

G. KRACKER.
MUFFLER ATTACHMENT FOR TELEPHONES.
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1,064,492.

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Fig. 1.

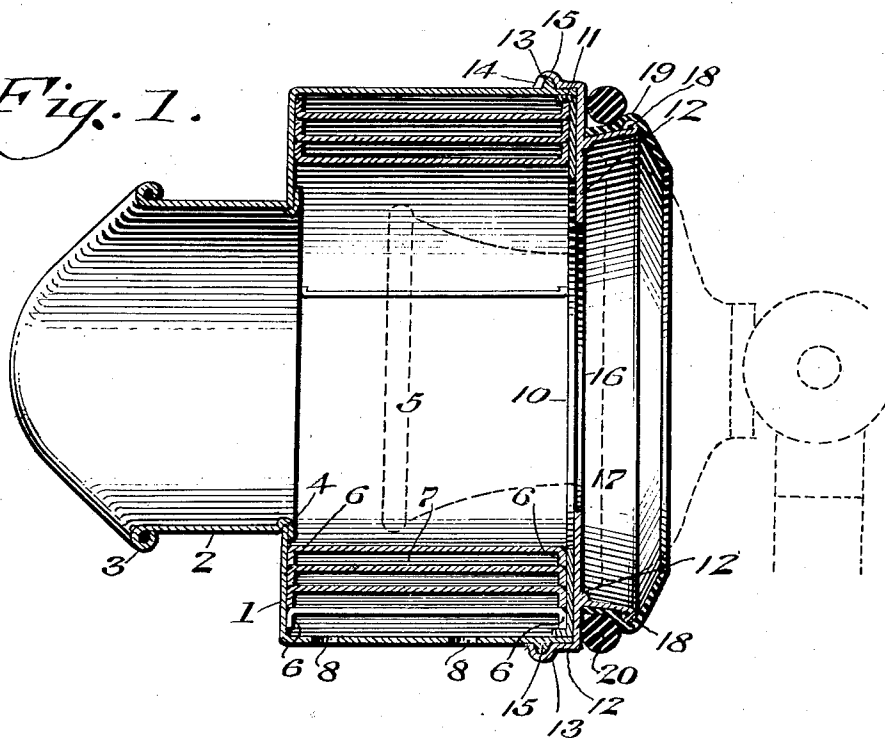


Fig. 2.

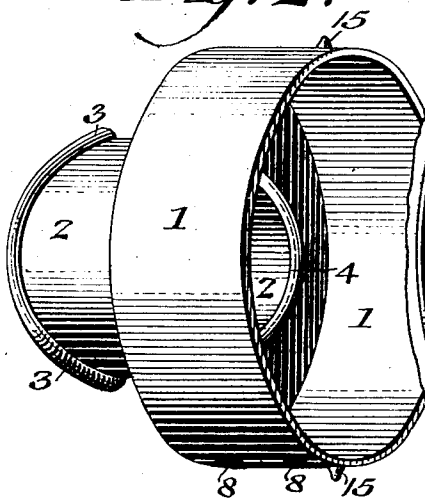


Fig. 3.

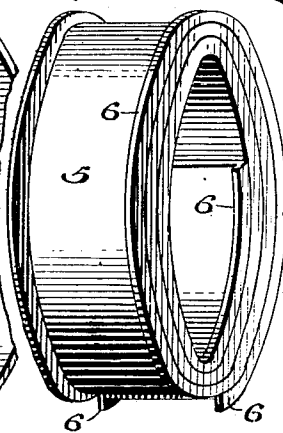


Fig. 4.

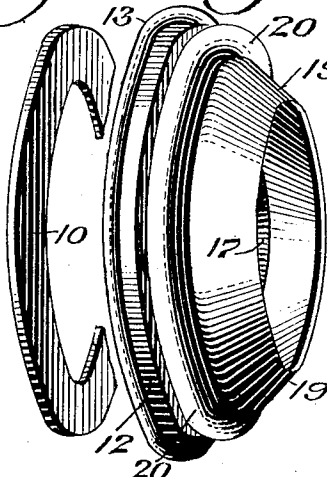


Fig. 5.

WITNESSES

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MUFFLER ATTACHMENT FOR TELEPHONES.

1,064,492.

Specification of Letters Patent.

Patented June 10, 1913.

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To all whom it may concern:

Be it known that I, GEORGE KRACKER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Muffler Attachment for Telephones, of which the following is a specification.

This invention relates to a muffler for use in connection with telephone transmitters and has for an object to provide a device wherein the sound waves may be transmitted in the usual manner to the telephone transmitter without interference and whereby the muffling medium is interposed between said sound waves and the exterior of the device. By this construction it becomes possible to use a telephone in the ordinary manner and transmit the sound as usual while the voice of the user is completely muffled to the exterior of the device and the words cannot be distinguished by anyone in the vicinity thereof. This action is of course predicated upon the position of the user, since it is necessary in operation to have the mouth positioned well within the mouthpiece of the attachment so that sound vibrations may not escape to the exterior thereof.

