

(No Model.)

H. E. WAITE.
RECEIVER FOR TELEPHONES.

No. 286,875.

Patented Oct. 16, 1883.

Fig. 1.

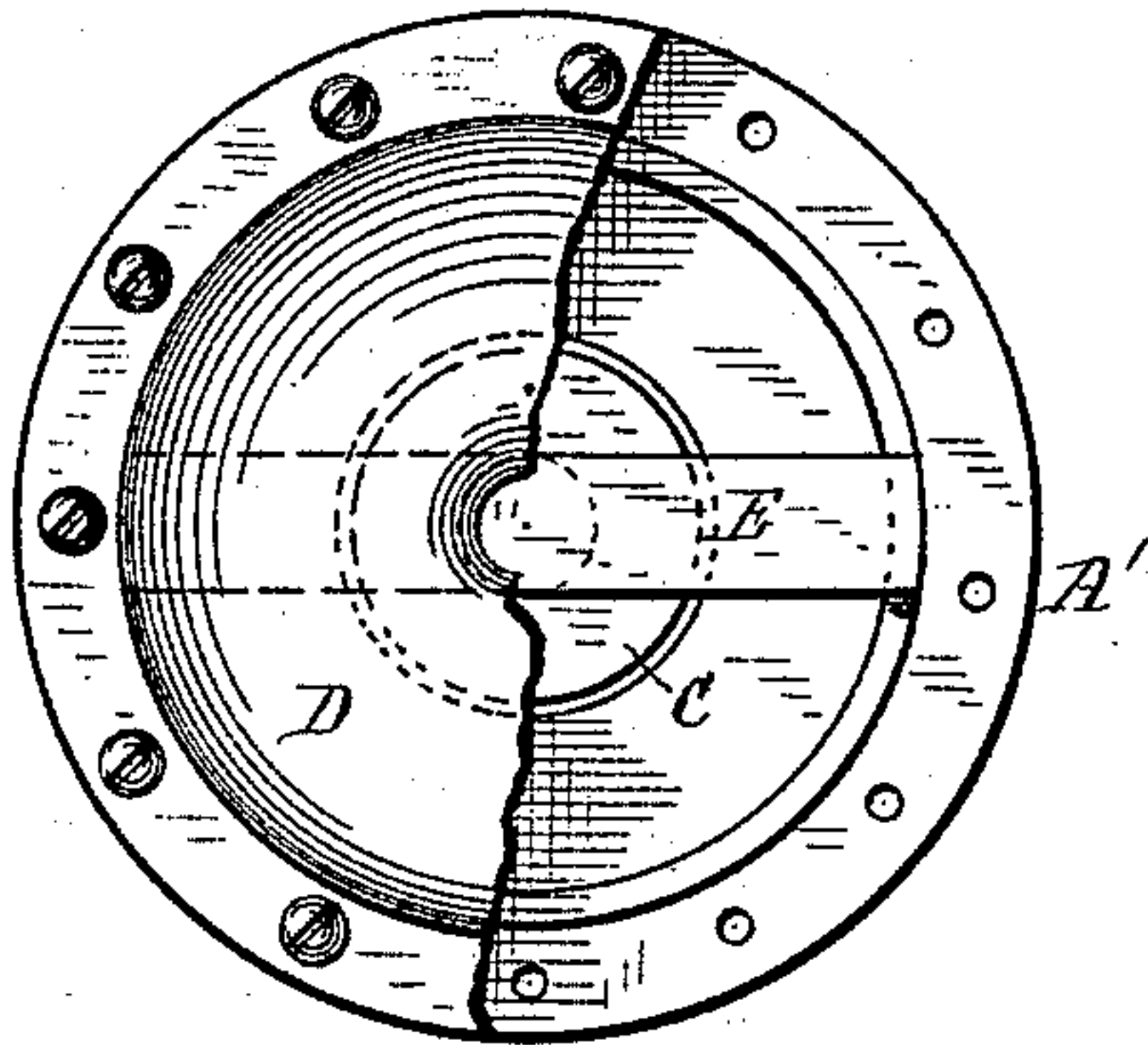


Fig. 2.

