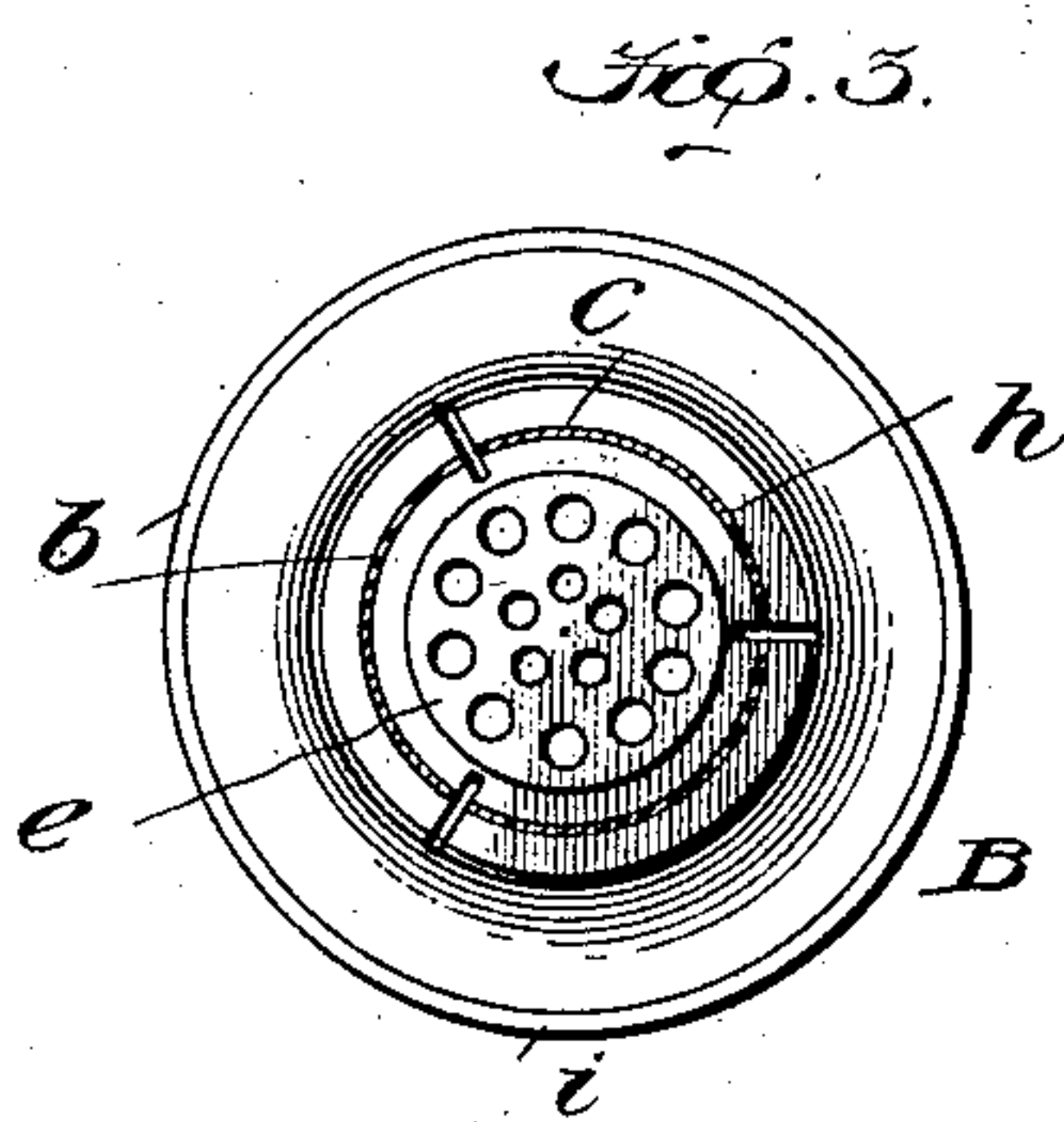
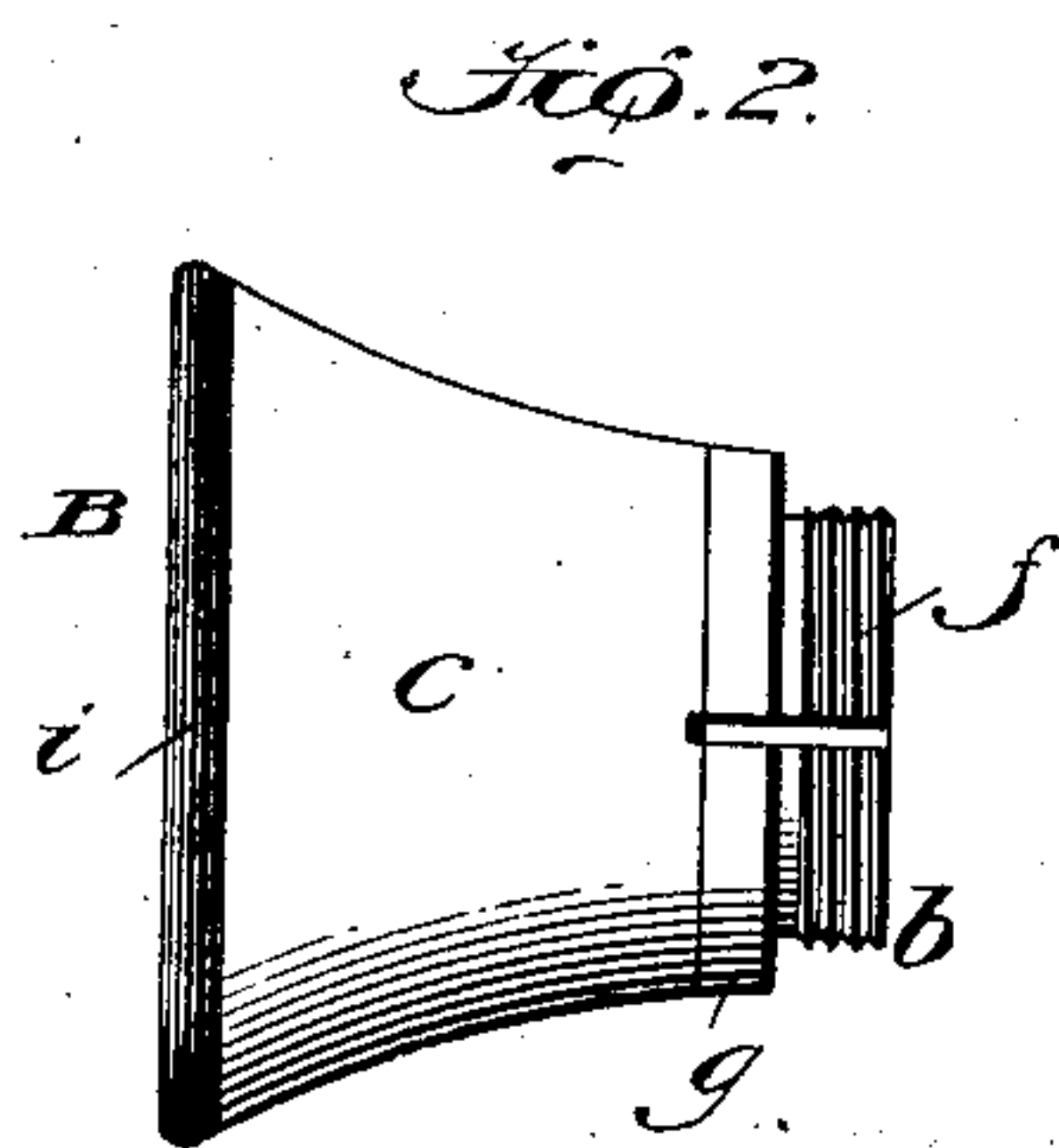
