

(No Model.)

R. D'UNGER.

TELEPHONE RECEIVING INSTRUMENT.

No. 409,736.

Patented Aug. 27, 1889.

Fig. 1.

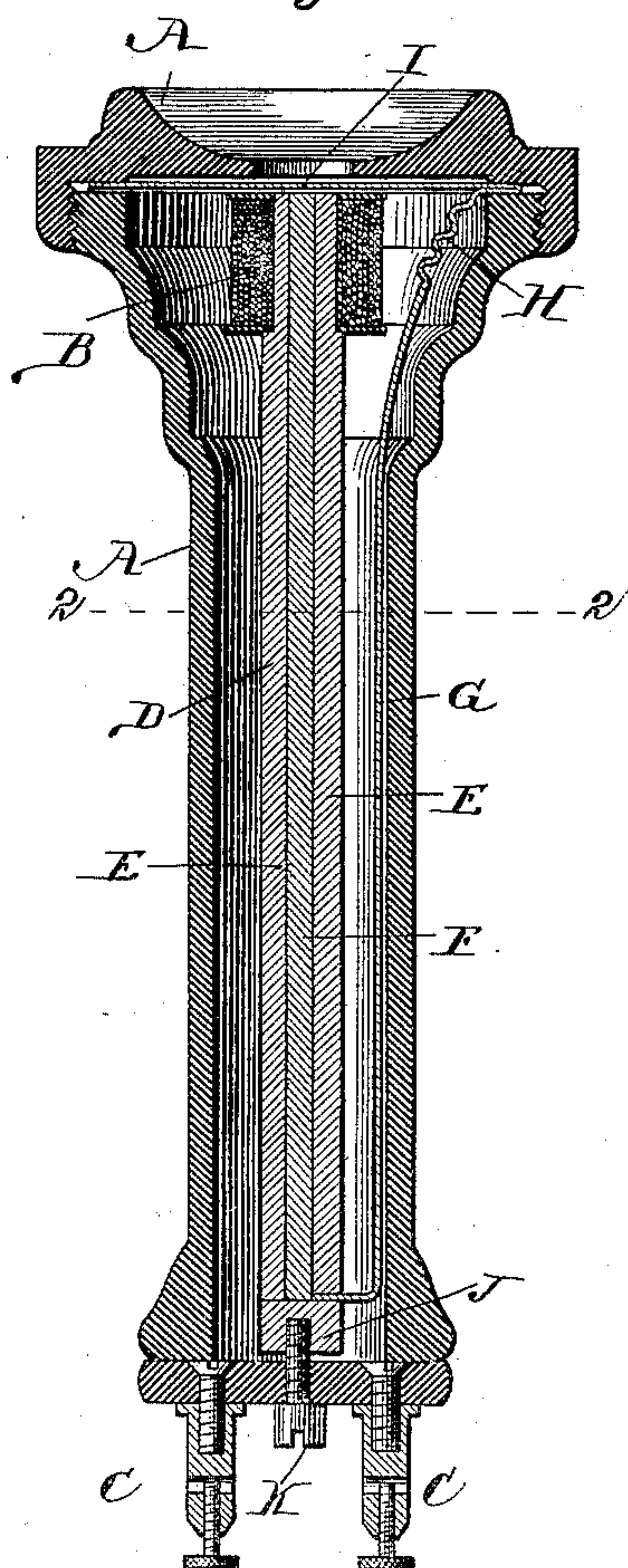
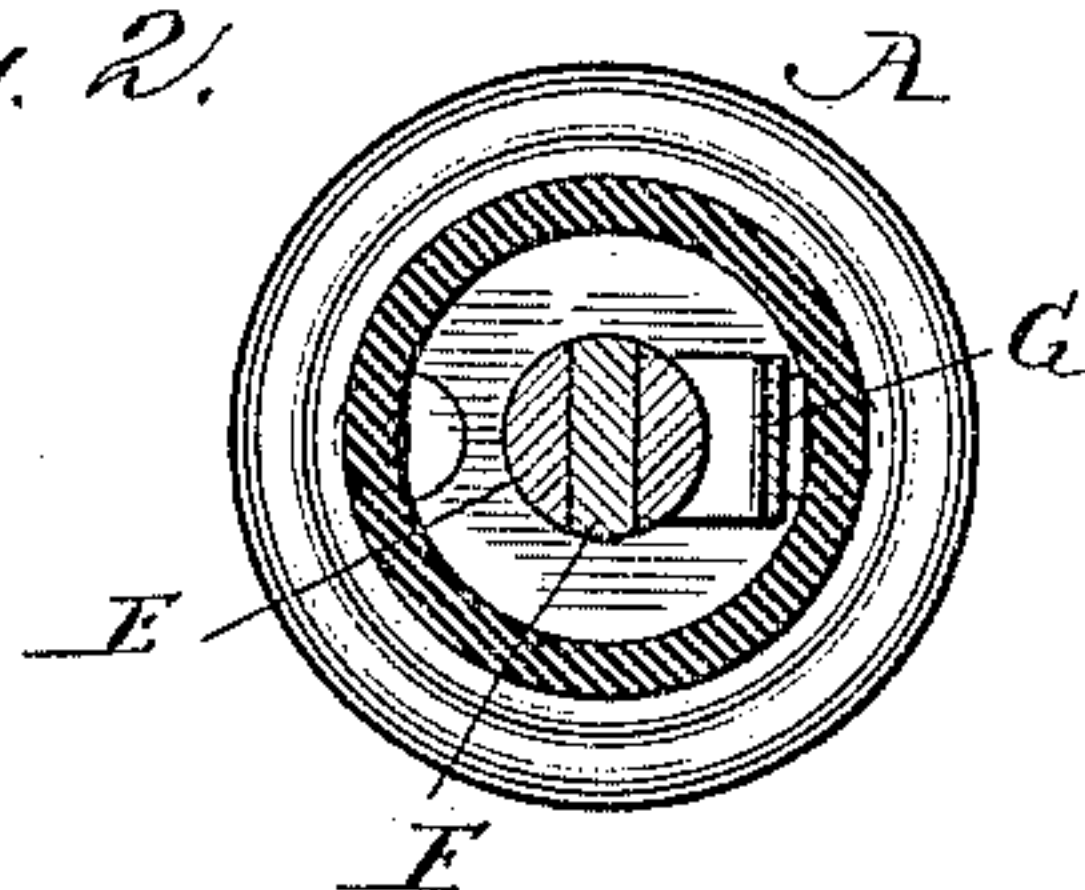


