No. 887,124. PATENTED MAY 12, 1908.

R. H. RALSTON.

VOICE SCREEN FOR TRANSMITTER MOUTHPIECES.

APPLICATION FILED SEPT. 1, 1906.

Fig. 1

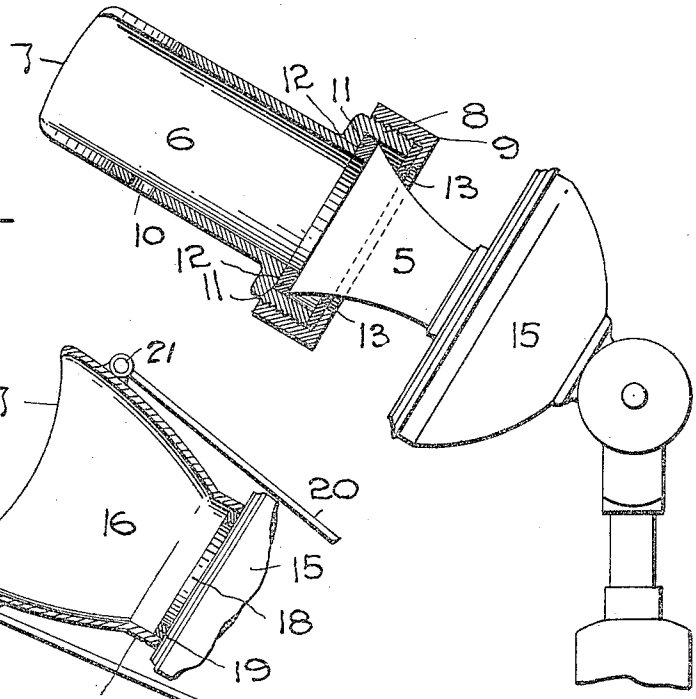



Fig. 4



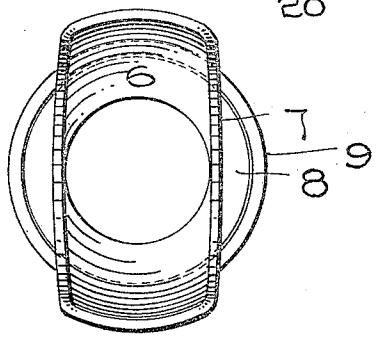




Fig. 3.

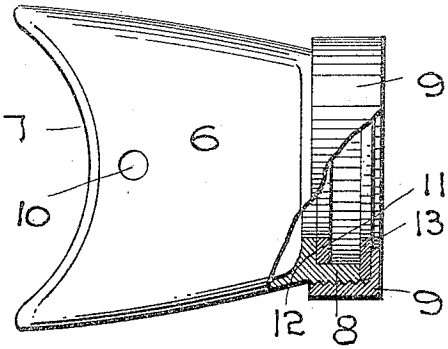



Fig. 2

WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## VOICE-SCREEN FOR TRANSMITTER-MOUTHPIECES.

No. 887,124. Specification of Letters Patent. Patented May 12, 1908.

Application filed September 1, 1906. Serial No. 333,014.

*To all whom it may concern:*

Be it known that I, ROBERT H. RALSTON, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Voice-Screens for Transmitter-Mouthpieces, of which the following is a specification.

This invention relates to improvements in voice screens for transmitter mouthpieces for telephone-transmitters and has for its object to provide a device which by completely concentrating the waves of sound toward the diaphragm, will promote audible and distinct reproduction of articulate speech at the receiving instrument while permitting modulation of the voice to a very low key, and which, by inclosing the mouth of the speaker, conceals the movement of the lips and renders the voice inaudible to persons standing near. I attain this object by the device illustrated in the accompanying drawings, in the various views of which like parts are similarly designated and in which,

Figure 1—represents a side elevation of a telephone transmitter and adjacent parts, my improved mouthpiece being shown in section, Fig. 2—an underneath view of the detached device, partly in section, Fig. 3—a front view thereof and Fig. 4, a sectional view of the device modified to be employed in direct connection with the transmitter.

The device as illustrated in Figs. 1, 2 and 3 is designed to be used in connection with the mouthpiece or funnel 5 now in use on telephone transmitters and consists of the funnel-shaped portion 6, oblong in cross section, the orifice 7 of which is, by concavity of the edges of the opposite sides, shaped so as to conform with the contour of the portion of the human face adjacent to and surrounding the mouth. The opposite, reduced end of the funnel-shaped portion of the device terminates in an integral, annular extension or base 8, the outer circumferential surface of which is threaded to coöperate with the internal thread of an annular screw-cap 9.

One of the sides of the funnel 6 is provided, in suitable proximity to the orifice 7, with an aperture 10 for the purpose of preventing accumulation and subsequent compression of air within the device, when in use.

The contrivance, as described, is applied to the telephone instrument by inserting the mouth of the ordinary mouthpiece 5, in the circular extension of the funnel 6, after which the cap 8 is screwed in place as shown in Fig. 1 of the drawings.

To insure an air tight joint between mouthpiece 5 and the auxiliary funnel, and thus farther prevent escape of sound during the use of the instrument, I have provided two washers 11 and 13 composed of rubber or other elastic substance, one of which, 11, being placed against the shoulder 12, formed at the juncture of the funnel shaped portion 6 and its annular extension 8, engages in practice, the outer edge of mouthpiece 5, while the other, 13, is applied between the outer edge of the said extension and the inwardly ranging flange 14 of the screw cap 9 and engages with its inner edge the circumferential surface of the mouthpiece.

The modified device 16 illustrated in Fig. 4, is intended to be applied directly to the transmitter 15, to take the place of the regular mouthpiece 5. Its annular portion 17 at the base of the funnel encircles the outwardly extending rim 18 on the face of the transmitter, and an interposed washer 19, renders the joint air tight. A flexible strap 20 secured to lugs 21 on the device, affords means to secure the contrivance to the transmitter.

In this connection I wish to observe that the manner of connecting the device to the transmitter or to its mouthpiece is of minor importance and that variation of form and arrangement of this portion of the contrivance, may be availed of within the spirit of my invention, which I claim is,

1. A device of the class named comprising a funnel adapted at one of its extremities to inclose the human mouth and having at its opposite, contracted portion an enlarged, externally threaded cylindrical extension forming at its juncture with the funnel an internal shoulder adapted to be placed in opposition to the outer edge of a telephone transmitter surrounded by the said extension, and an annulus screwed upon the said extension and having an inturned flange surrounding the outer surface of the said transmitter.

2. A device of the class named comprising a funnel adapted at one of its extremities to inclose the human mouth and having at its opposite, contracted portion an enlarged, externally threaded cylindrical extension form-

ing at its juncture with the funnel an internal shoulder adapted to engage the outer edge of a telephone transmitter mouthpiece surrounded by the said extension, an elastic washer upon the said shoulder, an annulus screwed upon the said extension and having an inturned flange and an elastic washer upon the said flange arranged to frictionally engage the outer surface of the said transmitter mouthpiece.

In testimony whereof I have affixed my signature in presence of two witnesses.

ROBERT H. RALSTON.

Witnesses:

G. J. ROLLANDET,

K. M. STUMP.