

(No Model.)

F. H. BROWN.
TELEPHONE.

2 Sheets—Sheet 1.

No. 536,914.

Patented Apr. 2, 1895.

Fig. 1.

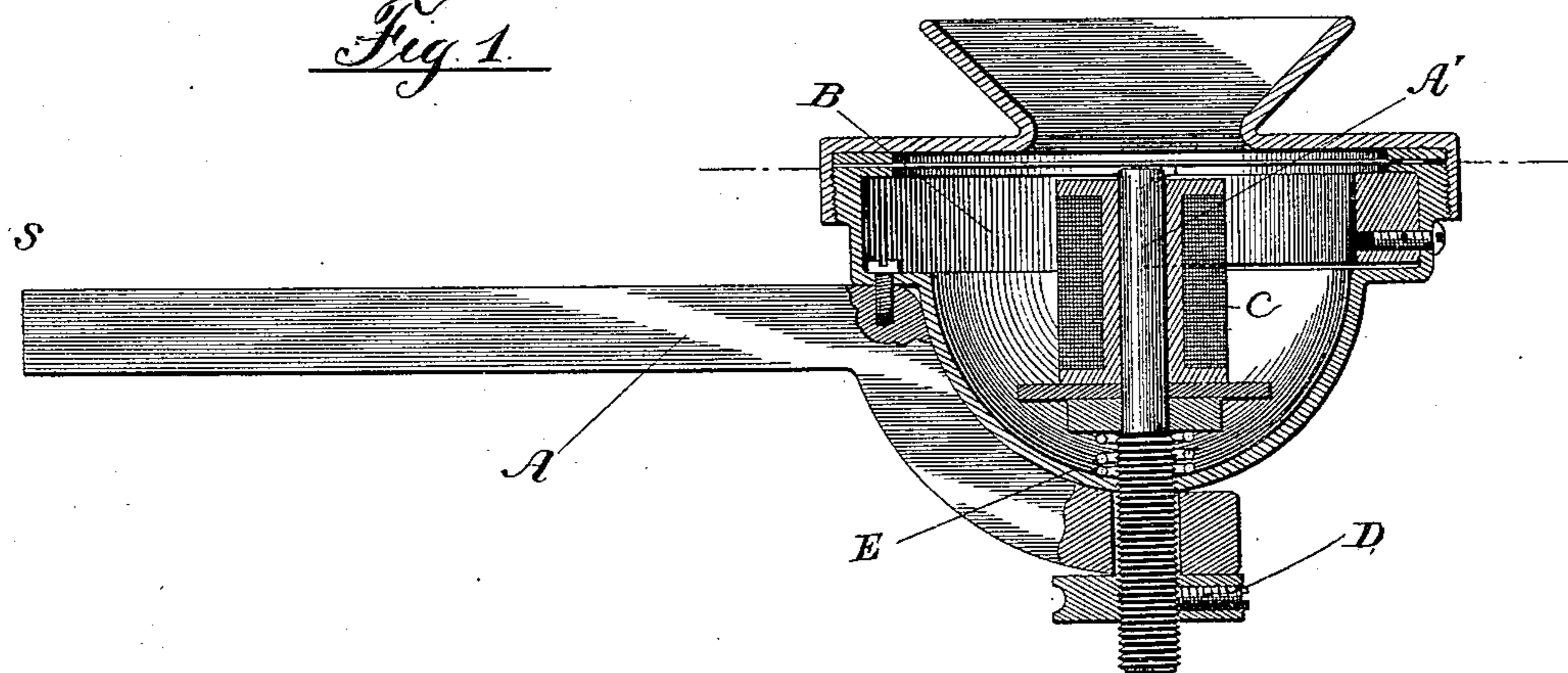


Fig. 2.

