No. 697,528. Patented Apr. 15, 1902.

A. NERI.

TELEPHONE.

(Application filed June 12, 1901.)

(No Model.)

Fig. 1.

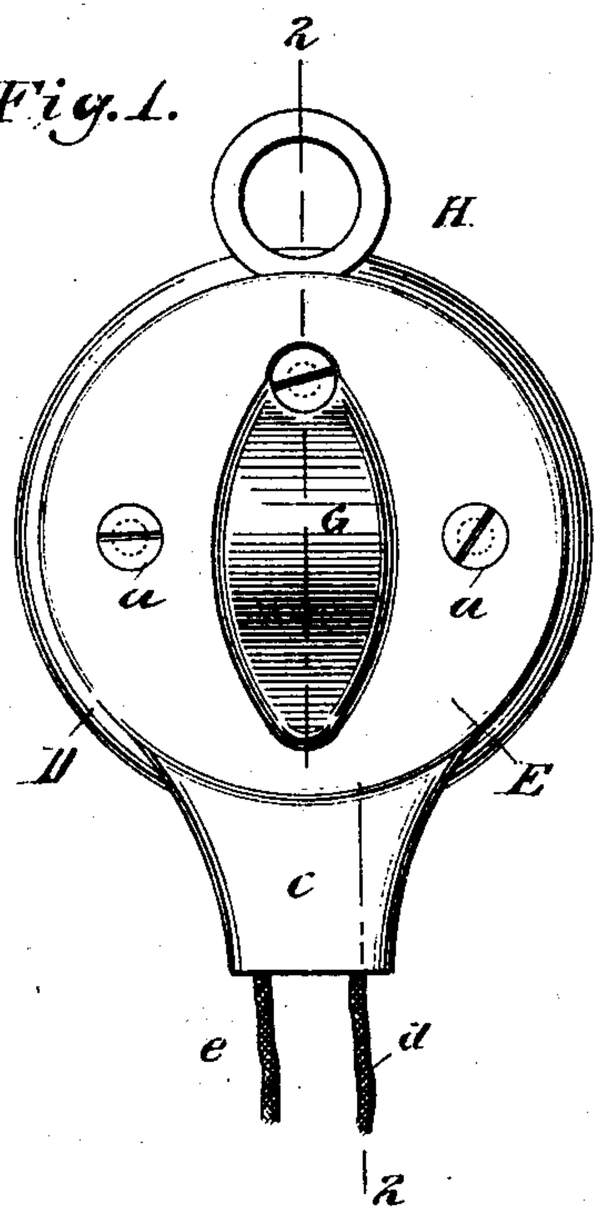


Fig. 2.

