

(No Model.)

W. PERPENTE.
SPEAKING TUBE.

No. 485,979.

Patented Nov. 8, 1892.

Fig. 1.

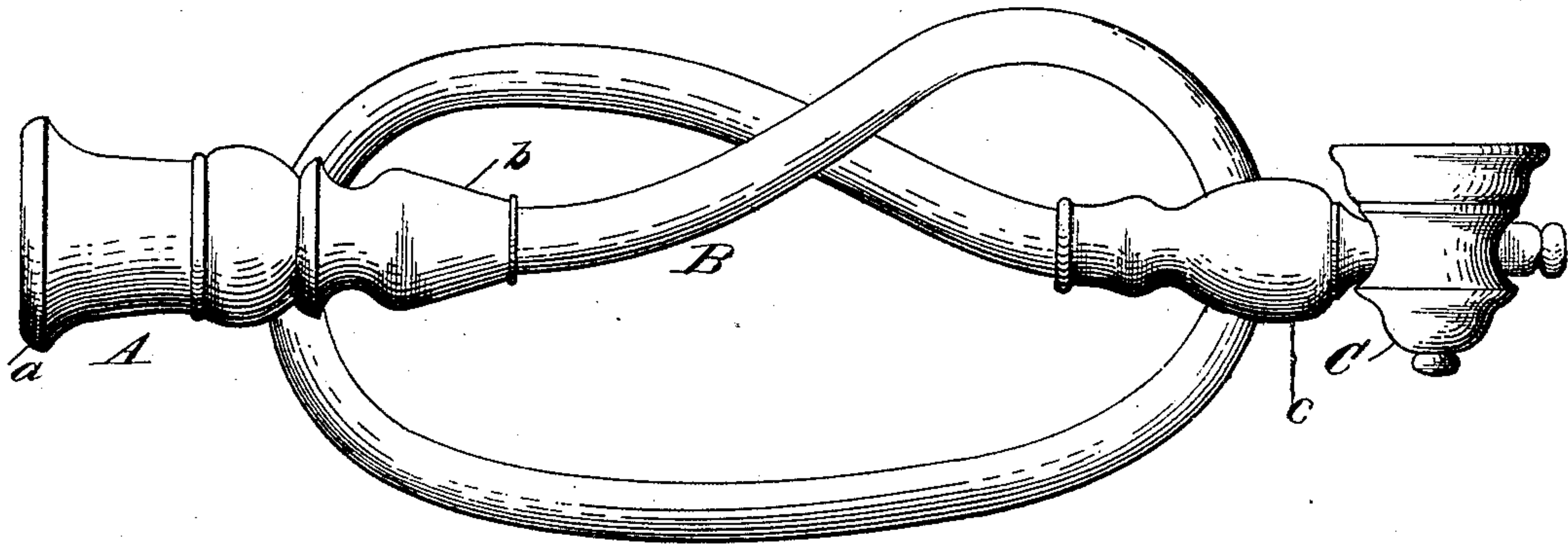


Fig. 2.

