H. VAN HOEVENBERG & R. W. POPE.

PROTECTOR FOR TELEPHONE TRANSMITTERS.

APPLICATION FILED MAY 17, 1913.

1,083,569.

Patented Jan. 6, 1914.

Fig. 1,

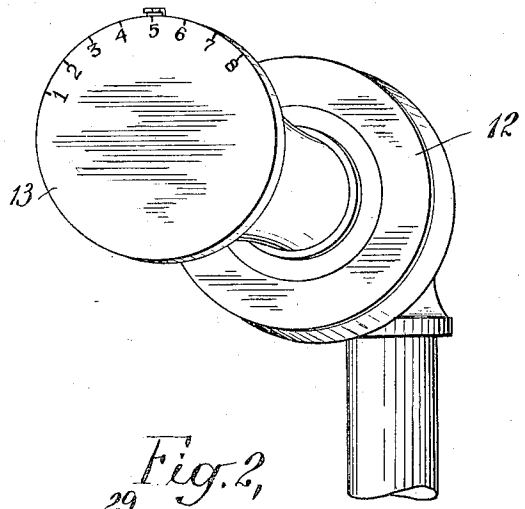


Fig. 5,

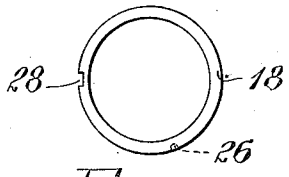


Fig. 6,

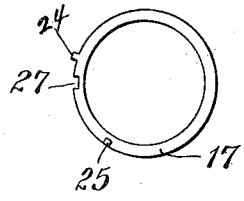


Fig. 7

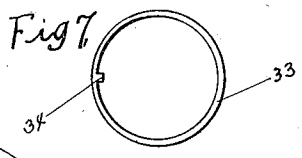


Fig. 2,

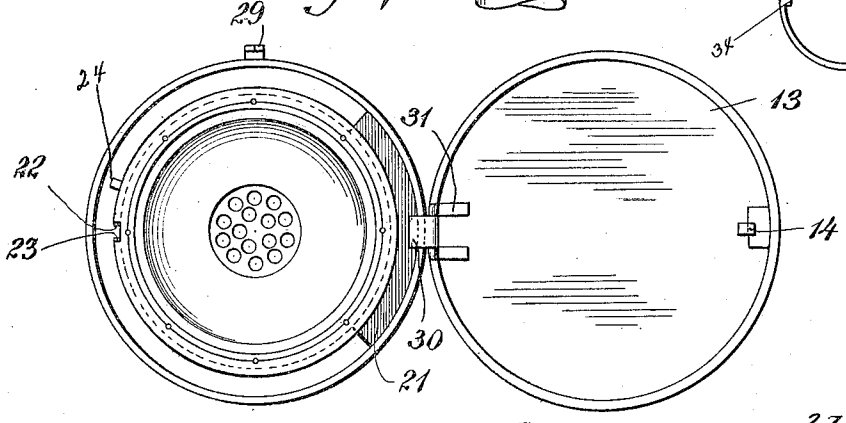


Fig. 3,

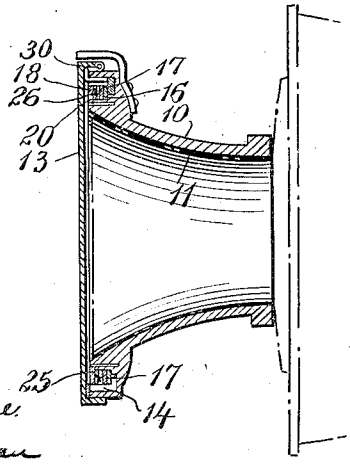
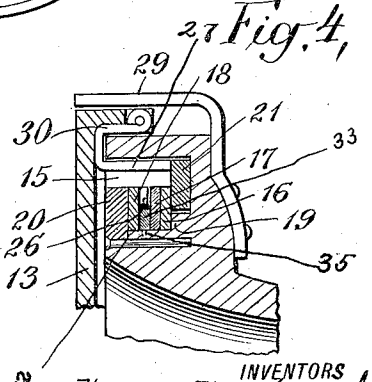


Fig. 4,



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UNITED STATES PATENT OFFICE.

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PROTECTOR FOR TELEPHONE-TRANSMITTERS.

1,083,569. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed May 17, 1913. Serial No. 768,218.

