

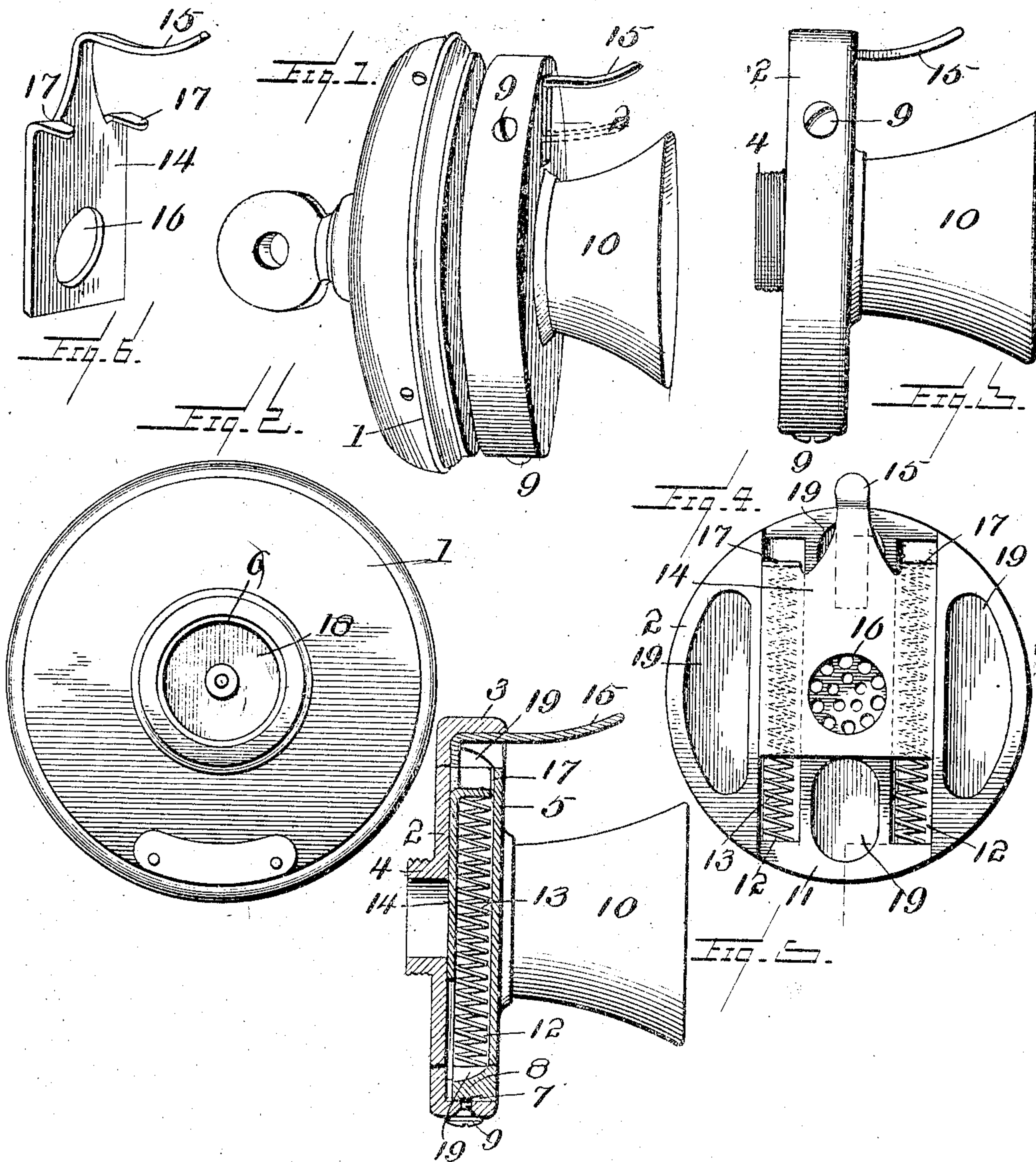
No. 821,877.

