

No. 837,304.

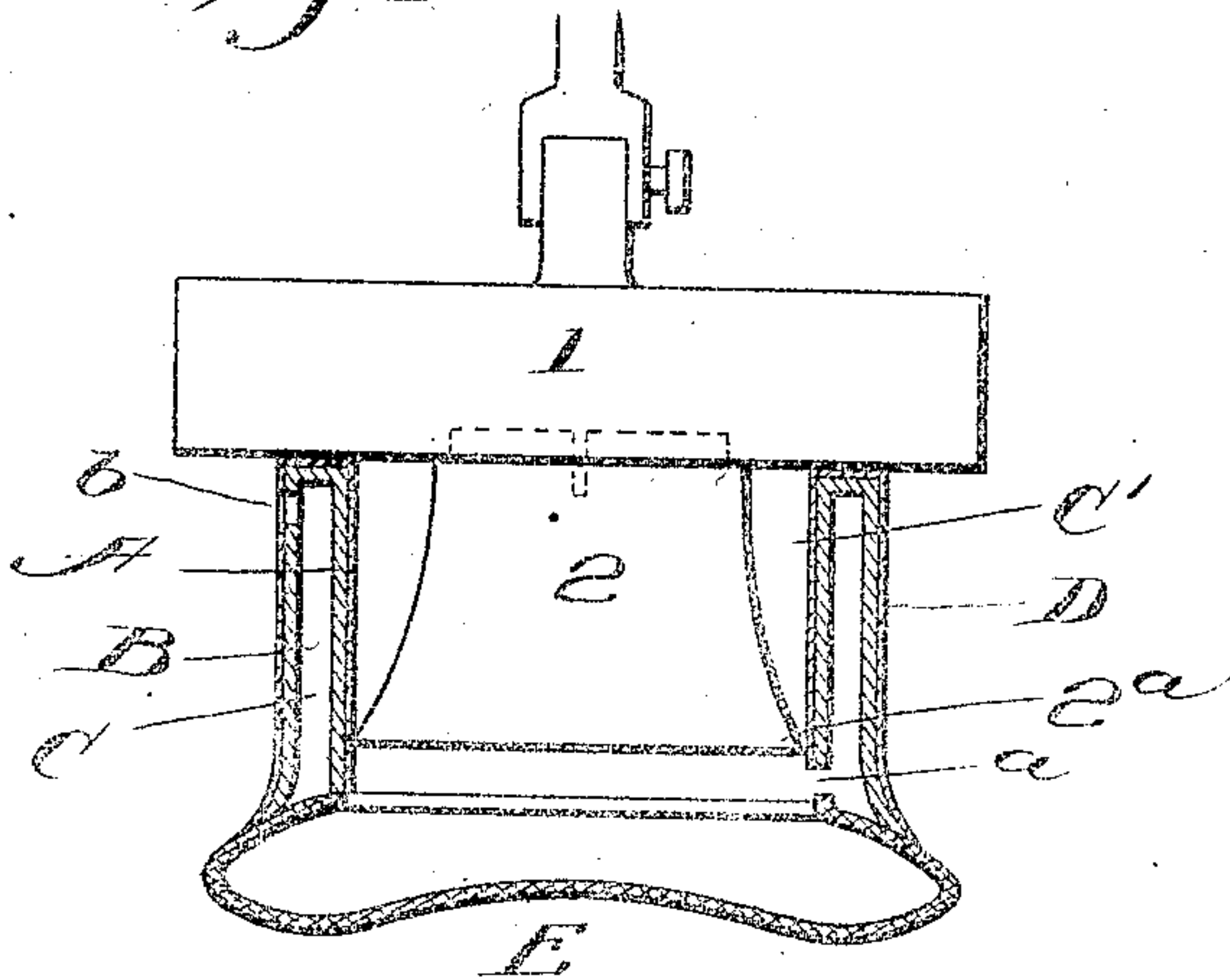
PATENTED DEC. 4, 1906.

