

No. 682,333.

Patented Sept. 10, 1901.

M. C. MENGIS.
TELEPHONE TRANSMITTER.

(Application filed Feb. 15, 1900. Renewed Feb. 12, 1901.)

(No Model.)

Fig. 1.

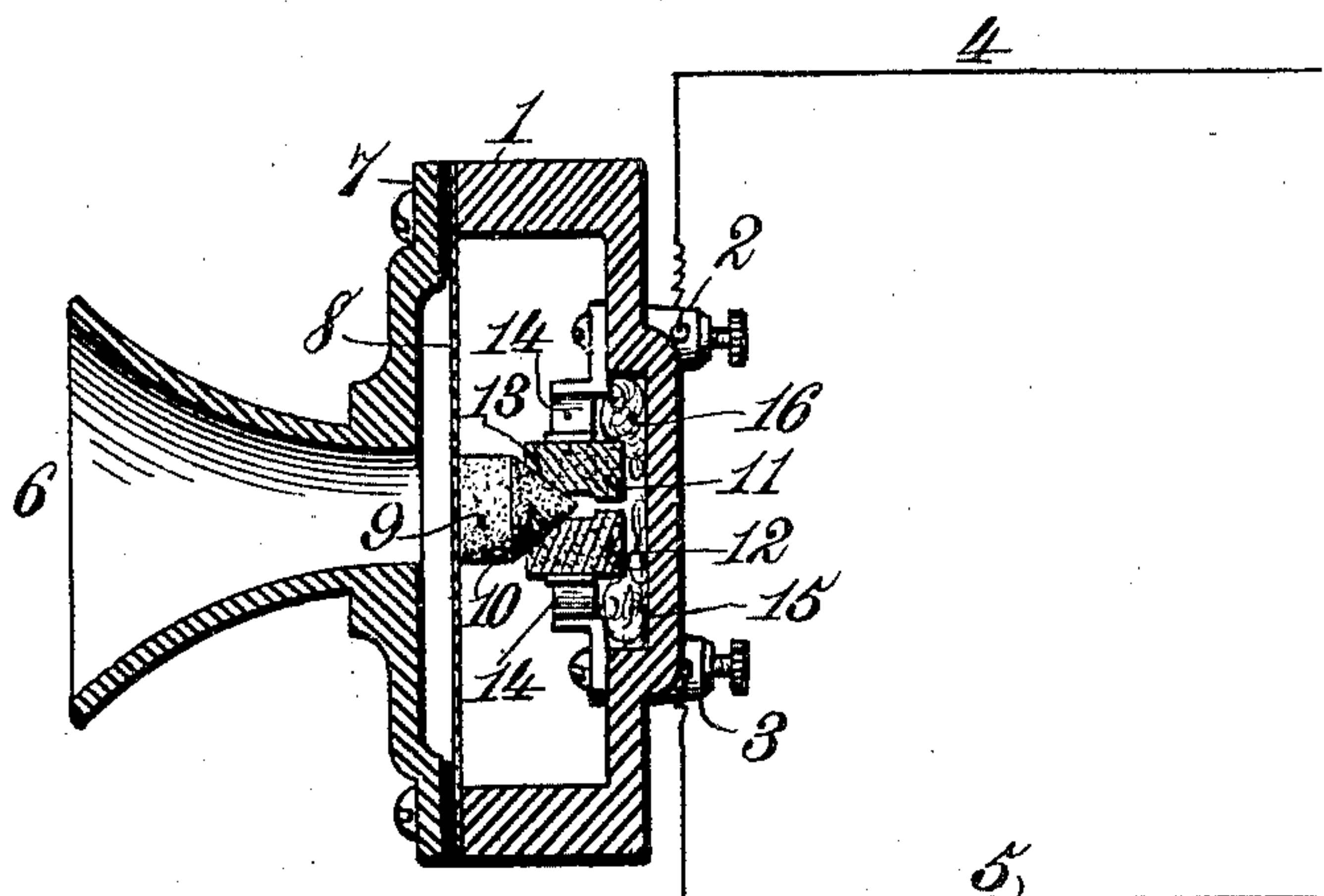


Fig. 2.