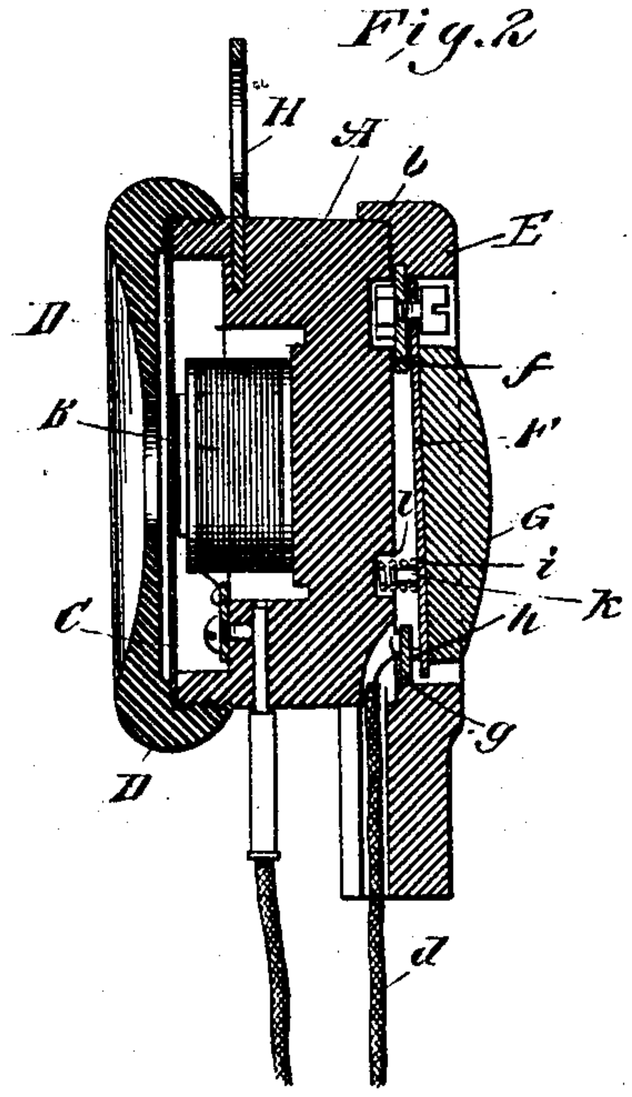


Fig. 4.

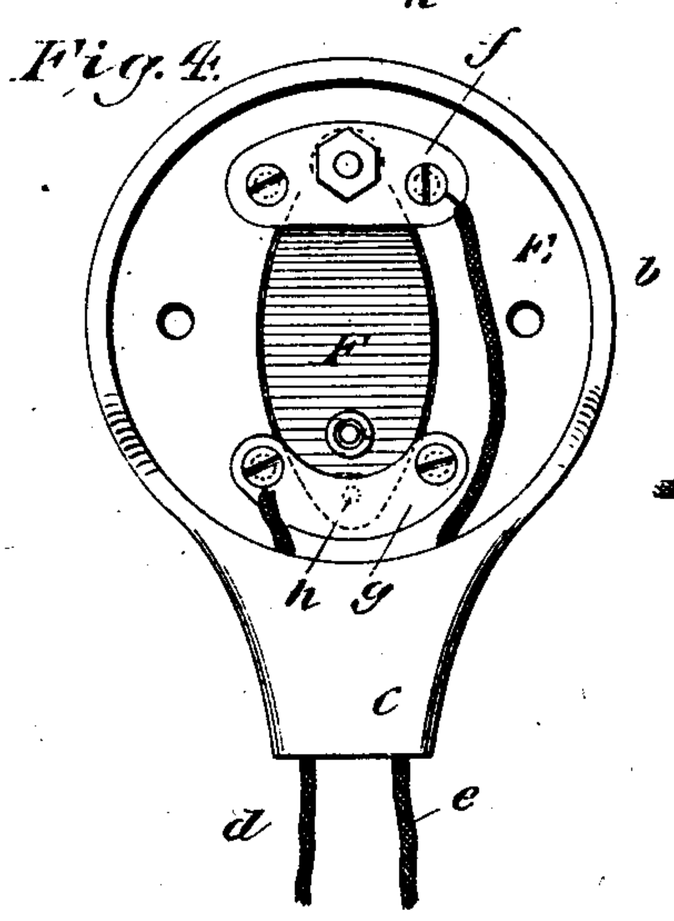
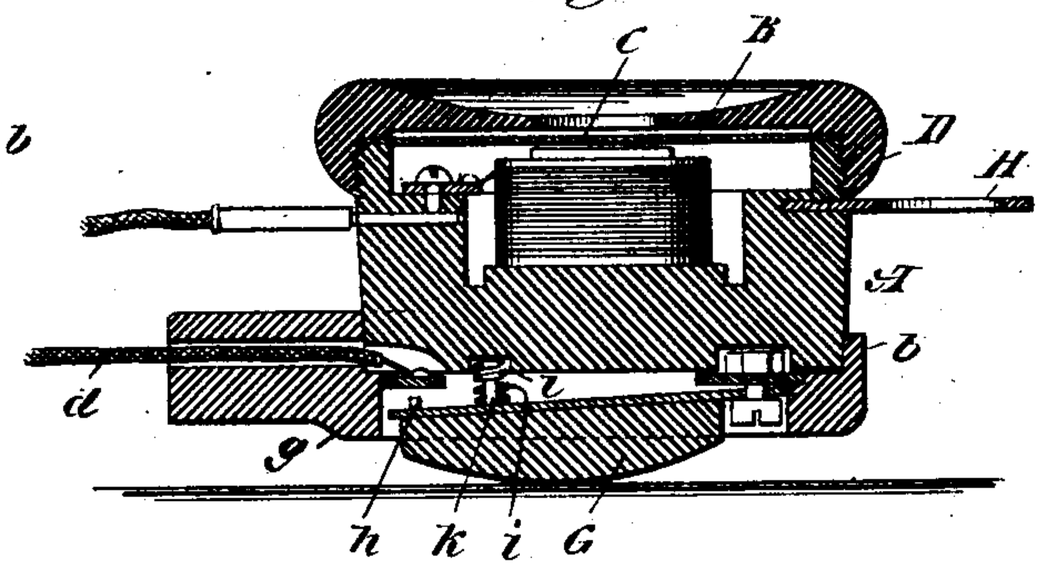