J. G. KITCHELL.

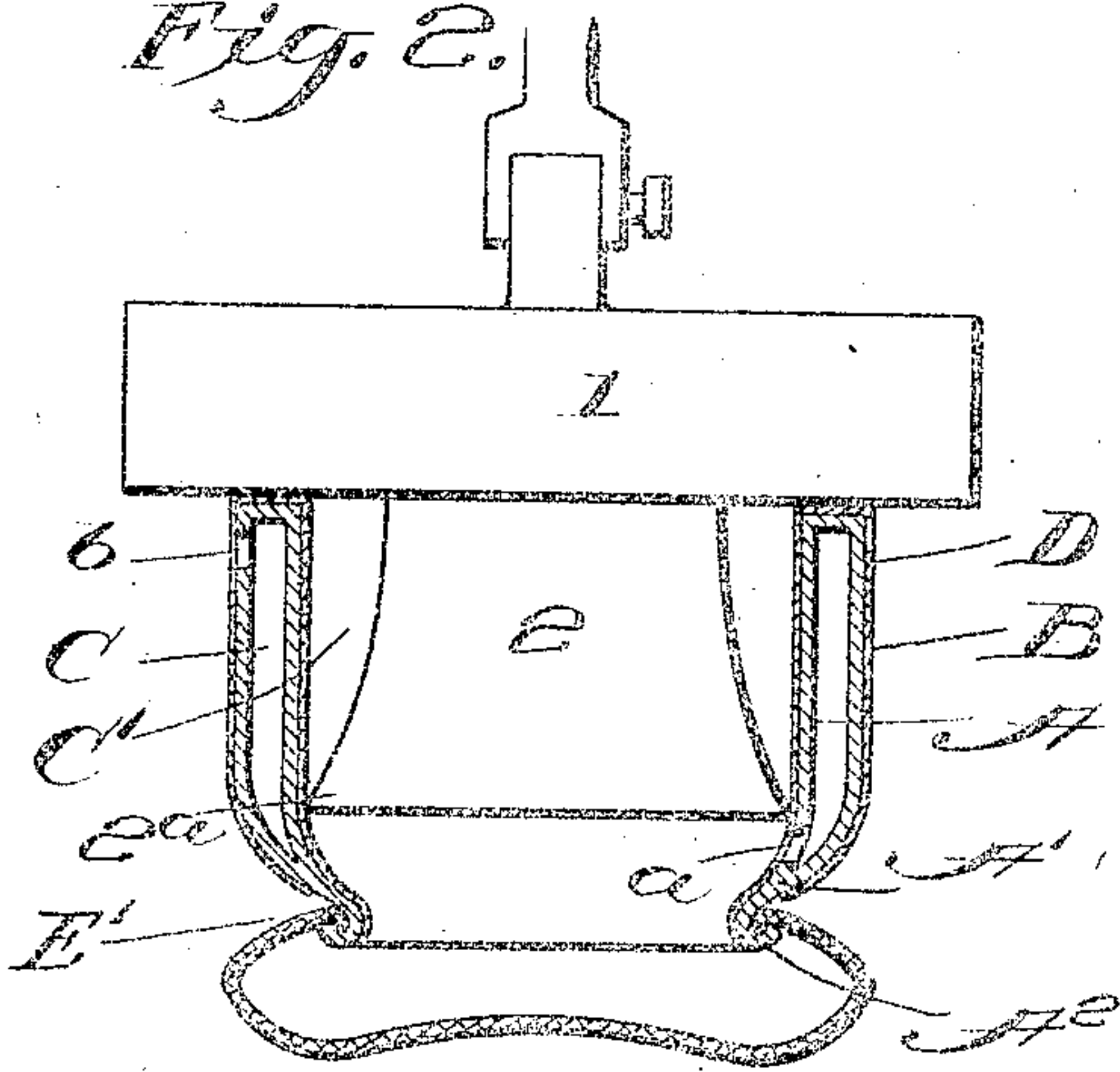
ATTACHMENT FOR MOUTHPIECES OF TELEPHONE TRANSMITTERS.

APPLICATION FILED NOV. 21, 1905.

