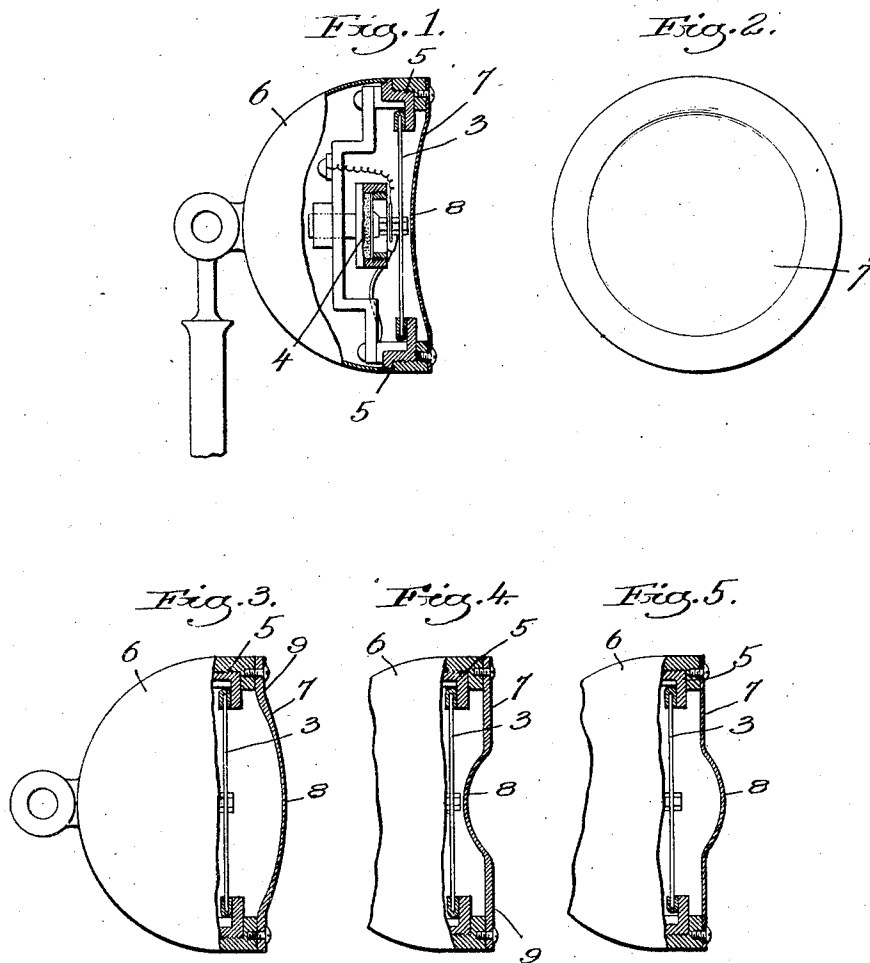


J. H. O'CONNELL.  
 SANITARY TELEPHONE TRANSMITTER.  
 APPLICATION FILED DEC. 5, 1908.

1,010,449.

Patented Dec. 5, 1911.



witnesses:

Fred. S. Grumbach  
 Joseph M. Ward,

Inventor.  
 John H. O'Connell,  
 by *Emory & Emory* Attys.

# UNITED STATES PATENT OFFICE.

JOHN H. O'CONNELL, OF BOSTON, MASSACHUSETTS.

SANITARY TELEPHONE-TRANSMITTER.

1,010,449.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed December 5, 1908. Serial No. 466,048.

*To all whom it may concern:*

Be it known that I, JOHN H. O'CONNELL, a citizen of the United States, residing at Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Sanitary Telephone-Transmitters, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object to provide a telephone transmitter which is sanitary in every respect and which affords no opportunity for the accumulation of disease germs, dirt, dust, etc., on the diaphragm or other interior parts of the transmitter.

All transmitters that I am familiar with are provided with a front plate having an opening through which a portion of the diaphragm is exposed, and usually a mouth piece is employed to direct the sound waves through the opening in the front plate and onto the diaphragm. In telephones having this construction the diaphragm is very apt to accumulate dust, dirt or disease germs, but it is impossible to remove the diaphragm for cleansing or disinfecting it because said diaphragm is permanently connected with the variable resistance and other interior parts of the transmitter. With my invention the diaphragm is entirely protected because the front plate is imperforate and has no opening therein through which unsanitary matter might find its way to the diaphragm. I propose to make the central portion of the front plate of sufficient thinness so that it will not interfere with the passage of the sound waves to the diaphragm, and thus my construction will not interfere in any way with the ordinary use of a telephone transmitter.

In the drawings wherein I have shown several embodiments of my invention, Figure 1 is a sectional view of a telephone transmitter showing one embodiment of my invention; Fig. 2 is a front view; Figs. 3, 4, and 5 are modifications.

The diaphragm of the transmitter is shown at 3 and it has associated therewith the variable resistance 4 of usual construction and it is sustained by a frame 5 forming part of or received in a casing 6. A front plate 7 is arranged over the front of the diaphragm, said front plate being secured to the casing 6 or frame 5 in any suitable way. This front plate is imperforate and therefore absolutely

protects the diaphragm from the breath of persons using the telephone and prevents the accumulation of dust, dirt or other unsanitary matter on the diaphragm.

The central portion 8 of the front plate is made sufficiently thin so that it will not in any way retard the transmission of sound waves to the diaphragm and will not therefore interfere with the ordinary use of the telephone. If desired, the whole area of the front plate may be made thin, as shown in Figs. 1 and 5, or the outer rim portion 9 of the front plate may be made comparatively thick while the central portion 8 only is made thin, as shown in Figs. 3 and 4. The front plate may also have various shapes. It may be concave throughout substantially its entire extent, as shown in Fig. 1, or convex throughout substantially its entire extent, as shown in Fig. 3, or the central thin portion 8 only may be concave, as shown in Fig. 4, or said central portion may be convex, as shown in Fig. 5.

In all embodiments of my invention the diaphragm is completely protected from the breath of the persons using the telephone, and the only part on which any unsanitary matter can accumulate is the front plate itself which can be readily washed or disinfected without injuring or affecting in any way the diaphragm or other delicate parts on the interior of the diaphragm.

While I have shown a few embodiments of my invention, I do not wish to be limited to the constructions illustrated, as it will be obvious that many changes in the arrangement and shape of the parts may be made without departing from the invention.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a telephone transmitter for talking purposes, the combination with a shell, a diaphragm-receiving frame therein and a diaphragm and variable resistance carried by the frame, of a single imperforate metallic front plate overlying the front face of the frame and detachably secured thereto, said plate extending to the periphery of the frame and having a smooth exterior surface free from sharp shoulders, the central portion of said plate being sufficiently thin so as not to interfere appreciably with the transmission of sound vibrations to the diaphragm.

2. In a telephone transmitter for talking purposes, the combination with a shell, a

diaphragm-receiving frame therein and a diaphragm and variable resistance carried by the frame, of a single imperforate front plate detachably secured to the frame and  
5 having a smooth exterior surface free from sharp shoulders, the central portion of which is thinner than the portion near the edge.

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

JOHN H. O'CONNELL.

Witnesses:

LOUIS C. SMITH,

THOMAS J. DRUMMOND.