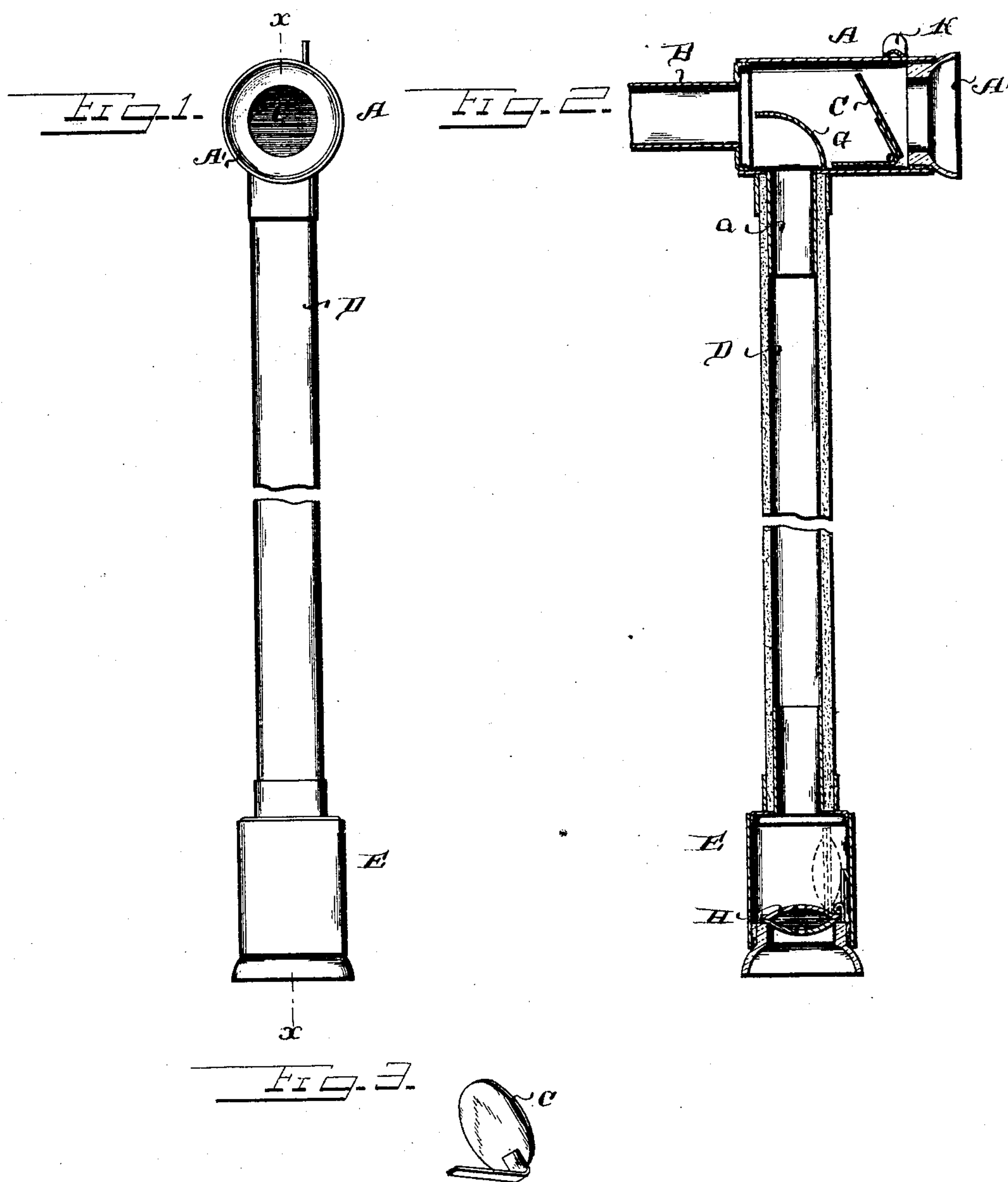


(No Model.)

C. A. BARTLIFF.  
SPEAKING TUBE.

No. 501,487.

Patented July 18, 1893.



Witnesses.  
Jesse Heller  
Philip C. Massi.

Inventor  
Chas. A. Bartliff  
by E. W. Anderson  
his attorney

# UNITED STATES PATENT OFFICE.

CHARLES A. BARTLIFF, OF MEMPHIS, TENNESSEE.