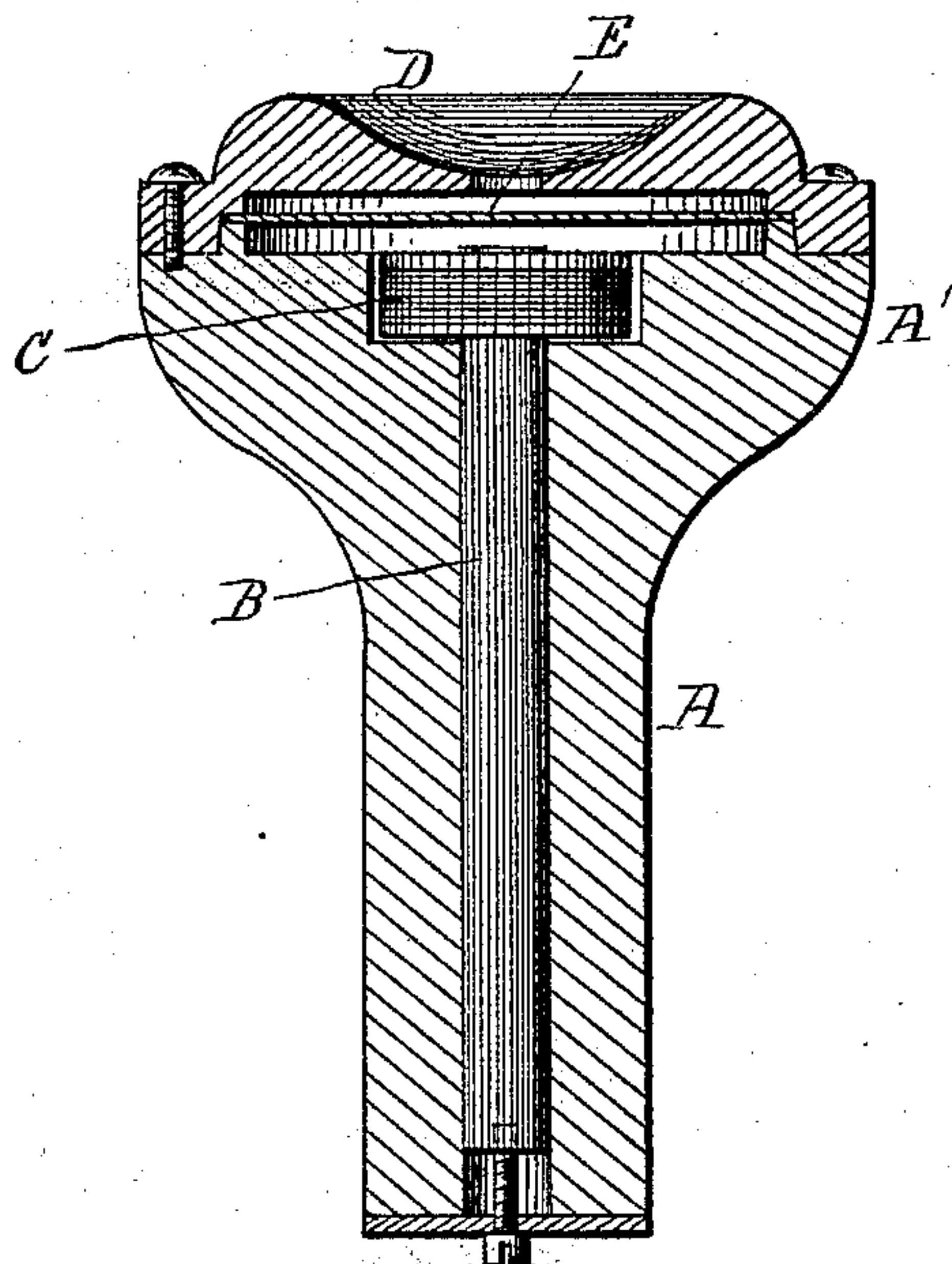
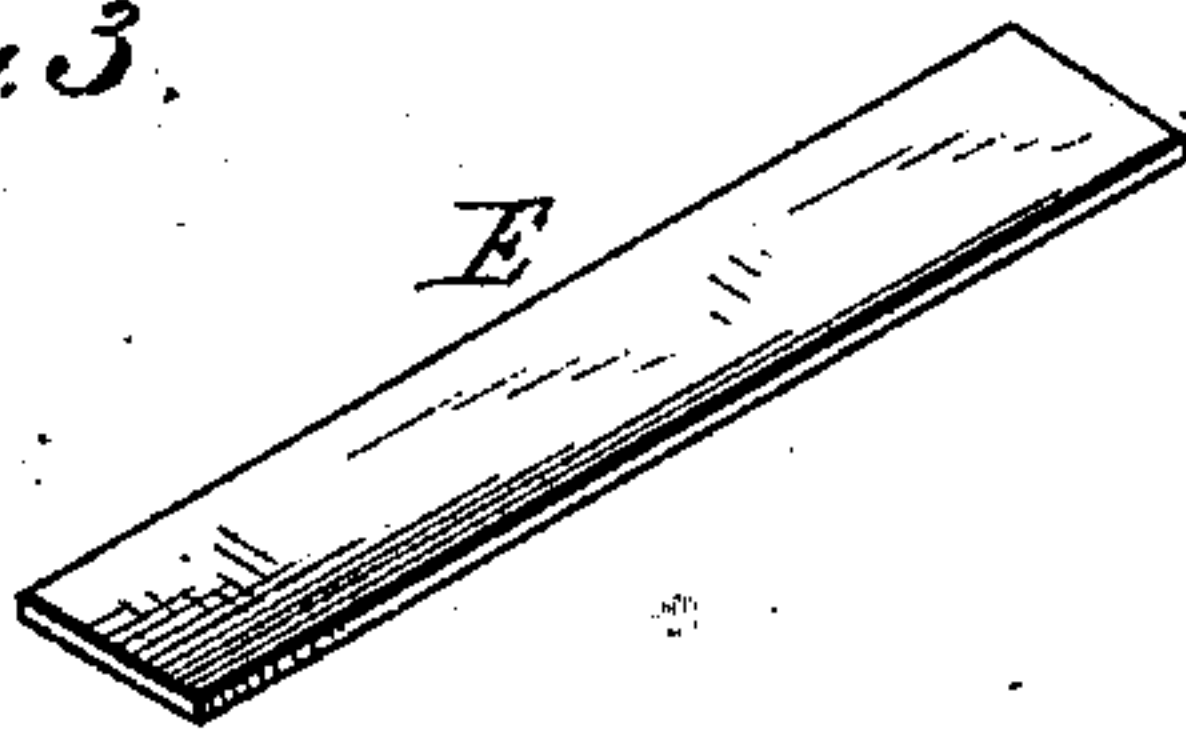


