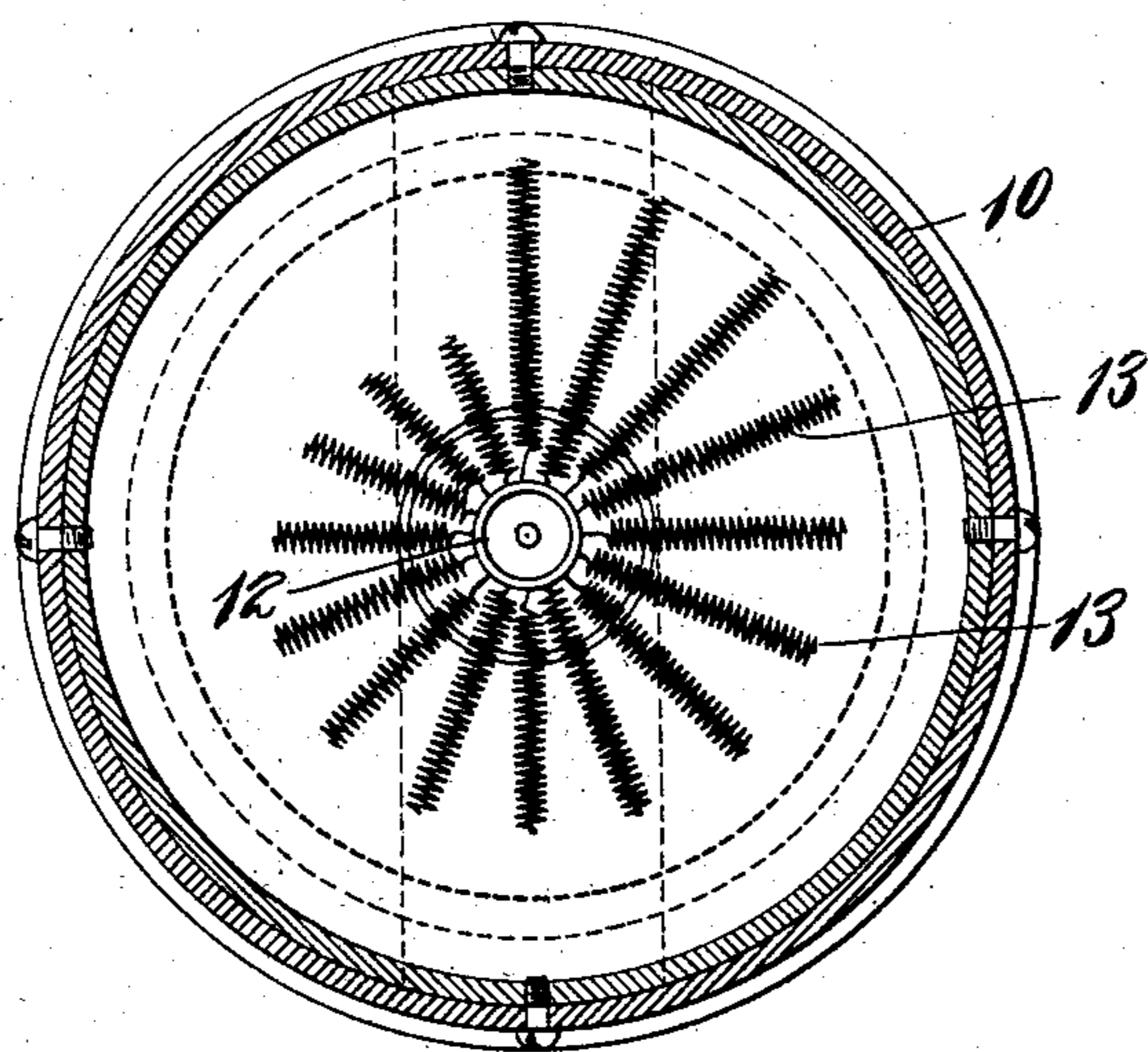
