ends of the tubes and is adapted to be operated by the dropping of a leaf 12, as hereinafter de-

scribed, and the bell is provided with the usual binding-posts 31, by means of which its connections are made. The connections and circuits are as follows: From the battery A through the wire *a*, the bell 30, the wire *b*, the support 32, wire *c*, spring 25, the arm 22, the circuit-breaking bar 18, the spring 20, the wire *d*, the contact-bar 15, and when the leaf 12 is dropped through the block 16, an arm 13, a plate 11^a, the wire *e*, a supporting-strip 33, and wire *f* back to the battery. It will thus be seen that the plates 11^a are connected with one pole of the battery and that the contact-bar 15 is connected with the opposite pole, and as these parts are not usually in connection the circuit will be normally broken; but when a plate is dropped the arm 13 will swing on the arc of a circle, the block 16 will swing outward from the inner end of an arm, as shown in Fig. 5, and will contact with the contact-bar 15, thus closing the circuit, and as the bell 30 is included in the circuit it will ring until the leaf 12 is again raised or until the button 24 is turned, so as to release the catch 21 from the bar 18, and thus break the circuit.

The mechanism above described is adapted to be operated by a person at the upper end of a tube, and the operation is performed by simply blowing in the tube, as the force of the wind will cause the leaf at the lower end of the tube to drop; but in Figs. 5 and 6 I have shown electrical means which may be employed for depressing a leaf. In this case the tubes, the leaves, the arms, and blocks are constructed and connected exactly as described above; but the following means are employed for depressing a leaf. An inverted-U-shaped hanger 34 is arranged in the rear of each leaf, and this carries a magnet 35, which connects by means of wires *g* and *g'*, a push-button 36, and wires *h* and *h'* with the battery A. Immediately in front of the magnet 35 is an armature 37, which is arranged a little to one side of the arm 13, as shown in Fig. 6, and the armature has at its lower end a laterally-extending arm 38, which is arranged immediately in front of the bent end 14 of the arm 13. It will thus be seen that when the push-button is pressed and the circuit closed through the magnet the armature 37 will be drawn rearward, and the arm 38, striking the bent end of the arm 13, will raise the arm and depress the plate 12, to which it is attached. This movement closes the circuit through the bell in the manner already described.

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

1. An annunciator for speaking-tubes, comprising a swinging leaf supported beneath the mouth of a tube and adapted to close the latter, said leaf being connected with one pole of a battery, a contact-bar arranged in the rear of the leaf, a bent arm secured to the leaf and adapted to swing beneath the contact-bar, a contact-block pivoted to the lower end of the bent arm and adapted to strike the contact-bar, and an electric bell included in the circuit, substantially as described.

2. An annunciator for speaking-tubes, comprising a swinging leaf supported beneath the mouth of a tube and adapted to close the latter, said leaf being connected with one pole of a battery, a contact-bar arranged in the rear of the leaf, a bent arm secured to the leaf and adapted to swing beneath the contact-bar, a contact-block pivoted to the lower end of the bent arm and adapted to strike the contact-bar, an electric bell included in the circuit, and a circuit-breaker arranged in the circuit, substantially as described.

3. The combination, with the drop-leaf, the contact-bar, and the bell, all included in an electric circuit, of the circuit-breaking bar, the spring-pressed arm to engage the bar, and the latch to operate the arm, the bar and arm being included in the circuit, substantially as described.

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