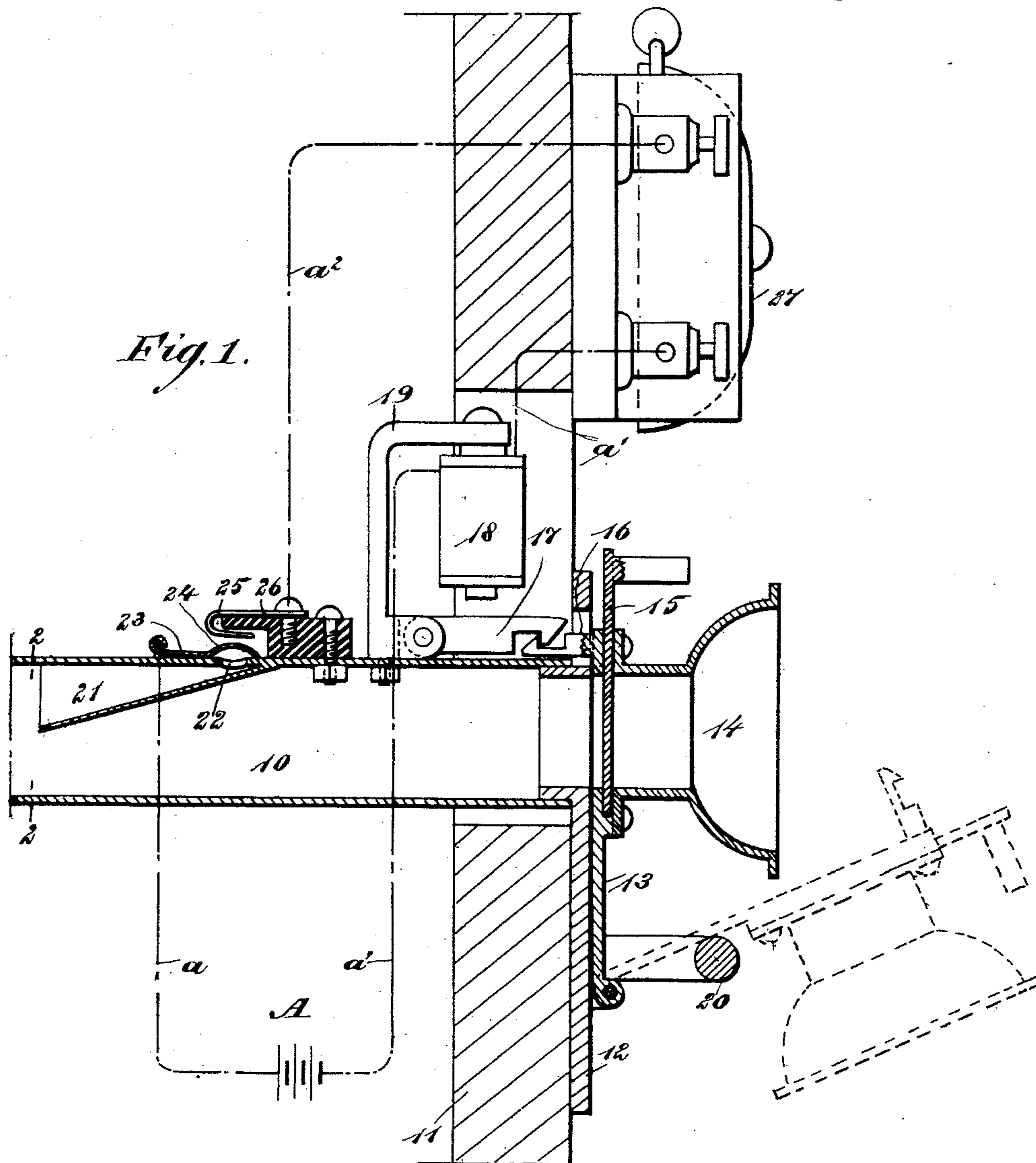


(No Model.)