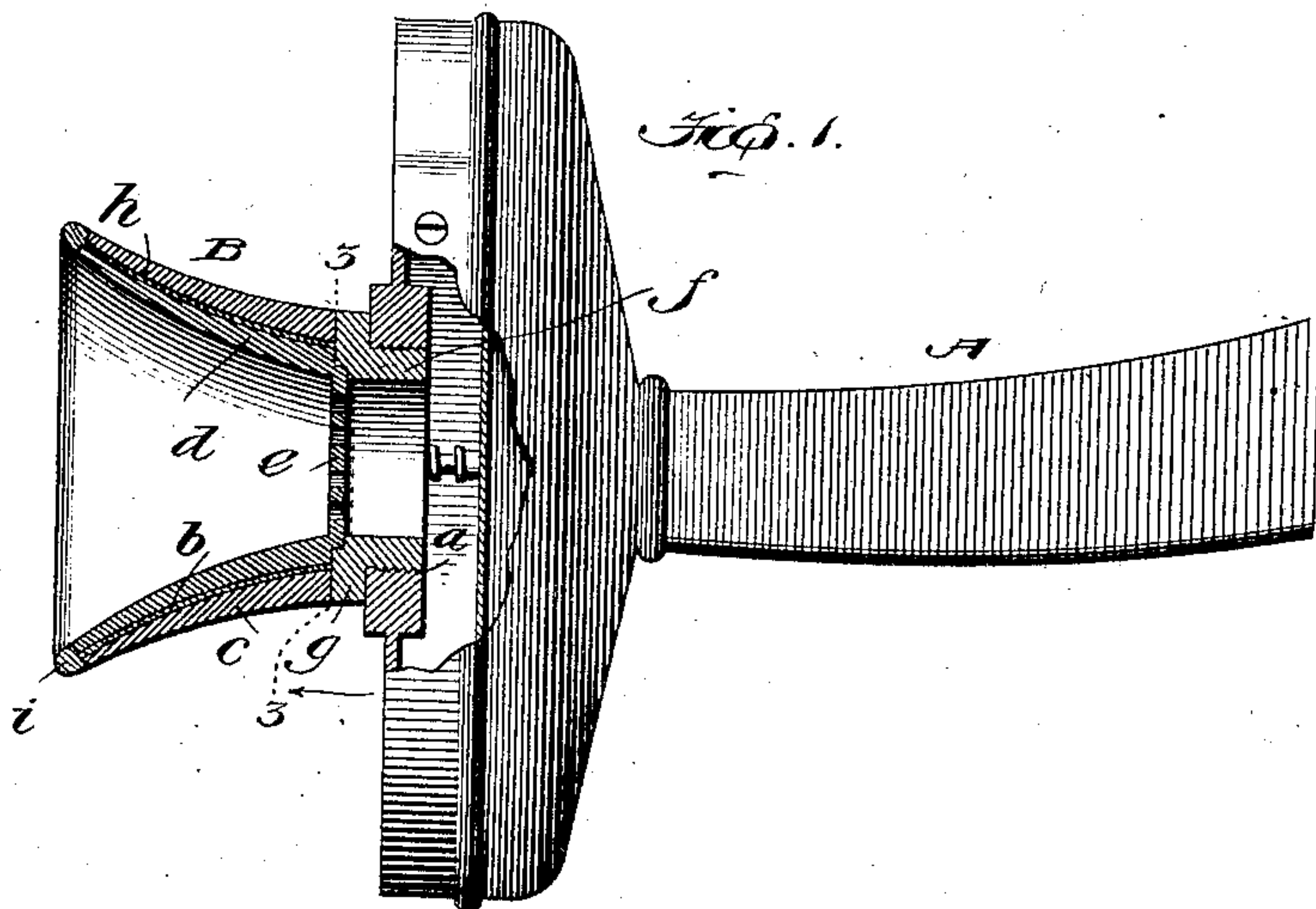


