

O. M. LEICH & N. PEDERSEN.
 TELEPHONE TRANSMITTER.
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970,066.

Patented Sept. 13, 1910.

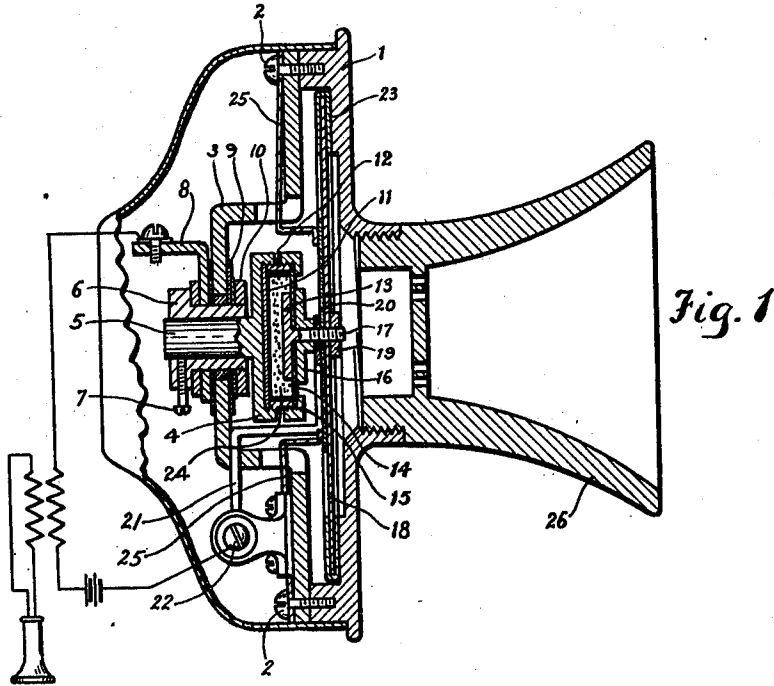


Fig. 1

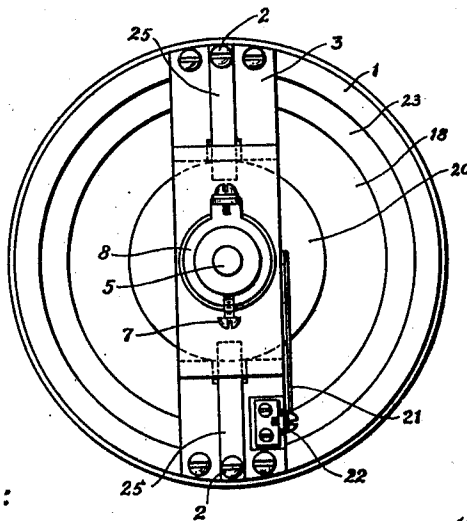


Fig. 2

WITNESSES:

J. C. Anderson
R. B. Deakman

INVENTORS

OSCAR M. LEICH
 NIELS PEDERSEN

May W. Label
 BY

ATTORNEY

UNITED STATES PATENT OFFICE.

OSCAR M. LEICH AND NIELS PEDERSEN, OF GENOA, ILLINOIS, ASSIGNORS TO
CRACRAFT-LEICH ELECTRIC CO., OF GENOA, ILLINOIS.

TELEPHONE-TRANSMITTER.

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To all whom it may concern:

Be it known that we, OSCAR M. LEICH and NIELS PEDERSEN, citizens of the United States, residing at Genoa, in the county of Dekalb and State of Illinois, have invented a certain new and useful Improvement in Telephone-Transmitters, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to transmitters, and has for its object the provision of an improved transmitter instrument for telephone work.

The advantages of our improved transmitter are due to the special constructional features involved, and will be more fully set forth by reference to the accompanying drawing forming part of this specification, in which—

Figure 1 is a sectional view of the center of our improved transmitter, and Fig. 2 is a rear view with the cup removed.

The transmitter comprises a suitable body, 1, circular in shape, upon which is mounted and firmly secured thereto by means of screws 2, 2, a bridge, 3. The bridge 3, supports a carbon inclosing cup, comprising the rear metal cup shaped portion 4, having a stem, 5. An annular washer, 6, is provided about said stem and secured thereto by means of a screw, 7. The stem, 5, together with the annular washer, 6, are attached to one terminal of the circuit, and for this reason are provided with a terminal element, 8. Through the interposition of suitable washers, 9, a nut, 10, secures the annular washer, 6, in the bridge, 3, and the stem, 5, as before stated, is firmly held in the washer, 6, by means of the screw, 7. The rear cup, 4, is made to receive a carbon electrode, 11, which carbon electrode is firmly secured into said rear cup, 4, by means of a screw threaded annulus, 12. It will thus be seen that by virtue of this improved construction it is not necessary to solder the carbon electrode, 11, to the rear cup, 4. A second or front carbon electrode, 13, is mounted upon a suitable insulating medium, 14, preferably mica. The mica disk, 14, is mounted upon the annulus, 12, and held firmly thereto by the front cup, 15. A disk, 16, is mounted upon the opposite side of the mica disk, 14, to which the electrode, 13, is mounted. A