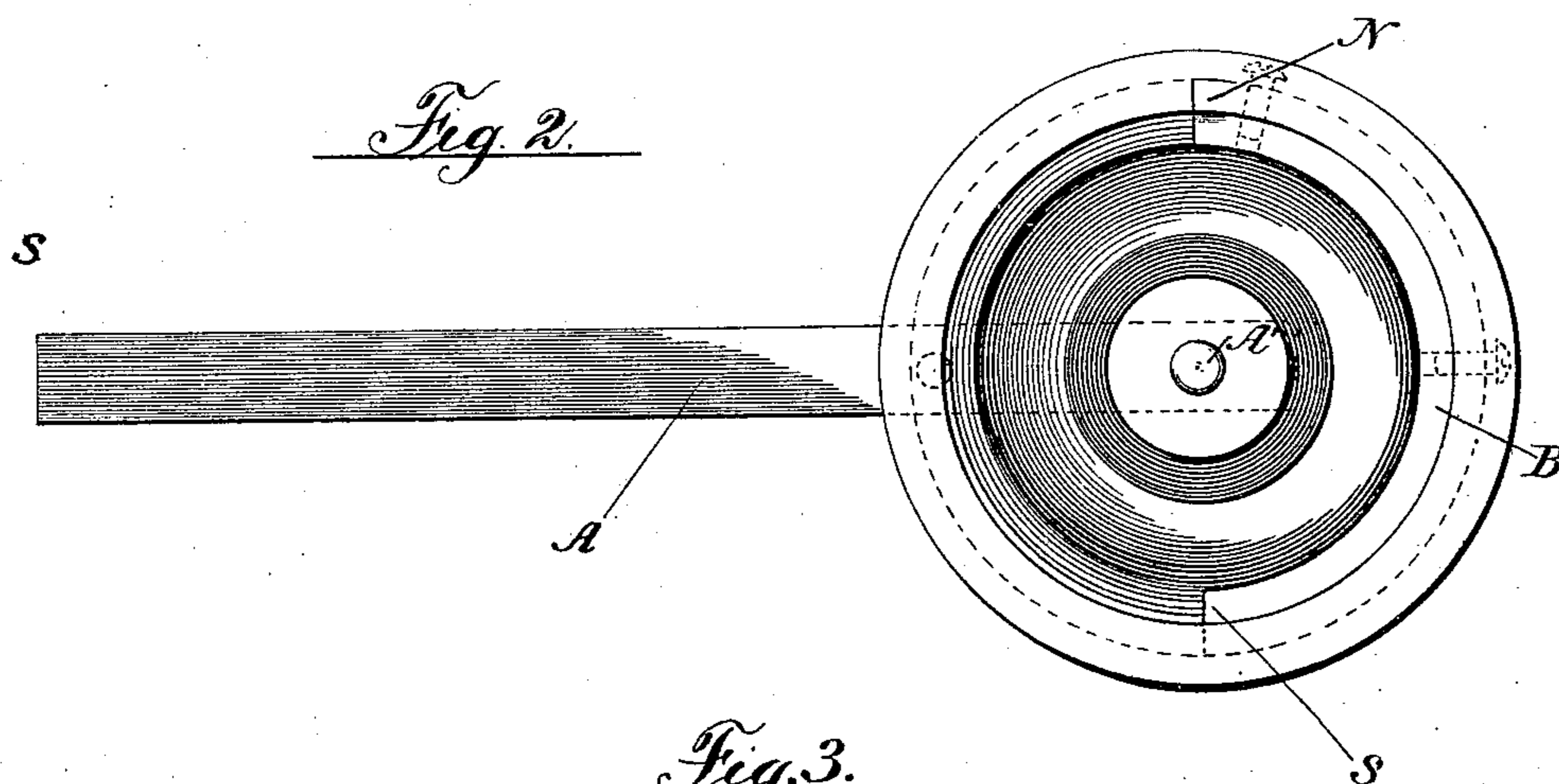
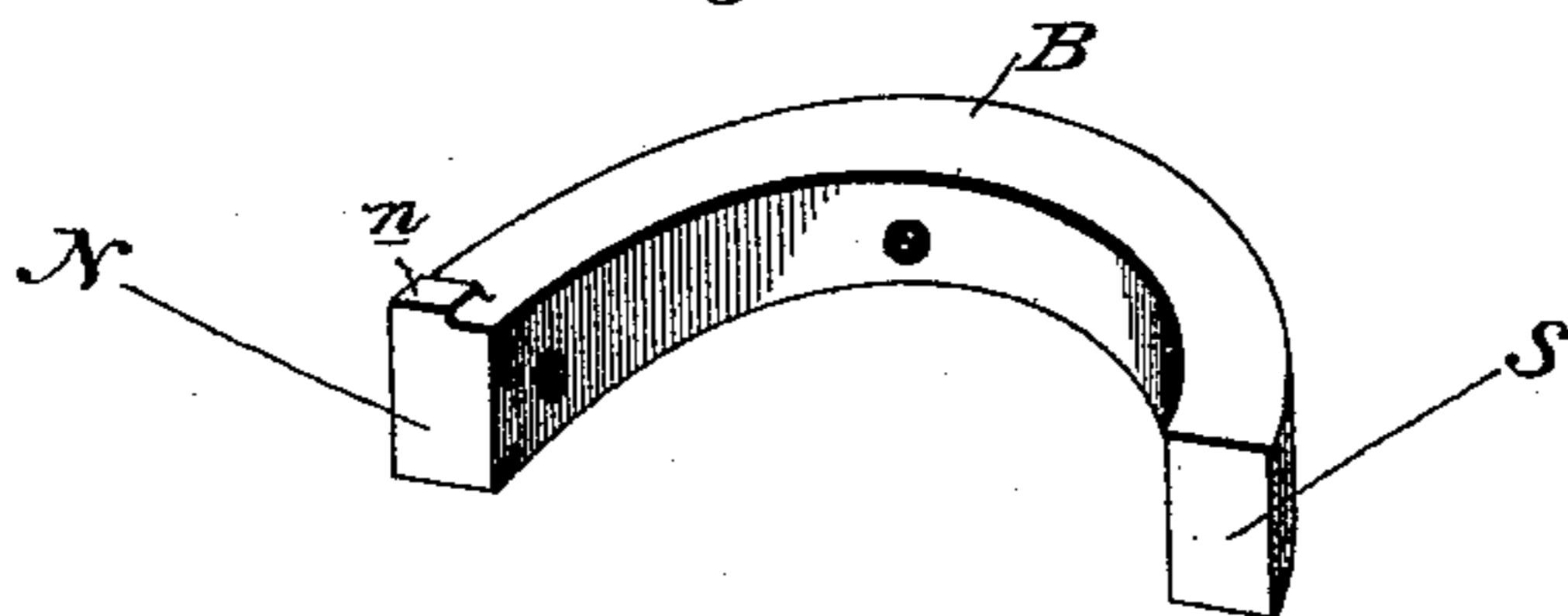