To all whom it may concern:

Be it known that we, HENRY VAN HOEVENBERG and RALPH W. POPE, citizens of the United States, residing at North Elba, Essex county, New York, and Elizabeth, Union county, New Jersey, respectively, have invented certain new and useful Improvements in Protectors for Telephone-Transmitters, of which the following is a full, clear, and exact description.

Our invention relates to improvements in locking devices for telephones and the like, and has for its chief object to provide a device that can be easily and quickly attached to the mouthpiece of the telephone transmitter that is in universal use, and which will securely lock a closure for said mouthpiece and prevent unauthorized use of the telephone.

The use of telephones by employees in residences, for example, for their personal communications, at times when members of the household are absent, is often resorted to and in consequence charges for telephone services are increased.

It is one of the objects of our invention to provide a comparatively simple means whereby such unauthorized use of telephones can be prevented, and which will effect a saving to users in telephone charges to the extent at least of the amount charged for unauthorized calls.

A further object of our invention is to provide a device of simple construction for this purpose which can be easily applied to the mouthpiece of a telephone and also capable of ready manipulation by any one having authority.

Referring now to the drawings which accompany and which form a part of this specification Figure 1 is a perspective view of the device attached to the mouthpiece of a telephone transmitter. Fig. 2 is a front view of the mouthpiece of a telephone transmitter showing the device attached and with the lid or cover extended to open position. Fig. 3 is a side view, in section, showing the device applied to the mouthpiece of a telephone transmitter. Fig. 4 is a detail sectional view showing the novel hinge connection, and other parts in detail. Figs. 5 and 6 show tumbler rings that are employed. Fig. 7 is small ring, adapted to be rigidly secured between the tumbler rings.

Similar reference numerals will designate like parts throughout the detailed description of our device which follows:—

The preferred embodiment of our device as shown herein consists of an annular bell-shaped body member 10, the interior surface of which conforms to the outer surface of the removable mouthpiece 11 of the ordinary telephone transmitter 12. To the body member a closure 13 attached to the body member and having a locking catch 14, is provided for the mouthpiece of the telephone. The body member is somewhat enlarged at its outer end to provide an annular chamber 15 for the insertion of locking means and for the reception and rotation of the catch 14 which is secured to the closure, and which, upon being rotated in the chamber or recess, operates the locking means to lock and unlock the device as will be readily understood. This chamber is also adapted to receive a hinge member 21 to be described later. The locking means in the construction shown consists of a plurality of rings 16, 17, 33 and 18, and are located between a shoulder 19 and fixed annular collar 20, which also rests upon and is secured to a succeeding shoulder 32 above the shoulder 19, both of which extend around the annular chamber and serve to prevent longitudinal movement of said locking means. The bottom ring 16 is non-rotatable, extends slightly beyond the edge of the shoulder 19 and overlaps the hinge member 21 to prevent its removal. The said ring is preferably secured to the shoulder 19 and is provided with a notch 22 therein which is in alinement with the notch 23 in the annular ring or collar 20. Rings 17 and 18 are revoluble, the former of which is provided with a lug member 24 which extends outwardly into the path of the locking catch 14. This ring is also, provided with an upwardly extending lug 25 and the other revoluble ring is provided with a downwardly projecting lug 26. Rings 17 and 18 are provided with notches 27 and 28 respectively to receive the catch 14 when they are properly registered. The lugs 25 and 26 are adapted to contact, upon the rotation of the rings, and in this way the ring which is not provided with the outwardly extending lug may be rotated to bring the notch 28 in its side in register with the

other rings and collar so that the device may be locked or unlocked, as the case may be. Between the revoluble rings 17 and 18, a ring 33 is provided for the purpose of separating the revoluble rings. This ring 33 is slightly bent, forming frictional contact with the rings 17 and 18 and at the same time holds them in place. It is stationary, and in order to secure the same to the wall of the chamber an inwardly extending lug 34 is provided which fits into a notch 35 in the wall of the chamber. In order that there will be no interference with the upwardly and downwardly extending lugs 25 and 26 upon the revoluble rings 17 and 18, this ring 33 is made smaller than the rings 17 and 18, and fits inside of the lugs 25 and 26, which are consequently left free to rotate in the locking and unlocking operations of the device.