No. 819,531.

PATENTED MAY 1, 1906.

F. C. FISHER & W. C. CULIN.  
MOUTHPIECE FOR TELEPHONES.

APPLICATION FILED OCT. 30, 1905.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## MOUTHPIECE FOR TELEPHONES.

No. 819,531.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed October 30, 1905. Serial No. 285,050.

*To all whom it may concern:*

Be it known that we, FRANK C. FISHER, residing at Cheltenham, in the county of Montgomery and State of Pennsylvania, and WALTER C. CULIN, residing at Camden, county of Camden, State of New Jersey, citizens of the United States, have invented new and useful Improvements in Mouthpieces for Telephones, of which the following is a specification.

Our invention pertains to mouthpieces for telephones; and it contemplates the provision of a mouthpiece constructed with a view of being strongly connected to its support and of withstanding rough usage and blows without liability of being broken off, chipped, or otherwise deteriorated.

Other advantageous features peculiar to our invention will be fully understood from the following description when the same is considered in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view illustrating the mouthpiece constituting the present and preferred embodiment of our invention in diametrical section and as properly connected to a conventional support. Fig. 2 is a side elevation of the mouthpiece removed, and Fig. 3 is a transverse section taken in the plane indicated by the line 3 3 of Fig. 1 looking in the direction of the arrow.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a support, which may be of the conventional type at present in use, as illustrated, or of any other construction compatible with the purposes of our invention, and B is our novel mouthpiece, which is preferably, though not necessarily, connected to the support A by being screwed into a threaded aperture *a* in the face or front plate thereof.