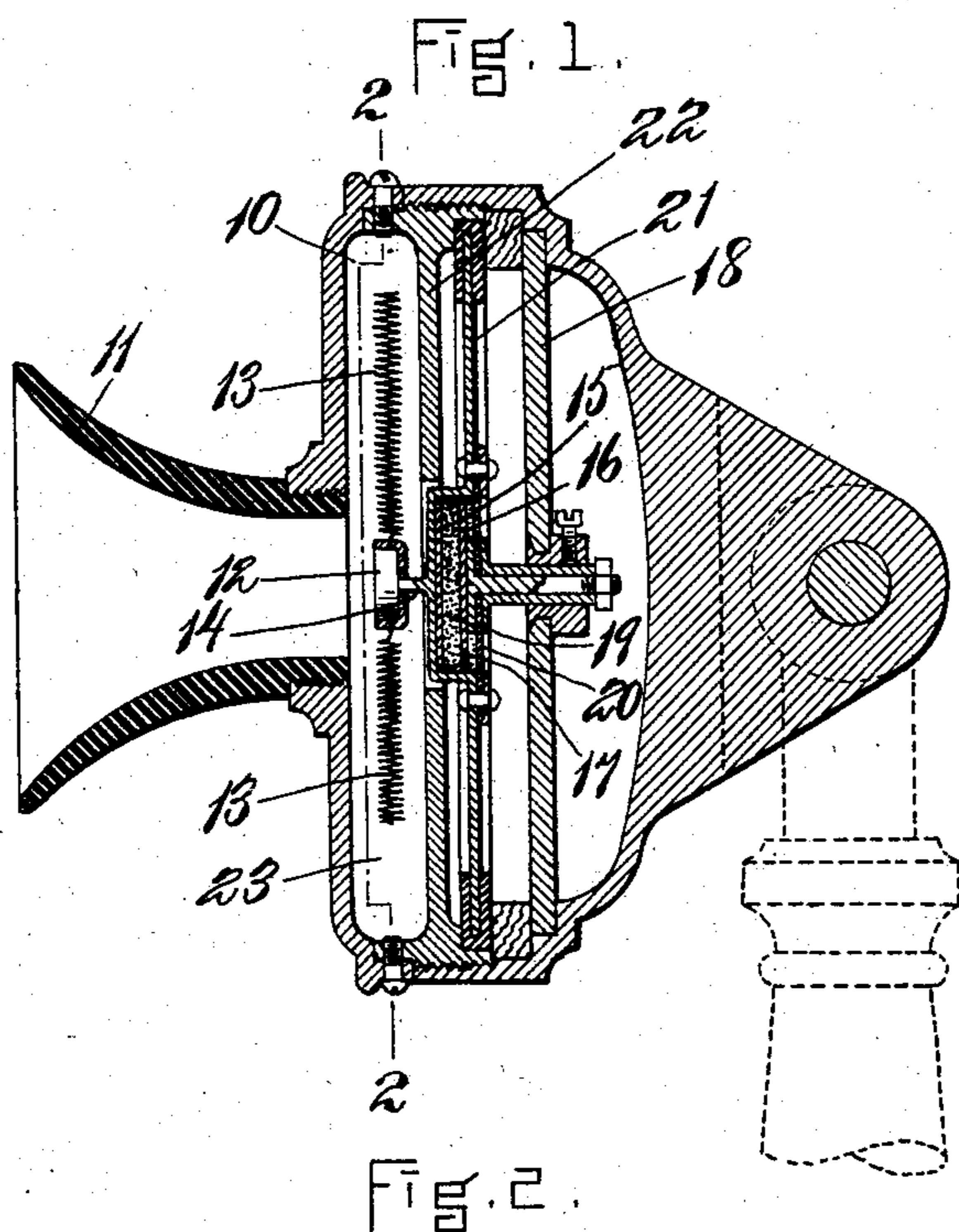