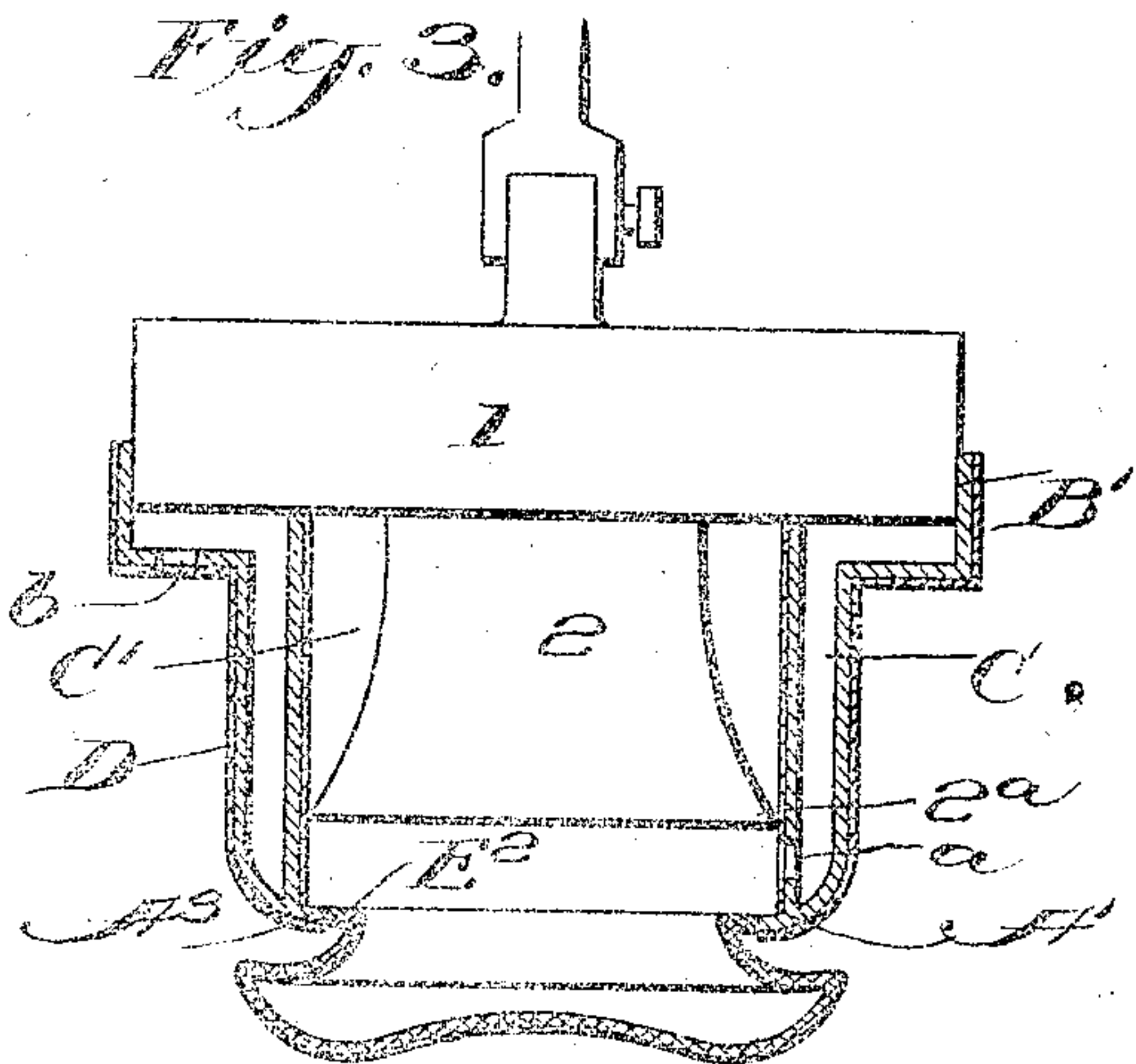
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## ATTACHMENT FOR MOUTHPIECES OF TELEPHONE-TRANSMITTERS.

No. 837,304.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed November 21, 1905. Serial No. 288,364.

*To all whom it may concern:*

Be it known that I, JOSEPH G. KITCHELL, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Attachments for Mouthpieces of Telephone-Transmitters, of which the following is a specification.

