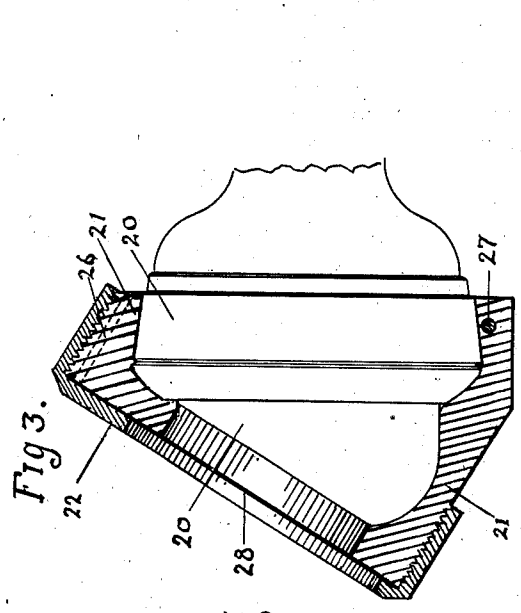
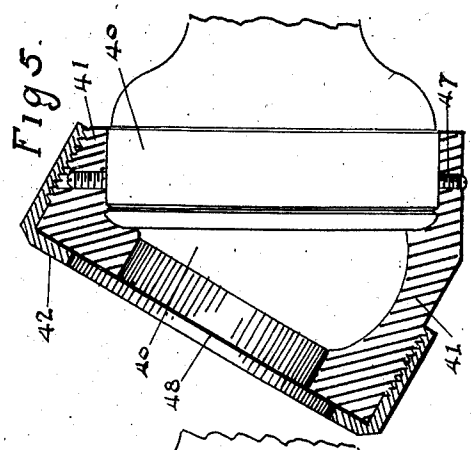
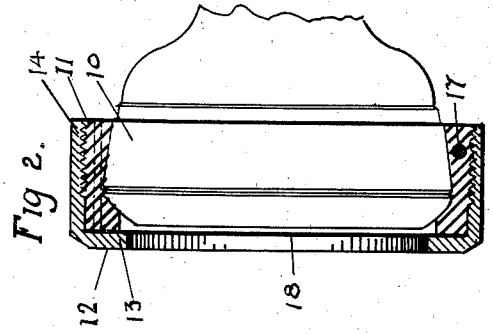
Sept. 9, 1947. R. L. LEWIS 2,427,147

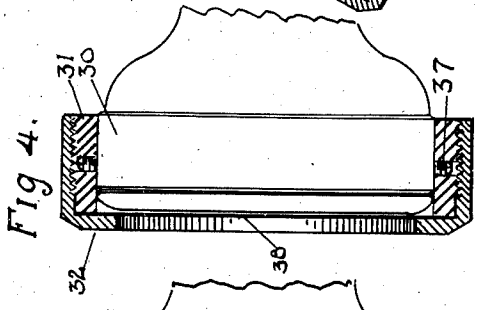
SANITARY TELEPHONE ATTACHMENT

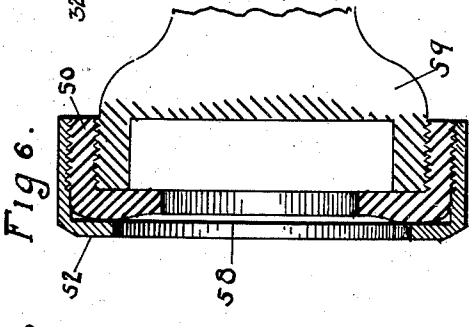
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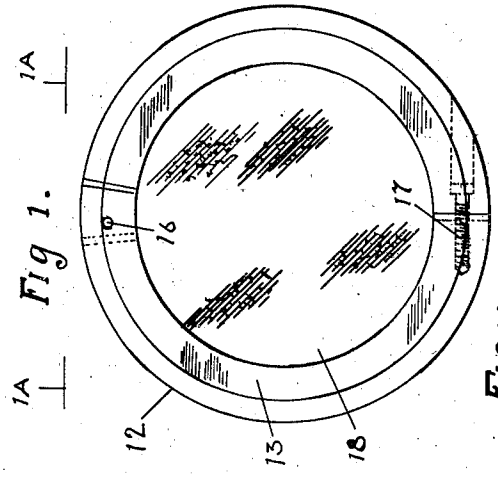


