

No. 675,467.

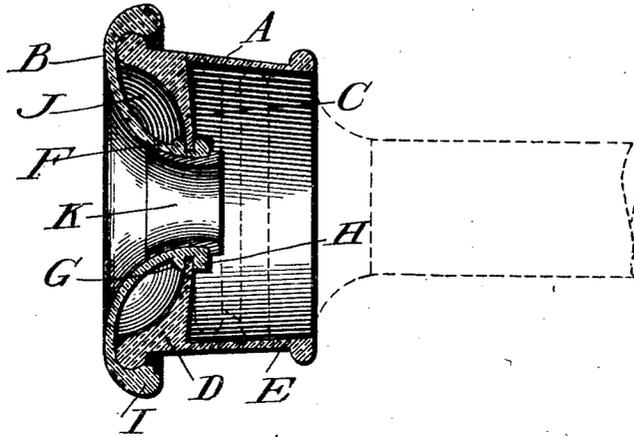
Patented June 4, 1901.

H. A. CUTMORE.  
TELEPHONE SPEAKING TUBE OR LIKE RECEIVER.

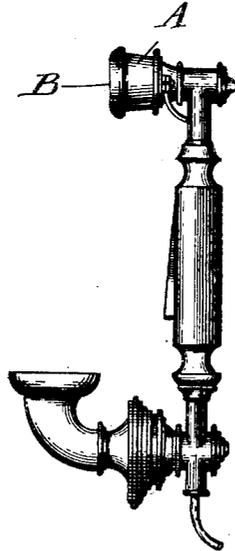
(Application filed Mar. 31, 1900.)

(No Model.)

~~Fig. 1.~~



~~Fig. 2.~~



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HAHNEMANN ADOLPHUS CUTMORE, OF LEE, ENGLAND.

## TELEPHONE SPEAKING-TUBE OR LIKE RECEIVER.

SPECIFICATION forming part of Letters Patent No. 675,467, dated June 4, 1901.

Application filed March 31, 1900. Serial No. 10,978. (No model.)

*To all whom it may concern:*

Be it known that I, HAHNEMANN ADOLPHUS CUTMORE, a subject of the Queen of Great Britain and Ireland, and a resident of 12 Rembrandt road, Lee, in the county of Kent, England, have invented a certain new and useful Improvement in or Relating to Telephone Speaking-Tubes or Like Receivers, (for which I have made application for a patent with a provisional specification in Great Britain, No. 18,040, bearing date September 6, 1899,) of which the following is a specification.

This invention relates to receivers for telephones, speaking-tubes, and the like.

It consists in furnishing each receiver with a contrivance which is so constructed that when pressed against the ear it excludes all extraneous sounds and in the case of telephones and the like also renders the sounds received more audible.

In the accompanying drawings, Figure 1 is a sectional view of my receiver attachment, and Fig. 2 is an elevation of a commonly-used combined receiver and transmitter with the attachment on the receiver.

According to my invention I form the receiver attachment in two principal parts A and B, both of which are made of india-rubber or other suitable elastic material. In the part A is a circular diaphragm or base C, which is of corresponding size with the receiver with which the contrivance is used. Around said diaphragm is a flange D, having a bead or ridge on its edge, while on the opposite side of the diaphragm is a sleeve E, which fits upon the receiver. In lieu of this sleeve I may use any other suitable means for attaching the contrivance to the receiver. The funnel-shaped covering B curves outward from the hollow neck F, which is retained in a central hole formed in the diaphragm C by the flanges G and H. The said part B has a beaded rim I, which extends over and grips the rim of the flange D, thus forming an annular air-chamber J. Said chamber when the contrivance is in use being mechanically closed is non-collapsible.

A metallic flared-mouth tube K is inserted in the throat of the neck F. This tube is held in rigid contact over the opening in the

receiver to the diaphragm therein, so as to allow the sounds to pass direct from the receiver to the ear clear and distinct.

The contrivance fitted upon a receiver in use is pressed firmly against the ear, the curved surface of the part B adapting itself to the irregularities of the ear, and thus practically seals the ear, and thereby prevents the entrance of extraneous sounds.

I find that the contrivance in use upon telephone-receivers, especially of the class illustrated in Fig. 2, renders the sounds received at the distant terminal much more audible and distinct even without a contrivance on the receiver thereat and also destroys the intense resonance in the receivers. It is quite possible that this effect could be produced also with a modified construction of 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 character described, a flexible sleeve, a perforated diaphragm extending thereacross, and an elastic covering extending from the perforation of the diaphragm to the sleeve and forming an air-chamber between itself and the diaphragm, substantially as described.

2. In a device of the character described, a flexible sleeve, a perforated diaphragm extending thereacross, a bead formed on the sleeve, and an elastic covering extending from the perforation of the diaphragm to the bead and forming an air-space between itself and the diaphragm, substantially as described.

3. In a device of the character described, a sleeve, a perforated diaphragm extending thereacross, a bead formed on the sleeve, an elastic covering engaging the walls of the perforation and the bead and forming an air-chamber between itself and the diaphragm, and a tube engaging the covering and located within the perforation of the diaphragm, substantially as described.

4. In a device of the character described, a sleeve, a perforated diaphragm extending thereacross, a bead on the sleeve, and an elastic covering having a bead on its outer edge to engage the bead of the sleeve, and a pair

of flanges on its inner edge to engage the walls of the diaphragm-perforation, substantially as described.

5 In a device of the character described, a sleeve, a perforated diaphragm extending thereacross; a bead on the sleeve, a flaring elastic covering having a bead on its outer edge engaging the bead of the sleeve, and a pair of flanges on its inner edge engaging the  
10 walls of the diaphragm-perforation, and a tube located within the perforation of the diaphragm and engaging the inner edge of the covering, substantially as described.

6. In a device of the character described, an  
15 elastic sleeve, a diaphragm extending there-

across, a beaded flange on the sleeve, an elastic funnel-shaped covering having a bead on its outer edge engaging the bead of the flange and a pair of flanges on its inner edge engaging the walls of the diaphragm-perforation, 20 and a rigid tube located within the perforation of the diaphragm and engaging the inner edge of the covering, substantially as described.

In witness whereof I have hereunto set my 25 hand in the presence of two witnesses.

HAHNEMANN ADOLPHUS CUTMORE.

Witnesses:

W. D. ROWLINGSON,  
JAMES WYETH.