C. M. HARTNETT.

MOUTHPIECE FOR TELEPHONE INSTRUMENTS.

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**1,224,922.**

Patented May 8, 1917.

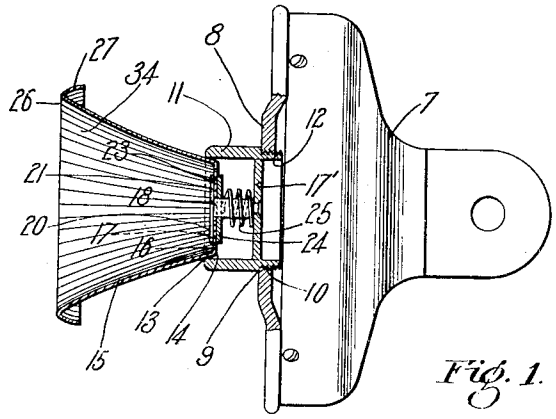



Fig. 1.

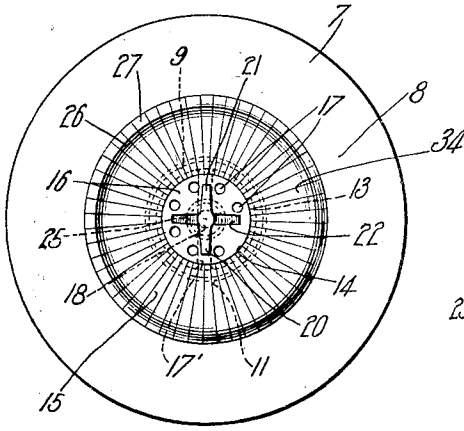



Fig. 2.

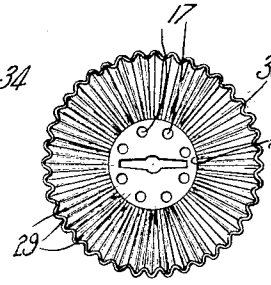



Fig. 3.

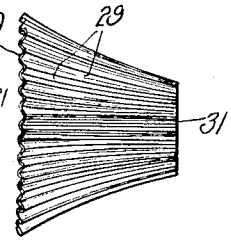



Fig. 4.

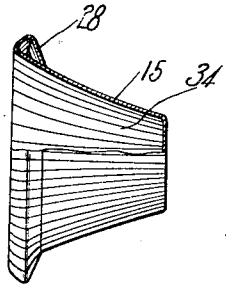



Fig. 5.

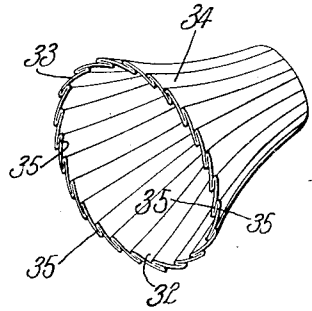



Fig. 6.

Inventor

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By his attorney, Charles S. Goodwin.

THE BORROWS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

CHRISTOPHER M. HARTNETT, OF CHICAGO, ILLINOIS.

## MOUTHPIECE FOR TELEPHONE INSTRUMENTS.

1,224,922. Specification of Letters Patent. Patented May 8, 1917.

Application filed February 1, 1916. Serial No. 75,572.

*To all whom it may concern:*

Be it known that I, CHRISTOPHER M. HARTNETT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Mouthpieces for Telephone Instruments, of which the following is a specification.

This invention relates to improvements in mouth-pieces for telephone instruments.

The object of the invention is to provide a mouth-piece which may be constructed of inexpensive sheet material preferably antiseptic in its nature and constructed and arranged to be easily attached or detached with respect to the transmitter of the telephone.

The nature and construction of the mouthpiece embodying this invention is such as to permit the construction thereof at a very low cost, and therefore may be discarded after each use of the instrument if it is so desired.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims.

Referring to the drawings:

Figure 1 is a side elevation of a telephone transmitter with a mouth-piece embodying my invention shown in connection therewith, said mouth-piece and a portion of said transmitter being shown in section.

Fig. 2 is a front view of the same.

Fig. 3 is a front view of a modified form of mouth-piece.

Fig. 4 is a side elevation of the mouthpiece illustrated in Fig. 3.

Fig. 5 is a detail side elevation partly in section illustrating still another form of mouth-piece.

Fig. 6 is a perspective view, of yet another modified form of mouth-piece, the several forms of mouth-pieces illustrated being adapted to fit the socket illustrated in Fig. 1.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 7 is a transmitter of a telephone instrument which is so familiar to those skilled in the art that a description thereof is considered unnecessary.

It will therefore be sufficient to state that the front wall 8 of said transmitter is provided with an opening 9 for the reception of the usual mouth-piece of the instrument, the same being held by screw threads 10 formed in said front wall and upon the mouth-piece respectively. In this case, however, said mouth-piece is omitted and in its place is inserted a socket 11 constructed of any suitable material, said socket having screw threads 12 adapted to coöperate with the threads 10 to retain said socket within said opening.