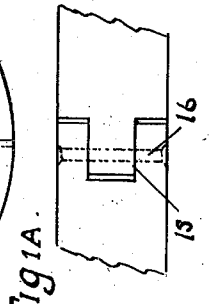












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SANITARY TELEPHONE ATTACHMENT

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8 Claims. (Cl. 179—185)

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This invention is directed to a telephone attachment providing a filter for the transmitter mouthpiece adapted to maintain the mouthpiece germ free and otherwise sanitary.

The general object of the invention is to provide a device of this character which is reliable and durable, and which enables the filter element to be replaced quickly and easily.

Telephone mouthpiece filters for sanitary purposes have been known heretofore but have not been generally accepted. Unsightliness, difficulty of changing the filter element and lack of reliable securing connection with the attachment and the mouthpiece are probably the major factors explaining their lack of success.

The filter attachment of the present invention is constructed to avoid the objections just mentioned, and more particularly to provide a device which is reliable, yet simple in mechanical construction, of neat appearance and adapted to be employed without annoyance to telephone users. Further, the essential construction of the invention is such as to adapt it to embodiment in various forms for telephone transmitters of the different types now in general use.

The invention will be readily understood by reference to the embodiments thereof shown in the accompanying drawing hereafter to be described.

In such drawings:

Fig. 1 is a front plan view of a filter attachment according to one form of the invention;

Fig. 1A is an enlarged fragmentary elevation taken on line 1A—1A of Fig. 1 showing a detail of construction;

Fig. 2 is a side view, partly in section and partly in elevation, showing the attachment of Fig. 1 applied to a telephone transmitter;

Fig. 3 is a view corresponding to Fig. 2 showing a modified form of attachment applied to a different type of telephone transmitter;

Fig. 4 is a similar view of still another embodiment adapted to a third form of transmitter;

Fig. 5 is a similar view of still another embodiment applied to a fourth type of transmitter; and,

Fig. 6 is a similar view of a modified construction according to the invention which dispenses with one of the parts required in the other embodiments.

The filter attachment of the invention shown in Figs. 1, 1A and 2 is adapted for use with a telephone transmitter having a cap or mouthpiece 10 with a tapering peripheral wall, and includes

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an adapter 11 of annular form having its inner periphery shaped to conform to the inwardly and outwardly tapering wall portions of cap 10. Engageable with adapter member 11 is an auxiliary cap 12 having a front portion 13 apertured in its central area for voice transmission and here taking the form of an annulus. Cap 12 is formed with a peripheral flange 14 fitting the outer periphery of adapter member 11. Internal threads on flange 14 engage external threads on adapter 11 so that auxiliary cap 12 may be easily screwed on and off the adapter.

To enable the adapter to be applied to transmitter cap 10 it is made in split form with the two sections hinged together at 15 by a hinge pin 16. After the adapter has been applied to the transmitter cap 10 the free ends of the cap are drawn together by a securing screw 17 which clamps the adapter firmly on the transmitter cap.

The outer annular portion 13 of auxiliary cap 12 is formed on its inner side to provide an annular seat for a filter disc 18 of paper, cloth, or other suitable material adapted to trap and chemically treated to destroy germs which may be discharged from the mouth of a telephone user incident to talking. The outer end of adapter member 11 forms a coacting seat for filter disc 18. By placing a filter disc in cap 12 and screwing it on adapter 11 the marginal portion of the disc is clamped between the coacting seats of the cap and adapter member and completely shields transmitter cap 10.

