

UNITED STATES PATENT OFFICE.

WILLIAM V. LOCKWOOD, OF NEW YORK, N. Y., ASSIGNOR TO THE MOLECULAR TELEPHONE COMPANY, OF SAME PLACE.

RECEIVER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 241,386, dated May 10, 1881.

Application filed October 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM V. LOCKWOOD, of the city, county, and State of New York, have invented certain new and useful Improvements in Receivers for Telephones or Vocal-Sound Telegraphs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, and which represents my improved receiver partly in section and partly in side elevation.

My invention relates to a novel construction of telephone-receiver; and it consists in the employment of a metal cup secured at its bottom or base to the handle-magnet and inclosing the helix arranged within it, said cup forming a sounding-chamber interposed between the main magnet and the diaphragm, as hereinafter explained.

In the accompanying drawing, A represents the main or permanent magnet, made by preference in the form of a chain-link, with its ends a a' separated, giving it the form of an open link, as shown. The arms or ends a a' are at one side of the link, and one, a' , is made longer than the other, to bring the cup B attached thereto about midway of the length of the link. The magnet thus made forms a convenient handle to the receiver. The cup B is made of metal, preferably of steel or some other metal susceptible of magnetism, though other metal may be used with good effect in forming the sounding-chamber. The bottom of this cup B is perforated to permit the passage through it of the end of a rod or bar, C, of soft iron, steel, or other magnetic material, forming the core to the wire coil D. The end of the magnet or core C rests upon the end a' of magnet A, and is secured thereto by means of a screw, c' , passing through said magnet into the end of the core, as shown. The end of core C may be shouldered, adapting it to clamp the cup firmly to the magnet A, or the screw may pass through a perforation in the bottom of the cup into the end of the core or magnet C in such manner that when the latter is drawn down by the screw c' it serves to unite the cup firmly to the magnet A.

The coil D is of the usual construction, the ends of the wire forming it passing out through

perforations in the cup to screw or binding posts E on the outer side of the cup, as shown. The cup B expands in bell or cup form from a diameter at its base or bottom b just sufficient to accommodate the coil toward its outer end, as shown, and has a ledge or flange near said end on its inner face for the support of the diaphragm G, and outside of said diaphragm or sounding-board the end of the cup has a screw-thread formed within it. The ear-piece H, having a similar screw-thread formed upon its periphery or outer edge, is screwed into the cup, and secures the diaphragm or sounding-board firmly in place.

It will be seen that by the construction described a sounding-chamber, B', is formed within the metallic cup B surrounding the coil D, and its core or magnet C secured therein, and said cup being made of metal, in the form of a bell secured to the main magnet, is rendered peculiarly sensitive to the variations or disturbances in the current or degree of polarity, and which are communicated in the form of sound-waves through the cup itself and through the sounding-chamber therein to the diaphragm. Where the cup is made of steel or other magnetic metal, the effect referred to is enhanced, as the cup then forms a thin circular extension of that pole of the magnet with which it is connected, and the variations or disturbances in degree of polarity in different parts of said pole, or between the body of the magnet and the outer edge of the cup, are communicated to the diaphragm. Thus the variations or disturbances in the current will be first communicated to the core C, which is surrounded by the wire through which said current passes, and from thence the impulse or disturbance passes to the main magnet, and from that to the cup, the outer edge of the latter receiving it last, and these disturbances, acting upon the diaphragm to attract, repel, or to bring it to an equilibrium or state of rest, greatly increase the efficiency of the receiver; but a non-magnetic metal may be used for forming the bell or sounding-chamber with very good result.

Having now described my invention, what I claim is—

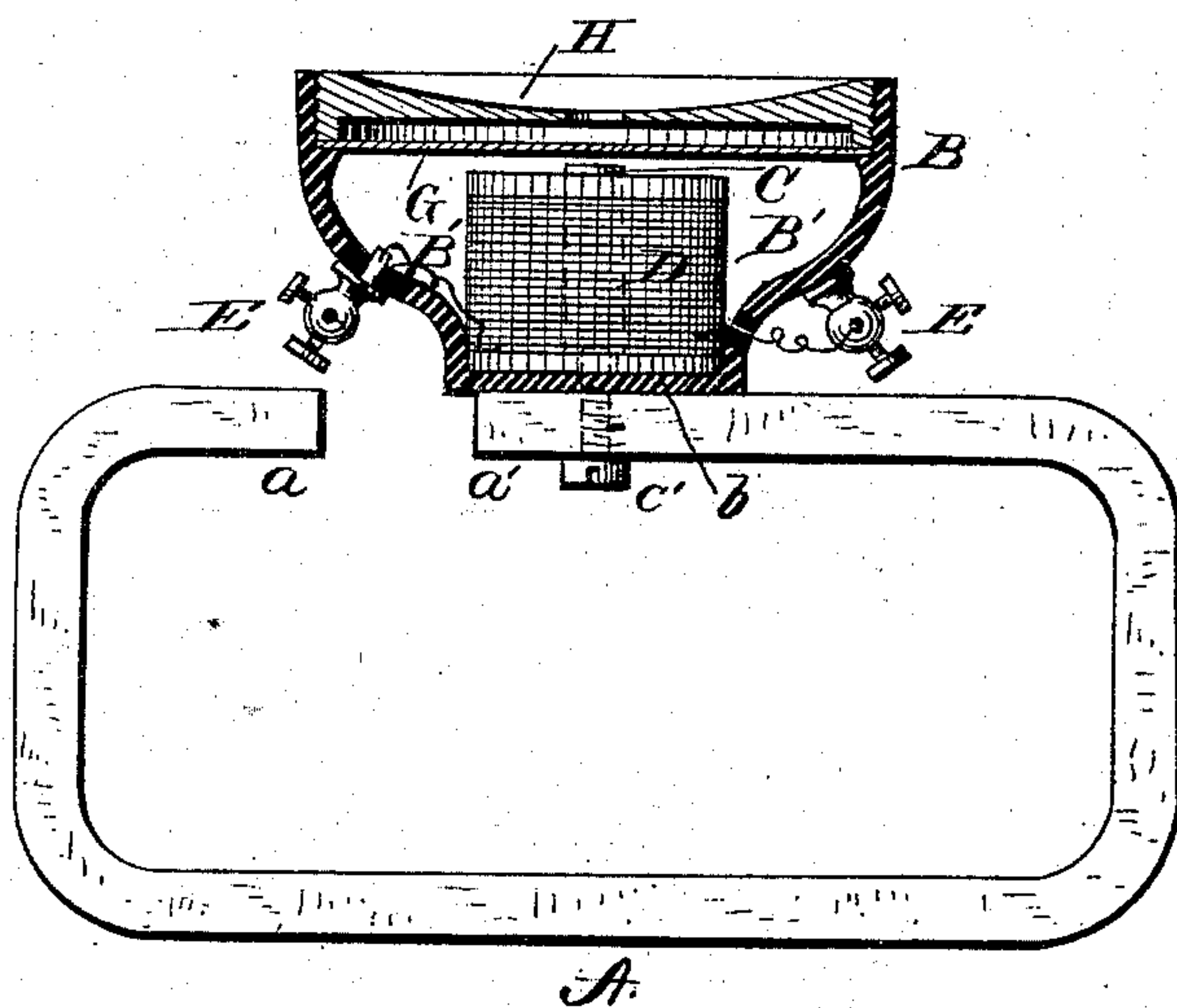
1. The receiver to which the diaphragm is

(No Model.)

W. V. LOCKWOOD.
Receiver for Telephones.

No. 241,386.

Patented May 10, 1881.



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