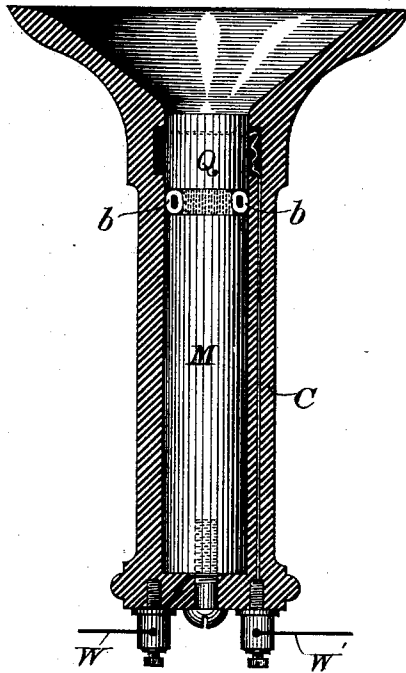


(No Model.)

A. W. ROSE.
Electrical Telephone.

No. 237,132.

Patented Feb. 1, 1881.



WITNESSES

Wm A. Shinkle.
Geo W. Beck.

INVENTOR

Allen W. Rose.

By his Attorneys

Baldwin, Hopkins & Peyton

UNITED STATES PATENT OFFICE.

ALLEN W. ROSE, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES A. CHEEVER,
OF SAME PLACE; SAID CHEEVER ASSIGNOR TO HIMSELF AS TRUSTEE.

ELECTRICAL TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 237,132, dated February 1, 1881.

Application filed October 26, 1880. (No model.)

To all whom it may concern:

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

My present invention relates to that class of speaking-telephones which embody in their
10 organization metallic filings susceptible to magnetic or inductive action interposed in a loose condition in a magnetic field in a galvanic circuit. Several forms of such apparatus and its method of operation form the subject-matter of other applications filed simultaneously with this, and my present claim
15 is therefore limited to the specific organization shown in the accompanying drawing, which represents a vertical central section through one form of my improved apparatus. In this case an ordinary tubular case or handle, C, provided with the usual mouth-piece,
20 is shown with a magnet, M, secured therein. A plunger, Q, capable of moving freely endwise in the guideway of said casing, is located near the mouth-piece, being preferably supported and kept from contact with the magnet M by means of suitable buffers or springs b, thus leaving a cavity or chamber between
30 them, constituting a magnetic field, in which are placed metallic filings in a loose condition. This plunger must be a conductor of electricity, but need not necessarily be a magnet. The filings may be of iron, steel, aluminium, cobalt,
35 nickel, or other metal capable of inductive action; but the last-mentioned metal is preferable, as it does not rust on exposure to moisture.

These filings may be in the form of a coarse powder; but I prefer to use them in the form of slivers or filings the length of which is
40 three or four times greater than their width or thickness.

A mixture of filings of different magnetic metals or filings and powder of similar or dissimilar magnetic metals may be used.

Either a permanent or electro magnet may
45 be employed.

The wire W connects the spindle or magnet M with one pole of the battery and the wire W' connects the plunger with the other pole,
50 thus including them, as well as the interposed filings, in a magnetic field in an ordinary galvanic circuit, the normal condition of the filings, and consequently their conductive capacity, being varied by vibrations caused by the
55 impingement of sound-waves directly upon the plunger, consequently producing corresponding variations in the strength of a current traversing the circuit, as is well understood.

I claim herein as of my own invention— 60

The combination, substantially as herein set forth, of the case, the magnet, the plunger, the interposed buffers or sustaining-springs, and metallic filings susceptible to inductive or
65 magnetic action in a magnetic field, and constituting part of a galvanic circuit.

In testimony whereof I have hereunto subscribed my name this 22d day of October, A. D. 1880.

A. W. ROSE.

Witnesses:

WILLARD L. CANDER,
E. C. DAVIDSON.