

(No Model.)

L. J. CROSSLEY.
TELEPHONE RECEIVER.

No. 280,800.

Patented July 10, 1883.

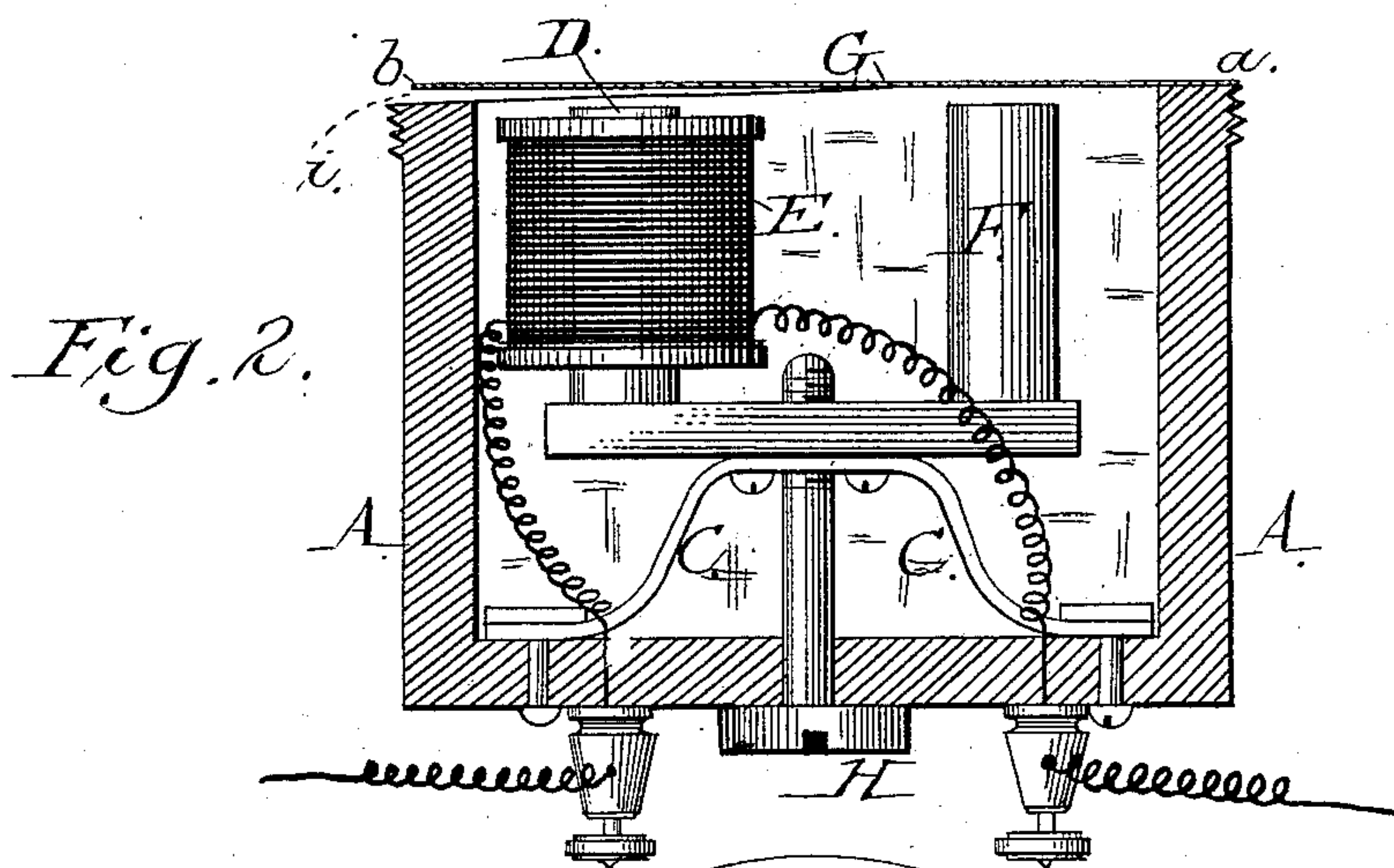
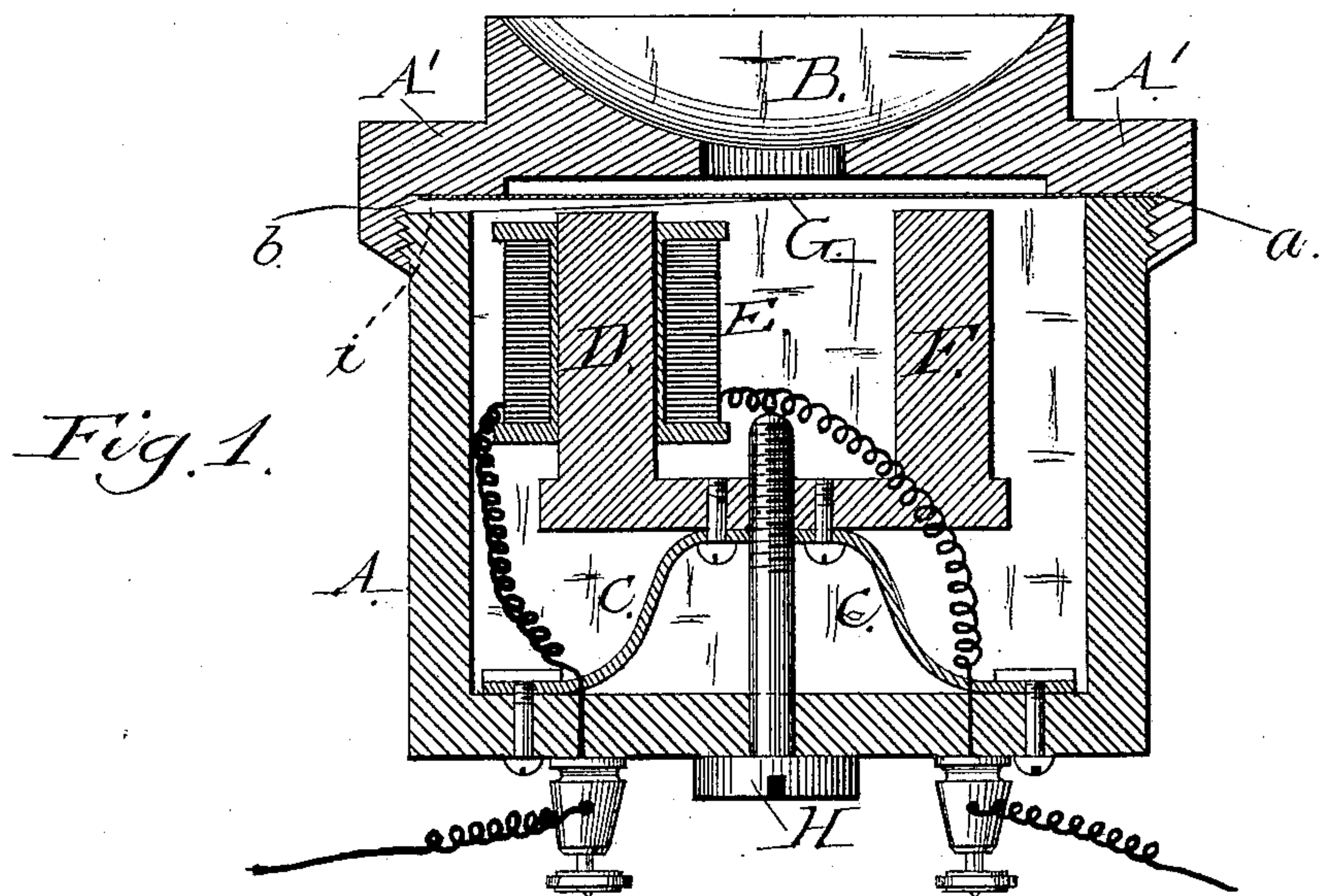
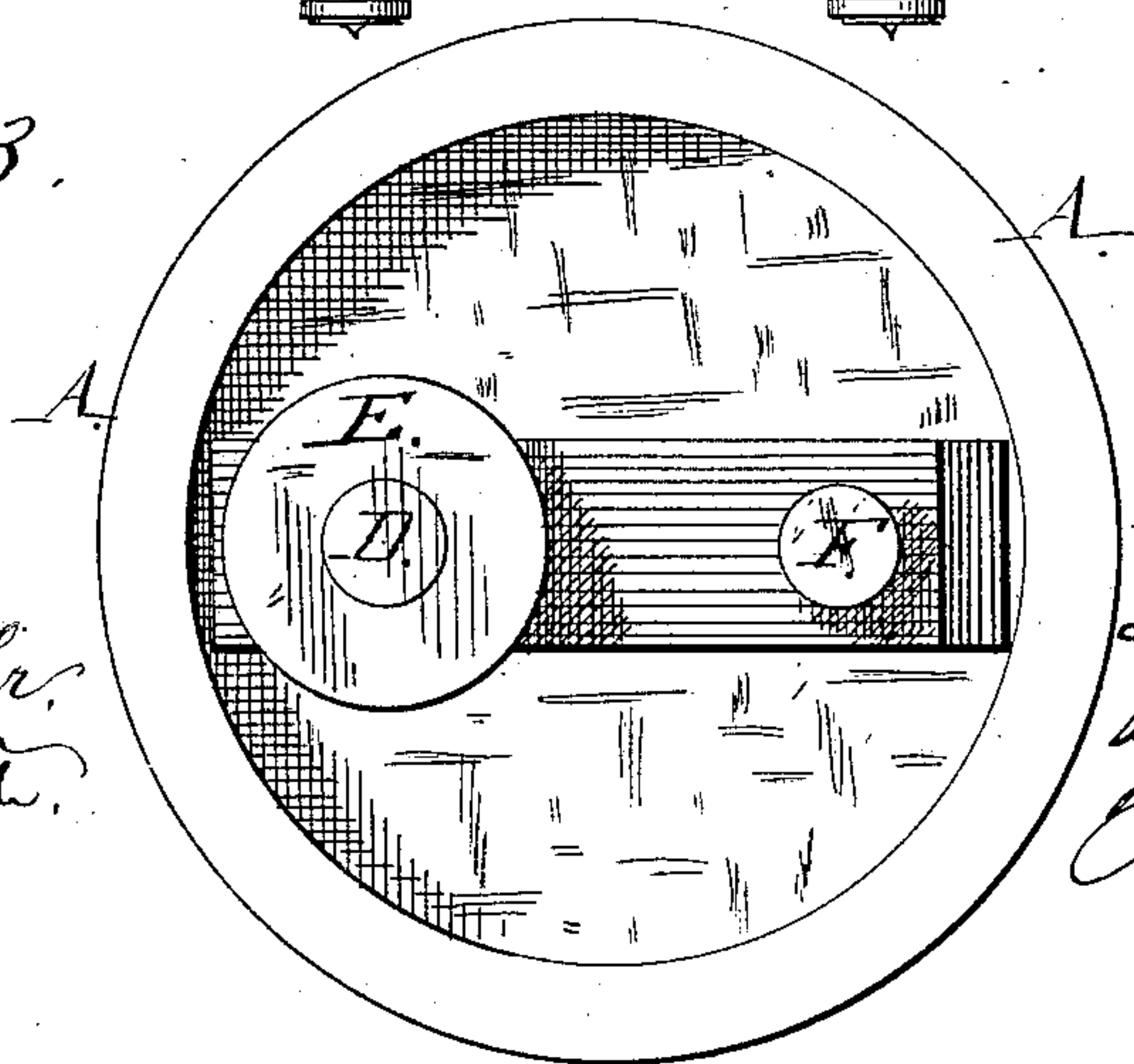


