

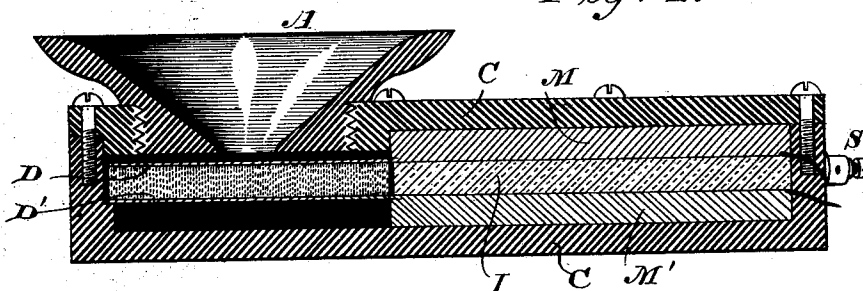
(No Model.)

A. W. ROSE.  
Transmitting Telephone.

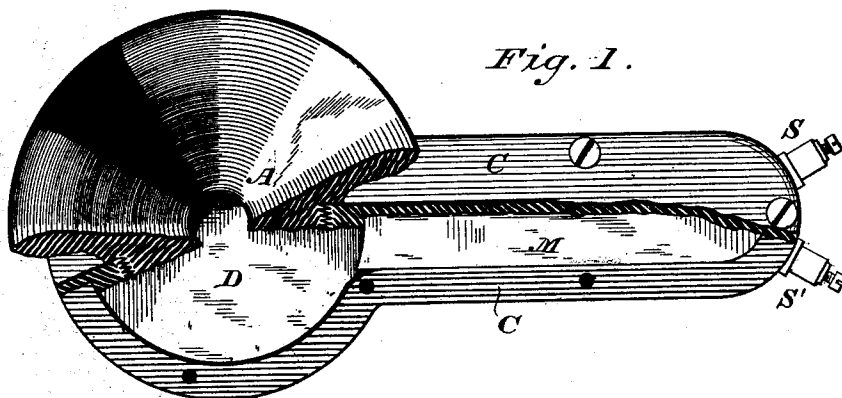
No. 237,131.

Patented Feb. 1, 1881.

*Fig. 2.*



*Fig. 1.*



WITNESSES

*Wm. A. Shink.*  
*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.

## TRANSMITTING-TELEPHONE.

SPECIFICATION forming part of Letters Patent No. 237,131, 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, now residing in the city, county, and State of New York, have invented certain new and useful Improvements in Transmitting-Telephones, of which the following is a specification.

My invention relates to that class of electric telephones in which variations of resistance of a current traversing a galvanic circuit are produced by the varying conditions of magnetic filings capable of inductive or magnetic action included in a magnetic field therein.

In other applications filed simultaneously with this I have broadly claimed the method of operation of this apparatus, as well as the various modifications of its organization. I therefore limit my present claim to the specific organization specified at the close of this specification, the distinguishing characteristic of which is the interposition of magnetic filings in a magnetic field between elastic diaphragms, constituting magnetic poles.

In the accompanying drawings, Figure 1 represents a plan view of my improved transmitter, with portions of the casing broken away; and Fig. 2, a vertical longitudinal section there-through.

The case C is provided with a suitable mouth-piece, A. Magnets M M' are secured in this case, arranged parallel to each other, with interposed insulating material I between. One pole of each magnet is drawn out, so as to constitute an elastic or yielding diaphragm, D D', parallel to each other, lying directly beneath the mouth-piece. Filings of some metal capable of magnetic or inductive action are shown as placed loosely in the magnetic field between said diaphragms. Such filings may be in the form of coarse powder; but I prefer to use them in the form of slivers or filings, the length of

which is three or four times as great as that of its breadth or thickness. Filings of iron, steel, aluminum, cobalt, or nickel may be employed; but I prefer the last-named metal, as being less liable to oxidation from exposure to moisture.

A mixture of filings of different magnetic materials, or of filings and powder of homogeneous or dissimilar materials, may be employed, if preferred.

Electro-magnets may also be used, if desired.

Each magnet is connected, by suitable wires or binding-screws, S S', to a galvanic battery, so that the circuit passes from one diaphragm to the other through the filings, the resistance of the circuit being correlatively varied by variation in the condition of the filings, caused by impingement of sound-waves upon the diaphragm.

I claim as of my own invention—

1. The combination, substantially as herein set forth, of two elastic or yielding diaphragms, constituting magnetic poles and included in a galvanic circuit, with metallic filings capable of magnetic or inductive action interposed loosely in the magnetic field between said diaphragms.

2. The combination, substantially as herein set forth, of the case, the mouth-piece, the magnets, the interposed insulating material, the diaphragms constituting magnetic poles, the filings interposed in the magnetic field between said diaphragms in a loose condition, and a galvanic circuit, of which the filings form a part.

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

A. W. ROSE.

Witnesses:

E. C. DAVIDSON,  
WILLARD L. CANDEE,