(No Model.)

C. M. FLEURY.

VOICE CONVEYER FOR TELEPHONES.

No. 564,371. Patented July 21, 1896.

FIG:1.

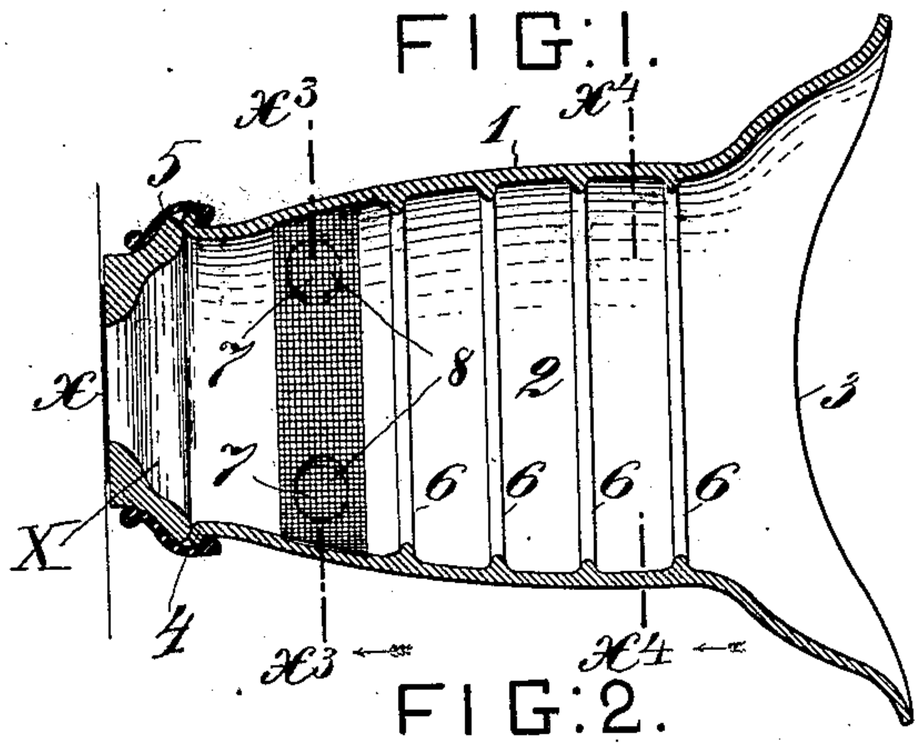


FIG:2.

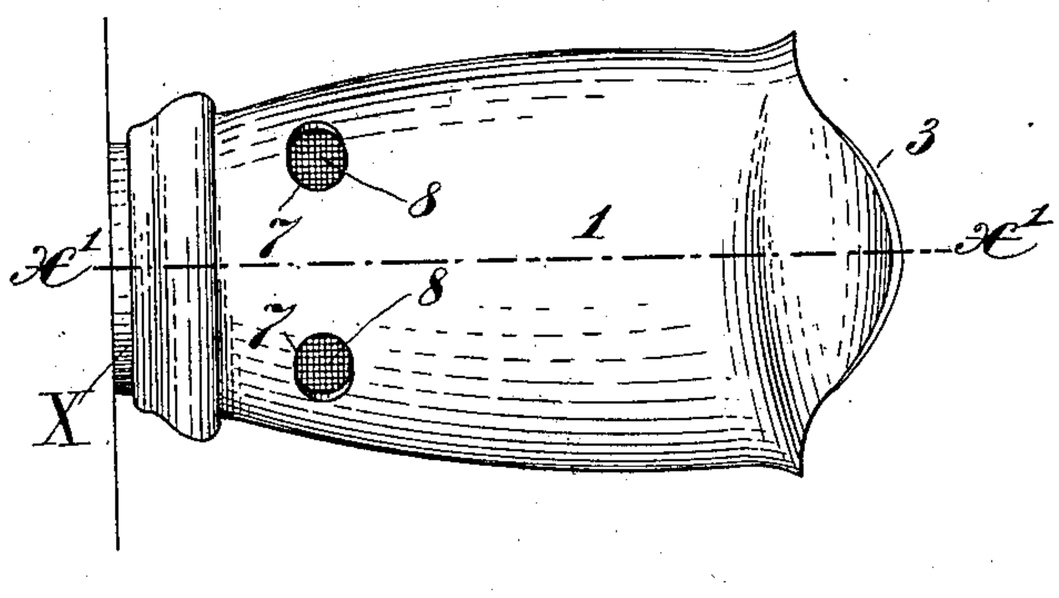


FIG:3.

