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MOUTHPIECE FOR TELEPHONE TRANSMITTERS.

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924,072. Patented June 8, 1909.

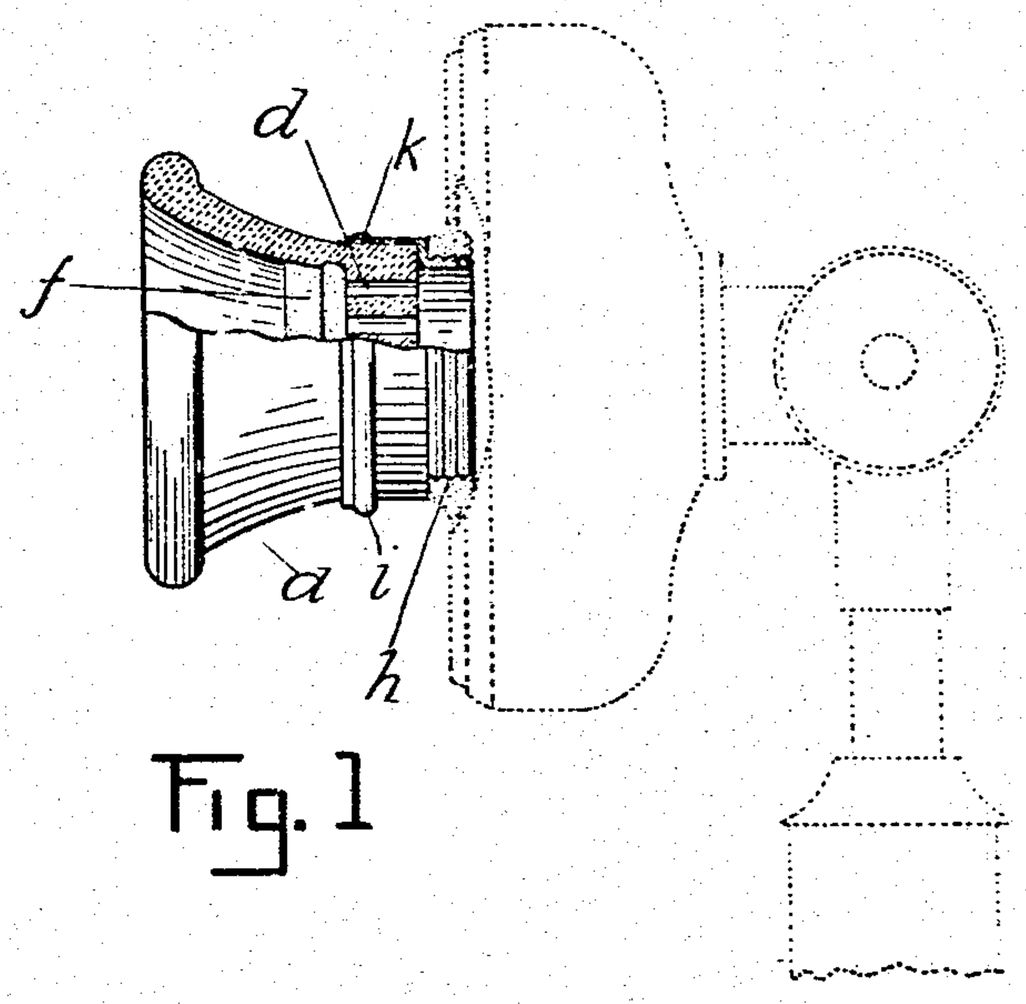

Fig. 1

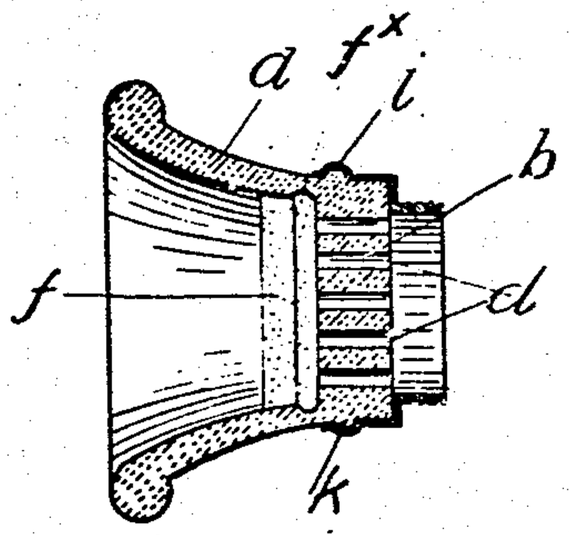

Fig. 2

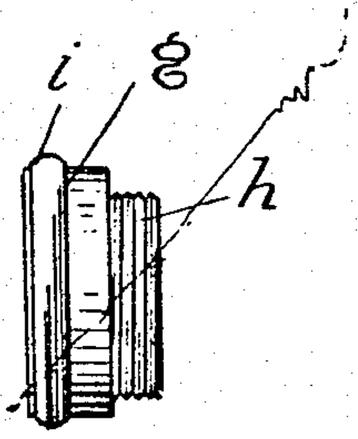

Fig. 3

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UNITED STATES PATENT OFFICE.

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MOUTHPIECE FOR TELEPHONE-TRANSMITTERS.

No. 924,072. Specification of Letters Patent. Patented June 8, 1909.

Application filed November 10, 1908. Serial No. 461,986.

To all whom it may concern:

Be it known that we, MILTON S. HUFSCHMIDT, residing in the city and county of San Francisco, State of California, and CHARLES F. WAGNER, residing in Oakland, in the county of Alameda, in said State, citizens of the United States, have invented new and useful Improvements in Mouth-pieces for Telephone-Transmitters, of which the following is a specification.

This invention relates to improvements made in the construction of a mouth-piece for a telephone transmitter.

The object of the invention is chiefly to provide a telephone mouth-piece having the property of exhaling or giving off disinfecting or antiseptic vapors especially on or in proximity to those surfaces of the mouth-piece that are the more directly exposed to the breath of the person using the instrument.

A further object of the invention is the production of a telephone mouth-piece having the property of absorbing or taking into the substance of its structure a liquid disinfectant, and of giving off the vapors therefrom on the surfaces which are the more directly exposed to the breath of the person speaking into the mouth-piece.

A further object of the invention is to provide a comparatively inexpensive attachment to a telephone transmitter which shall constitute both a mouth-piece and a disinfectant container.