Fig. 3.



WITNESSES:
M. Van Nortwick.
W H Stubbs

INVENTOR
Aristide Neri,
BY Georgelbrk.
ATTORNEY

UNITED STATES PATENT OFFICE.

ARISTIDE NERI, OF HOBOKEN, NEW JERSEY.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 697,528, dated April 15, 1902.

Application filed June 12, 1901. Serial No. 64,217. (No model.)

To all whom it may concern:

Be it known that I, ARISTIDE NERI, a subject of His Majesty King of Italy, and a resident of Hoboken, in the county of Hudson and State of New Jersey, have made and invented certain new and useful Improvements in Telephones, of which the following is a specification.

My invention relates to an improvement in telephones, and more particularly to the receiver, and of that kind usually employed for interior work and generally known and referred to as "interior" telephones, wherein the receiver is of the watchcase type, the object of the same being to provide an article of this kind or character whereby all danger of the circuit remaining closed by reason of the carelessness of the operator in not hanging up the receiver, and thus breaking the circuit, shall be obviated. In my experience in this class of work I have often found that after using the telephone a person will neglect to hang the receiver upon the hook provided to receive it and break the circuit, allowing the receiver to remain on the table or desk, the result being that the circuit remains closed and the batteries in a short while exhausted or rendered inoperative. Again, in mills and factories, where the atmosphere is filled with dust or particles of foreign matter, it not infrequently happens that the contact-points of the spring-hook on which the receiver is hung and the points usually secured to or provided on the transmitter-stand become covered with this dust or foreign matter, thereby preventing perfect contact of the points, resulting in the imperfect working or operation of the telephone. To overcome these defects, I have designed my improved receiver, the parts being so constructed and arranged that contact is made and the circuit closed in the receiver itself instead of by the hook pivotally secured to the transmitter-stand, the contact-points being covered or concealed and protected from the dust and dirt, the invention consisting in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the rear face of a receiver having my invention applied thereto. Fig. 2 is a sectional view taken on the line 2 2 of Fig. 1, showing the circuit closed. Fig. 3 is a similar view showing the circuit open. Fig. 4 is a view of the inner face of the detached rear plate of the receiver.

