

W. D. PLUMB.  
TELEPHONE MUFFLER.  
APPLICATION FILED JAN. 19, 1909.

950,865.

Patented Mar. 1, 1910.

Fig. 1

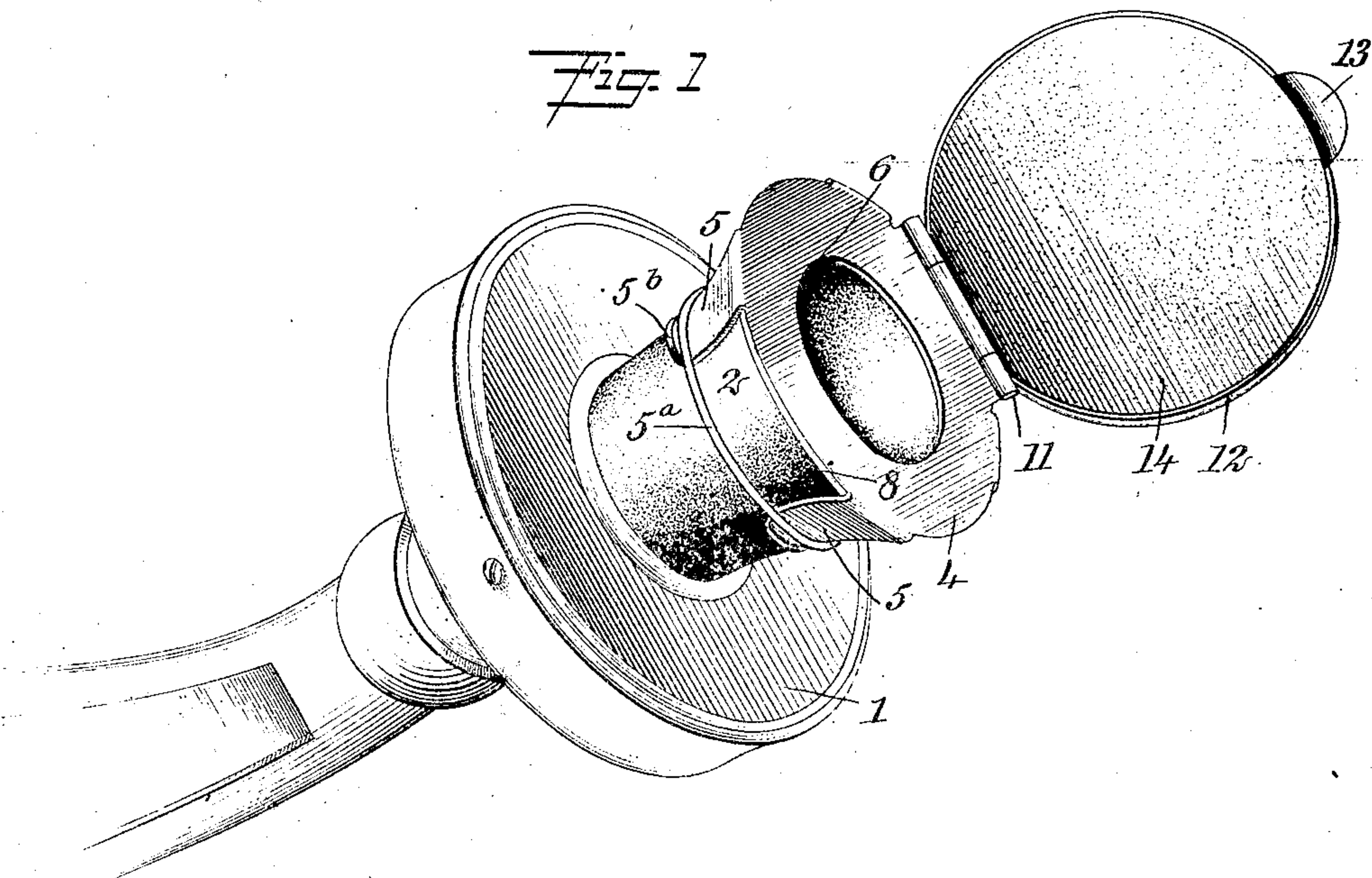
