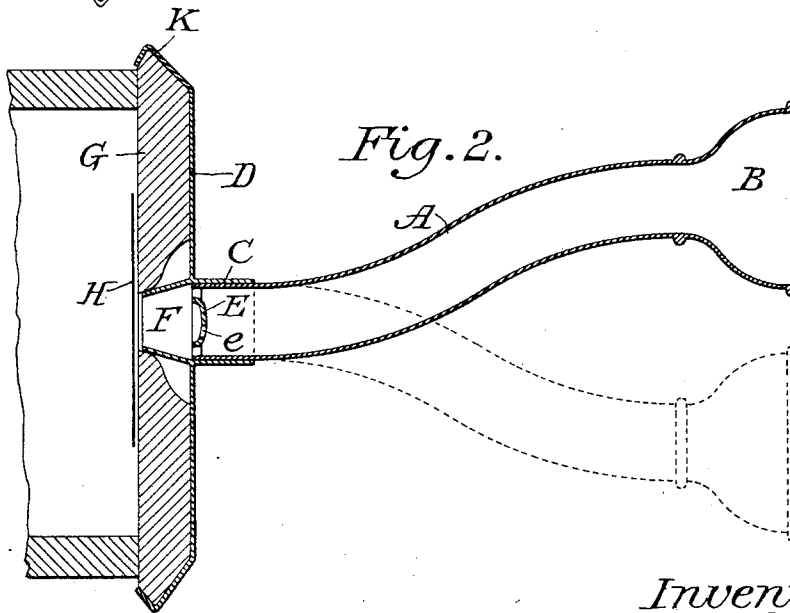
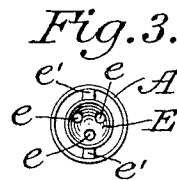
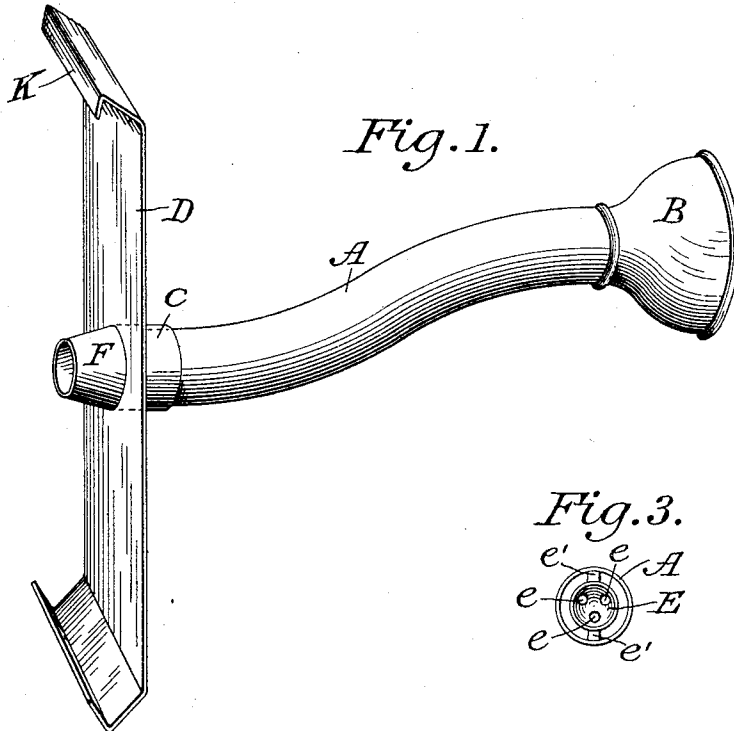


(No Model.)

V. A. COOK.  
EXTENSION TRANSMITTER FOR TELEPHONES.

No. 475,300.

Patented May 24, 1892.



Attest:  
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Atty.

# UNITED STATES PATENT OFFICE.

VICTOR A. COOK, OF NEW YORK, N. Y.

## EXTENSION-TRANSMITTER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 475,300, dated May 24, 1892.

Application filed January 8, 1892. Serial No. 417,408. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR A. COOK, of New York, in the county and State of New York, have invented a new and useful Improvement in Extension-Transmitters for Telephones; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is to produce an improved extension-mouth piece for telephone-transmitters, which, while properly directing the sound-waves from the mouth to the diaphragm, shall effectually guard against the transmission of metallic vibration, and thereby overcome a difficulty which has existed hitherto in the use of extension-mouth-pieces, and accomplish other desirable results, as hereinafter set forth.

A further object is to adapt the extension for convenient use by persons of different heights.

In the drawings, Figure 1 is a perspective view of my improved extension ready for application to the transmitter. Fig. 2 is a central section thereof, and Fig. 3 is an end elevation of the tube.

A tube A, of convenient length and diameter and having a usual mouthpiece B, is bent, substantially as shown, with a double bend. The tube should be cast of some suitable metal, preferably brass, not merely to enable any desired degree of curvature to be given to it, but mainly because the objectionable metallic twang is much less noticeable than in tubes otherwise formed. Its inner end is made to fit within a sleeve C, which projects from the clip D, the fit being sufficiently snug to hold the tube in place, while permitting it to be rotated, as indicated by dotted lines in Fig. 2. A disk E, preferably rounded in cross-section and provided with holes *e e*, is supported by arms *e' e'* within the inner end of the tube and is of such diameter at its base as to leave an annular space between itself and the tube. On the inner side of the clip D is a conical flange F, which enters the aperture in the door or casing G in front of the diaphragm H. The

clip is made of spring metal and is formed with hooked ends K, by which it may be conveniently secured to the box of the transmitter.

I have found that by bending the tube of the extension the sound-waves due to the vibration of the metal are broken up and not transmitted, as usual, to the diaphragm, and an indirect course is given to the sound-waves caused by the voice, which largely prevents injurious shocks upon the diaphragm, while the sound-waves caused by the voice are also toned down somewhat, with good results in the distinctness of the sounds received at the other end of the line. Furthermore, the particular shape given to the tube enables the mouthpiece to be adjusted to suit the convenience of the person using the transmitter. The perforated disk in the end of the tube further breaks the sound-waves and distributes them evenly over the diaphragm, guarding it from shocks. The flange on the inner side of the clip prevents the escape of the sound-waves and, being conical, focuses them properly upon the diaphragm.

I claim as my invention—

1. An extension-mouthpiece for telephone-transmitters, consisting of a tube, a disk of smaller diameter supported centrally within the tube, a spring-plate for securing the tube in front of the transmitter, and a conical flange supported by the clip and adapted to enter the aperture in the casing over the transmitter, substantially as shown and described.

2. An extension-mouthpiece for telephone-transmitters, consisting of a tube having a double bend, substantially as shown, a disk of smaller diameter, arms attached to the tube and disk and supporting the latter centrally within the former, and a supporting-plate having a sleeve to receive the end of the tube and wherein the tube is rotatable, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VICTOR A. COOK.

Witnesses:

A. N. JESBERA,  
A. WIDDER.