stem, 17, projects from the electrode, 13, through the transmitter diaphragm, 18, and a nut, 19, firmly secures together said diaphragm, 18, said electrode, 13, said mica disk, 14, and said washer, 16, there being further secured in this combination a mica disk, 20, whose purpose is to be more fully described hereafter, and a contact bar, 21, which extends thereto from the remaining terminal of the transmitter 22. It will be seen from this that the two terminals 8 and 22 are so mounted that they have extensions running parallel with the axis of the transmitter. This permits the transmitter head to be removed from its back cup without the necessity of long and cumbersome connecting wires. The head is first released from the back cup and then moved forwardly a short distance, at which time a screw-driver may readily be inserted to disengage the terminals from their connecting wires.

The diaphragm, 18, is provided with a rubber cushion, 23, and is set against the body, 1, engaging said body at its outer extremity. The pressure which the diaphragm exerts against the body and thereby transmits to the carbon carrying cup is regulated by means of the pressure with which the stem, 5, is pushed inwardly toward the diaphragm, being thereafter secured by the screw, 7, as outlined. Carbon granules, 24, are provided in the cylindrical portion formed by the rear cup, 4, and the front cup, 15, and form the main portion of the transmitter talking circuit, as well understood. The mica disk, 20, which rests against the diaphragm 18, is part of our improved dampening device which gives this transmitter exceptional facilities for transmitting voice currents which maintain intact the various harmonics and overtones of the voice. To work in connection with this mica disk, 20, we provide dampening springs, 25. By virtue of our improved construction we are enabled to mount these dampening springs directly on the bridge, which provides great facility for the manufacture of these transmitters at the same time serving to maintain the various modulations of the voice current. These dampening springs, 25, are held in the bridge by means of the screws 2, 2, and press inwardly against the diaphragm, 18, preferably through the interposition of the mica disk, 20. A mouthpiece, 26, completes our transmitter.

We have herein shown and particularly described the preferred embodiment of our invention, but do not wish to limit ourselves to the precise construction or arrangement as herein shown.

Having described one embodiment of our invention, what we claim as new and desire to secure by Letters Patent is:—

1. A telephone transmitter comprising a suitable body, a diaphragm mounted therein, a bridge having apertures likewise mounted upon said body, for carrying the current varying device, and leaf springs impinging against said diaphragm, having one extremity rigid with respect to said body, projecting through the apertures in said bridge and extending from the outer portion of said body toward the center of said transmitter, whereby a long spring action is obtained.

2. A telephone transmitter comprising a suitable body portion, a bridge firmly fixed thereto for carrying the current varying device, a diaphragm associated with said current varying device and mounted in said body, leaf springs provided upon said bridge and impinging against said diaphragm, and insulating material interposed between said leaf springs and said diaphragm in combination with means carried by said bridge for holding said insulating material in place.

3. A telephone transmitter comprising a suitable body portion, a bridge firmly fixed thereto for carrying the current varying device, a diaphragm associated with said current varying device and mounted in said body, leaf springs provided upon said bridge and impinging against said dia-

phragm, and mica interposed between said leaf springs and said diaphragm and means carried by said bridge for holding said mica in place.

4. A telephone transmitter comprising a suitable body portion, a bridge having an aperture firmly fixed thereto for carrying the current varying device, a diaphragm associated with said current varying device and mounted in said body and a leaf spring provided upon said bridge projecting through said aperture in said bridge, said dampening spring impinging against said diaphragm and extending from the outer portion of said body toward the central portion of said transmitter, thereby to secure a long spring action.

5. A telephone transmitter comprising a suitable body portion, a bridge firmly fixed thereto for carrying the current varying device, a diaphragm associated with said current varying device and mounted in said body, a leaf spring provided upon said bridge projecting through an aperture in said bridge, said leaf spring impinging against said diaphragm, and a sheet of insulating material interposed between said dampening spring and said diaphragm in combination with means carried by said bridge for holding said insulating material in place.

In witness whereof, we hereunto subscribe our names this 31st day of March, 1908.

OSCAR M. LEICH.
NIELS PEDERSEN.

Witnesses:

MAX W. DABEL,
O. M. WENNIEL.