L. STEINBERGER.

TELEPHONE MOUTHPIECE.

APPLICATION FILED AUG. 20, 1910.

985,638. Patented Feb. 28, 1911.

Fig. 1.

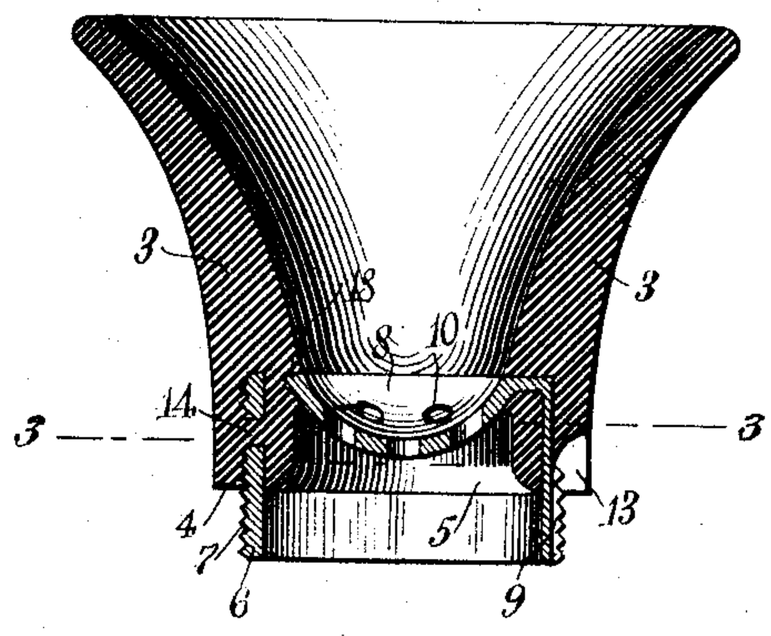


Fig. 2.

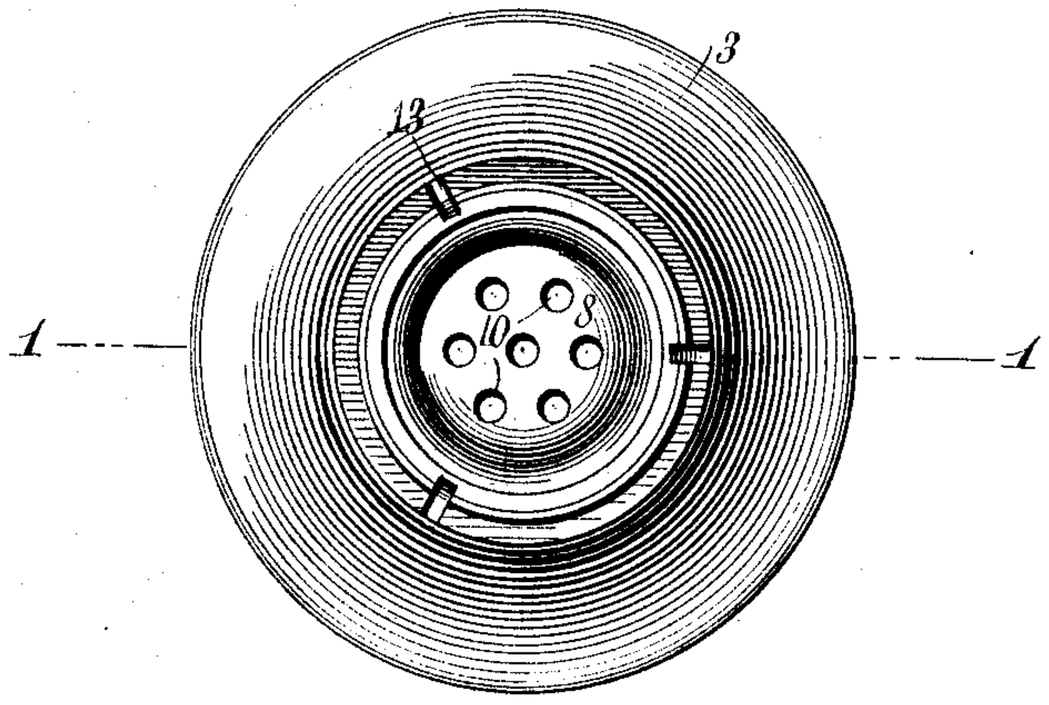


Fig. 3.