No. 721,817.

PATENTED MAR. 3, 1903.

L. MELLETT.  
TELEPHONE TRANSMITTER.  
APPLICATION FILED JUNE 6, 1902.

NO MODEL.



WITNESSES.  
Adeline C. Ratigan  
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# UNITED STATES PATENT OFFICE.

LEMUEL MELLETT, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO MICROPHONE TRANSMITTER COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

## TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 721,817, dated March 3, 1903.

Application filed June 6, 1902. Serial No. 110,467. (No model.)

*To all whom it may concern:*

Be it known that I, LEMUEL MELLETT, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain  
5 new and useful Improvements in Telephone-Transmitters, of which the following is a specification.

This invention relates to telephone-transmitters; and its object is to obtain greater  
10 delicacy or receptiveness in the instrument with a consequent increase in the loudness and distinctness of the sounds given out at the receiving end of the line. This object I attain by dispensing with the ordinary dia-  
15 phragm as the primary sound-receiving element of the transmitter and employing in its place a primary sound-receiver, consisting of a plurality of mechanical vibrators, preferably attuned to the notes of the scale and pro-  
20 vided in sufficient number to take up all or the principal tones of the speaking voice, such vibrators controlling the resistance-varying means, preferably by direct attachment to the movable electrode.

25 The accompanying drawings represent an embodiment of my invention which I have selected for illustration, but to the details of which I do not confine myself.

Figure 1 represents an axial section of a  
30 transmitter constructed in accordance with my invention. Fig. 2 represents a section on line 2 2 of Fig. 1.

The same reference characters indicate the same parts in both figures.

35 In the drawings, 10 is a casing having a mouthpiece 11, immediately behind and in line with which is located a hub or support 12, from which radiate a series of vibrators 13 13, consisting of helically-coiled wire springs.  
40 These springs are of different lengths and attuned to the notes of the scale, and I have shown two octaves, although not confined to the exact number or arrangement shown, nor to any precise construction of vibrators.  
45 These springs besides responding as a whole to fundamental tones will also respond sympathetically to a large range of harmonics. The hub 12 is connected by a stem 14 with the diaphragm 21, hereinafter mentioned, and  
50 therethrough with the movable electrode 15

of the ordinary resistance-varying cell or element 16.

17 is the back electrode, supported by a rigid bridge 18, and 19 is granular carbon interposed between the electrodes.

20 is a flexible sheet of mica connecting the movable walls of the carbon-cell with the fixed electrode. The walls of the cell 16 are shown as continued or spread out into a dia-  
60 phragm 21, forming a support for the movable electrode 15 and the vibrators 13, which permits the electrode to travel readily with the movements imparted by the vibrators.

22 is a partition forming the back wall of a chamber 23 in which the vibrators 13 are  
65 placed. The vibrators 13 receive in a primary capacity the air-vibrations due to sounds, and owing to their great delicacy they absorb these vibrations and are themselves set in vibration more readily than is the case  
70 with the ordinary transmitter-diaphragm. The latter being relatively stiff reflects a large part of the sound-waves received upon it, which reflected sound is not efficiently utilized in vibrating the movable electrode.

75 The construction above described may be varied in many particulars while still retaining the principle of operation involved.

The function of the diaphragm 21 is merely to act as a flexible support for the movable  
80 electrode, and any other suitable means for movably supporting said electrode may be substituted in its place.

I am aware that harmonic vibrators have heretofore been used in various connections  
85 with respect to telephonic apparatus; but I am not aware of the use of mechanical vibrators prior to my invention as a primary sound-receiving device.

By the expression "primary sound-re-  
90 ceiver" or its equivalents used herein I mean that device first in the path of the air sound-waves affecting the resistance-varying means.

This application discloses certain struc-  
95 tures which I do not herein claim or claim generically, as the same are incorporated in another application, Serial No. 113,556, filed by me.

I claim—

1. In a telephone-transmitter, a primary sound-affected device consisting of a plurality of differently-tuned mechanical vibrators, and resistance-varying means directly controlled thereby. 5
2. In a telephone-transmitter, a resistance-varying element having a movable electrode, and a primary sound-affected device comprising a hub or support attached to said movable electrode, and a plurality of differently-tuned vibrators radiating from said support. 10
3. In a telephone-transmitter, a resistance-varying element having a movable electrode, a primary sound-affected device consisting of a plurality of vibrators, and a flexible support located behind said vibrators and supporting the latter and the movable electrode. 15

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

LEMUEL MELLETT.

Witnesses:

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ADELINE C. RATIGAN.