(No Model.)

R. M. LOCKWOOD & S. H. BARTLETT.

Telephone Receiver.

No. 231,065. Patented Aug. 10, 1880.

Fig. 1.

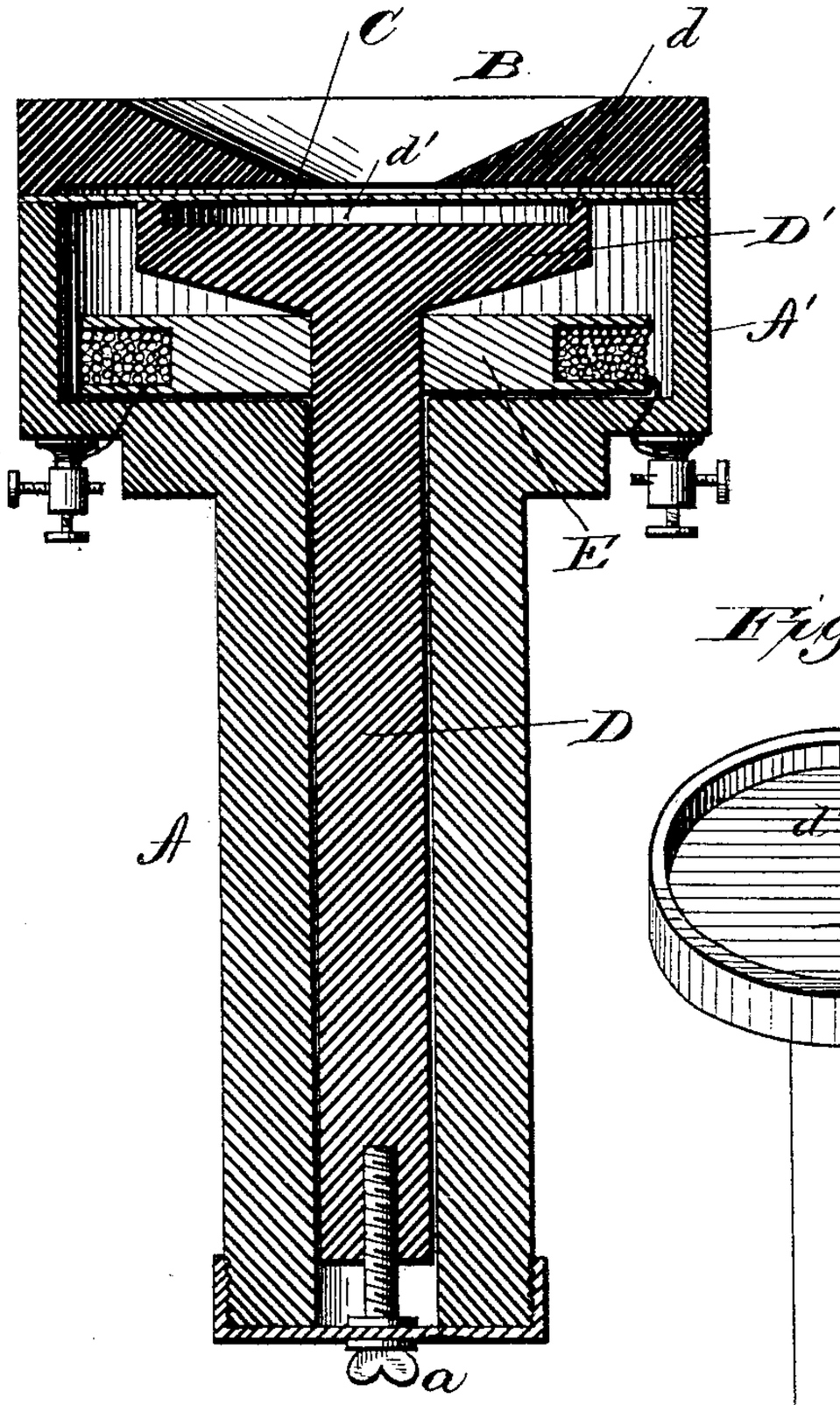
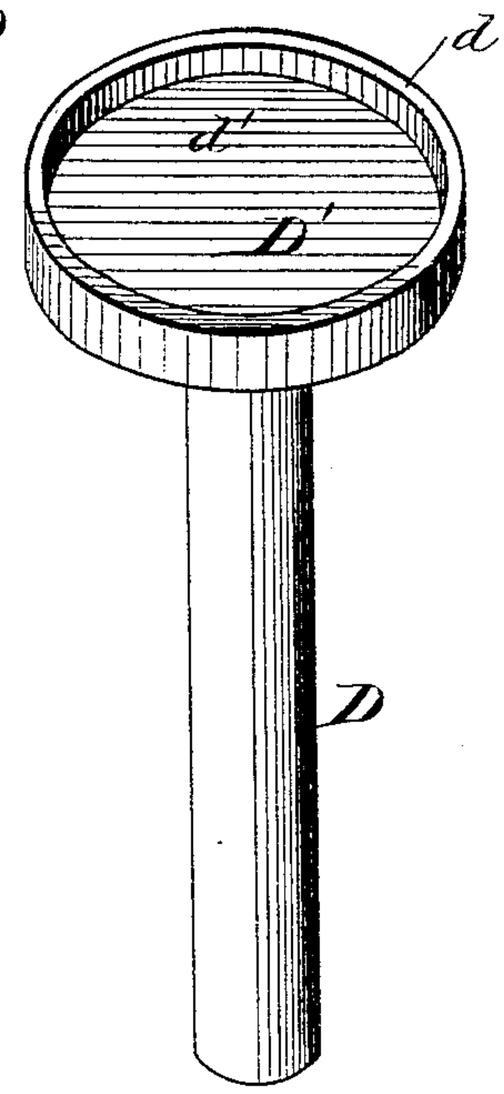


