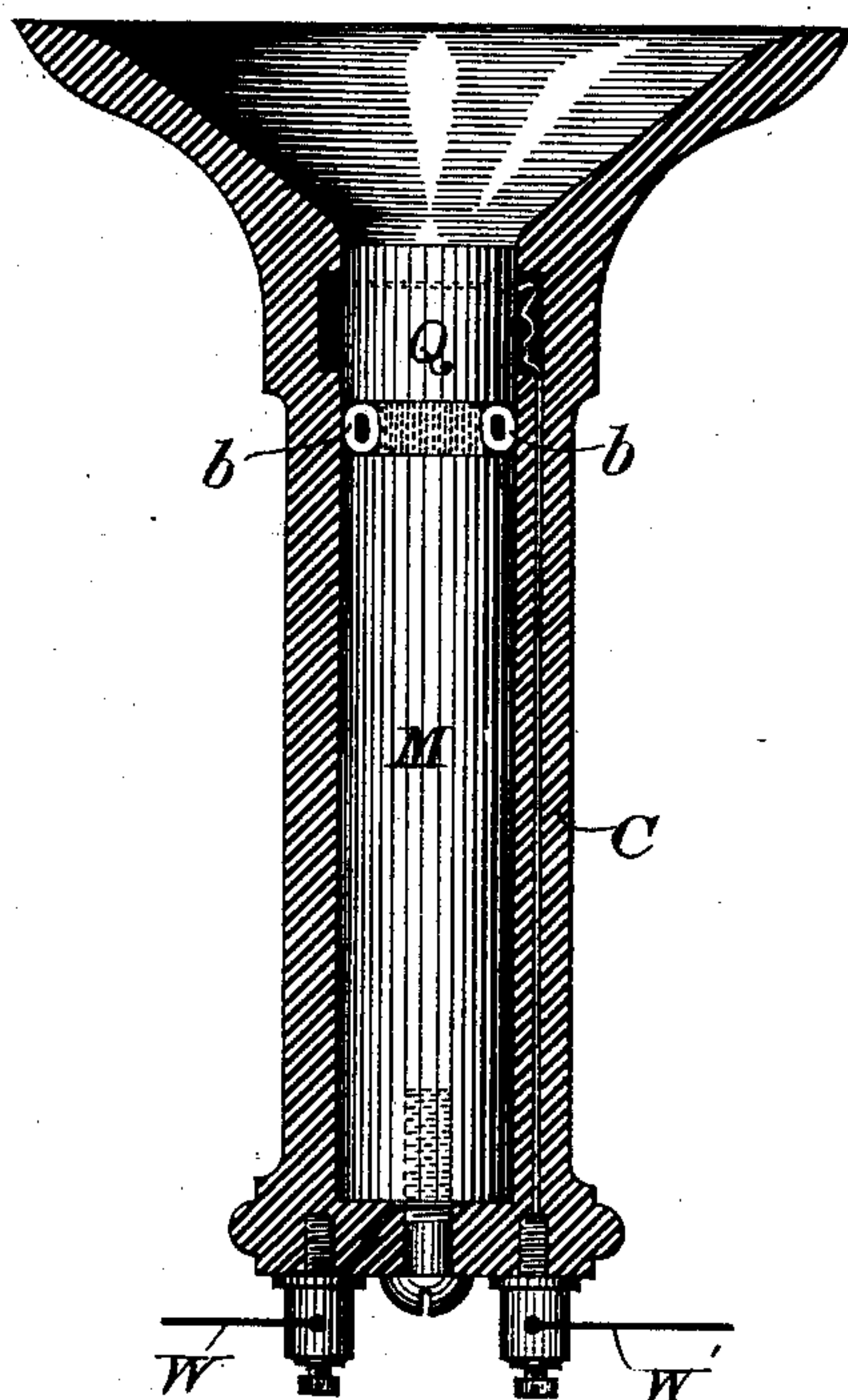


(No Model.)

A. W. ROSE.  
Electrical Telephone.

No. 237,132.

Patented Feb. 1, 1881.



WITNESSES

*Wm A. Linkle.*  
*Geo W. Breck.*

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  
25 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,  
30 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.

45 Either a permanent or electro magnet may 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 im-  
55 pingement 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 magnetic action in a magnetic field, and con-  
65 stituting 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.