PATENTED MAY 29, 1906.

G. A. LONG.

MUFFLER FOR TELEPHONE TRANSMITTERS.

APPLICATION FILED MAR. 1, 1904.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## MUFFLER FOR TELEPHONE-TRANSMITTERS.

No. 821,877.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed March 1, 1904. Serial No. 196,067.

*To all whom it may concern:*

Be it known that, I GEORGE A. LONG, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a certain new and useful Muffler for Telephone-Transmitters, of which the following is a specification.

The invention, as indicated by its name, relates to a device for impeding the transmission of sound to a telephone-transmitter and may be used upon any ordinary telephone in present use, or a special transmitter may be used embodying the invention, which is then contained within the casing which holds the transmitter parts, including the diaphragm.

The object of the invention is to provide a device which is normally in position to permit transmission of sounds to the telephone-transmitter, but which may by manipulation effectually cut off sound-waves and prevent their action upon the diaphragm, which ordinarily gives the necessary vibration for transmitting the sounds.

A further object of the invention is to provide an absolute muffle for the diaphragm of the telephone-transmitter, thereby holding the diaphragm to prevent vibration or by shutting out the sound-waves, and thus deflecting them before they reach the diaphragm to vibrate it.

A still further object is to provide a self-contained device which may be applied to the transmitter of a telephone, such as is in common use.

Referring to the drawings, Figure 1 is a perspective view of the device applied to an ordinary telephone-transmitter. Fig. 2 is a front face view of the transmitter with the muffler removed. Fig. 3 is a view in side elevation of the muffler. Fig. 4 is a rear face view of the front plate. Fig. 5 is a sectional view through the parts shown in Fig. 4. Fig. 6 is a perspective view of the muffler-plate.

In the use of an ordinary telephone-transmitter when the receiver is removed from the hook and held to the ear sounds or sound-waves, which then reach the transmitter, create a vibration of the diaphragm of the transmitter, and these sounds are conducted to the receiver held to the ear of the operator. In using an instrument, for instance, with the windows open and where there is a confusion of noises from street traffic or other sources the vibration upon the transmitter-dia-

phragm is often such as to confuse the vibrations caused by the voice of the user, and oftentimes great difficulty is experienced in clearly hearing a conversation over the instrument. It is well known that it has been common practice to place the palm of the hand over the transmitter while listening to the message transmitted from the other end of the line; but, so far as is known, no device has been provided which could be operated with facility for effectually shutting off extraneous sounds at any desired moment.

A further object in providing such a device results in the use of an instrument for ordinary business. A person using an instrument often desires to ask for information which is not intended to be transmitted over the wire, and the device hereinafter described may be readily used to cut off the transmitter at an instant's notice, and thus preclude the possibility of the transmission of information or sounds not intended for the party called on the telephone.

In the accompanying drawings the numeral 1 denotes an ordinary telephone-transmitter, and 2 a muffler-case secured thereto. This muffler-case comprises two sections, an outer casing 3, having a screw-threaded tubular member 4, and an inner section 5, which forms a direct support for the movable parts of the muffler. The tubular screw-threaded member 4 is of such a size and form as to be inserted in the mouthpiece-opening 6, into which opening the mouthpiece of the transmitter is ordinarily screwed.

The inner or supporting section 5 of the muffler-case has an angularly-formed groove 7, extending about its periphery, one wall of which slopes rearward and outward from the bottom of the groove. The outer casing 3 has screws 9 passing through it, and these screws engaging the beveled surface 8 draw the parts normally together and insure the back face of the section 5 being brought into close contact with the bottom of the cup-like outer casing 3.

The ordinary mouthpiece 10 is screwed into the front face of section 5 in the same manner in which it is ordinarily secured in the opening of the ordinary transmitter.

