(No Model.)

W. WEBER.

ATTACHMENT FOR SPEAKING TUBES.

No. 526,549. Patented Sept. 25, 1894.

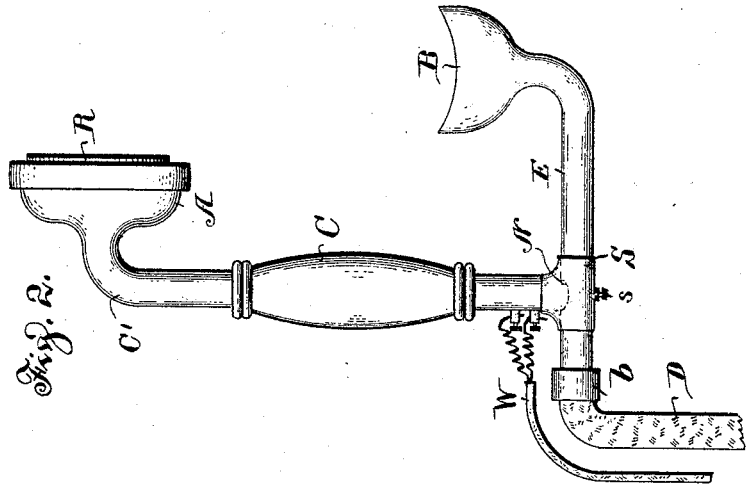

Fig. 2.

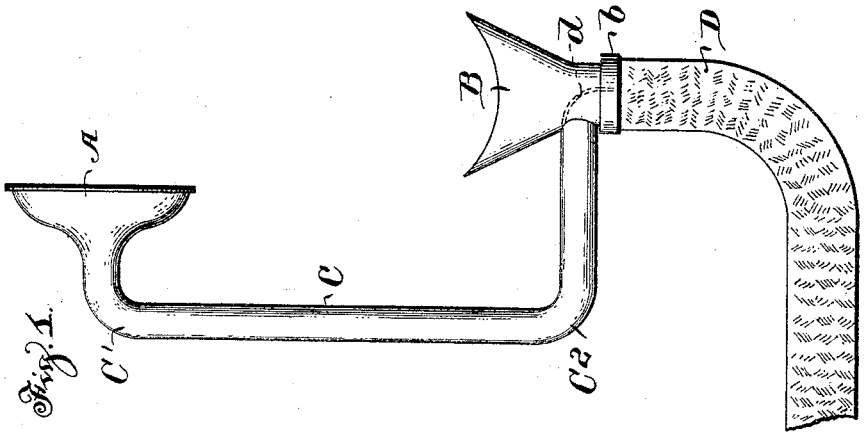

Fig. 1.

Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM WEBER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE WEBER, OF SAME PLACE.

ATTACHMENT FOR SPEAKING-TUBES.

SPECIFICATION forming part of Letters Patent No. 526,549, dated September 25, 1894.

Application filed December 30, 1893. Serial No. 495,232. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WEBER, a citizen of the United States, residing in the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Attachments for Speaking-Tubes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to ear and mouth attachments for speaking tubes and other analogous purposes, and has for its object to combine an ear piece and a mouth piece by means of a rigid tubular connection so that both of the same may be held in the hand by means of the tube, the said ear and mouth pieces being arranged at such relative distances from each other that the voice of the speaker will be necessarily at the proper distance from the mouth piece, and the latter be maintained by the rigid connecting tube in the opposite lateral plane from that in which the ear piece is supported thereon.

My invention also consists in the construction of the rigid connecting tube in two parts, in such manner, as hereinafter described, that the latter may be adjustable, and bring the ear piece in a closer or a more distant vertical plane to or from the mouth piece; and finally my invention consists in the combination with said device, of a telephone transmitter connected by the flexible tubing to the mouth piece, a telephone receiver maintained in position in the ear piece, and electrical connections leading to said receiver, supported by and within the rigid connecting tube that supports and maintains the receiver in position.

