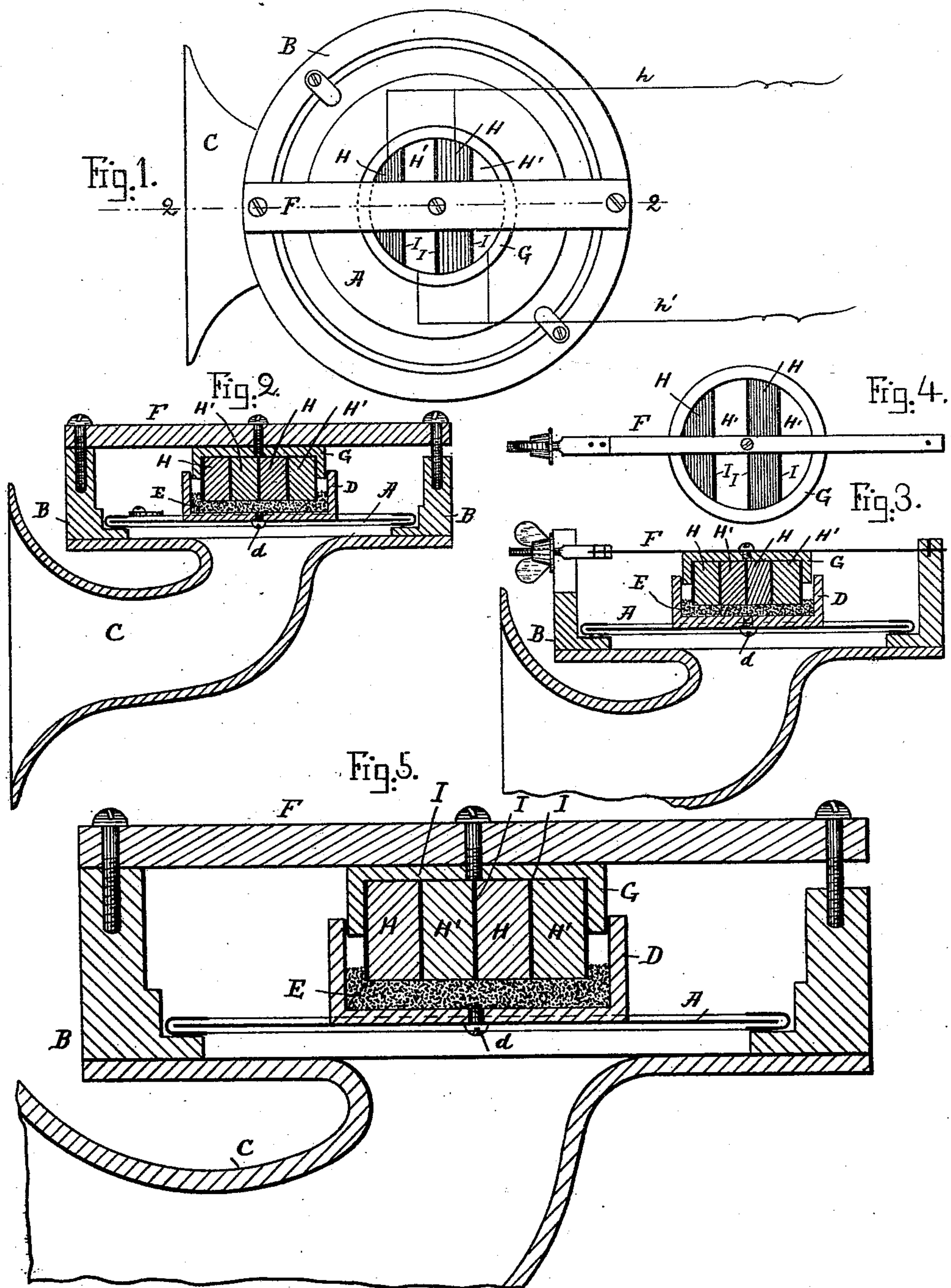


(No Model.)

J. B. SMITH.
TELEPHONE TRANSMITTER.

No. 521,325.

