

No. 759,316.

PATENTED MAY 10, 1904.

W. C. RUNGE.
TELEPHONE RECEIVER.
APPLICATION FILED DEC. 6, 1902.

NO MODEL.

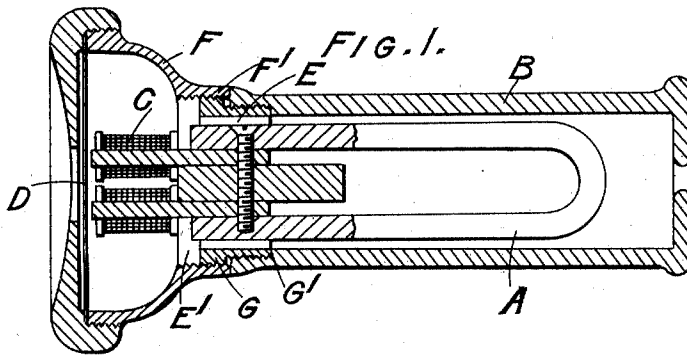
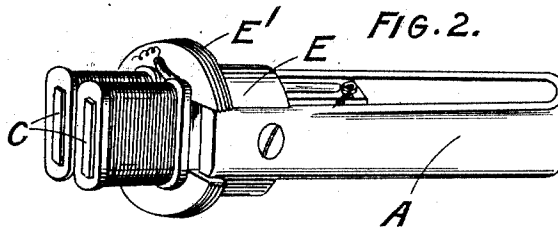
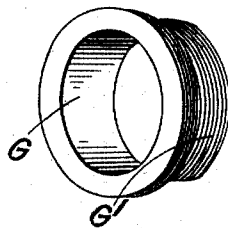


FIG. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WALTER C. RUNGE, OF LONDON, ENGLAND.

TELEPHONE-RECEIVER.

SPECIFICATION forming part of Letters Patent No. 759,316, dated May 10, 1904.

Application filed December 6, 1902. Serial No. 134,156. (No model.)

To all whom it may concern:

Be it known that I, WALTER C. RUNGE, a citizen of the United States of America, residing at London, England, have invented certain new and useful Improvements in or Relating to Telephone-Receivers, of which the following is a specification.

This invention relates to telephone receivers and transmitters, its object being the construction of such instruments so that they can be readily adjusted and the parts easily assembled or separated.

The main feature of this invention consists in the fact that in a telephone instrument in which a diaphragm is employed the parts are held in proper relation to one another by one or more screwed locking-rings which can be removed from the back of the instrument without affecting the adjustment of the remainder of the instrument.

Figure 1 is a transverse section of a receiver constructed in accordance with this invention. Fig. 2 is a perspective view of the magnets of the receiver. Fig. 3 is a perspective view of the locking-ring employed.

Like letters indicate like parts throughout the drawings.

Referring to the drawings, the receiver, according to this invention, is of the type in which a U-shaped magnet A extends inside the handle of the instrument B and is provided with two poles C, arranged in close proximity to the under surface of a diaphragm D. It is important that the position of these poles C relatively to the diaphragm D shall be capable of ready adjustment and that when adjusted they may be locked in position without risk of disturbing the adjustment. This is accomplished according to this invention by attaching to the magnet A near its poles C a plug E, having a screwed shoulder E' which engages with the threaded lower portion F' of the cup or case F, supporting the diaphragm D. Preferably the plug E is approximately of H-section and serves as a distance-piece between the magnet-poles. The magnet A is screwed up into the cup F until the pole-pieces are at the required distance from the diaphragm D, and a locking-ring G is then slipped up over the magnet A and the smaller part of the plug E and screwed into the threaded portion F' of the cup F until its face comes into

contact with the back surface of the screwed shoulder E' of the plug, thus locking the latter securely in position. Conveniently the magnet A may at first be screwed a little too far up into the cup F, and then when the locking-ring G has been screwed loosely home the magnet A may be locked by giving it a slight backward turn, this action also providing the necessary final adjustment.

From the above description it will be seen that the diaphragm D need not be disturbed in any way after the adjustment has been made, as both the adjustment and the locking are performed from the back or under side of the magnet A.

The locking-ring G is furnished with a second screwed portion G', preferably of smaller diameter than the part which screws into the cup F, and the sheath or casing of the receiver B is adapted to engage with the screw-thread on this smaller portion G', screwing over it until the face of the casing B abuts against the rear face of the cup F.

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

1. In a telephone-receiver, the combination of a casing, a cover for the casing, a diaphragm between the casing and the cover, transmitting-magnets within the casing, a threaded plug supporting the magnets and engaging with the inside of the casing, a removable locking-ring screwed into the casing and engaging the plug, and a handle engaging a thread on the locking-ring and abutting against the casing.

2. In a telephone-receiver, the combination of a casing, a cover for the casing, a diaphragm between the casing and the cover, transmitting-magnets within the casing, a threaded plug screwed within the casing and supporting the magnets, a handle for the casing, a locking-ring comprising a shoulder screwed into the casing and engaging the plug, and a threaded sleeve engaging and supporting the handle in abutment with the casing.

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

WALTER C. RUNGE.

Witnesses:

WILLIAM H. BALLANTYNE,
HARRY B. BRIDGE.