The extent of rotation of the revoluble rings, in order to bring their notches into register, is predetermined and the user of the device merely has to know a simple combination of turns which will bring the notches to the point of registry. For this purpose a series of numbers or other indicating marks are located upon the cover which guides the operator in manipulating the device, and a suitable indicator 29 marks the point at which the proper turns are to be begun and ended. When the closure or lid is rotated, the catch 14, which had previously been inserted into the alining notches in the rings, rotates in the annular chamber, the inwardly extending portion of it engaging with the under side of the fixed ring 17 thus preventing the opening of the closure. Upon the revolution of the closure, the catch member contacts with the outwardly extending lug 24 on the revoluble ring causing it to turn, and, when the upwardly and downwardly extending lugs contact, the other revoluble ring is caused to turn in the same direction thus bringing the notches of the movable rings out of register with each other and also out of register with the notches in the fixed ring 16 and collar 20. This effectually locks the device against unauthorized use and it can be unlocked only by those who are familiar with the combination.

In unlocking the device, in order that the telephone may be used, the operation is as follows, assuming, for the sake of illustration, that the combination is 7—5—6: Hold the body of the protector and revolve the cover counterclockwise to the left until two or more revolutions are made. This brings the catch 14 in contact with the lug 24 on the lower revoluble ring and the lugs 25 and 26 are also brought in contact and the rings 17 and 18 caused to revolve with the cover. This rotation is stopped when the mark opposite the figure "7" is directly opposite the indicator. The notch 28 in ring 18 will now be found to be in alinement needed to unlock the device. Reversing the direction of revolution of the cover at this point leaves the ring 18 in this position, for the lugs 25 and 26 are disengaged, and continuing the rotation in this reversed direction until the mark opposite the figure "5" has been twice brought opposite the indicator, the notch in the ring 17 will be found to be in alinement with the notches in the other tumbler ring and collar. Again reversing the revolution of the cover and turning the same slightly until the mark opposite the figure "6" is opposite the indicator the catch 14 will be found to be in the path of the alined notches.

A very important feature of the locking device is the means which are employed for hinging the lid to the body part. We provide an arc member 21 which is adapted to fit and rotate within the previously mentioned annular chamber 15. It is maintained within the chamber by virtue of its location between the outer walls thereof and the outer edge of the shoulder 19 and is adapted to move under the portion of the lower tumbler ring which extends beyond the said shoulder. In this way it is kept securely in place but free to revolve in either direction as the lid is moved in opening or closing the device. From the outer side of the hinge supporting member, a connecting flange 30 is extended upwardly for securement, as by a pintle, to the other member 31 of the hinge, the latter member being secured to the lower side of the closure. It will therefore be apparent that the hinge members are practically concealed from view and as a necessary consequence the possibilities of tampering with the device at this point for fraudulent purposes are exceedingly remote. The space between the outwardly projecting lug member 24 and the outer wall of the annular chamber 15 is sufficient to permit the flange 27 to pass freely without interfering with the said lug 24.

The locking catch which is riveted or otherwise secured to the closure extends downwardly at right angles thereto and its end is turned inwardly at right angles. When it is inserted through the notches when in register, rotation of the closure in either direction will bring the catch under the lower ring, securing the desired locking of the device.

The mouthpieces are usually made separate from their holders and are provided with screw threads which are adapted to register with screw threads in the part of the telephone to which they are designed to be attached. In applying the locking device, it is merely necessary to remove the mouthpiece, place it in the body part of the device and screw the mouthpiece back in place. The cover can then be brought in place, and

the use of the telephone is thereafter restricted to those who are familiar with the unlocking combination of the particular device. The body member is made to fit snugly but not to grip the mouthpiece; consequently the turning of the locking device will not turn the mouthpiece and remove it from its useful position.

From the foregoing description taken in connection with the accompanying drawing it will be observed that the novel form of locking closure for telephone transmitters which we have originated is one of extreme simplicity, capable of easy manipulation by any one who is apprised of the "combination", and neat in appearance.

An important feature of our invention is that the entire locking mechanism is normally concealed from view and the only parts visible are the closure and body member.

The cover with its sliding hinge connection with the body portion requiring, as it does, no removable parts, such as keys, makes its use very adaptable for the purpose intended.

It is obvious that many of the parts may be varied in point of detail without deviating from the true spirit and scope of the invention as defined by the appended claims.