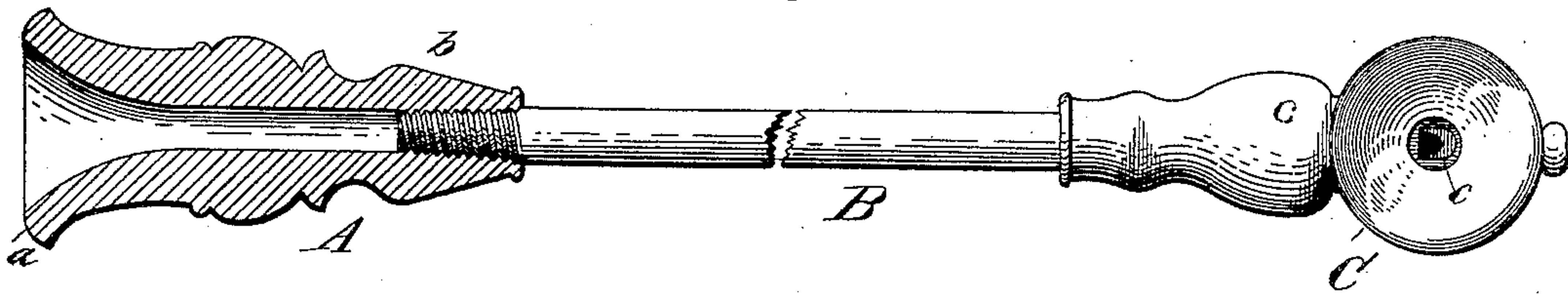
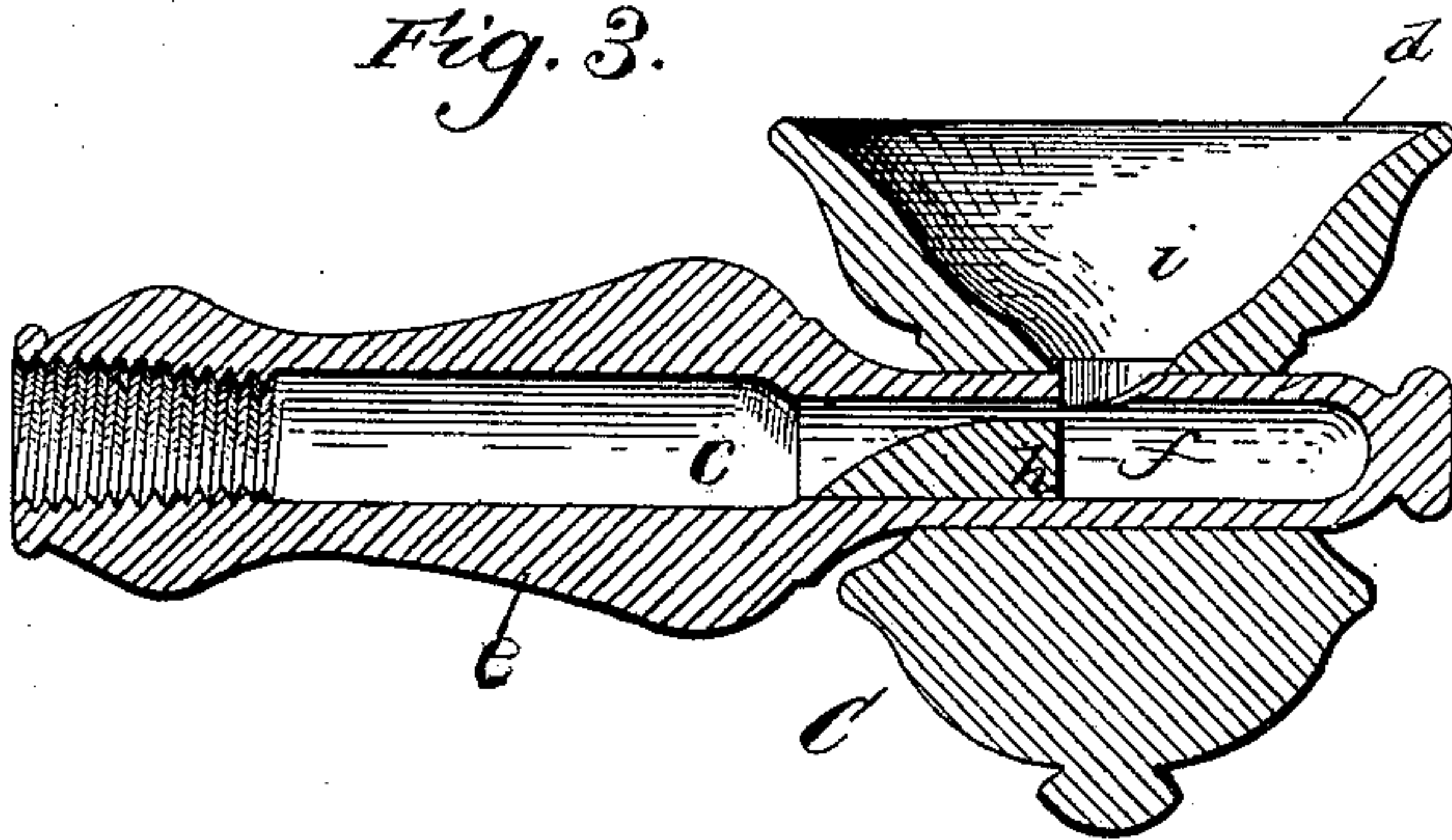


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM PERPENTE, OF NEW HAVEN, CONNECTICUT.

SPEAKING-TUBE.

SPECIFICATION forming part of Letters Patent No. 485,979, dated November 8, 1892.

Application filed August 17, 1891. Serial No. 402,897. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PERPENTE, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Speaking-Tubes; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to various new and useful improvements in speaking-tubes which are especially adapted for use in carriages for establishing a means of communication between the occupants thereof and the driver; but it should be understood that the invention is capable of effective use in other connections, such as in dwelling-houses, offices, &c.