Fig. 3.



Witnesses:
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Fig. 1^a

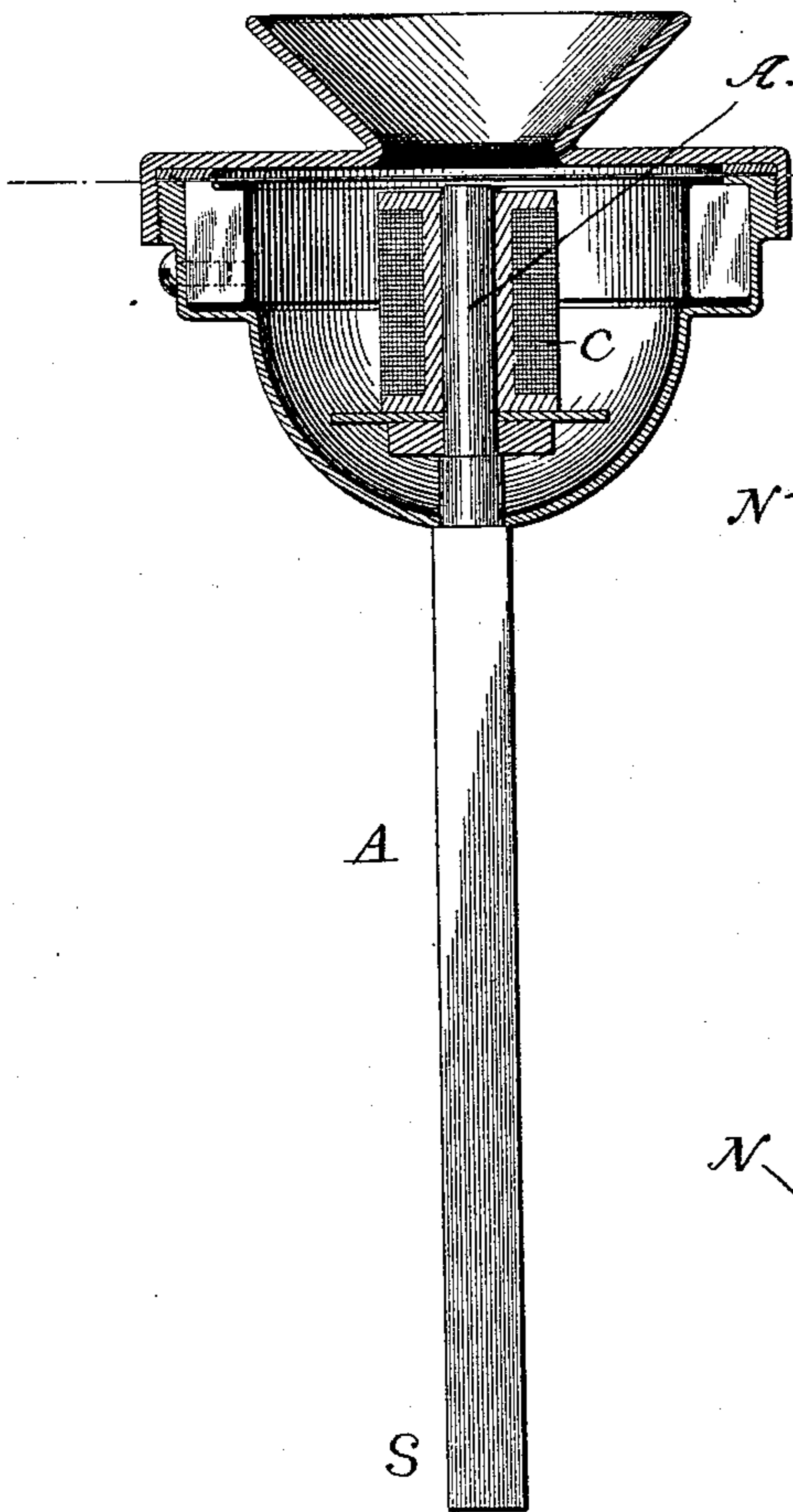


Fig. 2^a