My invention relates to an improvement in an attachment for mouthpieces of telephone-transmitters to prevent what is said by the person talking in the telephone from being overheard by any one near by.

One of the objects of my invention is to make such an attachment as may be portable and easily attached to or removed from the mouthpiece of a telephone and that will not only cover the mouth, but extend beyond the mouth, so as to permit uninterrupted movement of the lips in talking, and will also prevent the sound from being heard outside the telephone.

Other objects will appear from the hereinafter description.

My invention is illustrated in the accompanying drawings, in which the same reference character indicates the same part in the different views.

On the drawings, Figure 1 represents a cross-section of one type of my attachment shown connected to the mouthpiece of an ordinary telephone. Fig. 2 is a cross-section of a modification, and Fig. 3 is a cross-section of still another modification.

The parts marked A and B are the inner and outer tubes or walls of the attachment. They are made of a material such as hard rubber, papier-mâché, celluloid, or the like and are formed, preferably, in one piece, with an air-space C between them. The inner tube is provided with an opening *a* near the forward end thereof, and the outer tube or wall is provided with an opening *b* at the other end thereof.

D is an outside covering, of flexible or vulcanized rubber or other similar sound-deadening material. This sound-deadening material may extend only on the outside of the outer wall or tube B, or it may cover completely the outer surfaces of both walls, as shown in the drawings.

E is a flexible mouthpiece which is connected to the tubes A and B. This mouthpiece is large enough to not only cover the mouth, but extends some distance there-

from, so as to permit free use of the mouth in talking. The edges are shaped to conform to the contour of the face. In the construction shown in Fig. 1 this mouthpiece may extend from the edges of the walls A and B and is connected to the walls at these edges, forming the inclosed air-space C, above referred to.

In the construction shown in Fig. 2 the inner and outer walls A and B are merged together, as shown at A', with an outturned edge A<sup>2</sup>, and the mouthpiece has a contracted portion, as shown at E', which fits over the turned end A<sup>2</sup> of the walls, by which the mouthpiece is fastened to the tubes. In this construction the mouthpiece may be readily attached or detached from the tube, and different forms of mouthpieces may be used.

In the modification shown in Fig. 3 I have made the inner and outer walls A and B of separate pieces, but have joined them together at their ends, as shown at A'. The wall B is extended to the periphery of the transmitter 1, as shown at B', instead of being formed and connected to the forward edge of the inner tube A and resting on the front part of the transmitter, as shown in Figs. 1 and 2. This third construction, it will be seen, covers entirely the front face of the transmitter and prevents any vibrations therein from being transmitted beyond the attachment. In other words, this construction completely drowns the vibration of the transmitter, as well as preventing what is spoken into the telephone from being heard by any one near the transmitter. The mouthpiece in this case is also made of flexible material, with an outturned edge E<sup>2</sup>, which is connected to the edge A<sup>3</sup> of the meeting ends of the two tubes A and B. The diameter of the inner tube A is such that it will bear against the edge 2<sup>a</sup> and fit tightly on the transmitter 2, leaving an air-space C' between the wall of the transmitter and the inner wall of the attachment, and, as will be seen, the diameter of the outer tube is such as to leave a clear air-space C between the two tubes A and B.

In a device of somewhat similar construction made before my invention the attachment conceals or excludes sound only in its passage from the lips to the opening of the mouthpiece, but does not subdue or muffle the sounds after they are conducted to that