Fig. 3.



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RECEIVER FOR TELEPHONES.

SPECIFICATION forming part of Letters Patent No. 286,875, dated October 16, 1883.

Application filed July 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WAITE, of New York, county of New York, and State of New York, have invented a new and useful
5 Improvement in Receivers for Telephones, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 My invention relates to a novel construction of the sounding-board of the receiver, whereby its sensitiveness and consequent effectiveness is increased; and it consists in making the sounding-board in the form of a narrow strip of flexible magnetic material of sufficient width merely to cover the aperture in the ear-piece and the end of the magnet adjacent thereto, and between which and said ear-piece said sounding-board is interposed in the
20 usual relation to said parts, said construction serving to render the sounding-board more sensitive, and to permit increased throw or vibration of the same under the disturbances or variations in degree of polarity in the magnet, as compared with the disk or extended diaphragm in common use.

In the accompanying drawings, Figure 1 is a plan view of the end of the receiver with the ear-piece partly broken away. Fig. 2 represents a longitudinal section through the receiver, and Fig. 3 is a perspective view of the sounding board or strip detached.

A represents the handle, which may be of any usual or suitable material, form, and construction, but preferably of hollow cylindrical form with an enlarged head or end, A', adapting it to receive and inclose the magnet B and coil C on one end of said magnet, as shown.

40 D is the ear-piece, made in any usual or preferred form, and adapted to be secured to the end or head A' in any suitable manner. The head A' is, by preference, provided in its end with a shallow enlargement of the chamber, 45 surrounding the coil C, and the ear-piece is similarly chambered, as shown, in such manner as to remove the sounding-board, which is secured between said head and ear-piece from

contact with said parts, except at its ends, by which it is grasped and held.

E represents the sounding-board, which is made in the form of a narrow strip of flexible or elastic and magnetic material of a width sufficient to cover the aperture in the ear-piece and the end of the magnet adjacent thereto, but not of sufficient width to be grasped between the head A' and ear-piece D, except merely at its ends.

Any suitable magnetic material may be employed for the sounding-board, and it may be secured between the chambered end of the handle A and the ear-piece D in any suitable manner, so long as it is supported only at the ends, and its sides are left free to vibrate under the disturbances in degree of polarity in the magnet.

It will be readily understood that by this construction the sounding-board will be adapted to respond more quickly to the disturbances in the magnet than where it is made to cover the entire end of the head of the receiver in the form of a diaphragm interposed between said head and the ear-piece, and is bound or grasped and held upon all sides; also, that not being held at the sides there will be less resistance to its movements, and it will consequently be moved farther under the same impulse or degree of disturbance in polarity in the magnet, and that its movement will be in substantially parallel and right lines from side to side of the strip, instead of in curved lines of increasing or diminishing convexity. The portion of the strip underlying the aperture in the ear-piece and over the end of the magnet will thus be made to move, substantially, bodily under the action of the disturbances in the magnet, and the effectiveness of the receiver is thereby greatly increased. The receiver, except in the particular of the sounding-board referred to, may be constructed in any usual or preferred manner.

I am aware that a narrow strip of magnetic material connected with one pole of a bar-magnet, and passing through the magnetic field of the opposite pole of said bar or

magnet, has been employed in lieu of the ordinary extended diaphragm. This I do not claim; but,

Having now described my invention, what
5 I claim as new is—

In a telephone-receiver, the combination, with the ear-piece and the magnet, of the interposed sounding-board composed of a narrow strip of flexible magnetic material sup-

ported only at its ends, substantially as and to for the purpose described.

In testimony whereof I have hereunto set my hand this 10th day of July, A. D. 1883.

HENRY E. WAITE.

Witnesses:

REX. SMITH,
GEO. RUNDEL.