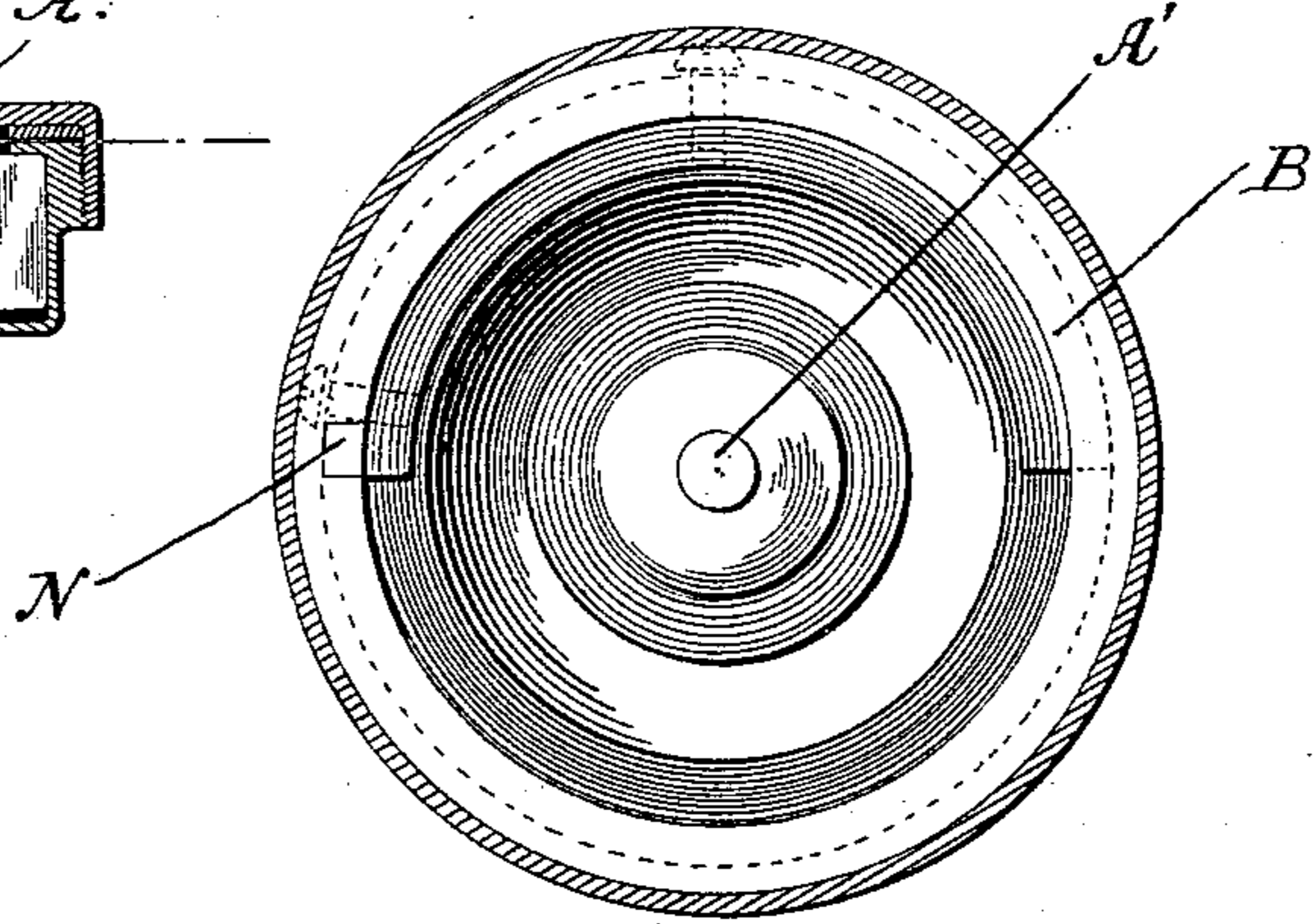
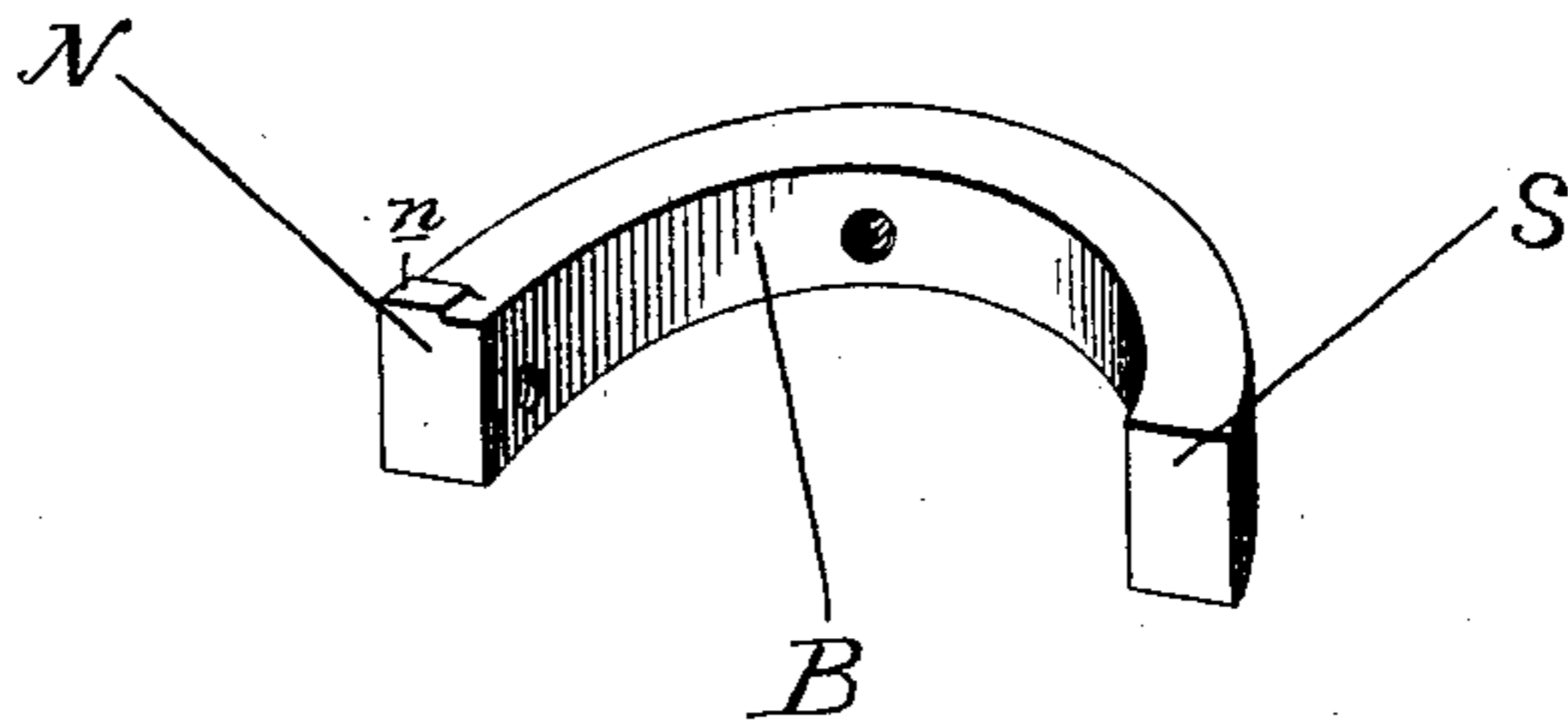


