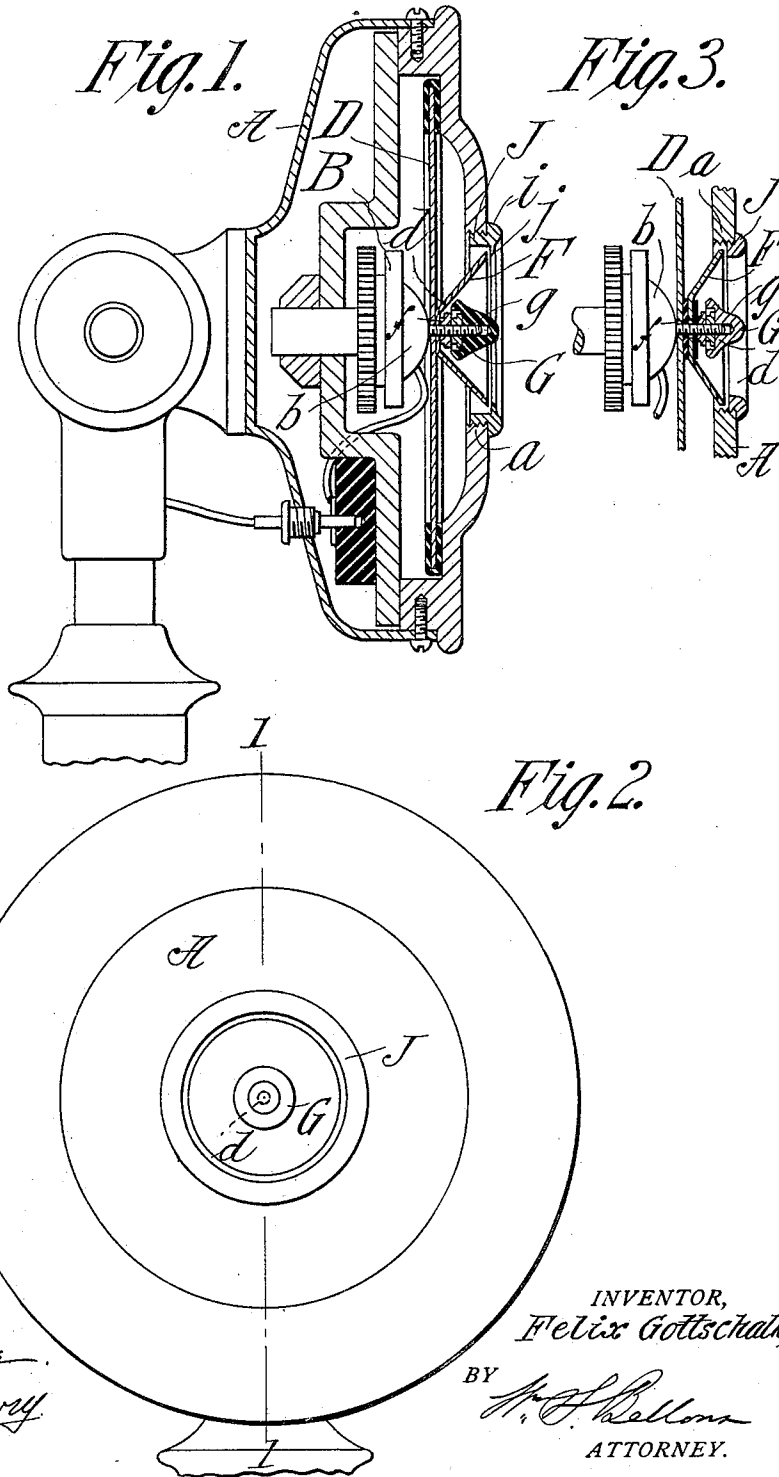


977,622.

Patented Dec. 6, 1910.



WITNESSES:
H. L. Sprague
R. M. Mowry

INVENTOR,
Felix Gottschalk
 BY *H. J. Hellman*
 ATTORNEY.

UNITED STATES PATENT OFFICE.

FELIX GOTTSCHALK, OF NEW YORK, N. Y.

TELEPHONE-TRANSMITTER.

977,622.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed February 25, 1910. Serial No. 545,844.

To all whom it may concern:

Be it known that I, FELIX GOTTSCHALK, a citizen of the United States of America, and resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Telephone-Transmitters, of which the following is a full, clear, and exact description.

This invention for improvement in telephone transmitters, usually of the Bell type, particularly pertains to one such as described and shown in Letters Patent of the United States issued to me Feb. 22, 1910, No. 950,229, characterized by the absence of the usual forwardly flaring mouthpiece which projects in a considerable extent beyond the front of the instrument, and by the provision of a forwardly flaring cup shaped shell having its rear portion located in proximity to the front electrode of the resistance cup and extending forwardly therefrom and terminating in comparatively close relation to the front wall of the casing.

The present invention is in further pursuance of the object to produce a telephone transmitter which is in the highest degree sanitary, especially in that it is not in the front portion thereof a receptacle or collector for germs or any residue from the moisture of the breath, or dirt or foreign matter of any character; and in pursuance, furthermore, of the object of having the front marginal portion of the cup shaped shell concealed and guarded by a means which is not only efficient to this end but also enhances the appearance of the transmitter at its front; and still furthermore to the end that the somewhat delicate means of connection whereby the cup shaped shell is, by its base or back portion held in its proper relation to the front electrode safeguarded against being interfered or tampered with to the detriment of the operative efficiency of the instrument.

