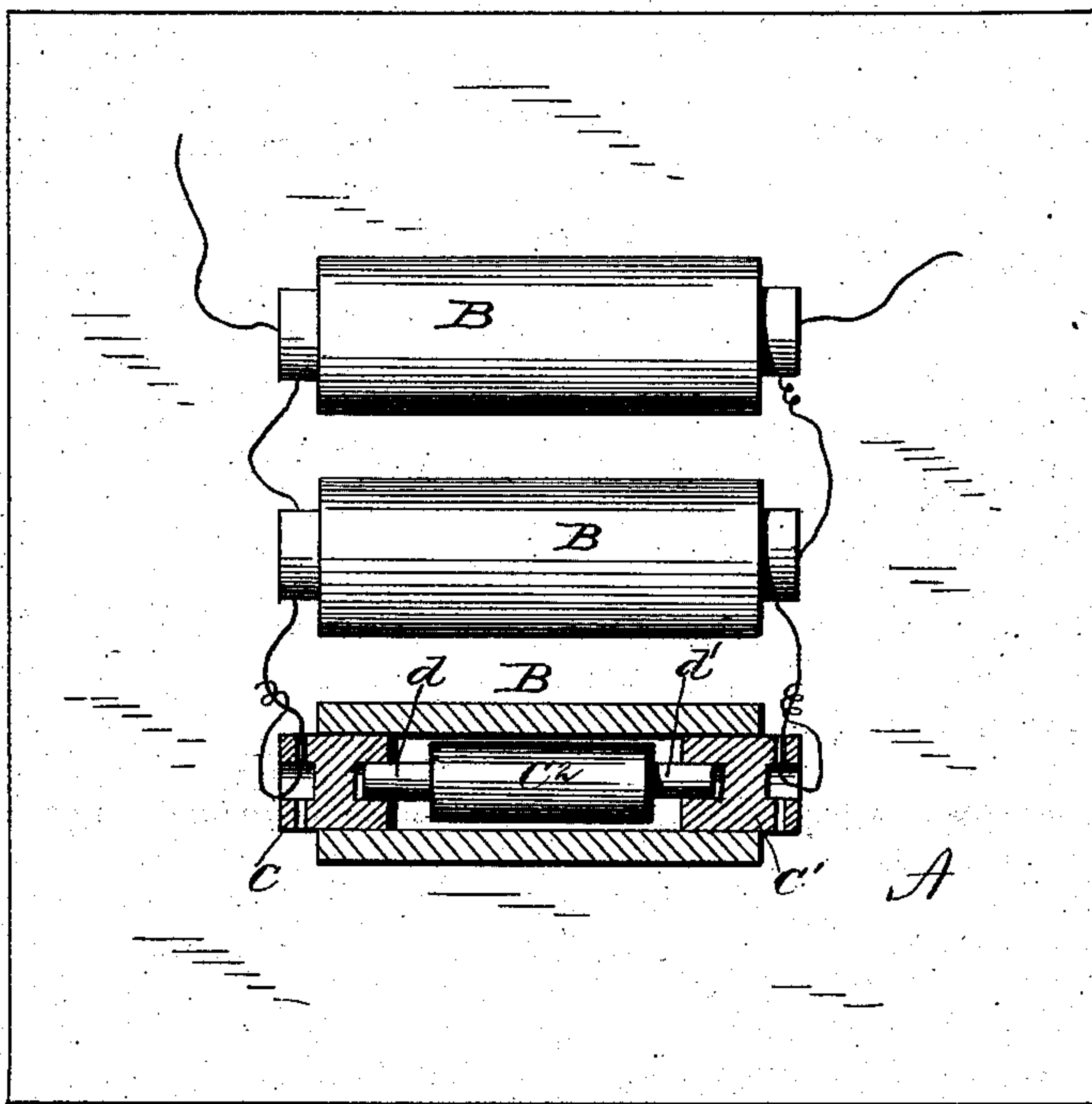


(No Model.)

H. E. WAITE.
TELEPHONE TRANSMITTER.

No. 292,603.

Patented Jan. 29, 1884.



WITNESSES
F. L. Curran
Rex. Smith

INVENTOR
Henry E. Waite
by *A. M. Smith*
Attorney.

UNITED STATES PATENT OFFICE.

HENRY E. WAITE, OF NEW YORK, N. Y., ASSIGNOR TO THE MOLECULAR TELEPHONE COMPANY, OF SAME PLACE.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 292,603, dated January 29, 1884.

Application filed May 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY E. WAITE, of New York, county of New York, and State of New York, have invented a new and useful Improvement in Telephone-Transmitters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification.

My invention relates to the construction of a microphone or transmitter, and to the manner of embedding the same in a hollow cylindrical block of wood, cork, or other resilient material, and will be understood from the following description, with reference to the drawing, which shows a plan or top view of a group of my improved transmitters, one of them being shown in section to show the construction of the microphone.

A represents a base-plate, to which the transmitter is secured, and B a hollow cylinder, of wood, cork, or other suitable material, secured to said base-plate in any suitable manner. The plate A may form one of the sides or the front or back of a box inclosing the transmitter, which may be secured to the inner face of said plate. Where the base-plate constitutes the front or top of the box, the transmitter may be secured to the inner face thereof, and the sound-waves, being directed against the outer face, will be communicated through said plate to the transmitter on its inner face.

Within the cylindrical block B is embedded the microphone, consisting of two short socketed cylindrical blocks, C and C', of carbon or equivalent material, which fit within and snugly fill the ends of the bore of the cylindrical block B, and between which pieces C and C' is placed a third cylindrical block or pencil, C², of similar material to the blocks C and C'. This intermediate cylinder is of smaller diameter than the internal diameter of the cylinder B, and is provided at its ends with projecting points or spurs *d* *d'*, which enter sockets in the end cylinders, C and C', which are thus connected by said piece C², and serve to uphold the latter out of contact with the in-

closing-cylinder B, and at the same time to effectually shut it up within said cylinder, and thereby to protect it from dust and atmospheric action. The points or spurs *d* and *d'*, while they snugly fill the inner ends of the sockets in the short cylinders C and C', rest sufficiently loosely therein to permit slight end play of the intermediate cylinder or pencil, C², which is made somewhat less in length than the distance between the inner ends of the blocks C and C', to accommodate or permit such end play, thus leaving the piece C² free to disturb the current passing through the microphone, under the action of the sound-waves thrown against the plate to which the cylindrical block of cork or wood containing the microphone is attached.

The cylindrical blocks C and C' are connected with the battery and line-wires in any usual or preferred manner, and, in connection with the interposed cylinder or pencil C² and the inclosing or embedding cylinder of cork or wood, constitute my transmitter complete; but for giving increased power to the apparatus or instrument I prefer to employ a series of embedded electrodes, similar to those described above, arranged side by side, as shown, or in other suitable compact form, and by connecting them by wires, as shown, or by other suitable conductors, to combine their powers into a single transmitter, in a manner well understood.

Having now described my invention, what I claim as new is—

In a telephone-transmitter, the carbon pencil C², provided with tenons upon its ends, in combination with the blocks C and C', of similar material, socketed to receive the tenons upon said pencil, all inclosed within a protecting-cylinder of wood or cork, substantially as described.

In testimony whereof I have hereunto set my hand.

HENRY E. WAITE.

Witnesses:

H. B. ZEVELY,

E. W. DE KNIGHT.