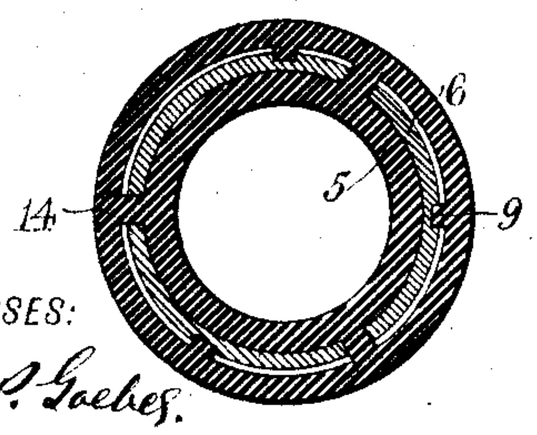
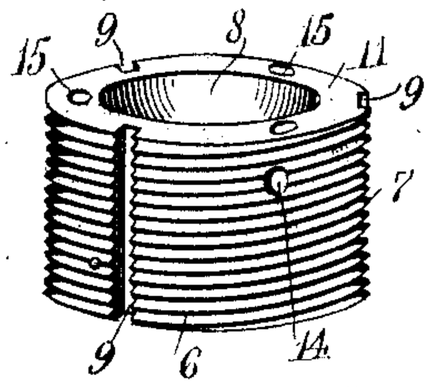


Fig. 4.



WITNESSES:

William P. Goebel.

Walton Harrison

INVENTOR

Louis Steinberger.

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

LOUIS STEINBERGER, OF NEW YORK, N. Y.

TELEPHONE-MOUTHPIECE.

985,638. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed August 20, 1910. Serial No. 578,085.

To all whom it may concern:

Be it known that I, LOUIS STEINBERGER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Telephone-Mouthpiece, of which the following is a full, clear, and exact description.

My invention relates to telephone mouthpieces, my more particular purpose being to improve the sanitation of the mouthpiece, and also to provide for increasing its strength for rendering its various portions readily accessible and for otherwise improving its general efficiency.

More particularly stated, my invention comprehends a mouthpiece of such form as to provide a surface comparatively free from lodging places for bacteria and other disease germs.

My invention further comprehends giving to various parts of the mouthpiece such curvature that when assembled the complete structure will have a minimum of abrupt corners, especially in those portions of the mouthpiece which ordinarily face the operator.

Again, my invention contemplates a judicious use of metal and tough material, such as electrose, whereby the metallic parts serve to brace the parts made of non-metallic material, and the parts made of such material are in turn so placed relatively to the metal as to avail themselves, as far as practicable, of its bracing strength.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a section through my improved mouthpiece, and is taken on the line 1—1 of Fig. 2; Fig. 2 is an inverted plan or bottom view of the mouthpiece shown in Fig. 1; Fig. 3 is a section on the line 3—3 of Fig. 1; and Fig. 4 is a detail showing in perspective the threaded sleeve alone.

At 3 is a body portion made in this instance of electrose, but which might be constructed of hard rubber or any other appropriate material suitable for the purpose. The body portion 3 is provided with a shoulder 4 and with an annular flange 5, the lower or inner edge of which is rounded, as indicated in Fig. 1. At 6 is a metallic sleeve having generally the form of a cup or thimble and provided externally with a thread 7. The sleeve 6 is further provided at its top with a concavity 8, the latter having perforations 10 preferably seven in number, one of the perforations being disposed centrally and the other six being grouped around it in substantially the form of a circle, as indicated in Fig. 2. The sleeve 6 has an annular portion 11 integral with it and supporting the concave portion 8. The sleeve is further provided with a number of slots 9 extending throughout its entire width in a direction crossing the general direction of the thread 7. The body portion 3 is provided with slots 13 which, when the parts are assembled, merge into the slots 9.

