(No Model.)

W. R. BALCH.

SPEAKING TUBE ATTACHMENT.

No. 261,196. Patented July 18, 1882.

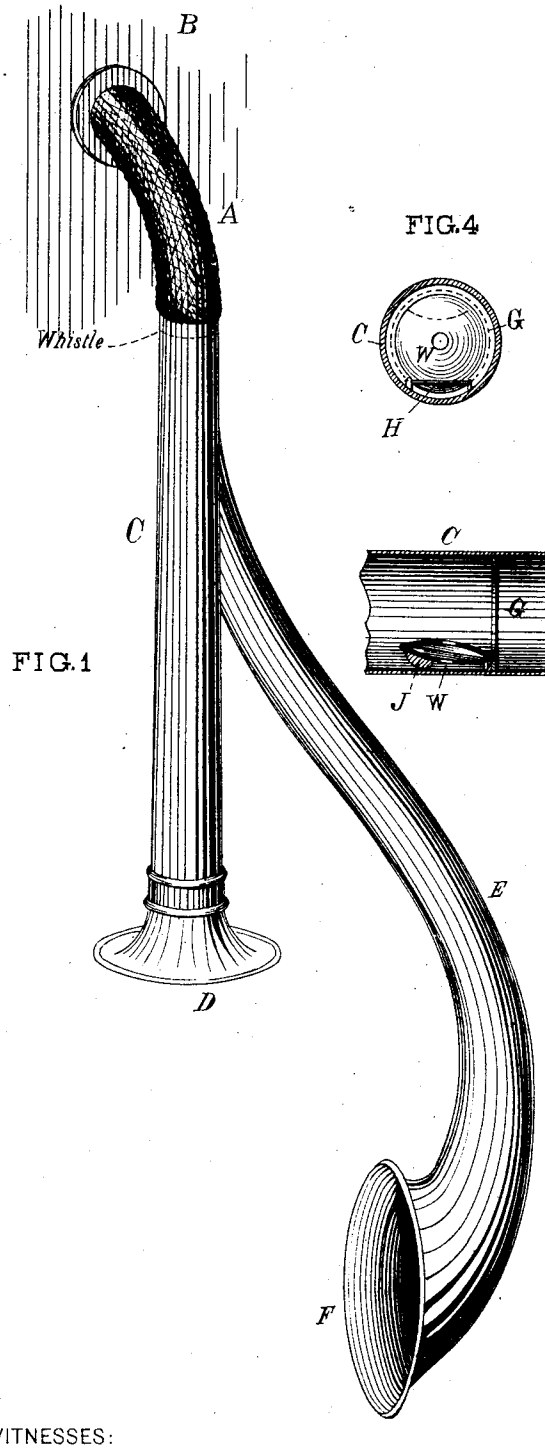


FIG. 1

FIG. 4

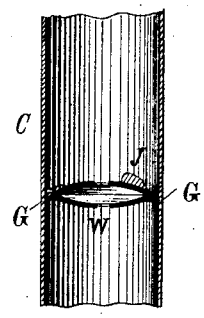


FIG. 3

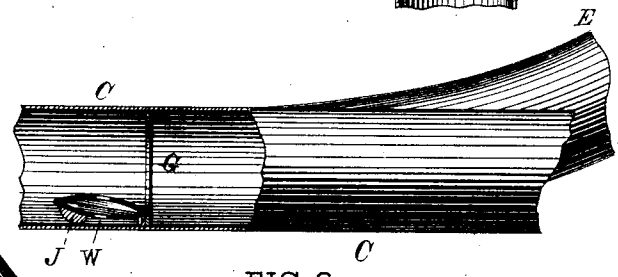


FIG. 2

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SPEAKING-TUBE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 261,196, dated July 18, 1882.