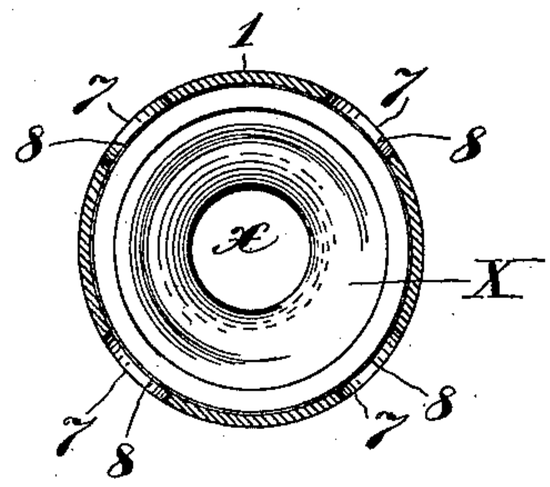


FIG:4.

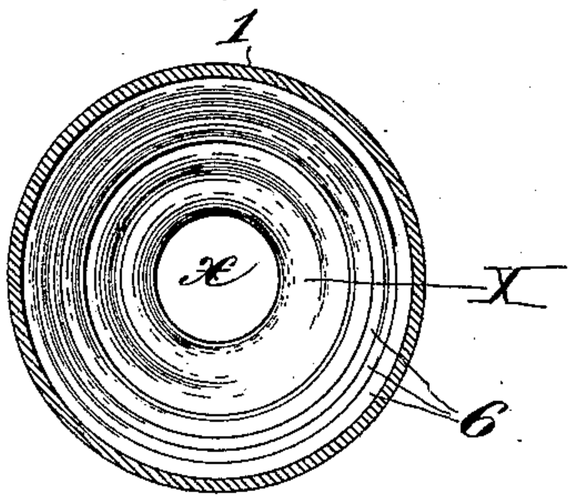
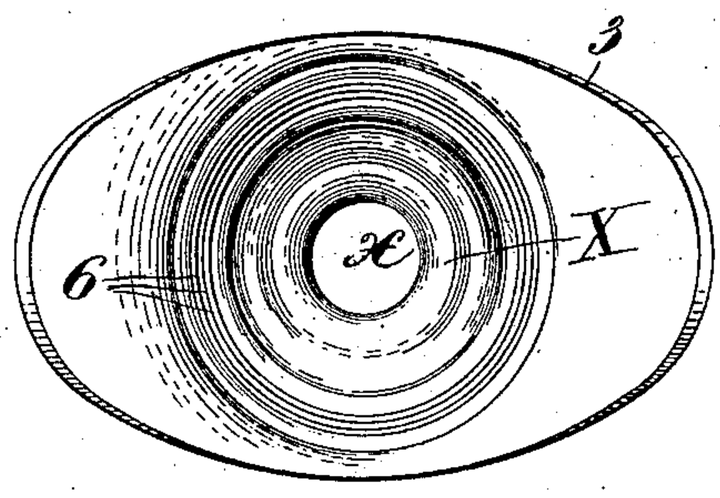


FIG:5.



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UNITED STATES PATENT OFFICE.

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VOICE-CONVEYER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 564,371, dated July 21, 1896.

Application filed October 17, 1895. Serial No. 565,942. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. FLEURY, a citizen of the United States, residing at Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Voice-Conveyers for Telephones, of which the following is a specification.

My invention relates to a voice-conveyer to be interposed between the lips of the user and the ordinary mouthpiece of the telephone to prevent the user's voice from being heard by bystanders. Such instruments are designed to take the place of the cumbrous booth now commonly employed.

The object of the present invention is to provide a simple, portable, and inexpensive device or instrument which will accomplish the end sought and prevent that tension on the transmitter-diaphragm which is produced in many of the instruments for this purpose now known, such tension causing sharp rattling metallic sounds of a disagreeable character. Where the voice-conveying tube concentrates the sound-waves on the telephone-diaphragm too forcibly and the breath cannot escape from such tube with freedom sufficient to avoid air-pressure or tension on the diaphragm, harsh, rattling, and sharp metallic sounds are produced, and it is this objectionable feature which has, in a great degree, prevented the general adoption of this class of instruments in lieu of the booth. My invention has for its object to overcome these defects.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a horizontal longitudinal mid-section of the voice-conveyer on line x' in Fig. 2. Fig. 2 is a side elevation thereof. Figs. 3 and 4 are respectively transverse sections on the lines x^3 and x^4 in Fig. 1. Fig. 5 is a front end view of the instrument, showing the trumpet-mouthpiece.