Referring to the drawings, A represents the body, box, or receptacle of a receiver, and of that kind usually known and referred to as a watchcase "receiver," said box or receptacle being made of rubber, vulcanite, or any other suitable insulating material, containing the magnets B, diaphragm C, and cap D, these several parts being constructed and arranged in the ordinary manner, and hence needing no detail description. To this box or receptacle A, I secure by means of bolts or screws *a* a rear plate E, also made of insulating material and preferably formed with a flange *b* to fit over and around the edge of the receptacle A, as illustrated in Figs. 2 and 3, this rear plate being provided with an extension or neck *c*, having passages through it for the wires or conductors *d*, leading to the battery or other source of electric current, and the wire or conductor *e*, leading to the transmitter. The central portion of the plate E is cut out, as illustrated in the several figures of the drawings, and has inserted in this opening a metal plate F, the upper end of this plate being bolted or otherwise electrically connected with the plate *f*, the lower end of said plate F being free to move toward or away from the body A. To the plate E is secured the plate *g*, extending across the lower end of the central opening in said plate E, and to which is connected one end of the wire or conductor *d*, leading to the battery, as aforesaid, one end of the wire or conductor *e* leading to the transmitter being electrically connected to the plate *f*, as illustrated in Fig. 4. To the lower end of the plate F is secured the point *h*, which when the plate F is forced inwardly toward the receptacle A comes in contact with the plate *g*, thereby closing the circuit in the same manner and for the same purpose as the circuit is closed by means of the hook usually secured to the transmitter-stand. To the plate F is secured the button or back G, of the same material as said receptacle A and plate E are made—that is, rubber, vulcanite, or other insulating material—said button or

back G being of sufficient thickness to extend out beyond the outer side or surface of said plate E, as illustrated in Figs. 2 and 3. In order to retain an open circuit when the instrument is not in use, I insert a coil-spring *i* between the plate F and the receptacle A, one end of said spring fitting around the pin or lug *k*, secured to the plate F, and the opposite end of said spring fitting in a depression *l*, formed in said receptacle A, whereby the point *h* is held out of contact with the plate *g*, as illustrated in Fig. 3 of the drawings, the tension of this spring being such as to prevent the closing of the circuit by the weight of the instrument when resting upon a table, desk, or other support. If desired, a ring H may be provided, whereby to hang the receiver upon any convenient peg or hook.

Having fully described the construction of my device, I will now proceed to describe its operation.

When desiring to use the instrument, the operator, by a slight pressure of the hand, presses inwardly a button G, thereby bringing the point *h* in contact with the plate *g*, thereby closing the circuit in the same manner as the circuit is closed when the receiver is lifted from the spring-hook in the case of the telephones as usually and ordinarily constructed, the circuit being closed through the conductor *d*, point *h*, plate *g*, plate F, plate *f*, and wire or conductor *e*. When the pressure upon the button G is relieved, the spring *i* immediately breaks the contact between the point *h* and plate *g*, thereby breaking the circuit.

From the foregoing it will be understood that all danger of exhausting the batteries by omitting or neglecting to hang up the receiver is obviated, the circuit being broken the moment the operator hangs the receiver up or lays it aside upon his table or desk. Furthermore, the contact-points are protected, thereby preventing them from being covered or clogged with foreign matter.

The invention is exceedingly simple, cheap to manufacture, and the parts readily accessible, as it is only necessary to remove the two bolts or screws *a a* to detach the plate or disk E from the receptacle or body A.

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

1. The combination with a receiver, of a disk secured to the back thereof, a contact-plate secured to said disk and having one of the conducting-wires connected therewith, a spring-actuated button secured to said disk and having a conducting-wire connected therewith, whereby when said button is pressed the circuit is closed, and when the pressure is relieved the circuit is broken, substantially as described.

2. The combination with a receiver, of a disk of insulating material secured to the back thereof, a wire or conductor leading into said disk, a plate located in a central opening in said disk and secured at one end to said disk, a wire or conductor secured to said plate, and a spring located between said plate and receiver, whereby said plate when pressed, contacts with said first conductor, and separates therefrom when the pressure is released, substantially as described.

3. The combination with a receiver, of a disk E secured thereto and provided with a central opening, the conductor *d* leading into said disk, the plate F occupying the opening in said disk and having a button secured to the outer side thereof, a wire or conductor *e* indirectly connected with said plate and a spring *i*, located between said receiver and plate F, whereby when said button is pressed, its attached plate F will contact with said conductor *d*, substantially as and for the purpose set forth.

Signed at New York, in the county of New York and State of New York, this 10th day of June, A. D. 1901.

ARISTIDE NERI.

Witnesses:
GEORGE COOK,
M. VAN NORTWICK.