Fig. 2.



Witnesses
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ROBERT D'UNGER, OF CHICAGO, ILLINOIS.

TELEPHONE RECEIVING-INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 409,736, dated August 27, 1889.

Application filed January 15, 1889. Serial No. 296,442. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D'UNGER, of Chicago, Illinois, have invented certain new and useful Improvements in Telephone Receiving-Instruments, of which the following is a specification;

My invention relates to the construction of a diaphragm and magnet of a receiving-instrument.

10 In the accompanying drawings, Figure 1 is a longitudinal section, and Fig. 2 a cross-section on line 2 2 of Fig. 1, of an instrument containing my invention.

A is a case of substantially the ordinary form.

B is the coil or helix.

C are the binding-posts for connecting the instrument to line-wires.

20 D is the bar or magnet upon the end of which the coil B is placed.

In the instrument shown in the drawings the bar D is made of three pieces, the outer ones E being of hardened steel and the inner one F of soft steel or soft iron. This soft-iron central piece is longer than the others, and its end is drawn out, as at G, to a size and form sufficient to extend from the back end of the bar forward through the case to the front

again, where it is flattened so as to form the diaphragm I. At H this return-piece is corrugated, as shown in Fig. 1, so as to permit the adjustment of the diaphragm and magnet with reference to each other without straining any of the parts. To the back end of the bar is secured a button J, of brass or other suitable material, to receive the screw K by which the adjustment is effected.

By this construction the diaphragm forms one pole of the magnet, the other pole being the end of the bar adjacent to the diaphragm.

I claim—

1. In a telephone-receiver, a magnet having the coil upon one end and having its other end flattened to form the diaphragm, with the corrugated portion H, substantially as set forth.

2. In a telephone, the combination of the hardened-steel portions E, the soft-metal portion F, the return-bar G, having its end flattened into the diaphragm I, and the corrugated portion H, substantially as set forth.

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Witnesses:

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