The device is an improvement on my Patent No. 901,108, granted October 13th, 1908, and in operation is far superior and effective. Furthermore a new result is produced since the novel construction of my present invention does not destroy the voice timbre and it is therefore possible to recognize the voice of any one who is employing the attachment as readily as without the said attachment.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawing one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a vertical section through a muffler embodying my invention. Fig. 2 represents a perspective of the

casing of the device. Fig. 3 represents a section of the sound muffling spiral. Fig. 4 represents a perspective of the retaining ring for the muffling spiral. Fig. 5 represents a perspective of the end cap of the casing and its adjuncts.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a casing preferably cylindrical and having secured thereto a mouthpiece 2 which is in communication with the interior of the casing and formed, in the present instance, with a beaded edge 3 in order to provide a smooth contact surface to closely fit against the face of the user of the device. This mouthpiece 2, as here shown, is fixedly secured to the casing 1 by means of the inwardly crimped edge 4.

5 designates a muffling member preferably in the form of a spiral, the side edges of which are each provided with a flange 6 which forms spacing elements between the several convolutions of the spiral in order to form a continuous passageway 7 from the interior of the casing 1 to a point adjacent exhaust openings 8 formed in the wall of the said casing. As here shown, this muffling member or spiral is held in place by means of an annulus 9 or retaining collar, the opening 10 of which is preferably arranged in alinement with the mouthpiece 2, while the outer edges of the said annulus are inwardly turned as shown at 11 and are adapted to be pressed into position between the outer convolutions of the spiral member and the casing 1, thereby firmly holding the parts in position.

12 designates a cap provided with a circumferential beaded flange 13 slotted at suitable intervals as shown at 14, in order to permit engagement with suitable projections 15 of the casing 1, whereby the parts are secured together by a common type of bayonet joint, although it will of course be understood that any suitable fastening means may be employed for this purpose and it will further be understood that the diameter of this beaded cap 13 is sufficiently large to permit the necessary telescoping action with the casing 1. This cap 12 is provided with a central opening 16 alined with the opening 10 and the mouthpiece 2 and is also provided with outwardly extending flanges 17, the edge of which is reversely turned to form a shoulder 18 over which is seated an

annular strip of rubber 19 or like flexible material by means of which the device is removably secured to the mouthpiece of an ordinary telephone. In the present instance, this rubber member 19 is held in place through the medium of a collar 20, likewise of elastic material, which is adapted to be forced over the shoulder or rounded edge 18 and snaps into position as shown in Fig. 1, thereby preventing displacement of the attaching means and yet allowing ready removal of the same or substitution of another piece of the same material in case of wear.

In operation the device is placed in position upon the mouthpiece of a telephone and there held by stretching the member 19 over a portion of the telephone transmitter in which position all of the openings between the transmitting device and the mouthpiece 2 are in alinement to transmit sound waves directly to the said transmitter. The user of the device by placing the mouth closely within the mouthpiece 2 may talk into the telephone in the ordinary manner and whatever sound waves escape to the exterior thereof are obliged to travel a circuitous path through the spiral member 5 and finally discharge through the openings 8 at which time they are so weakened as to prevent any words being distinguished.

It will now be apparent that I have provided a simple and effective muffling device for use in connection with telephone transmitters wherein a continuous sound muffling spiral member is utilized to deaden and decrease the sound waves prior to their discharge to the exterior of the casing and wherein the sound waves which are adapted to contact with the transmitting mechanism are not intercepted or affected by any interposed parts. It will also be noted that in a device of this character it is very necessary that they may be readily taken apart or disassembled for cleaning purposes and, in my present construction, any or all parts may be readily taken out and thoroughly cleaned.

I am aware that it has heretofore been proposed to provide tubular devices spirally arranged in an attempt to muffle the sound but in practice I have found such devices choke the sound waves and create more or less of a back pressure which causes the following sound waves to be broken up, producing a confused and unnatural sound within the muffling device and rendering it impossible to recognize the voice of the speaker. It has been found in practice that in mufflers of the spiral type such as shown in my prior patent, No. 901,108, of October 13th, 1908, that owing to the dimensions of the spiral way, which must necessarily be small to form a compact article, that dust

and dirt enter this way or path and within a comparatively short time, clog the same to such an extent that the sound waves do not have free access to the outside of the muffler. This results in choking the muffler in the manner heretofore described, and it is with this in view that I have devised a separable or sectional structure which permits ready access to the spiral channel to allow the dirt to be removed and the article again become an efficient muffling device. In my present construction I have obviated such difficulties and the sound waves from one word or tone are so quickly distributed through the broad channel of the convolutions of my muffling spiral that the next word or tone is not interfered with and therefore the voice timbre is not destroyed.

It will now be apparent that I have devised a novel and useful construction of a muffler attachment for telephones which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

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

In a device of the character stated, a casing tubular in form and having an open end affording free access to the interior thereof, a mouthpiece secured to the opposite end of said casing and communicating with the interior thereof, a sound muffling spiral member located in said casing and readily removable therefrom, said member being circumferentially arranged with respect to the axial path of sound waves from said mouthpiece, an annular member fitted within the open end of said casing and retaining said spiral member in normal position, a cap having an opening therein adapted to fit over the open end of said casing, lugs on said casing, means on said cap adapted to interlock with said lugs to removably secure said cap to said casing, an outwardly flaring flange formed integral with said cap, and an elastic fastening means secured to said flange and adapted to retain said casing in position upon a telephone transmitter.

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Witnesses:

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