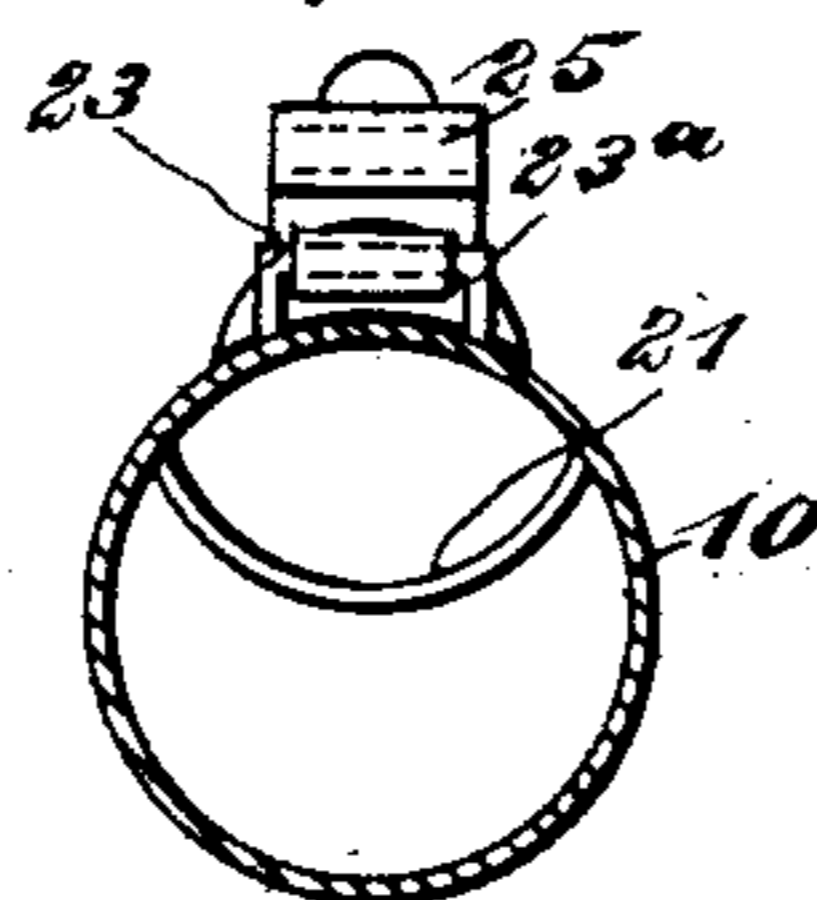
W. C. DILLMAN.  
ANNUNCIATOR.

No. 472,440.

Patented Apr. 5, 1892.



*Fig. 2.*



WITNESSES:

*Donn Twitchell*  
*C. Sedgwick*

INVENTOR:

*W. C. Dillman*  
BY *Munn & Co.*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

WILLIAM C. DILLMAN, OF BROOKLYN, ASSIGNOR TO OWEN WALSH, OF  
NEW YORK, N. Y.

## ANNUNCIATOR.

SPECIFICATION forming part of Letters Patent No. 472,440, dated April 5, 1892.

Application filed December 22, 1891. Serial No. 415,864. (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 to announce when a person is at one end of the tube and wishes to converse with a person at the other end.

The object of my invention is to produce an extremely simple and cheap annunciator which may be easily applied to any ordinary speaking-tube and which may be easily operated by the breath so as to momentarily close a circuit in which an electric bell is included, thus ringing the bell and attracting attention to the tube, and also breaking the circuit quickly, so as to avoid excessive ringing of the bell and exhaustion of the battery.

To this end my invention consists in an annunciator the construction of 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 both views.

Figure 1 is a broken vertical longitudinal section of the annunciator embodying my invention, showing also a diagram of the electric circuit; and Fig. 2 is a cross-section through the tube on the line 2 2 in Fig. 1.