Let X represent the ordinary mouthpiece of a transmitting-telephone and x the vibrator-diaphragm thereof.

My voice-conveyer comprises, in general, a body 1, having in it a chamber 2, and a mouthpiece 3, of trumpet form, to receive the lips of the user and to fit about his mouth close up to the face all about the margin of the mouthpiece 3. The body 1 will by preference be substantially circular in cross-section (see Figs. 3 and 4) at all points in its length, and it will be concave interiorly in the direction of its length, as seen in Fig. 1—that is, it will not taper on a straight line from the mouthpiece 3 to the smaller end next the telephone, but the line of taper will be a curve. At the smaller end of the body 1 it is provided with a lip or flange 4 to receive and hold a tube of soft rubber 5. This is a securing-tube to connect the device with the telephone-mouthpiece X, and it will be normally attached to the body 1 by the lip or flange 4. The attachment will be effected by drawing the end of the elastic securing-tube 5 over the mouthpiece X, when it will hold the end of the body 1 up snugly to the latter and produce a hermetic closure at the point.

In order to prevent the concentration of the sound-waves on the diaphragm x, the internal surface of the body 1—or wall of the chamber 2—is provided with ribs 6, which extend circumferentially and transversely of the axis of the instrument. I do not limit myself as to the number of these ribs, as the particular number is not important. Their function is to prevent concentration at the diaphragm and they produce somewhat the same effect as would be produced by greatly lengthening the tubular body 1, so as to remove the mouth farther from the diaphragm.

In order to prevent the accumulation of gaseous pressure in the chamber 2 and on the diaphragm by the accumulation of the breath in the body, and at the same time to prevent the too free escape of the sound-waves, I provide apertures 7 in the wall of the chamber 2 and cover these with fine wire-gauze 8, as seen in Figs. 1, 2, and 3. I prefer to make the apertures 7 near the end of the body which is adjacent to the telephone-diaphragm, so as to relieve or prevent the pressure at that point especially, and I also prefer to distribute the apertures equally around the body for the same reason. The gauze 8 serves to break up the sound-waves and deaden the sound.

In practice the body 1 may be molded from some plastic material and a strip of wire-gauze be embedded therein in such a manner as to cover the aperture or apertures 7

I do not limit myself to any particular material for the body 1 and the mouthpiece 3. They may be of papier-mâché or hard rubber, for example, and the body may have double walls with an air-space between them, or a space packed with sound-deadening material. These features are old in this class of devices and I have not deemed it necessary to illustrate them.

I prefer wire-gauze to cover the apertures 7, but textile gauze, such as bolting-cloth, would serve.

Having thus described my invention, I claim—

1. A voice-conveyer for use with a transmitting-telephone, comprising an oval, trumpet-mouthpiece 3, shaped to fit about the lips, and a tubular body 1 connected to said mouthpiece, said body being rigid and having on its inner surface ribs which extend transversely of the axis of the body to prevent the concentration of sound-waves on the diaphragm of the telephone, and lateral apertures for the escape of the breath, substantially as set forth.

2. A voice-conveyer for use with a transmitting-telephone, having a rigid, tubular body provided with transversely-arranged ribs on its inner surface and a mouthpiece, and having an aperture or apertures in its lateral walls for the escape of the breath, said aperture or apertures being covered with fine gauze to prevent the escape of sounds, substantially as set forth.

3. A voice-conveyer for use with a transmitting-telephone, having a trumpet-mouthpiece 3, and a tubular body having in it a chamber with walls of concave form in a longitudinal direction and provided with ribs 6 on its inner surface extending around the chamber transversely of its axis and having a lateral outlet for the breath, substantially as set forth.

4. A voice-conveyer for a transmitting-telephone, having a mouthpiece, and a tubular body 1, said body having internal, transverse, circumferential ribs 6, and an aperture or apertures 7, in its side walls covered with gauze and arranged adjacent to that end of the body which is nearest the telephone-diaphragm, substantially as and for the purposes set forth.

5. A voice-conveyer for telephones comprising a tapered, tubular body 1, having a trumpet-mouthpiece 3, at one end and a circumferential lip at the other end, said body having a screened outlet for the breath, and a tube 5 of soft rubber fixed on the flanged end of the body whereby the latter is adapted to be secured hermetically to the mouthpiece of the telephone.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES M. FLEURY.

Witnesses:
HENRY CONNETT,
PETER A. ROSS.