Fig. 3.



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by
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UNITED STATES PATENT OFFICE.

LOUIS J. CROSSLEY, OF HALIFAX, COUNTY OF YORK, ENGLAND.

TELEPHONE-RECEIVER.

SPECIFICATION forming part of Letters Patent No. 280,800, dated July 10, 1883.

Application filed May 23, 1881. (No model.) Patented in England January 14, 1880, No. 158; in France December 7, 1880, No. 140,017; in Belgium December 13, 1880, No. 53,307; in India February 21, 1881, No. 125; in New South Wales March 7, 1881, No. 81/803; in New Zealand, 1881, No. 159; in Victoria June 12, 1881, No. 2,945, and in Italy June 30, 1881, XXVI, 8.

To all whom it may concern:

Be it known that I, LOUIS J. CROSSLEY, a subject of the Queen of Great Britain, residing at Halifax, in the county of York, England, have invented a new and Improved Telephone-Receiver; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical sectional view of the receiver complete. Fig. 2 is a vertical sectional view, with the cap removed from the inclosing-box. Fig. 3 is a plan of the receiver with the cap removed.

This invention relates to a novel telephonic receiver operative through a current in line; and my invention consists of certain details of construction, as hereinafter fully described, and specifically pointed out in the claim, and for which I have received Letters Patent in Great Britain No. 158, January 14, 1880; in France December 7, 1880, No. 140,017; in Belgium December 13, 1880, No. 53,307; in India, No. 125, February 21, 1881, and New South Wales, No. 81/803, dated March 7, 1881; in New Zealand, No. 159 of 1881; in Victoria, No. 2,945 of June 12, 1881, and in Italy June 30, 1881, XXVI, 8.

I have found that an electro-magnet having one pole wound and the other pole left unwound and bent up to a point even with the wound pole, so that it may be inserted and fitted into a box of such a size as to be practically used as a telephonic receiver, is much more sensitive to the electrical impulses produced on a circuit by a transmitter than when both the poles are wound, and that the electro-magnet of such construction, provided with adjusting devices, and combined with a flexible armature having the side next to the unwound pole fixed and the side adjacent to the wound pole loose, all properly fitted into a small closed box provided with an ear-piece and binding-posts, constitutes a cheap, efficient, and practical telephone-receiver.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a non-magnetic inclosing-box, and A' a non-magnetic cap for said box provided with the ear-piece B. Within this box, supported on a spring, C, is an electro-magnet having one pole, D, wound with the coil E, and the other pole, F, bent up even with the pole D, but left unwound. Over the poles of the electro-magnet is an armature, G, having one side, *a*, rigidly secured between the cap A' and the box A, and the opposite side, *b*, loose between the cap and box. This may be accomplished by cutting the edge of the mouth of the box somewhat diagonally, so as to leave a space, *i*, on one side, which does not bind the armature. A set-screw, H, passing through the bottom of the box and engaging with the magnet, serves to adjust it to or from the armature.

From the foregoing description it will be evident that this receiver, unlike most other receivers, depends for its action, while speaking, upon a permanent current of electricity being maintained in the line and through the receiver, as the instrument is strictly electro-magnetic.

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

In a telephone-receiver, the non-magnetic box A and cap A', provided with the ear-piece B, in combination with the inclosed electro-magnet having pole D wound with coil E, and pole F unwound and bent up, as shown, the flexible armature G, secured rigidly on one side, *a*, and loose on the opposite side, *b*, the spring and screw adjusting device C H, and proper electrical connections, substantially as set forth.

LOUIS JOHN CROSSLEY.

Witnesses:

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