The principal object which I seek to accomplish by the use of my invention is to do away with the usual tin whistle now used to attract the attention of the driver, since I have found that the use of such tin whistles is objectionable for the reason that the proper transmission of the sound is considerably effected thereby, that such whistles are difficult to introduce and retain in the receiver of the speaking-tube, and that when such whistles become rusty or damaged they become inoperative, or at least operate very imperfectly. To accomplish this object, I make use of a wooden whistle, which forms practically a continuation of the speaking-tube, and which is placed crosswise in the receiver in order that the sound therefrom may be directed out of the receiver, and, further, in order that the opening in the side of said whistle may be utilized as a passage through which sound may be transmitted.

Other objects of my invention are to provide and produce a speaking-tube which will be attractive in appearance, cheap to construct, and effective and durable in use.

For a better comprehension of my invention attention is directed to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side view of my improved speaking-tube; Fig. 2, a top view of the same,

and Fig. 3 a side sectional view of the receiver thereof.

In all of the above views corresponding parts are designated by the same letters of reference.

All of the views of the drawings show the device as adapted to be used with a short length of flexible tubing and with a receiver at one end and a transmitter at the other, which is the construction applied to use in carriages; but it is to be understood that any length of tubing may be used, and that a non-flexible tubing may be used, and that a receiver or a receiver and transmitter may be placed at each end of the tube.

A is the transmitter, B the tubing, and C the receiver, which are the three principal elements of the invention. The transmitter A, which is preferably made of wood turned out in an ordinary lathe, is of the general bell shape shown. It may be provided with suitable ornamental beads, as shown, to improve its appearance. The transmitter is provided with a flaring lip *a* and is made hollow, so as to convey the sound to the tube. The neck *b* of this transmitter A is made screw-threaded on its interior, and the said interior is inclined, so that when the end of the tube B is screwed therein it will be gradually compressed, until it is firmly in position. The tube B is preferably of rubber, either plain or covered with a cloth or silk web, so as to improve its appearance, and it is to be screwed within said transmitter A, as just explained. When the device is to be used in dwelling-houses or in other similar connections, a tin, iron, or heavy paper tube may be substituted in lieu of said rubber tube, since rubber, owing to its cost and its liability to decay, would be impracticable for use in such connection. The receiver C is composed of two separate parts, the whistle *c* and the hearing-piece or bell *d*, which are both preferably made of wood, which may be easily and economically turned out by an ordinary turning-lathe.

The whistle *c* consists of a body part *e* and a cylindrical head *f*. The body *e* is preferably provided with suitable ornamental beads, as shown, and it constitutes a very convenient handle, by which the receiver C may

be held up to the ear of the listener. The whistle *c* is made hollow up to a point near the extreme end of the cylindrical portion or head *f*; or, if desired, it may be hollowed out
 5 its entire length and the head *f* may be plugged up for a short distance by means of a wooden plug. The hollowed-out portion within the body part *e* is made larger than that within the cylindrical head, and it is also
 10 made inclined and screw-threaded in the same way and for the same purpose as the hollowed-out portion of the transmitter A. The cylindrical head *f* is provided with the usual inclined cut or opening *g* therein, seen in all
 15 whistles of this variety, and a wooden plug *h*, having a passage along its top, is inserted within the whistle directly back of the cut or opening *g*, so as to direct the moving currents of air against the sharp inclined edge of said
 20 cut, whereby a sharp penetrating whistling sound will be produced.

The hearing-piece or bell *d* is made of the general form shown, with a large deflecting aperture *i* therein, which communicates at its
 25 inner and smaller end with a cylindrical lateral passage extending directly through the same. The cylindrical portion or head *f* of the whistle is inserted through this passage, so that the cut or opening *g* therein will be
 30 directly coincident with the inner end of the

deflecting aperture *i*. The two parts may be held in this position by friction or by glue or screws or brads.

The operation of my improved device will be readily apparent upon inspection. On
 35 blowing through the transmitter the whistle will be blown and the sound therefrom will be deflected directly out of the diverging orifice *i* of the receiver. The driver being thus notified, conversation may be had in the usual
 40 way.

It will be seen that I obtain a very attractive device, one possessing certain advantages attendant on the particular construction employed, and one which avoids the objections
 45 adherent on old devices.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

In a speaking-tube, the combination of a
 50 tube and a receiver C, consisting of a whistle *e*, having a cut or opening *g* therein, and a hearing-piece or bell provided with a deflecting orifice *i*, the said opening *g* being coincident with the inner end of said orifice, sub-
 55 stantially as set forth.

WILLIAM PERPENTE.

In presence of—

DANIEL COLWELL,
 JOHN J. PHELAN.