These and other objects we attain and secure in and by the construction and combination of parts producing an improved disinfecting mouth-piece as hereinafter described, the accompanying drawing referred to therein illustrating a telephone mouth-piece of our invention.

Figure 1 represents in side-view a mouth-piece of our invention mounted on a telephone transmitter. Fig. 2 is a sectional-view taken longitudinally through the center of the mouth-piece. Fig. 3 is a view of the ferrule or coupling by which the mouth-piece is attached to the transmitter.

A novel feature in the present improvements consists in forming the body of a telephone mouth-piece of a porous material or composition having the property of absorbing or taking into the substance of its structure a liquid disinfectant—such as a solution of formaldehyde—and having also sufficient hard and durable quality to retain its shape and to withstand the wear to which a mouth-piece is ordinarily exposed. Fire clay or any material or composition of a plastic nature that can be molded, turned or otherwise brought to the required shape and of sufficient porosity when baked or fired to possess the proper absorbing quality, can be used for the purpose. And as formed of such material the body *a* of the mouth-piece is preferably molded to shape with a solid or closed bottom *b*, in which apertures *d* are formed either in the operation of molding or afterward.

The sides of the body are preferably made somewhat tapering, preserving or conforming to the usual shape of the rubber mouth-piece, excepting that the walls of the trumpet shaped body are made thicker than in the rubber mouth-piece.

In the course of shaping and baking the mouth-piece if it be made of plastic material, or if it be formed from porous material without being burned the surfaces of the mouth-piece are glazed or coated to render them nonporous, both for the purpose of retaining the absorbed liquid with which the body is filled before it is placed on the transmitter, and also to prevent dust from adhering to the surfaces and to insure greater cleanliness generally.