Fig. 3^a



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UNITED STATES PATENT OFFICE.

FRED H. BROWN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO THE ECONOMY TRANSMISSION COMPANY, OF SAME PLACE.

TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 536,914, dated April 2, 1895.

Application filed October 17, 1894. Serial No. 526,216. (No model.)

To all whom it may concern:

Be it known that I, FRED H. BROWN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Magneto-Telephones; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improved arrangement and construction of the magnets of a magneto telephone transmitter and re-
15 ceiver.

My invention further contemplates a more economical and cheaper form of magnets than
20 has been possible in those devised and patented by me in this art.

In all previous forms of magnets where two poles of similar polarity are opposed to the inductive influence of the diaphragm much
25 trouble has been experienced in so placing the two other poles removed from the diaphragm in such relative position that they would not depolarize each other on account of close proximity (they being of a similar polarity).

30 The two magnets in this telephone are as far removed as possible from each other.

The invention is fully and clearly illustrated in the accompanying drawings, wherein—

35 Figure 1 is a vertical section of the casing, showing the arrangement of the respective parts. Fig. 2 is a plan view of the instrument. Figs. 3 and 3^a are detail views of the permanent magnet which lies within the case. Fig. 1^a is a sectional view showing the outer per-
40 manent magnet straight; and Fig. 2^a is a plan view of the casing shown in Fig. 1^a.