In making the mouthpiece, the metallic sleeve 6 is first produced and is provided with the concavity 8. The plastic composition is next filled into and around it and pressed up. The body portion 3 is thus connected with the metallic sleeve, the thread 7 and the slots 9 of the sleeve extending a little distance into the body portion 3, so as to afford a good anchorage for holding the body portion 3 and the sleeve 6 together.

The sleeve 6 is provided with holes 14, 15 used as anchorages, and also with slots, portions of which are also used as anchorages. That is to say, when the body portion 3 and portions of this material extend through the holes 14, 15 and into the slots 9 and also over and into the threads, thus anchoring the sleeve rigidly in relation to the body portion. The body portion 3 is provided with slots 13 and the slots 9 of the sleeve 6 are so positioned that when the parts are assembled, as indicated in Fig. 1, the slots 9, 13 are in registry with each other and practically continuous. The mouthpiece as a whole is thus virtually provided with three slots used as air vents.

It will be noted that the upper central or concave portion of the sleeve 6 has a curvature approximating that of a hemisphere. The upper exposed surface of the concavity 8 registers with the inner surface of the body portion 3. To facilitate this purpose I provide an annular shoulder 18 integral with the body portion 3 and engaged by the annular surface 11. This being the case, the inner portion of the mouthpiece presents a

surface all parts of which are more or less curved, there being only a single line of demarcation between the concavity 8 and the inner surface of the body portion. A person placing his fingers within the mouthpiece can feel no joint or seam between the inner surface of the mouthpiece and the concavity 8 which is of metal.

The construction above described makes it almost impossible for bacteria or other disease germs to so lodge within the mouthpiece that they can not be readily removed. The operator, by simply wiping out the mouthpiece with a cloth, disinfecting mop or analogous member, is able to reach each and every portion of the interior of the mouthpiece and to remove or destroy any bacteria or disease germs which may be present. Moreover, he can run a brush axially through the longitudinal passages and clean the same somewhat after the manner of cleaning a pipe stem.

The parts being assembled as above described and secured permanently together, the mouthpiece is ready for use. In order to mount it in position, the lower or threaded portion of the sleeve 6 is inserted in the face plate so that the thread 7 catches the thread of the face plate and the mouthpiece is then turned until the annular shoulder 4 lodges against the face plate.

The mouthpiece above described, if made as indicated, is quite symmetrical in its measurements, as well as in its appearance, and serves to give good articulation with good sanitation. The alarming spread of contagious diseases, and particularly tuberculosis, has made it very desirable that the mouthpieces employed in telephones shall be, as nearly as practicable, germ-proof, and also easy to clean and to maintain in good sanitary condition.

I do not limit myself to the particular form of any or all of the parts herein shown and described, nor to the exact combination shown, nor to employ in every instance a separate sleeve-like member. Neither do I limit myself to the use of any prescribed materials; I prefer, however, to employ for the mouthpiece the material well known in this art as "electrose."

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A telephone mouthpiece, comprising a body portion having an inner surface and also having an annular flange and a metallic sleeve provided with a surface for engaging the inner surface of said flange, and further provided with a middle portion curved substantially into the form of a hemisphere, said middle portion being in registry with the inner surface of said body portion.

2. A telephone mouthpiece, comprising a body portion of composition having an inner surface, and a metallic sleeve provided with a concavity so located that the surface of said concavity registers accurately with the said inner surface of said body portion.

3. A telephone mouthpiece, comprising a body portion having an inner surface and also having an annular shoulder and a metallic sleeve provided externally with a thread, said sleeve being further provided with an annular flat portion sunken into said body portion, and also provided with a concavity, the inner surface of which registers with the inner surface of said body portion.

4. A telephone mouthpiece, comprising a body portion having an inner surface and also a flange, and a metallic sleeve provided with a portion for engaging said flange for the purpose of holding said sleeve in position, said sleeve being also provided with a concavity so formed as to register with said inner surface of said mouthpiece.