It is desirable to frequently change the filter disc as its useful life is limited. This is easily accomplished by unscrewing the cap 12 from the adapter, removing disc 18 and inserting a new one in the cap and then screwing the cap again tightly on the adapter member.

The filter attachment of Fig. 3 is designed for a telephone transmitter 20 of the type having a hooded extension 20' and tapering side walls. Here adapter member 21 is formed with an angular extension 21' to accommodate transmitter cap hood 20', being shaped interiorly to conform to the contour thereof. As in the embodiment of Figs. 1 and 2 adapter member 21 will comprise hinged sections secured together by a hinge pin 26 and provided with a screw 27 to draw the free ends of the section into clamping engagement with the hooded transmitter cap. The auxiliary cap 22 of the attachment is similar to cap 12 and is screw threaded on the angular portions of adapter 21 to conform to the angle of transmitter cap hood 20'. Filter disc

28 is clamped between cap 22 and the angular extension of adapter 21.

The embodiment of Fig. 4 is designed for a telephone transmitter cap 30 having a straight instead of tapering side wall. Since the adapter member 31 can be slid on and off cap 30 the same may be made in the form of a continuous annulus instead of as hinged sections. The auxiliary cap 32 of the attachment is similar to those previously described and is provided with internal threads coactive with external threads on adapter 31. Set screws 37 are threaded in adapter 31 to secure the same rigidly to transmitter cap 30. These are relatively short so as not to interfere with auxiliary cap 32 which coacts with the outer end of the adapter to clamp filter disc 38 in operative position.

The embodiment of Fig. 5 is designed for use with a transmitter cap 40 having straight side wall, as in the case of Fig. 4, but having a hooded extension 40' as in the case of Fig. 3. Adapter member 41 is provided with an angular extension 41' to accommodate hood 40'. It differs from adapter 21 in Fig. 3 in that it is made in one piece instead of as hinged sections. The auxiliary cap 42 is similar in construction to that in previous embodiments and is screw thereaded on the adapter member to clamp filter disc 48 in position at an angle conforming to transmitter cap hood 40'. Set screws 47 are provided to rigidly secure adapter member 41 to transmitter cap 40.

In the embodiment of Fig. 6 the filter attachment dispenses with an adapter member. This is accomplished through provision of a special telephone transmitter cap 50 which is internally threaded on the transmitter casing 59, as conventionally, and which is provided with external threads on its straight side wall. Internally threaded auxiliary cap 52 can thus be screwed directly on transmitter cap 50, and filter disc 58 clamped at its periphery between the outer marginal portions of auxiliary cap 52 and transmitter cap 50.

Since the telephone transmitter casings and caps comprise molded plastics it is desirable for uniformity of appearance that the filter cap of the attachment, likewise the adapter member employed in most embodiments, be molded of similar material. This may be hard rubber or numerous types of synthetic resins. It will be understood, however, that either or both the auxiliary cap and adapter member may be made of metal.

It will be evident that the invention provides an extremely satisfactory filter attachment for telephone transmitters which cannot be accidentally knocked off, or caused to come apart, but which at the same time permits the filter element to be quickly and easily replaced. Despite its rugged character the attachment is extremely compact and hardly noticeable to the telephone user.

I claim:

1. An attachment for a capped telephone transmitter casing comprising an auxiliary hollow cap, said auxiliary cap having an internally threaded, axially extending, continuous, annular, supporting flange portion which is relatively broad in an axial direction and of sufficiently larger internal diameter than a transmitter casing as to be adapted to fit over the outer periphery of the cap of a transmitter casing, and a centrally apertured, voice transmitting, end portion projecting radially inwardly from the outer end of the supporting flange portion and being

formed on its under face with an annular seat, and a replaceable filter disc within the auxiliary cap for protecting the telephone transmitter cap and having a marginal portion adapted to be removably engaged by the annular seat of the auxiliary cap.