A designates a permanent magnet which may be either straight as shown in Fig. 1^a, or bent at its inner portion to conform to the cup
45 of head of the casing as shown in Fig. 1. The inner end of this permanent magnet A is projected into the casing as shown, so that the portion within the casing stands at a right angle to the surface of the diaphragm with its pole
50 A' closely adjacent thereto, as is usual, and

as indicated in the drawings, and on the stem within the casing is mounted a helix or coil C. The casing is preferably of cup-shape, and at its upper portion is formed with an annular rim flange, constituting a seat for the interior
55 permanent magnet B. The magnet B is of the form shown in Figs. 3 and 3^a, and conforms to the interior of the casing, and is arranged on the flange thereof, with its body and pole remote and out of direct connection
60 with the pole of the central magnet. The respective poles of the magnets, are designated by the letters N and S. On one of the poles of the magnet B, is a nipple or lug n, which
65 contacts against or lies against the edge-surface of the diaphragm, so that the magnet B may become charged with the same polarity as the pole of the other magnet which is arranged centrally in the casing. By lodging
70 or contacting the projection n against this diaphragm, it tends to counteract the magnetic pull on the diaphragm exerted by the centrally arranged magnet.

In Fig. 1 I have shown a means for adjusting the relation of the pole A' of the mag-
75 net A to the diaphragm. This consists of a thumb-screw D on the outer part of the magnet, and an interior cushion-spring E.

Having thus described my invention, what I claim, and desire to secure by Letters Pat-
80 ent, is—

1. In a receiving telephone, the combination with the casing, and the diaphragm, of a permanent magnet, a pole of which lies adjacent to the diaphragm, and a permanent magnet
85 located wholly within the casing remote from the other magnet, and having a small part of its surface in contact with the edge-surface of the diaphragm, so that the interior magnet is charged with the same polarity as the con-
90 tacting pole of the other magnet, substantially as described.

2. In a receiving telephone, the combination with the casing, and the diaphragm, of a per-
95 manent magnet, a pole of which lies adjacent to the diaphragm, and a second permanent magnet lying wholly within the casing and remote and disconnected from the other magnet, and having one pole in contact with the
100 outer-surface of the diaphragm, so that the

interior magnet is charged with the same polarity as the contacting pole of the other magnet, substantially as described.

3. In a receiving telephone, the combination
5 of a suitable casing and a diaphragm, of a permanent magnet, one pole of which lies adjacent to the diaphragm, and a second permanent magnet wholly within the casing and having its body and poles remote from the
10 other magnet and one pole in contact with and supporting the diaphragm, so that the interior magnet is charged with the same polarity as the contacting pole of the other magnet, substantially as described.

15 4. In a receiving telephone, the combination with the diaphragm and a casing, of suitable material formed with a flange at the other portion, of a permanent magnet seated on the flange of the casing and having one pole in
20 contact with the diaphragm, and a permanent magnet projected into the casing with its pole adjacent to the diaphragm and remote from the other magnet, so that the interior magnet is charged with the same polarity as the contacting pole of the other magnet, substan-
25 tially as described.

5. In a receiving telephone, the combination with the diaphragm and a suitable casing formed with a seat in its upper portion, of the

permanent magnet A, projected centrally into 30 the casing with its pole adjacent to the diaphragm, a semi-circular permanent magnet B, arranged in the seat of the casing with both poles remote from the central magnet A, and formed with a lug *n*, on which the outer edge- 35 surface of the diaphragm rests, so that the interior magnet is charged with the same polarity as the contacting pole of the other magnet, substantially as and for the purpose specified.

6. In a receiving telephone, the combination with a suitable casing and a diaphragm, of a centrally located permanent magnet projected into the casing with its pole adjacent to the diaphragm, and a semi-circular permanent 45 magnet arranged within the casing with its body and poles remote from the other magnet, so that the interior magnet is charged with the same polarity as the contacting pole of the other magnet, substantially as and for the 50 purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

FRED H. BROWN.

Witnesses:

N. J. GOLL,
F. A. BRONSON.