In the drawings illustrating my invention, Figure 1 is side elevation of my improved attachment for speaking tubes. Fig. 2 is a like view showing the adjustability of the device, and a telephone receiver maintained within the ear piece.

The flexible tube D of the speaking tube proper is constructed as usual and attached to my device at the collar *b*. The device, as shown in Fig. 1 consists of a rigid metallic or hard rubber tube C curved at its top end at C′, and terminating in an ear piece A of the usual form. At the base of the tube C it is curved in the same direction at C^2, and secured at its extremity to a mouth piece B. I prefer to mount on the lower end of the connecting tube and within the base of the mouth piece, a deflecting plate *d*, so that the sound waves entering the flexible tube and intended to reach the ear piece, will be surely and with certainty deflected thereto. The mouth piece is mounted on the connecting tube in an opposite direction laterally from that of the ear piece. The rigid connecting tube between the two parts thus brings both of them in proper position relatively, at the same time, one to the ear and the other to the mouth, thus bringing the mouth piece directly in front of and in an appropriate position, and at a proper fixed distance from the speaker, while the ear piece is always in position to enable the user to receive any reply message transmitted thereto. By my device also the necessity for a whistle as in the usual combined mouth and ear piece of speaking tubes, is entirely obviated, while the rigid tubular connection affords also a convenient and easy means of grasping the apparatus when in use or supporting it upon a bracket when not in use.

It may be desirable for some purposes to adjust the ear piece nearer to or farther from the vertical plane of the mouth piece, and to this end I have shown in Fig. 2 a division of the rigid tubular connection, one part C thereof terminating in a sleeve S which slides on the part which is slotted at N, the parts being secured, after adjustment, by means of a thumb screw *s*. (This enables the mouth piece to be adjusted to the position relatively to the main tube G and the ear piece most convenient for the user.) In said Fig. 2 is also shown at R a telephone receiver mounted in the ear piece A and electrical connections W leading thereto and concealed within the rigid tubular connection C. The free end of the flexible tube D, conveying the sound waves received at the mouth piece B, may be mounted by any appropriate means to the supporting frame of a telephone transmitter plate, and deliver the sound vibrations di-

rectly thereto, such means being shown in Letters Patent No. 520,467, granted to me May 29, 1894.

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

1. A mouth and ear attachment for speaking tubes, consisting substantially of a rigid main tube and rigid tubular connections extending on the same side of the main tube, such extensions being of unequal lengths, the shorter terminating in an ear piece and the longer in a mouth piece, said mouth piece being adjustable toward and from the main tube, substantially as described.

2. The combination with a rigid tubular connection constructed in two parts C and E, the latter slotted at N and the former terminating in a sleeve S, and a set screw to maintain them in a fixed position after lateral adjustment; of an ear piece A on the inwardly projecting short end of the tube C, and a mouth piece B on the inwardly projecting long end E of the connecting tube; said parts being constructed and arranged relatively to each other as and for the purposes set forth.

3. A mouth and ear attachment for speaking tubes adapted as an attachment for telephones, consisting of a rigid connecting tube C provided with inwardly projecting ends E and C′ of unequal lengths, the shorter end C′ provided with an ear piece A; a telephone receiving diaphragm R, mounted therein, telephonic conductors leading therefrom and wholly concealed within the rigid tubular connection C for its entire length and issuing through apertures in the base thereof; a mouth piece B mounted upon the longer projecting end E of said tubular connection in a horizontal plane and opposite direction from the vertical plane in which the ear-piece is mounted; and a flexible tube D secured to the basal opening of the mouth piece, and adapted to receive and convey sound waves to a transmitting telephone; said parts being constructed, combined and arranged relatively to each other, substantially as and for the purposes set forth.

In testimony whereof I have hereunto affixed my signature this 8th day of December, A. D. 1893.

WILLIAM WEBER.

Witnesses:
GEO. W. REED,
THOS. L. REED.