2. A capped telephone transmitter attachment comprising an auxiliary cap having a centrally apertured, voice transmitting, end portion formed on its under face with an annular supporting seat, and an axially extending, internally threaded, supporting flange of greater internal diameter than a telephone transmitter cap and extending rearwardly from the end portion of the auxiliary cap, a continuous annular adapter member adapted to fit over and embrace the outer peripheral wall of a telephone transmitter cap and externally threaded to engage the supporting flange of the auxiliary cap, and a replaceable filter disc housed in the auxiliary cap for covering a transmitter cap and clamped between the annular supporting seat of the auxiliary cap and one end of the adapter member.

3. A telephone transmitter attachment comprising an auxiliary cap having a voice-transmitting apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded peripheral cap securing flange, an externally threaded hollow adapter member removably supporting the auxiliary cap and adapted to fit over a telephone transmitter cap, said adapter member comprising complementary sections hinged together at one side to be swung apart for application to a telephone transmitter cap, means carried by the adapter member for securing together the free ends of the adapter member sections to clamp the adapter on a telephone transmitter cap, and a replaceable filter disc housed in the auxiliary cap and clamped between the auxiliary cap and one end of the adapter member.

4. A telephone transmitter attachment comprising an auxiliary cap having a voice-transmitting apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded peripheral cap securing flange of greater internal diameter than the outer diameter of a telephone transmitter cap, an externally threaded hollow adapter member removably supporting the auxiliary cap and having a tapering annular inner peripheral portion adapted to embrace a telephone transmitter cap having a tapering side wall, means carried by the adapter member for securing rigid engagement of the adapter member on a telephone transmitter cap having a tapering side wall, and a replaceable filter disc housed in the auxiliary cap for covering a telephone transmitter cap and clamped between the auxiliary cap and one end of the adapter member.

5. A telephone transmitter attachment comprising an auxiliary cap having a voice-transmitting apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded peripheral cap securing flange, and externally threaded hollow adapter member removably supporting the auxiliary cap and having a tapering annular inner peripheral portion adapted to embrace a telephone transmitter cap having a tapering side wall, said adapter member comprising complementary sections hinged together at one side to be swung apart for application to a

telephone transmitter cap, means carried by the adapter member for securing together the free ends of the adapter member sections to clamp the adapter on a telephone transmitter cap, and a replaceable filter disc housed in the auxiliary cap and clamped between the auxiliary cap and one end of the adapter member.

6. A telephone transmitter attachment comprising an auxiliary cap having a voice-transmitting apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded annular peripheral flange of greater internal diameter than the outer diameter of a telephone transmitter cap, an externally threaded adapter member including a continuous annular portion adapted to fit over a telephone transmitter cap and removably supporting the auxiliary cap, and a replaceable filter disc in the auxiliary cap clamped between the cap and one end of the adapter member.

7. A telephone transmitter attachment comprising an auxiliary cap having a voice-transmitting apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded annular peripheral flange, an externally threaded adapter member fitting a telephone transmitter cap having a projecting hood and comprising an annular portion adapted to embrace a telephone cap and an angular hollow extension adapted to embrace the transmitter hood, external threads on the adapter member angular extension for removably securing the auxiliary cap, and a filter disc in the auxiliary cap clamped between the cap and the angular extension of the adapter member.

8. An attachment for a telephone transmitter comprising a main transmitter cap having an apertured central area and a surrounding portion forming on its outer side an annular supporting seat, said cap having external threads around its outer periphery, an auxiliary outer cap having an apertured central area, a surrounding portion forming on its inner side an annular supporting seat and an internally threaded peripheral flange having an internal diameter substantially the same at the outer diameter of the main transmitter cap removably threaded on the transmitter cap, and a filter disc in the auxiliary cap clamped around its margin between the auxiliary cap and the main cap.

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