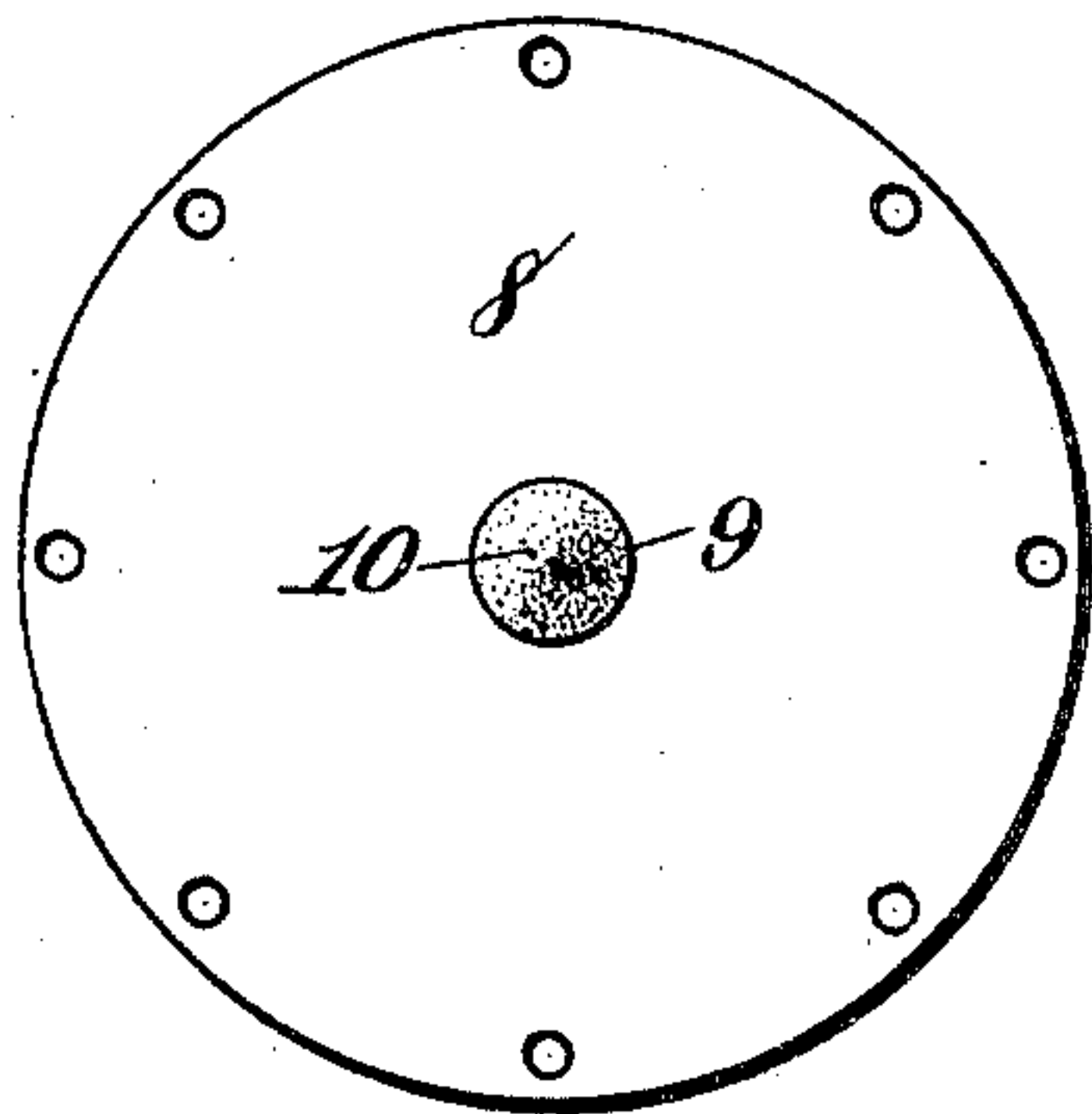
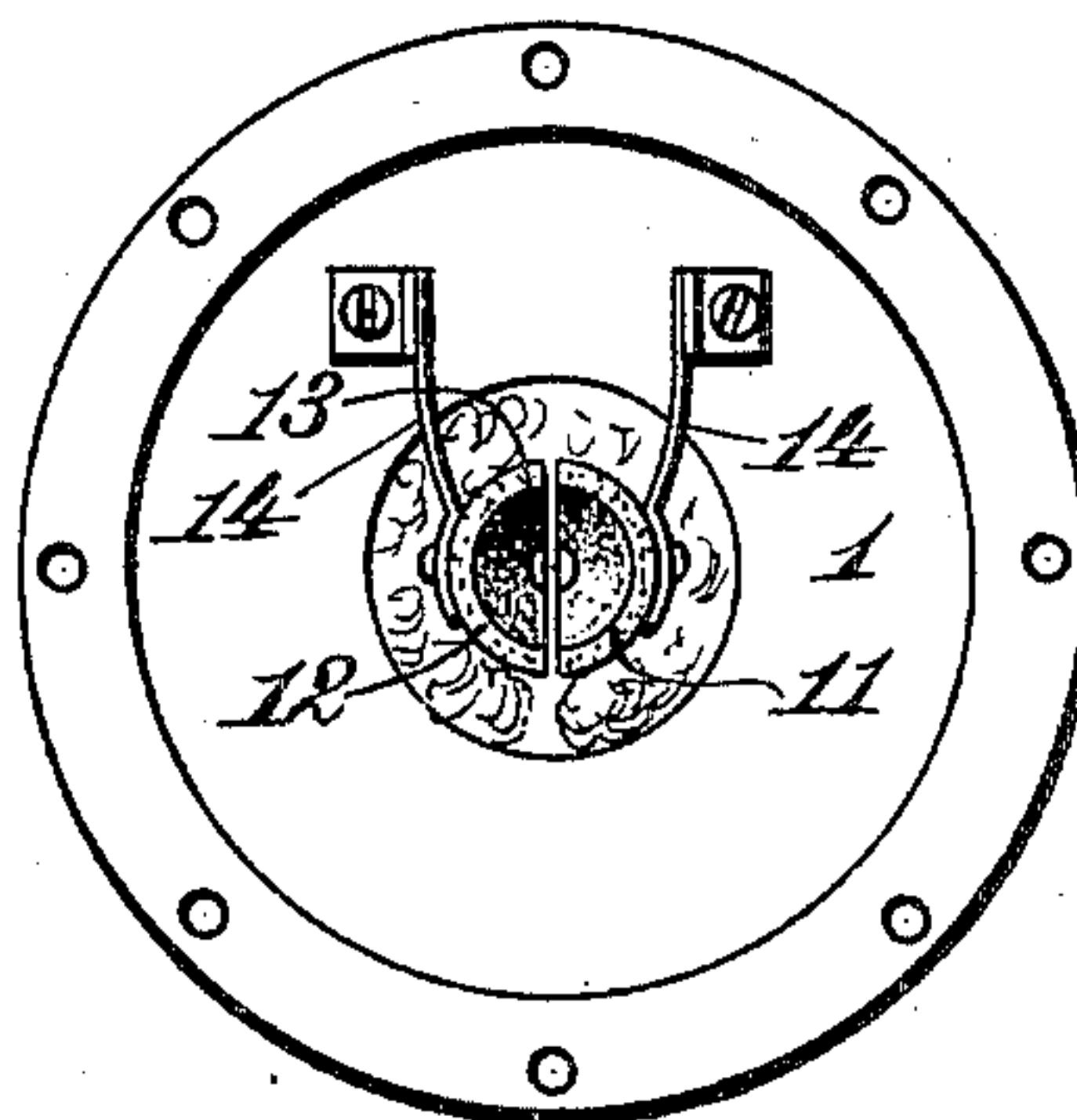