5. A telephone mouthpiece, comprising a body portion of molded material, and a sleeve connected therewith and provided with threads, said sleeve being partially embedded within said body portion, said body portion being provided with an inner surface, and said sleeve being further provided with a portion registering with said inner surface and provided with sound passages.

6. A telephone mouthpiece, comprising a body portion provided internally with an annular shoulder, and a sleeve partially embedded within said body portion and provided with a portion engaging said annular shoulder, said sleeve being further provided with a concavity, the curvature of which coincides with the internal surface of said body portion.

7. A telephone mouthpiece, comprising a sleeve having a concavity, and also having sound passages through said concavity, and a body portion engaging said sleeve and having an inner surface registering with one of the surfaces of said concavity so as to form therewith a practically continuous surface.

8. A telephone mouthpiece, comprising a sleeve having generally a cylindrical form and provided at one of its ends with a portion having a concavity, and also having sound apertures, and a body portion of molded material engaging said sleeve both externally and internally, said body portion encircling said concavity so that said concavity virtually forms a bottom for said body portion.

9. A telephone mouthpiece, comprising a body portion of molded material having internally an annular shoulder, and a metallic sleeve connected rigidly with said body portion and having a concavity, said sleeve being further provided with a portion engaging said shoulder, said concavity joining

the inner surface of said body portion so neatly as to form a practically continuous surface therewith.

10. A telephone mouthpiece, comprising a body member of molded material, and a metallic sleeve connected with said body member, said metallic sleeve having a concavity which forms virtually a bottom for said body member, said sleeve being further provided with a thread whereby it may be mounted.

11. A telephone mouthpiece, comprising a sleeve having a concavity, and a body portion connected with said sleeve and having an inner surface in registry with said concavity, said sleeve being further provided with sound passages.

12. A telephone mouthpiece, comprising a body member having a curved inner edge, and a sleeve connected with said body member and partially embedded therein, said curved inner edge of said body member being disposed within said sleeve, and said sleeve being provided with sound passages.

13. A telephone mouthpiece, comprising a sleeve provided externally with a thread, and further provided with a concavity and with an annular portion encircling said concavity, and a body member of molded material engaging said sleeve and encircling said concavity thereof.

14. A telephone mouthpiece, comprising a sleeve having an annular portion and a concavity within said annular portion, and further provided with sound passages within said annular portion, and a body member of molded material partially enveloping said sleeve and engaging said annular portion thereof.

15. A telephone mouthpiece, comprising a sleeve having generally a cylindrical form and provided with passages extending radially through it, said sleeve being further provided with a portion having sound passages, and a body portion partially enveloping said sleeve and made of molded material extending through said passages extending radially through said sleeve.

16. A telephone mouthpiece, comprising a body portion of molded material, and a metallic sleeve engaging said body portion, said metallic sleeve being provided with an annular portion and with holes extending through said annular portion, said body member having portions extending through said holes for the purpose of anchoring said sleeve relatively to said body member, said sleeve being further provided with sound passages.

17. A telephone mouthpiece, comprising a body member of insulating material having a thick portion, and a metallic sleeve provided with threads and with slots, said metallic sleeve being partially embedded within said thick portion, a portion of said threads and a portion of said slots constituting anchorages for securing said metallic sleeve relatively to said thick portion of said body member.

18. A telephone mouthpiece, comprising a hollow member provided with a portion for securing it to a support, and further provided with ends and with a rounded bottom, said bottom being provided with sound passages and being located between said ends.

19. A telephone mouthpiece, comprising a hollow member provided with ends, a concavo-convex bottom located between said ends of said hollow member and provided with sound passages extending through said bottom, and means for securing said hollow member to a support.

20. A mouthpiece, comprising a hollow member provided with ends and with a curved inner side wall, a concave hemispherical bottom located within said hollow member and disposed between the ends thereof, said bottom being provided with sound passages, the curved inner side wall of said hollow member merging into said concave hemispherical bottom, and means for securing said hollow member to a support.

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

LOUIS STEINBERGER.

Witnesses:
WALTON HARRISON,
PHILIP D. ROLLHAUS.