The tube 10 is of the usual kind and is supported at its mouth in a wall 11, the end of the tube being carried by a flange on the face-plate 12, which is secured to the wall, and to which is hinged a lid 13, having the usual mouth-piece 14 and having the ordinary slide-valve 15, which normally closes the mouth-piece, but which is raised when the tube is to be used. On the back of the lid 13 is a catch 16, which is adapted to be engaged by a swinging latch 17, mounted in a recess of the wall 11, and the latch thus holds the lid in a raised position. Above the latch is a magnet 18, which is supported by an arm 19, and when the annunciator is used the circuit through the magnet is

closed, thus raising the latch 17, which serves as an armature, and releasing the lid 13, which will drop by reason of the weight of the mouth-piece and will rest upon a guard-rail 20, as shown by dotted lines in Fig. 1.

The above construction is shown in the United States Patent No. 456,803, dated July 28, 1891, and forms no part of this invention.

If desired, any other suitable catch may be used, or the annunciator may be operated without regard to the operation of the lid. Adjacent to the mouth of the tube and within the bore thereof is an air-chute 21, which is of a tapering form, the wider end opening toward the end of the chute opposite the mouth, and the narrower end of the chute terminates beneath a perforation 22 in the upper wall of the tube 10, and this perforation is normally covered by a swinging contact-arm 23, which is very light, so that it may be easily raised by the breath, and which has a cup-like free end 24, which covers the perforation 22, and which by holding the air enables the contact to be easily raised. The contact-arm 23 is pivoted on a support 23<sup>a</sup> on the top of the tube 10, and the contact-arm forms one terminal of an electric circuit, which includes a bell and which will be described below. Above the free end of the contact-arm 23 and in the path of the said arm is another contact 25, which is secured to an insulating-block 26 on the top of the tube and which forms the other terminal of the bell-circuit. The bell 27 is the ordinary electric bell and may be arranged in any convenient place adjacent to the mouth of the tube.

The current for operating the bell is supplied by a battery A, which connects by a wire  $a$  with the contact-arm 23 and by a wire  $a'$  with the magnet 18 and with one binding-post of the bell 27. The other binding-post of the bell connects by a wire  $a^2$  with the contact 25. When the contacts 23 and 25 touch, the circuit will be closed and will be from the battery A through the wire  $a$ , the contact-arm 23, the contact 25, the wire  $a^2$ , the electric bell 27, and the wire  $a'$  and magnet 18 to the battery.

It will be understood that the chute 21 may be of any desired shape; but it is preferably made tapering toward the perforation 22, so

that the air will be somewhat condensed and will pass upward through the tube with considerable force.

I am aware that it is not new to operate  
5 a swinging contact by means of air blown through a speaking-tube, so as to close a circuit through an electric bell, and I do not claim this feature, broadly, as my invention, but claim the mechanism shown, which enables the operation described to be easily per-  
10 formed.

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

15 1. The combination, with the perforated tube and the air-chute mounted within the tube and terminating beneath the perforation, of a swinging contact mounted above the perforation and forming one terminal of a circuit  
20 which includes a bell, and a fixed contact forming the other terminal and arranged in the path of the swinging contact, substantially as described.

2. The combination, with the perforated

tube, of a tapering chute fixed within the tube 25 and having its smaller end arranged beneath the perforation, a swinging contact-arm having its free end held above the perforation, said contact-arm forming one terminal of an electric circuit which includes a bell, and a 30 fixed contact forming the other terminal and arranged in the path of the swinging contact, substantially as described.

3. The combination, with the perforated tube and the air-chute arranged to divert air 35 through the perforation, of a swinging contact mounted upon the tube and having a cup-shaped free end to cover the perforation, said contact forming one terminal of an electric circuit which includes a bell, and a fixed 40 contact forming the other terminal and arranged in the path of the swinging contact, substantially as described.

WILLIAM C. DILLMAN.

Witnesses:

WARREN B. HUTCHINSON,  
C. SEDGWICK.