The socket 11 is provided with an opening 13 at its outer end adapted to receive the small end 14 of a substantially frusto conical mouth-piece 15 having an end wall 16 constructed of the same material which constitutes the sides of said mouth-piece, which end wall 16 is perforated at 17 to permit the vibrations produced by a person talking into said mouthpiece, to pass therethrough into engagement with the usual diaphragm employed in the construction of the transmitter 7.

The socket 11 is nothing more nor less than an adapter whereby the mouth-piece of the construction shown may be attached to the transmitter. In order to secure the mouth-piece 15 to said socket, the latter is preferably provided with a transversely disposed member 17′ carrying a stud 18 arranged with its median axial line substantially coincident with the axis of said socket 11.

The stud 18 is preferably cylindrical and has at its outer extremity a pair of oppositely disposed projections 20 and 21 forming, in other words, a head having two transverse diameters the longer diameter being equal to the distance between the outer ends of said projections while the shorter diameter is equivalent to the diameter of the stud 18. The mouth-piece 15 is provided with an orifice 22 in the end wall thereof which substantially corresponds with the transverse conformation of the combined stud and projections 20 and 21, said orifice being arranged to receive the head of said stud including said projections, and after said head has been passed through the end wall 16 thereof said mouth-piece is adapted to be rotated upon said stud so as to aline the unlike diameters of the orifice and said head, thereby preventing the withdrawal of said mouth-piece from said stud.

Means are provided to yieldingly retain the end wall 16 of said mouth-piece 15 against the back side 23 of said head, said means preferably consisting of a disk 24 arranged to reciprocate longitudinally of

the stud 18, and a spring 25 encircling said stud between said disk and the transverse member 17 is adapted to force said disk against said end wall.

The mouth-piece 15 may be constructed of any sheet material suitable for this purpose, but preferably said mouth-piece is constructed of antiseptic paper and may be reinforced at its outer rim 26 by a rearwardly extending rim 27 or if desired said rim may be turned inwardly as at 28, Fig. 5, to engage the side walls of the mouth-piece.

Another method of reinforcing said mouth-piece is shown in Figs. 3 and 4 in which the side walls thereof are corrugated as at 29 which corrugations preferably extend from the outer or large end 30 to the small end 31. In Fig. 6 still another manner of reinforcing the edge of the mouth-piece is shown. In this form the corrugations 32 extend from the outer edge 33 of said mouth-piece for a greater portion of the length thereof.

The mouth-piece embodying this invention is formed from a single sheet of paper, the superfluous material being taken care of by corrugating as hereinbefore described. In the mouth-piece illustrated in Figs. 1, 2, 5 and 6 the material which constitutes said corrugations is pressed down flat into folds 34, 34.

In Figs. 1, 2 and 5 these folds are held in their flattened positions by turning back the outer rim of the mouth-piece to form the rims 27 and 28. In Fig. 6, however, the outer edge of the mouth-piece is cut squarely off and not turned rearwardly as in the other forms, and in order to retain the folds 34, 34 flat in this latter case, said folds are preferably stuck together by a suitable adhesive substance, which is inserted therebetween as at 35, 35, said adhesive substance together with said folds constituting the reinforcement for the mouth-piece of Fig. 6.

Having thus described my invention what I claim and desire by Letters Patent to secure is:

1. The combination with a telephone transmitter of a socket connected with said transmitter, a stud mounted in said socket provided with a head having two transverse diameters, and a mouth-piece provided with an orifice substantially corresponding with the head of said stud adapted to receive said head and to be moved on said stud to aline the unlike diameters of said head and said orifice.

2. The combination with a telephone transmitter of a socket connected with said transmitter, a stud mounted in said socket provided with oppositely disposed projections at the outer extremity thereof, a mouth-piece constructed of sheet material having an orifice adapted to permit the passage of said projections therethrough, said mouth-piece being constructed and arranged to be rotated on said stud to disaline said projections and the corresponding portions of said orifice whereby said mouth-piece may be held upon said stud, and means adapted to yieldingly hold said mouth-piece in contact with said projections.

3. The combination with a transmitter of a stud mounted on said transmitter and provided with a head having two unlike transverse diameters, a mouth-piece provided with an orifice substantially corresponding with the head of said stud, said transmitter being arranged to be slipped upon said stud over said head and to be rotated thereon to aline the unlike diameters of said orifice and said head, and a disk yieldably mounted on said stud adapted to engage said mouth-piece and retain the same in contact with said head.

4. The combination with a transmitter of a stud mounted on said transmitter and provided with a head having two transverse diameters, a mouth-piece provided with an orifice substantially corresponding with the head of said stud, said transmitter being arranged to be slipped upon said stud over said head and to be rotated thereon to aline the unlike diameters of said orifice and said head, a disk mounted upon said stud and movable longitudinally thereof, and a spring engaging said disk adapted to yieldingly move said disk toward the head of said stud and to retain said mouth-piece in contact with said head.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHRISTOPHER M. HARTNETT.

Witnesses:
H. G. GRAHAM,
L. MANDERSCHEID.

**Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."**