The device comprising parts in combination and arrangement for constituting the present improvements is hereinafter fully described in conjunction with the accompanying drawings and set forth in the claims.

In the drawings:—Figure 1 is a central sectional view from front to rear, on an enlarged scale, of the improved transmitter. Fig. 2 is a front view showing the attractively simple face aspect of the instrument. Fig. 3 is a partial sectional view of parts

similar to those shown in Fig. 1, but indicating slight differences to be hereinafter referred to.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings, A represents the chambered casing of the transmitter having in the front thereof a circular aperture *a* which is screw threaded; B represents the resistance cup comprising the rear and front electrodes and interposed granular carbon as usual, a portion of the front electrode *b* being exposed to view in the drawings, and *c* represents a forwardly extending screw threaded stud understood as supported by the front electrode and forwardly extending therefrom in the line of its axis.

D represents the diaphragm and F represents the cup shaped shell having a perforation centrally in its back whereby it is engaged about said stud in close relation to the front electrode, the diaphragm D, as the instrument is here represented, only intervening.

f represents a nut, or more strictly speaking a plurality of nuts, screw engaging on the stud and binding the shell in its place in relation to the front electrode through the medium of the diaphragm (or in some cases where the diaphragm is omitted as, for instance, as set forth in my application for Letters Patent of the United States filed Oct. 25, 1909, Serial No. 524,385, holding the back of the shell, which, in such instance, exclusively serves as the diaphragm in its proximate relation to the front electrode).

G represents a substantially conical shaped member having therein a screw threaded socket *g* which opens rearwardly and is closed by the forward attenuated or apex portion of the conical member; and this member by its threaded socket portion screw engages the forward portion of the shell. The said conical member G has its rear portion chambered, that is, made with an enlarged rearwardly opening cavity therein to receive the said nut or nuts *f* in an inclosed relation therein.

The forwardly flaring cup shaped shell F has its circular marginal portion disposed within the aforementioned front aperture *a* in the front wall of the transmitter casing; and J represents a bezel ring which screw engages in the threaded aperture *a* and covers the forward circular edge of the shell.

This bezel ring, as represented in the section thereof, Fig. 1, has an outlying flange *i* which may bottom against the front wall of the casing marginally of its aperture; and such ring has an inwardly extending flange *j* which overlaps the adjacent edge of the cup shaped shell; but in the section, Fig. 3, the circular edge portion of the shell is disposed within the thickness of the front wall of the casing and the screw engaging portion of the bezel which covers and conceals the edge of the shell extends only part way through the thickness of such wall. These slight differences, as indicated by comparison between Figs. 1 and 3, are of small moment, and the provision of the bezel of either of the forms is a mere matter of preference of the constructor.

The conical member *G* is preferably made of hard rubber of the best quality and highly polished, exteriorly, and when applied in its screw engagement on the stud it is turned up to a hard seating against the nut or nuts practicably by the employment in the fingers of emery or crocus cloth; and by reason of the highly polished and frictionless peripheral character of this member *G* any ordinary attempts of curious or malicious persons to turn and loosen it will be futile; and hence this part *G* serves as an additional lock nut and as a guard for the nut or nuts *f*,—it also in no way impedes the sound waves produced by a person speaking in the direction into and against the cup shaped shell, which latter concentrates them to the axial center of the instrument, and it imparts in conjunction with the bezel ring a most attractive face aspect to the instrument which is in a degree heightened by the color thereof contrasting with the polished surfaces of the metallic shell *F* and the bezel ring *J*.

The making of the conical guard member *G* of hard rubber or glass, fiber or other insulating material is advantageous in that it prevents the instrument from becoming short circuited as might be accidentally or wilfully done by a person who might place a metallic object against the metallic bezel ring and against the forward end of the conical guard member; although the liability of this short circuiting effect is never very great and the conical member may, for comparatively good results, be composed of metal; and even when metal is used it may be suitably insulated so that short circuiting

in the manner above referred to will be prevented.

As manifest, the parts constituting the components of the devices for the improvement of the transmitter are of extremely plain, simple and inexpensive construction; and, of course, it is understood that by reason of the form and arrangement of the parts, dirt and moisture are excluded from the exterior of the instrument, and the front of the latter may be very easily and thoroughly cleansed as occasion therefor may require.

I claim:—

1. A telephone transmitter having an aperture in the front of its casing, the encircling wall of which is screw threaded, and the resistance cup having a forwardly extending stud supported by the front electrode thereof, a forwardly opening cup shaped shell having a perforated back engaged about said stud, a substantially conical member, having therein a screw threaded socket which opens rearwardly, and is closed by the forward attenuated portion of said conical member, and which by its threaded socketed portion screw engages the forward portion of the stud, and a bezel ring screw-engaged in the threaded aperture of the casing and covering the forward circular edge of said shell.

2. A telephone transmitter having an aperture in the front of its casing, and the resistance cup having a forwardly extending screw threaded stud supported by the front electrode thereof, a forwardly opening cup shaped shell having a perforated back engaged about said stud, a nut screwing on the stud and against the back of said shell, a substantially conical member, having therein a screw threaded socket which opens rearwardly, and is closed by the forward attenuated portion of said conical member, and which by its threaded socketed portion screw engages the forward portion of the stud, and which member has its rear portion chambered to receive said nut in an inclosed relation therein, and a bezel ring engaged in the threaded aperture of the casing and covering the forward circular edge of said cup shaped shell.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

FELIX GOTTSCHALK.

Witnesses:

G. R. DRISCOLL,
W. M. S. BELLOWES.