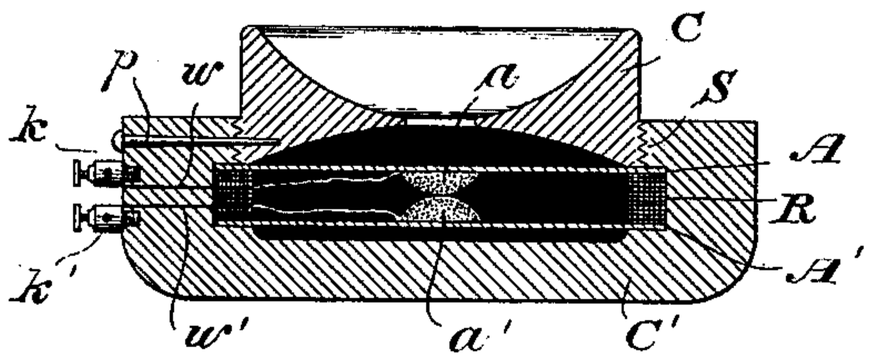
A. W. ROSE.

Telephone Transmitter.

No. 229,843. Patented July 13, 1880.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALLEN W. ROSE, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES A. CHEEVER, OF SAME PLACE.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 229,843, dated July 13, 1880.

Application filed October 27, 1879.

To all whom it may concern:

Be it known that I, ALLEN W. ROSE, a citizen of the Dominion of Canada, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Electric Speaking-Telephones, of which the following is a specification.

My invention more especially relates to that class of instruments known as "battery-telephones," by which the strength of a continuous current is increased or diminished by varying the pressure or area of conducting contact points or bodies through which the current passes.

The apparatus most generally used for producing such variations consists, broadly stated, of a vibrating transmitting-diaphragm and a carbon button, through which the current passes. Experience has demonstrated that it is better not to attach the conducting-body permanently to the case of the telephone, but to mount it upon a yielding support, allowing a certain amount of play. The well-known Blake transmitter, in which the conducting-body is mounted on an adjustable spring, is a good illustration of this last-mentioned form of apparatus. Experience has, however, demonstrated even this form of apparatus to be objectionable, it being difficult to permanently adjust the tension of the spring properly, and a very slight variation of such tension is often sufficient to prevent the proper working of the instrument.

The objects of my invention, generally speaking, are to simplify the construction of the apparatus, to diminish its cost, and to increase its efficiency, which ends I attain by mounting two diaphragms substantially parallel to each other on a suitable casing or support, and interposing conducting-bodies, through which the circuit passes, between them. The diaphragms are electrically insulated from their support, and are preferably rendered adjustable with relation to each other.

The subject-matter claimed herein is specified in the claims at the end of the specification.

The conducting-bodies employed by me preferably consist of carbon buttons or contact-points brought directly in contact with each other; but platinum disks or surfaces may be interposed between them, as is well understood.

The accompanying drawing represents a vertical central section through one form of my improved telephone.

The details of construction shown, being old and well known, except as hereinafter specified, need not be particularly described here.

The casing, handle, or support is shown as consisting of two sections, C C′, united by screw-connections S. Two diaphragms, A A′, are inserted in a cavity in the casing, being separated by an interposed elastic or yielding ring, R, of suitable well-known material.

The cap or mouth-piece C on the casing screws down upon the upper diaphragm, A, and serves to regulate the distance between the diaphragms by compressing the ring, as will readily be understood.

The conducting-bodies or contact-points shown consist of carbon buttons *a a′*, fastened to the inner faces of their respective diaphragms and having their adjacent faces in contact. The current passes through these buttons in the usual way, one wire, *w*, of the circuit being connected with one diaphragm, and the other, *w′*, with the other; or the conducting-wires may be connected directly with their respective carbon buttons, both of which modes of construction are old and well known. The wires are connected with binding-posts *k k′*, as usual.

The sections of the casing may be fastened together, when desired, by a locking-pin, P, passing through them, which pin may be driven clear through the parts to the inner cavity of the telephone, if desired.

Experience has demonstrated that my improved instrument operates well both as a transmitting and receiving telephone. The current passing through the carbon buttons causes the vibration of the receiving-diaphragms, which renders audible electrical undulations or impulses transmitted through the line.

My improved instrument is to be used in connection with a battery, induction-coil, and other well-known appurtenances incident to this class of instruments, which appurtenances form no part of the subject-matter of my inven-

tion, and consequently are not herein claimed. Neither do I claim herein the interposition of an independent conductor between the diaphragms, as that also constitutes the subject-matter of another division of this application.

I claim as of my own invention—

1. The combination, substantially as herein-before set forth, of two diaphragms, one having the capacity of receiving and transmitting sound-waves or aerial vibrations, and the other acting as a contact-spring to maintain the continuity of the circuit.

2. The combination, substantially as herein-before set forth, of two yielding diaphragms and interposed conducting-buttons, each secured upon its respective diaphragm, and with their adjacent faces in contact, whereby their pressure upon each other may readily be adjusted and maintained.

3. The combination, substantially as herein-before set forth, of a casing or support, a yielding diaphragm, a conducting-button mounted thereon in contact with the other conducting-button, and an adjusting device which regulates the pressure between the conducting-buttons by moving both the diaphragm and its conducting-button, thereby constituting both a transmitting-diaphragm and a pressure-spring.

4. The combination, substantially as herein-before set forth, of a casing or support, two diaphragms, conducting-buttons or contact-points on said diaphragms in a telegraphic circuit, and mechanism for mutually adjusting the diaphragms and contact-points relatively to each other to vary the pressure of the contact-points.

5. The combination, substantially as herein-before set forth, of a casing composed of adjustable sections, two diaphragms mounted therein, and an interposed spring, whereby the diaphragms may be adjusted relatively to each other.

6. The combination, substantially as herein-before set forth, of a casing composed of sections adjustably connected by a screw, an elastic ring, a diaphragm interposed between the ring and the adjustable section of the casing, and a contact-point with reference to which the diaphragm has the capacity of being adjusted.

ALLEN W. ROSE.

Witnesses:
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