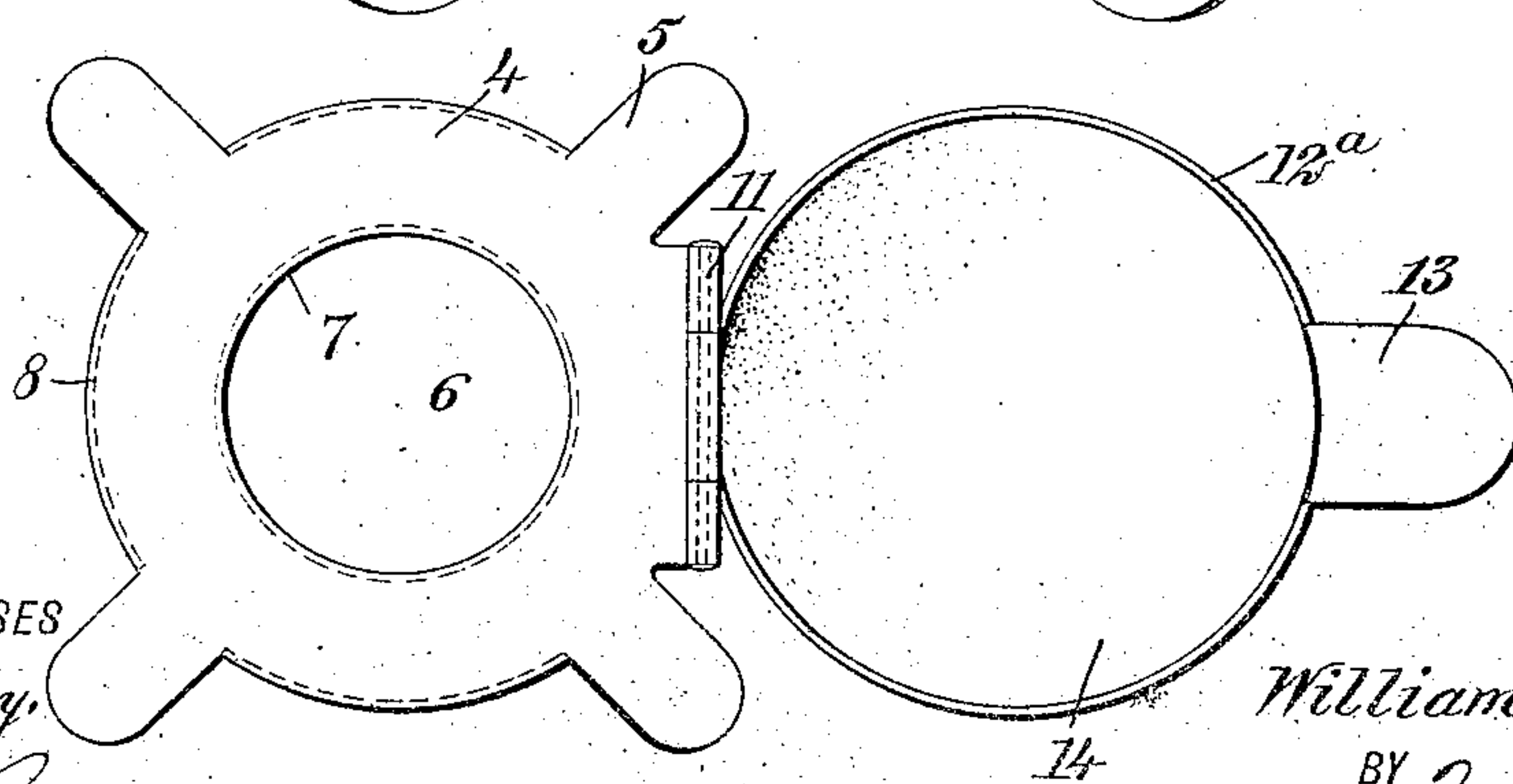
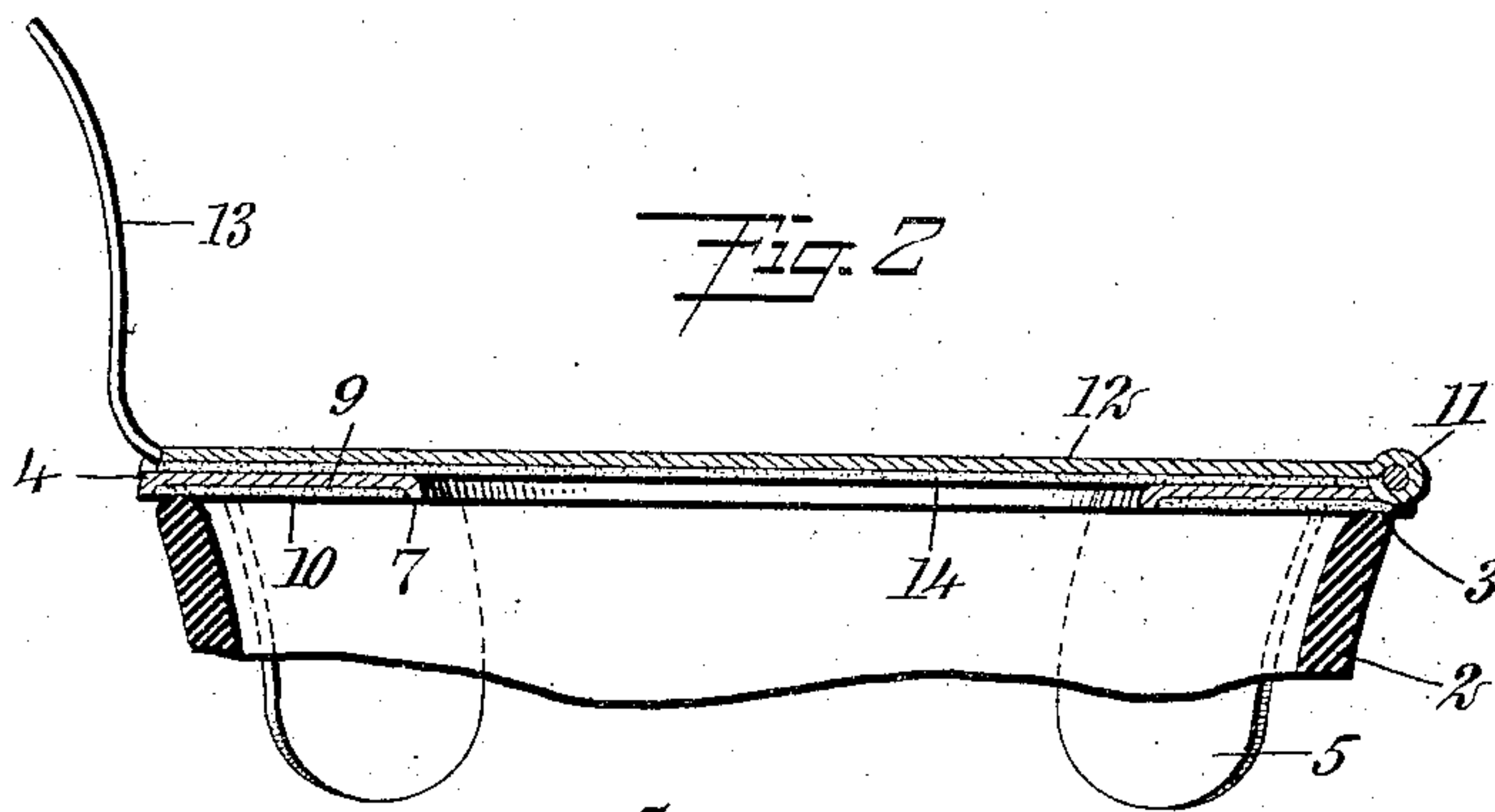