We claim:

1. In a locking device for telephone transmitters comprising a body member adapted to be placed over the mouthpiece of the transmitter and provided with an annular chamber therein, locking means within said chamber and normally concealed from view, a closure hinged to said body member, and a catch on said closure normally projecting into said chamber and in locking engagement with said locking means.

2. In a locking device for telephone transmitters comprising a body member adapted to be placed over the mouthpiece of the transmitter and provided with an annular chamber therein, a closure having a hinged connection with said member one of the members of said hinge being rigidly secured to said cover and the other member being slidably secured in said chamber, locking means within said chamber and normally concealed from view by the said closure, and a catch on said closure normally projecting into said chamber in locking engagement with said locking means.

3. In a locking device for telephone transmitters, a body member adapted to be placed over the mouthpiece of the transmitter and provided with an annular chamber therein, a closure for the outer end of the mouthpiece hingedly connected to said body member, and locking means for said closure comprising one or more tumbler rings carried by said member located in the chamber thereof and revoluble with respect to said member and a catch carried by the closure and in engagement with said ring or rings, said ring or rings being revoluble by a predetermined rotation of said closure with respect to the said member.

4. In a locking device for telephones, the combination of a body member having therein an annular chamber, a plurality of tumbler rings in said chamber having notches therein adapted to be brought into register, a cover for said body member, revolubly hinged means in said chamber for connecting the body member and cover, and a catch on said cover adapted to engage with one of said rings and revoluble in said chamber to bring the notches out of register for locking the cover to said body member.

5. In a locking device for telephones, the combination of a body member having therein an annular chamber, a plurality of rings in said chamber having notches therein adapted to register, one of the rings being rigidly secured in position, and the other rings being revoluble so that the notches therein can be brought into register with the notch in the permanently secured ring, a member in said groove and revoluble therein for securing the cover in hinged connection to the body part, and a catch carried by the cover and adapted to enter the notches in the rings when they are in register, said catch adapted to coöperate with means on the rings to bring the notches out of register to lock the device.

6. In a locking device for telephones, the combination of a body member having therein an annular chamber, a plurality of tumbler rings in said chamber having notches therein adapted to register, one of the rings being rigidly secured in position and the other rings being revoluble so that the notches therein can be brought into register with the notch in the permanently secured ring, means on one of said tumbler rings for moving the other relative thereto, a lug on one of the revoluble rings extending outwardly into the annular chamber, a hinge member revoluble in said annular chamber and connecting the cover with the body member, and a catch carried by the cover on the underside thereof, adapted to extend downwardly through the notches in the rings, said catch member engaging the lug member on the ring in its rotation in the annular groove and rotating the revoluble rings to bring their notches out of and into position of registry for locking and unlocking the closure to the body member.

7. In a locking device for telephones, the combination of a body member having therein an annular chamber, a plurality of annular rings in said chamber having notches therein adapted to register, two of the rings being rigidly secured in position, the other rings being revoluble so that the notches therein can be brought into register with the

notches in the permanently secured ring, the rigidly secured ring between the revoluble rings being of less diameter than the revoluble rings to permit the free movement of the lugs on the revoluble rings, and adapted to engage frictionally with and to retain the revoluble rings in place, a member on one of the revoluble rings extending outwardly into the annular groove, a member on the upper side of one of the rings and a similar member on the under side of the ring immediately above which are adapted to coöperate in rotating the rings to bring the notches into and out of position of registry, a revoluble hinge member in said annular groove and connecting the cover with the body member, and a catch carried by the cover on the underside thereof, adapted to extend downwardly through the notches in the rings when in register into the annular groove and adapted to revolve in the annular groove when the parts are rotated, said catch member adapted to engage with the outwardly extending member to rotate the movable rings to bring the notches therein out of and into position of registry.

8. In a locking device for the mouthpiece of telephone transmitters and similar openings, comprising a body member adapted to be placed over such mouthpiece or opening, locking means carried by the said body member adapted to be unlocked only by the holder of its key or combination, a closure revolubly hinged to said body member for excluding sound waves from said opening, and a catch in said closure coacting with said locking means and normally in locking engagement therewith.

In testimony whereof we affix our signatures in the presence of two subscribing witnesses.

HENRY VAN HOEVENBERG.
RALPH W. POPE.

Witnesses:
THOMAS J. BYRNE,
WILLIAM P. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."