Fig. 3.



Witnesses:
Robert Everett,
Lennie Sundry.

Inventor:
Morris C. Mengis.
By James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

MORRIS C. MENGIS, OF BROOKLYN, NEW YORK.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 682,333, dated September 10, 1901.

Application filed February 15, 1900. Renewed February 12, 1901. Serial No 47,052. (No model.)

To all whom it may concern:

Be it known that I, MORRIS C. MENGIS, a citizen of the United States, residing at Sheepshead Bay, in the borough of Brooklyn and State of New York, have invented new and useful Improvements in Telephone-Transmitters, of which the following is a specification.

My invention relates to telephone-transmitters, one object of the same being to provide an extremely delicate and sensitive instrument of this kind, and one in which a variation in the intensity of the electric current may be produced with the least possible friction of the parts.

A further object of the invention is to provide means whereby the vibration of the moving parts and consequently the buzzing sound produced thereby may be avoided or overcome.

Other objects and advantages of the invention will hereinafter appear.

The invention consists of a plurality of contact-sections having a cavity therein, a button on the diaphragm whose end fits within said cavity and is of corresponding shape therewith, and springs for holding said sections in engagement with said button.

The invention also consists in certain features and details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 is a longitudinal sectional view of my improved transmitter. Fig. 2 is an elevation showing the inner face of the diaphragm, and Fig. 3 is a similar view showing the sectional contacts and the springs cooperating therewith.