Fig. 2



WITNESSES  
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Fig. 3

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# UNITED STATES PATENT OFFICE.

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TELEPHONE-MUFFLER.

950,865.

Specification of Letters Patent.

Patented Mar. 1, 1910.

Application filed January 19, 1909. Serial No. 473,078.

To all whom it may concern:

Be it known that I, WILLIAM D. PLUMB, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Telephone-Muffler, of which the following is a full, clear, and exact description.

This invention relates to telephones, and especially to a device the purpose of which is to increase the distinctness of sound produced by the receiver, the operation of the device consisting in muffling or dampening the sounds which may be produced sympathetically or otherwise in the diaphragm of the transmitter.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective showing a portion of a transmitter to which my invention has been applied, this view showing my device in its open condition; Fig. 2 is a section through the end of the mouthpiece and showing my device in its closed position; and Fig. 3 is a plan or front elevation of the device representing it opened out and before being bent to its finished form.

Referring more particularly to the parts, 1 represents the sound box of a transmitter having a mouthpiece 2 of the usual bell-form, that is, the mouthpiece expands toward its outer edge or lip 3.

My invention comprises a ring plate 4 having an annular body, as indicated most clearly in Fig. 3. The body of this plate is provided with laterally projecting ears 5 which are integral therewith. The edge of the central opening 6 through this ring is provided with a downwardly projecting lip or flange 7, and a similar flange or lip 8 is formed on the outer edge of the plate between the ears 5. In this way the under side of the ring plate is made to form a wide and shallow groove or seat 9 for a damper ring 10. This damper ring is formed of cloth, blotting paper, rubber, or similar soft or fibrous material not adapted to transmit the vibrations, and a material which operates as a cushion, seating upon the lip 3 of

the mouthpiece. At one side the plate 4 is provided with a hinge 11 by means of which a cover 12 is connected to the ring plate. On the edge opposite the hinge 11, the cover 12 is provided with an outwardly projecting finger-piece or handle 13, and on the inner side of this cover, a damper disk 14 is attached. The dampers 10 and 14 are of the same material, and they may both be attached to their corresponding parts by means of a suitable adhesive substance, such as paste, glue, or cement. I prefer to attach them in this manner for the reason that fastening devices such as rivets, tend to transmit vibrations, and also may become loose so as to present openings through which the sound may pass directly.

Fig. 3 shows the device in the form in which it is when ready for the ears 5 to be bent so that they converge, as shown in Fig. 2. The ears are not so close together as to prevent the device from being placed over the mouth-piece as shown.

In applying the device the ring plate 4 is applied on the lip 3, as indicated in Fig. 2, and the ears 5 are then bent inwardly toward the mouth-piece so that their inner sides come against the wall of the mouth-piece and act as retaining fingers, holding the plate in position.

In order to secure the ears in their clamping position I provide a keeper ring 5<sup>a</sup> which is applied over the small end of the mouthpiece. This ring 5<sup>a</sup> seats on the sides of the ears near their ends and the ends of the fingers are then bent outwardly so as to form retaining tips 5<sup>b</sup> engaging the ring and securing it in position. When the device is applied in this way, the damper 10 seats upon the lip and forms a sound-proof joint. It also forms a vibration-proof joint on account of the cushioning effect of the damper 10. When the person telephoning is speaking the cover 12 will be held open by means of the finger-piece 13, as indicated in Fig. 1, but as soon as he ceases speaking and begins to receive the telephoned message, the cover is held in the closed position indicated in Fig. 2. When the cover is closed in this way, the damper disk 14 effectually closes the opening 6 and forms a sound-proof and vibration-proof closure across the mouth of the transmitter. In this way the diaphragm of the transmitter is effectually cut off or insulated acoustically from the atmosphere around the instrument. This



has the effect of preventing any possible interference by the transmitter from sympathetic vibrations or reflections or sounds produced over the line or in the room where the instrument is placed.

Attention is called to the construction of the ring plate 4 and to the fact that on account of the bell-shape of the mouth-piece, the device retains itself in position once it has been attached. Furthermore, on account of the great width of the damper ring 10 a single device may be applied to any one of a number of transmitters, although the diameter of the mouth-piece may be different. The edge of the cover 12 is crimped into a small flange or lip 12<sup>a</sup> which engages the edge of the damper disk 14 and assists in holding it in place.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A muffler for a telephone transmitter, having a ring plate with a central opening and with outwardly projecting ears adapted to clamp against the outer side of the mouth-piece and forming retaining fingers for said ring plate, a damper ring on the inner side

of said ring plate seating against the lip of the transmitter and absorbing sound vibrations tending to pass from said cover to said mouth-piece and to the diaphragm through the opening in said ring plate, and a cover jointed to said ring plate and adapted to close the opening therethrough and insulating the interior of said mouth-piece from the surrounding atmosphere.

2. A telephone muffler, comprising a ring plate having a central opening therein and having a damper ring on the inner side thereof, means for securing said ring plate to the mouth-piece of a transmitter with said damper ring seating on the lip of the mouth-piece, and a cover jointed to said ring plate and having a damper disk on the inner face thereof adapted to close said opening, and screening the transmitter diaphragm from the vibrations of said cover.

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

WILLIAM D. PLUMB.

Witnesses:

F. D. AMMEN,  
JOHN P. DAVIS.