opening. In other words, the sounds are unmuffled while vibrating or sounding inside the mouthpiece proper or the fixed mouthpiece of the transmitter. There is no deadening wall or walls surrounding the mouthpiece. Hence sounds are reflected from the hard-rubber wall or shell out of which these attachments have heretofore been made. My device is also constructed so that the entire attachment is sheathed or covered with a sound-concealing wall of deadening effect, and the vibrations of the voice are deadened from the time they leave the mouth until they are safely inside the transmitter, and there are two dead-air spaces around the attachment. Another important feature of my device, this extension of deadening-wall surface, has a simple means of attachment to the fixed mouthpiece of the telephone and obviates the employment of clamps and other means more or less complicated and cumbersome, which take time to operate and are liable to get out of order and permit leakage of direct voice-vibrations in their passage from the attachment to the transmitter. In an attachment of this kind, where it is only used on special occasions and when demanded must be instantly attached, any means of quick attachment and detachment is a marked improvement. From this it is seen that the attachment is practically in one piece and cannot easily get out of order. Its construction is such that it projects only a slight distance beyond the edge of the mouthpiece of the transmitter and is therefore not an incumbrance. It is so constructed that it can be made without using any exposed metal either in itself or in the parts attaching it. It can be instantly sterilized without injury to the same.

While I have shown a certain type of this construction, I do not wish to be understood that I am limited to the exact construction shown and described, as various changes and modifications can be made without departing from my invention.

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

1. In a device of the class described, a mouthpiece of a telephone, a wall surrounding the outside of said mouthpiece, bearing against the front flaring edge thereof and resting against the front face of the transmitter to form a dead-air space between the said mouthpiece and said wall, another wall concentric to the first wall, having an air-space between, and a mouthpiece connected to the forward ends and bridging said walls.

2. In a device of the class described, a mouthpiece of a telephone, a wall surrounding said mouthpiece with an air-space between the said wall and the mouthpiece, a second wall concentric to the first wall and separated therefrom to form an air-space be-

tween said walls, the space between the said walls being closed at each end, and each wall having an opening therein at opposite ends leading into the air-space, and a mouthpiece connected to the outer ends of said walls.

3. In a device of the class described, an inner and outer concentric wall having an air-space between, said air-space being closed at each end, each wall having an opening therein at opposite ends leading into the air-space, the said walls adapted to be connected to the mouthpiece of a telephone-transmitter so as to leave an air-space between the said mouthpiece and the inner wall of said device, another mouthpiece connected to said walls, and a detachable mouthpiece connected to said walls.

4. In a device of the class described, an inner and an outer wall with an air-space between, a sound-deadening material secured to the outer surface of the outer wall, and a mouthpiece connected to the walls.

5. In a device of the class described, an inner and an outer wall with an air-space between, sound-deadening material secured to the inner surface of the inner wall, and also sound-deadening material surrounding and secured to the outer surface of the outer wall.

6. In a device of the class described, an inner and an outer concentric wall with an air-space between, sound-deadening material covering the outer wall, the diameter of the inner wall being such as to tightly fit over the mouthpiece of a telephone-transmitter, leaving an air-space between said mouthpiece and said inner wall, and another mouthpiece connected to said walls.

7. In a device of the class described, an inner and an outer concentric wall constructed of hard rubber, said walls when in use having both ends inclosed with an air-space between, a soft-rubber covering for said wall or walls, each of said walls having an opening at opposite ends leading into the air-space, the diameter of the inner wall being such as to fit tightly around the flaring edge of the mouthpiece of a telephone-transmitter with a dead-air space between said mouthpiece and said inner wall, and another mouthpiece connected to said walls.

8. In a device of the class described, an inner and an outer concentric wall with an air-space between, one end of these walls being merged together and contracted, a detachable mouthpiece adapted to be fitted over said contracted ends, the other ends being closed, each wall having an opening therein leading into said air-space, the diameter of the inner wall being such as to fit closely over the flaring end of the mouthpiece of a telephone-transmitter, leaving an air-space between the said mouthpiece and the inner wall.

9. In a device of the class described, an inner and an outer concentric wall with an air-



space between, one end of the walls being closed and the other ends merged into each other and contracted, a detachable mouthpiece fitting over said contracted end, sound-  
5 deadening material covering the outer surface of one of these walls, both walls having openings leading into the air-space, the diameter of the inner wall being such as to fit closely over the flaring end of the mouthpiece of a telephone-transmitter, leaving an air-

space between said mouthpiece and said inner wall.

In witness whereof I have hereunto set my hand, at the city of New York, county and State of New York, this 11th day of November, 1905.

JOS. G. KITCHELL.

In presence of—

A. E. PALMER,

GEORGE ETHRIDGE.