The inner or supporting section 5 of the casing is provided with a slideway 11 upon its rear face, and on each side of this slideway are recesses 12, within which are arranged springs 13. A shutter or deflector 14, having an outwardly-extending handle 15, is



arranged to slide in the slideway 11. This shutter or deflector is provided with an opening 16 of sufficient diameter to leave a clear opening from the mouthpiece through the muffer-case and to the diaphragm of the transmitter. It is provided at or near its upper end with projecting lugs 17, which when the shutter is in place in the casing extend within the depressions 12 and overlies the springs 13. The handle 15 comes against the inner periphery of the outer casing 3, and thus a suitable stop is provided for limiting the movement of the parts, or the lugs 17 may be so located with reference to the opening 16 that they will stop the shutter or deflector when the lugs reach the upper end of the grooves 12. The muffer-section 5 is cored out, as at 19, to lighten the structure, which, as shown herein, is formed from cast metal, and it is perfectly obvious that the muffer-case may be formed from any desired material and made in any desired manner—as, for instance, from a suitable metal drawn and cupped up to shape.

The operation of the device is apparent. In ordinary use of the instrument the sound-deflector or muffer-plate 14 is in position to permit passage of sounds to the diaphragm 18; but when it is desired to prevent the passage of sounds the handle-finger lever 15 is depressed, as shown in dotted outlines in Fig. 1, and this brings the upper or solid portion of the deflector 14 over the opening 6 of the mouthpiece, effectually preventing the passage of sounds.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A telephone-transmitter including a casing having an opening thereinto, a muffer-case removably secured thereto and comprising a casing, and a shutter arranged to slide within the removable casing.

2. A telephone-transmitter including a casing with an opening thereinto for the reception of a mouthpiece, a muffer-casing adapted to be secured within said opening, said muffer-casing having an opening to receive the mouthpiece, and a muffer-shutter arranged to slide within the removable casing.

3. A telephone-transmitter having a casing with an opening thereinto to receive a mouthpiece, a muffer-casing arranged to be removably secured within said opening and having an opening to receive said mouthpiece, and a muffer normally located within the muffer-casing to permit passage of sound to the diaphragm in the transmitter, and means for moving the muffer to prevent vibration of the diaphragm.

4. A telephone transmitter having an open-

ing for the reception of a mouthpiece, a muffer-casing arranged to be removably secured within said opening and having an opening for said mouthpiece, a muffer located within the muffer-casing, and means for moving the muffer to prevent vibration of the diaphragm.

5. A telephone including a casing with a diaphragm arranged therein, a mouthpiece-opening to said diaphragm for the passage of sounds, an inclosed shutter having an aperture normally registering with the opening of the mouthpiece, means for moving said shutter into position with its aperture out of registering position with said mouthpiece, and means for returning said shutter to normal position after movement.

6. A telephone-transmitter, a casing, means for securing the casing to the transmitter, said casing comprising two parts one adapted to receive the other, means for drawing the two parts together and securing them, and a shutter arranged to slide within the casing.

7. A telephone-transmitter, a muffer-case comprising two parts, one of which has a flange overlying the other, screws extending through said flange, and an angular groove formed in one of said parts and adapted to be engaged by said screws whereby the parts of the muffer-case are drawn together and secured.

8. A telephone-transmitter including a casing having an aperture thereinto, a muffer removably secured thereto and comprising a casing with means for securing said casing appurtenant to the opening in the transmitter, a shutter arranged to slide within the casing, and means for holding the shutter normally at one limit of its play.

9. In combination with a telephone-transmitter including a casing with an opening thereinto, a removable muffer including a casing having an opening registering with that of the transmitter, interengaging screw-threads for securing said muffer-casing to the transmitter, a shutter arranged to move within the casing, means for holding said shutter at one limit of its play, and means extending without the casing for actuating the shutter.

10. A telephone-transmitter, a muffer including a casing, a slideway formed in the casing, spring-pockets arranged adjacent to the slideway, a muffer-shutter provided with an opening therethrough and having lugs overlying said spring, and means for depressing the muffer-shutter.

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