Like reference-numerals indicate like parts in the different views.

The casing 1, in which the operative parts of my device are mounted, has the binding-posts 2 3 secured to the rear side thereof, to which are connected, respectively, the circuit-wires 4 5, the said wires constituting portions of the line-circuit or of a local-battery circuit through the primary of an induction-coil. To the front side of the casing 1 is secured the mouthpiece 6, between the flange 7 of which and said casing 1 is secured a dia-

phragm 8. On the inner side of said diaphragm is a button 9, of carbon or other suitable material, having a tapering or cone-shaped end 10. While I prefer that the end 10 of the button 9 shall be cone-shaped, as shown, it is obvious that it may be rounded, if desired. Coöperating with the button 9 is what may be termed a "sectional contact," the members or sections 11 and 12 of which are formed with a tapering or cone-shaped cavity 13, in which the conical end 10 of said button fits and against the walls of which the walls of said conical end 10 bear. The said sections are out of contact with each other, but are maintained in contact with the conical end 10 of the button 9 by means of springs 14, connected, respectively, with the binding-posts 2 3, and are thereby included in the circuit with the wires 4 5. Seated in a recess 15 in the base or rear side of the casing 1 is a ring 16, of cotton, felt, wool, or other like yielding material, the said ring surrounding the sections 11 12 and tending to prevent the vibration of said sections when the instrument is not in actual operation. The nature of the material of which the ring is made, however, will permit of the movement of said sections when the instrument is in operation.

From the foregoing description it will be obvious that during the vibration of the diaphragm 8, caused by the sound impulses from the human voice in the mouthpiece 6, the button 9, carried by said diaphragm, or rather the conical end 10 thereof, will be caused to be moved back and forth in the cavity 13 in the sectional contact 11 12. This will vary the resistance in the circuit 4 5, in which the sections 11 12 are included, and consequently cause variations in the intensity of the electric current in accordance with the degree of the vibrations of the diaphragm 8. The sections 11 12 and the button 9 being always in contact with each other by reason of the action of the springs 13 and 14 and said parts being included in the circuit with the wires 4 5, it will be noted that the variations in the intensity of the current are caused by the variations in the extent of contact between said sections 11 and 12 and the conical end 10 of the button 9. In the movement of the button 9 upon the inclined surface of the sections 11

12 friction between the parts is reduced to a minimum, and the instrument produced is extremely sensitive.

It is of course obvious that many changes
5 may be made in the shape and details of construction of the various parts, and I therefore do not limit myself to the exact construction and arrangement herein shown except as defined in the claims.

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

1. In a telephone-transmitter, a plurality of contact-sections, having a cavity therein, a
15 diaphragm, a button on said diaphragm fitting within said cavity, and means for holding said sections in engagement with said button.

2. In a telephone-transmitter, a plurality of
20 contact-sections having a tapering or cone-shaped cavity therein, a diaphragm, a button on said diaphragm having a tapering or cone-shaped end fitting within said cavity, and means for holding said sections in engage-
25 ment with said button.

3. In a telephone-transmitter, a plurality of contact-sections having a cavity therein, a diaphragm, a button on said diaphragm fitting within said cavity, and springs for hold-
30 ing said sections in engagement with said button.

4. In a telephone-transmitter, a plurality of separated contact-sections, having a tapering or cone-shaped cavity therein, a button on

said diaphragm having a tapering or cone- 35 shaped end fitting within said cavity, and springs for holding said sections in engagement with said button, the said springs, contact-sections, and button being included in an electric circuit. 40

5. In a telephone-transmitter, a plurality of contact-sections having a cavity therein, a diaphragm, a button thereon fitting within said cavity, means for holding said sections in engagement with said button, and means 45 for preventing vibration of said sections.

6. In a telephone-transmitter, a plurality of contact-sections having a cavity therein, a diaphragm, a button thereon fitting within said cavity, means for holding said sections 50 in engagement with said button, and a yielding pad or buffer for preventing the vibration of said sections.

7. In a telephone-transmitter, a plurality of contact-sections having a cavity therein, a 55 diaphragm, a button thereon fitting within said cavity, means for holding said sections in engagement with said button, and a ring of yielding or elastic material embracing said sections for preventing the vibration thereof. 60

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MORRIS C. MENGIS.

Witnesses:

SINDING CHRISTENSEN,
FRANK S. OBER.