The glazing or coating being applied in such manner as to cover the surfaces both within and without, is nevertheless omitted or removed on one part or on several parts of the surface so as to leave the porous substance of the body exposed to a sufficient extent for the liquid to be taken up and absorbed, as well as to escape and be given off by evaporations or as exhalations. These portions of the surface uncovered and exposed are formed or produced in one way by omitting the glazing or coating; in another way, by grinding or otherwise removing the coating. These uncovered or unglazed portions are located preferably on the interior surface of the mouth-piece, as seen in Figs. 1 and 2, where the porous substance of the body indicated at *f* is exposed on the surface in a ring or band extending around the inner surface in close relation to the perforated diaphragm or bottom *b*. This is the preferred location for the exposed portion of the porous substance of the body, but the same may be located at other points either on the outside or the inside of the mouth-piece, and

we do not desire to be understood as limiting this feature in the construction of a mouth-piece of our invention to the particular location or the particular extent of the exposed part. In practice, however, we have found, that when located on the inside of the mouth-piece as illustrated in Figs. 1 and 2, the liquid is less liable to escape and drip from the rim of the mouth-piece before being taken up or dissipated by the evaporating action or influence of the breath, in the event of the porous body having been filled to excess with the liquid.

Being located on the inner wall of the mouth-piece, the exposed porous portion enables the liquid to be applied and readily absorbed by dropping it into the mouth-piece, while holding the latter at an angle with the lower side of the rim slightly elevated: or else by immersing the article in the liquid and then slowly revolving it, so as to bring the exposed porous portion at the bottom in contact with the liquid and until the substance of the body becomes sufficiently saturated. If a groove or depression be made in the exposed porous portion *f*, as indicated at $f^{\times}$ Fig. 2, the liquid will be more easily absorbed when it is poured or dropped into the mouth-piece.

Usually after the first treatment in which the mouth-piece has taken up as much as it will absorb without being liable to drip, the loss of liquid by evaporation is readily replaced by introducing a few drops from time to time into the mouth-piece and then turning it a few times on the transmitter without removing it.

A solution of formaldehyde, or other disinfecting substance in a liquid form, applied to the mouth-piece of our invention in the above described manner will give off vapors or exhalations to a sufficient extent or degree to continuously disinfect the surfaces of the mouth-piece which are exposed to contamination from the breath of the persons using the transmitter.

As a means of detachably securing this mouth-piece to the transmitter we fix on the base or smaller end of the body a metal ferrule *g* having a screw-threaded end *h* that is fitted to screw into the socket on the transmitter; the ferrule being fixed in place on the mouth-piece by spinning the neck *i* over a rib *k* on the end of the body. This ferrule constitutes a strong and simple coupling for fixing the mouth-piece in place, when from the character of the material of which the body is made it would not be practicable to form the screw-thread directly on the body itself.

We claim:—

1. A telephone mouth-piece having a porous body adapted to absorb a disinfecting liquid, and a non-porous coating covering the surfaces of the body excepting a portion thereof of relatively small area, which is left exposed.

2. A telephone mouth-piece formed of porous material of an absorbing character capable of taking up a disinfectant in liquid form, the surfaces of the body of the mouth-piece being non-porous and adapted to confine the liquid within the porous body and having a portion of the porous body of relatively small area exposed to the atmosphere.

3. As a new article of manufacture a telephone mouth-piece formed of a porous, liquid absorbing substance, and having its surfaces rendered non-porous excepting a portion thereof of relatively small area where the porous substance of its body is exposed at the surface.

4. As a new article of manufacture a telephone mouth-piece having a porous body and non-porous surfaces; a portion of the porous body being exposed at the surface for charging the body with a liquid disinfectant.

5. As a new article of manufacture a telephone mouth-piece having a porous body containing a disinfectant in a liquid form, a non-porous coating on the surfaces of the body, and a section of the said coating being omitted on a portion of said surfaces for escape of the disinfectant.

6. A telephone mouth-piece comprising a porous body and a coating of a non-porous character covering the surfaces of the body, a portion of said coating of relatively small area being removed to expose the porous substance of the body.

7. In a telephone mouth-piece, the combination with a body of a porous character adapted to absorb and hold a liquid and having surfaces of non-porous character adapted to confine the liquid within the porous body and having a portion of the porous body exposed at the surface, of a coupling on the end of the body as a means for fixing the mouth-piece in place.

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