## SPEAKING-TUBE.

SPECIFICATION forming part of Letters Patent No. 501,487, dated July 18, 1893.

Application filed August 31, 1892. Serial No. 444,653. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. BARTLIFF, a citizen of the Dominion of Canada, and a resident of Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Tube-Telephones; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front view of the invention. Fig. 2 is a vertical section on line *xx* Fig. 1. Fig. 3 is a perspective view in detail of the valve.

This invention has relation to certain new and useful improvements in non-electric telephones or speaking tubes; and it consists in the novel construction and combination of parts, all as hereinafter described and pointed out in the accompanying claims.

This invention more particularly relates to that class of speaking tubes or non-electric telephones, set forth in my pending application, Serial No. 444,504, filed August 30, 1891, wherein the speaking phone or transmitter is provided with an ear tube and phone attachment. In the device set forth in my said application, it is necessary in giving a call, to first turn back the hinged whistle, in order that it may not obstruct the current of air to the line tube.

In the present invention, it is my object to do away with the whistle in the transmitter, placing the same in the flexible ear tube, and so arranging it that when said tube is in its normal position, the whistle will be held closed or in position to sound; when however, said tube is raised to the ear, this whistle will fall back, out of position to obstruct the passage in the ear phone. Furthermore, I provide the transmitter with a disk or valve, which will be normally held open by gravity, but which will close when a current of air strikes against it from the line tube, thus normally keeping the parts open for ventilation, but closing at the proper time for operation.

Referring to the accompanying drawings,

the letter A designates the mouth tube or transmitter, having the flaring mouthpiece A' at its outer end, and a connection with the line tube B at its inner end. Hinged or pivoted in the tube A, just back of the mouthpiece, is a disk or valve C, which is normally held by gravity away from the mouthpiece, in the position shown in Fig. 2, its hinge or pivot preventing it from falling beyond the point shown.

At the lower inner portion of the tube A, is a sleeve *a* to which is connected the flexible ear tube D, which suspends the ear piece or phone E. In the inner end of the tube A is a curved shield or deflector plate G, in such position as to close the passage to the ear tube from the mouthpiece, but which will deflect the air from the line tube into said ear tube.

Hinged or pivoted in the ear piece or phone is a whistle H, which, when the phone is in its suspended position, is closed across the passage in position to sound. When however, the phone is picked up and placed to the ear, said whistle drops back into the position shown in dotted lines, Fig. 2, and the passage is unobstructed.

The operation is as follows, it being understood that a similar arrangement is provided at each end of the line. The person sending a call blows into the mouthpiece at that end of the line, the deflector causing the air to pass into the line tube. Reaching the other end, the air closes the valve or disk C in the mouthpiece, and is caused by the deflector to enter into the ear tube, where it sounds the whistle. An ordinary indicator K on the mouth tube may be employed in order to denote from what point the call proceeds, where more than one instrument is used. The person receiving the call picks up the ear piece and places it to his ear, this action causing the whistle to fall back, so that the tube is unobstructed. He then speaks into the mouthpiece, the sound going at once into the line tube. By this arrangement, I avoid the necessity for turning back the whistle as in ordinary speaking tubes, before proceeding with the conversation. The mouthpiece and line tube are moreover always kept open to the air, so that they are less likely to become foul



than are the old style, where said tubes are always kept closed, and the air is kept confined therein for long periods.

5 The mouth and ear pieces are preferably formed of porcelain, and are each made removable, in order that access may readily be obtained to the inside of the tubes for cleaning, or other purposes.

10 Having described this invention, what I claim, and desire to secure by Letters Patent, is—

15 1. In a speaking tube, the combination with the mouth tube, its line tube connection, and the normally open hinged disk or valve in said mouth tube, of the flexible ear tube forming a branch of said mouth tube, an ear piece on said tube, a gravity-operated whistle in said ear piece, and means at the junction of said air tube and line tube with the mouth

20 tube for diverting the air from said mouth tube into the line tube, and from the line tube into the ear tube, substantially as specified.

2. In a speaking tube, the combination with the mouth tube, its line connection, and the normally open hinged disk or valve, of the 25 flexible ear tube forming a branch of said mouth tube, an ear piece on said tube, a gravity-operated whistle in said piece, and a curved deflector in the mouth tube at the junction of the line and ear tubes therewith, 30 substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. BARTLIFF.

Witnesses:

PHILIP C. MASI,  
JESSE HELLER.