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT M. LOCKWOOD AND SAMUEL H. BARTLETT, OF NEW YORK, N. Y., ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO THE MOLECULAR TELEPHONE COMPANY, OF SAME PLACE.

TELEPHONE-RECEIVER.

SPECIFICATION forming part of Letters Patent No. 231,065, dated August 10, 1880.

Application filed May 14, 1880. (No model.)

To all whom it may concern:

Be it known that we, ROBERT M. LOCKWOOD and SAMUEL H. BARTLETT, both of the city, county, and State of New York, have invented a new and useful Improvement in Telephone-Receivers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents our improved receiver for telephones or vocal-sound telegraphs, and Fig. 2 is a perspective view of the magnet detached.

The invention relates to a novel form or construction of magnet, and to the arrangement of the same in connection with the diaphragm; and it consists in providing the single magnet with an enlargement, made in the form of a flanged disk, at the end adjacent to the diaphragm or sounding-board, the projecting rim or flange of the disk resting in contact with said diaphragm, as hereinafter explained.

In the accompanying drawings, A represents the handle or body of the receiver, B the ear-piece, and C the diaphragm, said parts being similar in construction and arrangement to the corresponding parts described in our application for Letters Patent filed April 30, 1880.

D is the magnet, made in the form of a straight bar, inclosed within the tubular handle A, and provided at the end adjacent to the ear-piece and within the enlarged socket in the head A′ of the handle with an enlargement, D′, made in the form of a disk, provided with a rim or flange, *d*, which projects beyond the outer face of the disk D′ and rests in contact with the diaphragm C. By this construction a shallow chamber is formed in the face of the magnet underneath the diaphragm, as shown at *d′*, Fig. 1. By preference, also, the inner face of the ear-piece is slightly chambered, supporting the diaphragm, or in contact therewith, only by means of a flange or rim on its edge, resting upon and secured to the rim or wall of the chambered head A′ by screws or other suitable fastening devices.

The magnet is made longitudinally adjustable by means of a thumb-screw at *a*, for regulating the pressure of the rim *d* upon the diaphragm C, as may be necessary for securing the best action of the latter, and is provided on its shank portion, adjacent to and directly underneath the disk D′, with a spool or helix, E, the ends of the wire upon which pass out through the body or handle A, and connect with binding or screw posts, through which the receiver is connected with the line-wires.

The operation of the receiver is similar to that described in our former application above referred to—that is to say, the body of the magnet lying within the helix is more sensitive to and more quickly affected by disturbances in the current than the flange or rim *d*, and constitutes, in connection with the enlargement or disk D′, a reservoir, as it were, from which said rim or flange is supplied, and the disk and rim are thus made to act upon the diaphragm relatively to each other in a manner similar to the action of the magnet and the U-shaped extension described in said former application, any difference or variation in the action being due mainly to the form of the parts and to the fact that the chamber in the disk of the magnet constitutes a sounding-chamber, which gives an improved result.

It will be seen that we dispense with an armature to the magnet, except in so far as the diaphragm itself constitutes such armature.

The form of the head D′ may be varied from the disk or circular form described so long as the flange or the chambered feature is retained; but that shown and described is preferred.

Having now described our invention, we claim—

1. In a telephone-receiver, the single magnet provided at the end adjacent to the ear-piece with the flanged or chambered disk or enlargement, substantially as described.

2. The combination, in a telephone-receiver, of the magnet having an enlarged flanged end or head and the diaphragm resting upon the flange of said head and closing the chamber formed in the face of the magnet thereby, substantially as described.

In testimony whereof we have hereunto set our hands this 12th day of May, A. D. 1880.

ROBT. M. LOCKWOOD.
SAMUEL H. BARTLETT.

Witnesses:
T. W. HARTFIELD,
C. H. HANKINSON.