As best shown in Fig. 1, the mouthpiece B comprises a body portion *b*, of aluminium or other suitable metal, an exterior section *c*, of hard rubber or analogous material, and an interior section *d*, of the same material as the section *c*, provided at its inner end with the usual foraminated diaphragm *e*. The body portion *b* is provided at its inner end with an exteriorly-threaded and comparatively thick annular portion *f*, designed to be ar-

ranged in the aperture *a* of the support A, and it is also provided with a circumferential flange *g*, disposed in front of the threaded portion *f*, a comparatively thin portion *h*, preferably shaped as shown and extending forwardly from the flange *g*, and an enlargement *i*, disposed at the outer edge of the thin portion *h* and having inner and outer shoulders at its rear side, as will be seen by reference to Fig. 1. The body portion or body *b* is preferably cast, though it may be formed in one piece in any other approved manner without involving a departure from the scope of our invention. The exterior section *c*, of hard rubber or analogous material, surrounds the thin portion *h* of body *b* and is interposed between the outer side of the flange *g* and the outer shoulder of the enlargement *i*, while the interior section *d* is arranged within and close against the said thin portion *h* of the body and is interposed between the forward side of the flange *g* and the inner shoulder of the enlargement *i*. By virtue of this relative arrangement of the body *b*, exterior section *c*, and interior section *d* it will be apparent that the sections *c* and *d* do not contact with the support A, and hence are not liable to be fractured when the mouthpiece is subjected to lateral strain or pressure; also, that the interposition of the sections *c* and *d* between the flange *g* and the shoulders afforded by the enlargement *i* precludes casual movement of the said sections with respect to the body and greatly lessens the liability of the sections being chipped, cracked, or otherwise impaired, while the enlargement *i* of the body serves to receive any blows that may be imposed on the forward end of the mouthpiece and effectually prevents the same from injuring the sections *c* and *d*.

From the foregoing it will be apparent that a mouthpiece constructed in accordance with our invention is strongly connected to the support A in such manner that the connection is not liable to be broken or otherwise affected by weight, strain, or blows imposed on the mouthpiece, and it will also be apparent that the mouthpiece *per se* is not liable to be broken, chipped or otherwise impaired by casual blows on the same. This will be appreciated as an important advantage when it is remembered that the necessity of replacing fragile mouthpieces at frequent intervals



is a considerable item in the operation of telephone systems.

Notwithstanding the strong and durable qualities of our novel mouthpiece, as set forth in the foregoing, the said mouthpiece is possessed of all of the acoustic advantages generally ascribed to the rubber mouthpieces at present in general use.

We prefer in the manufacture of our mouthpiece to mold the sections *c* and *d* at the outer and inner sides of the body *b*. When the mouthpiece is thus manufactured, it may obviously be produced easily and cheaply, and it will be appreciated that, in cooling, the sections *c* and *d*, of hard rubber, gutta-percha, or analogous material will shrink and tightly fit the metallic body.

Having described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A mouthpiece comprising a section of hard rubber or analogous material, and a metallic body carrying the said section and having one of its ends extended beyond the section and provided with means for effecting connection between the mouthpiece and a support and also having its opposite end extended beyond the section to protect the same against blows.

2. A mouthpiece comprising a body of metal, and sections of other material arranged at opposite sides of the body and interposed between enlargements on the body.

3. A mouthpiece comprising a body of metal having inner and outer enlargements, and a section of other material carried by the body and interposed between the enlargements thereof.

4. A mouthpiece comprising a body of metal having inner and outer enlargements, and a section of hard rubber, gutta-percha or

analogous material, carried by the body and interposed between the enlargements thereof.

5. A mouthpiece comprising a body of metal having means at its inner end whereby it may be connected to a support, and also having inner and outer enlargements, and a section of other material carried by the body and interposed between the enlargements thereof.

6. A mouthpiece comprising a body of metal having means at its inner end whereby it may be connected to a support and also having inner and outer enlargements at its inner and outer sides, an inner section of other material arranged between the enlargements at the inner side of the body, and a section of said material arranged between the enlargements at the outer side of the body.

7. A mouthpiece comprising a body, of metal, having a comparatively thick portion at its inner end provided with exterior threads and a circumferential flange, and also having a comparatively thin portion, and an enlargement at the outer end of said thin portion affording shoulders at opposite sides thereof, an outer section of hard rubber, gutta-percha or the like arranged at the outer side of the thin portion of the body and between shoulders thereof, and an inner section of hard rubber, gutta-percha or the like arranged at the inner side of the thin portion of the body and between shoulders thereof.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

FRANK C. FISHER.  
WALTER C. CULIN.

Witnesses:

DAVID C. FOLWELL,  
AL. P. BURCHELL.