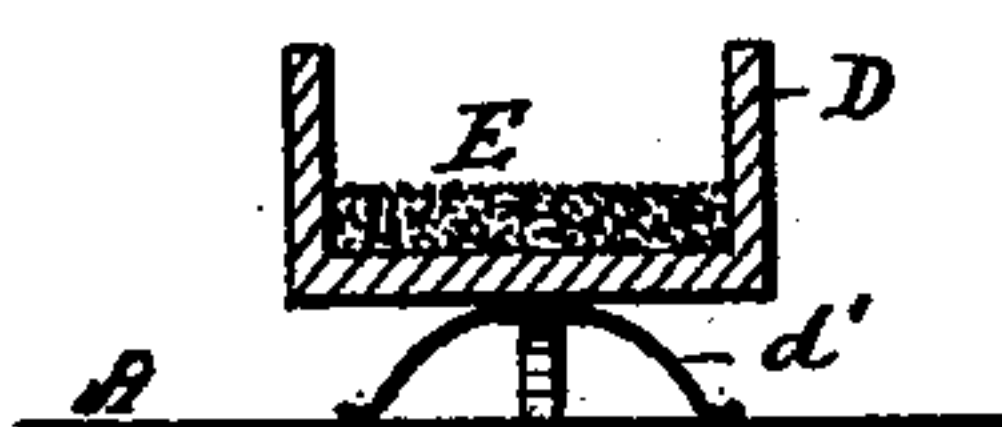
Patented June 12, 1894.



Witnesses.

Lauritz W. Möller
Kittie M. Hanson

Fig. 6.



Inventor.

Joseph Brodie Smith
by *Wm. Andrew*
his atty.

UNITED STATES PATENT OFFICE.

JOSEPH BRODIE SMITH, OF MANCHESTER, NEW HAMPSHIRE.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 521,325, dated June 12, 1894.

Application filed April 27, 1894. Serial No. 509,199. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH BRODIE SMITH, a citizen of the United States, and a resident of Manchester, in the county of Hillsborough and State of New Hampshire, have invented new and useful Improvements in Telephone-Transmitters, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention relates to improvements in variable resistance transmitters for telephones particularly adapted for long distance work and it is carried out as follows, reference being had to the accompanying drawings, wherein—

15 Figure 1, represents a top plan view of the invention showing the top end of the electrode containing cup as removed. Fig. 2, represents a cross section on the line 2—2 shown in Fig. 1. Fig. 3, represents a sectional view of a modification of the invention; and Fig. 4, represents a partial top plan view of Fig. 3. Fig. 5, represents an enlarged section like the one shown in Fig. 2; and Fig. 6, represents a modification of the manner of supporting the lower cup on the sound receiving diaphragm.

25 Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings A represents the sound receiving diaphragm supported and held in a ring or frame B to the lower portion of which is secured or connected the mouth piece C as usual in devices of this kind.

35 Upon the diaphragm A is supported or connected thereto a cup D made of insulating or conducting material which cup contains finely divided conducting material E preferably carbon.

In Figs. 2, 3 and 5 I have shown the cup D as connected to the diaphragm A by means of a fastening screw *d* and in Fig. 6 I have shown a suitable yielding spring or elastic cushion *d'* interposed between said cup D and the diaphragm A and I wish to state that I do not wish to confine myself to any particular manner of supporting said cup on the diaphragm as this may be done in either of the manners described that is connected to or yieldingly supported on said diaphragm without departing from the essence of my invention.

50 To the ring or frame B is connected in a suitable manner the electrode support F

which in Figs. 1, 2, and 5 is shown as a rigid bar secured in a vertically or nearly so adjustable manner to the ring or frame B. In Figs. 3 and 4 said electrode support F is represented as a yielding spring having means 60 for adjusting it to and from the diaphragm as in Figs. 2 and 5 for the purpose of regulating from time to time the sensitiveness of the instrument.

To the under side of the support F is secured an inverted cup G of insulating material containing a multiple electrode composed of a series of layers H, H, H' H' insulated from each other by sheets of mica I I or other suitable insulating mediums as 70 shown in the drawings. The lower portion of said multiple electrode is in contact with the finely divided conducting material E as shown. The alternate layers H H are connected together by means of a wire *h* and the corresponding alternate layers H' H' are connected together by means of a wire *h'* shown in Fig. 1 which wires lead respectively to the battery and primary of the induction coil as usual in telephone transmitters. 80

By the construction as above described the transmitted voice is increased in loudness rendering the telephone very serviceable and practical for long distance service.

What I wish to secure by Letters Patent 85 and claim is—

1. In a telephone transmitter a multiple electrode made in sections the alternate insulated layers of which are connected together combined with a cup containing finely 90 divided conducting material supported on a diaphragm and adapted to vibrate in unison with the latter substantially as and for the purpose set forth.

2. In a telephone transmitter a multiple 95 electrode made in sections the alternate insulated layers of which are connected together and rigidly supported combined with a cup containing finely divided conducting material supported on a diaphragm and adapted 100 to vibrate in unison with the latter substantially as specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 13th day of 105 April, A. D. 1894.

JOSEPH BRODIE SMITH.

Witnesses:

ALBAN ANDRÉN,
KITTIE M. HANSON.