Application filed April 6, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM RALSTON BALCH, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Speaking-Tube Attachments, of which the following is a specification, reference being had to the accompanying drawings, of which—

Figure 1 is a perspective view of the invention as it appears secured to the end of a speaking-tube and depending in the position for the call-whistle therein contained to be sounded in the usual manner—that is, by a blast of air from the person at the distant opposite extremity of the tube. Fig. 2 is a broken view, partly in longitudinal section, of part of the tube C, Fig. 1, in the position when the device is in use by the person at this end of the speaking-tube. Fig. 3 is a like sectional view of part of tube C, showing the position of the call-whistle when the parts are in the position shown in Fig. 1. Fig. 4 is a transverse section of tube C at the point where the whistle is located, giving a front view thereof and showing the manner of its attachment within said tube, as hereinafter described.

Like letters of reference, where the occur in the several figures, indicate like parts.

The invention consists in the combination of a mouth and an ear tube, communicating with each other, rigidly connected together and provided beyond their junction with a flexible tube for connecting these tubes with a speaking-tube, so that while the free end of the one tube is applied to the mouth of the operator the free end of the other may at the same time be applied to his ear.

It also consists in combining the call-whistle with the one of said tubes which is joined to the speaking-tube by means of a flexible connecting-tube in a manner that when the device is not in use by the operator at one end of the speaking-tube the whistle shall take a suitable position to be sounded in the usual manner by the person at the other end of said tube; and when the device is taken up to be applied to the mouth and ear the whistle shall assume a position substantially in line with the sides of the containing-tube, so as not to interfere with the passage of sound through the tube.

I am aware of the fact that mouth and ear tubes have been used in connection, as described in Lakin's patent, No. 244,261, of July 12, 1881; also, that call-whistles hinged in a speaking-tube have been employed, as described in Smith's patent, No. 153,856, of August 4, 1874; also, that separate mouth and ear pieces, each attached to the end of a flexible tube, the two tubes being joined to a single connecting-tube, have been used, as described and shown in Gower's patent, No. 236,021, of December 28, 1880; but it will be observed that the construction and operation of my device, as hereinafter described, are materially different from any of the patented inventions just referred to.

In Fig. 1, A is a flexible tube connecting the speaking-tube proper, which extends from within the wall or panel B, with a tube, C, which ends in a mouth-piece, D.

An ear-tube, E, preferably formed somewhat trumpet-shaped, curved, and having an expanded opening, F, at its extremity, connects with tube C, as shown.

A whistle, W, Figs. 2, 3, and 4, operating in the usual manner, is attached by means of a hinge, H, within tube C to ring G, so that, although free to fall back—that is, from the position seen in Fig. 3 to that in Fig. 2—it is stopped by said ring from falling forward beyond the latter. Otherwise the whistle is constructed of sheet metal, as ordinarily, except that it is preferred to weight the top part of the same with a metallic lug, J, so that it will the more readily move, as required, on its hinge.

The operation of the device is as follows: As it hangs suspended, as in Fig. 1, the whistle takes the transverse position across the tube C, as in Fig. 3. A blast of air blown by the person at the other distant extremity of the speaking-tube (which is also provided with my attachment) sounds the whistle or call. The person at this end takes up the device, and, the flexibility of the tube A readily permitting, he applies the end F of tube E to his ear, and at the same time his lips are brought near to the mouth-piece D. The raising of the tubes from the position of Fig. 1, as described, causes the whistle to drop to the lower side of the tube C, as in Fig. 2, and the latter is then open for the passage of the sound of the voice of the speaker at the far end of the speaking-tube to the ear of the listener at this end there-

of, and also for that of the voice of the latter to the ear of the former.

Tube C may be enlarged at the point where the whistle is located, so that the size of the opening at such point when the whistle is down will at least be equal to the internal diameter of the tube, so as leave a sufficient or unobstructed passage.

I do not confine myself to the specific arrangement of the devices as shown, as these may be altered so long as they act and coact substantially in the manner described.

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

1. A speaking-tube attachment consisting of the rigid combined mouth and ear tubes C and E, the flexible tube A, and the whistle hinged within tube C between the junction of tubes C and E and the flexible tube, the whole constructed, combined, and operating substantially as and for the purposes set forth.

2. In combination with a speaking-tube, the mouth-tube C, the whistle, and the flexible tube A, the whistle being hinged within the mouth-tube, as shown, and for the purposes described.

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Witnesses:
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