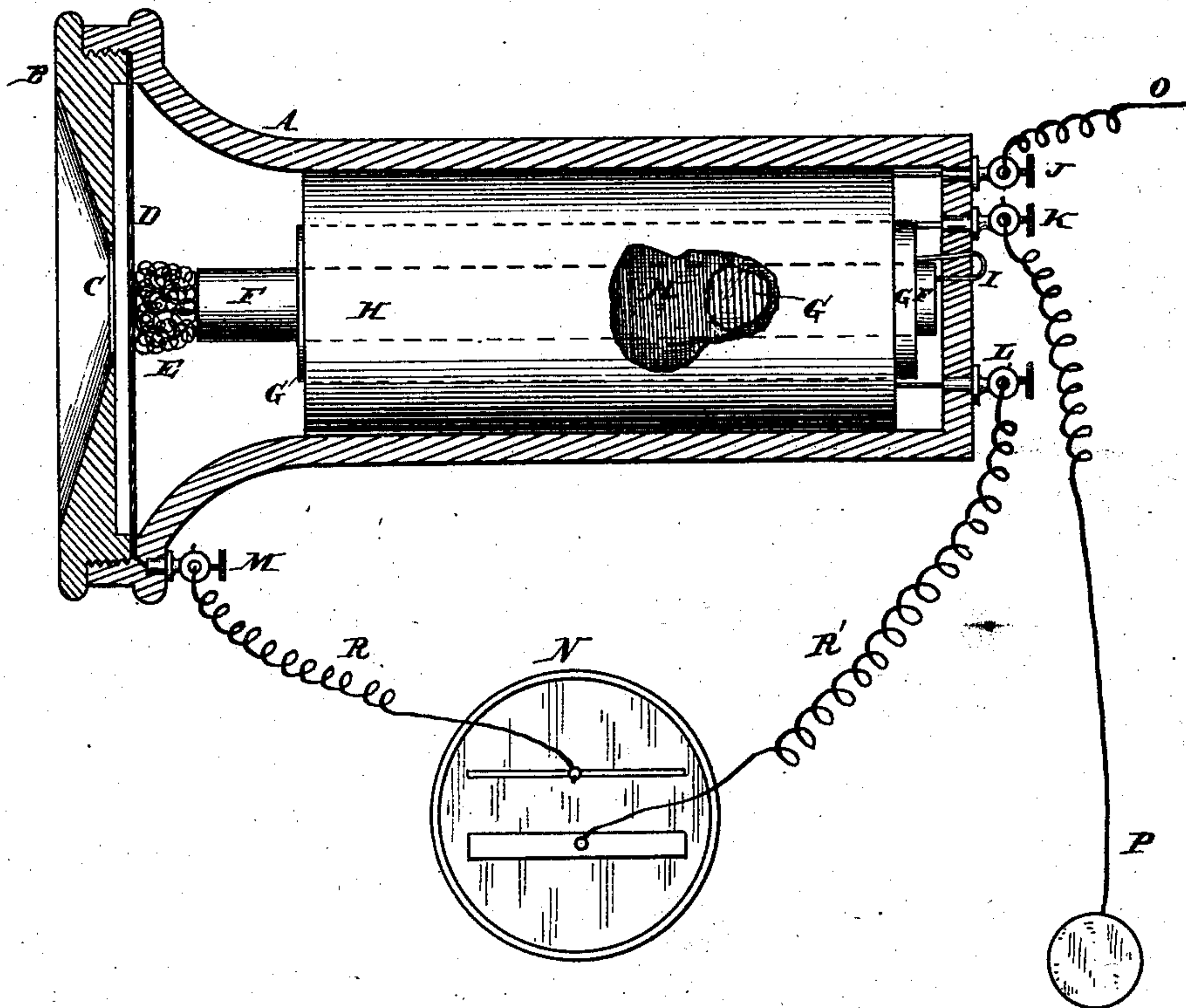


(No Model.)

J. M. STEARNS, Jr.
TELEPHONIC TRANSMITTER.

No. 248,116.

Patented Oct. 11, 1881.



Attests

[Signature]

L. J. Mawer.

Inventor

J. Milton Stearns Jr.

By his atty.

[Signature]

UNITED STATES PATENT OFFICE.

J. MILTON STEARNS, JR., OF BROOKLYN, NEW YORK.

TELEPHONIC TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 248,116, dated October 11, 1881.

Application filed June 22, 1881. (No model.)

To all whom it may concern:

Be it known that I, J. MILTON STEARNS, Jr., of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Telephonic Transmitters, of which the following is a specification.

My invention has reference to telephone-transmitters; and it consists in the application of an induction-coil, against the core of which the diaphragm rests through the agency of a piece of coiled or spongy wire or equivalent conducting-cushion, the core of said induction-coil being directly connected with the primary coil, which is also in connection with one pole of the battery, the other pole of said battery being connected to the diaphragm, and the secondary coil being in connection with the line and ground, all of which is more fully set forth hereinafter, and shown in the accompanying drawing, which forms part of this specification.

In the drawing is shown a sectional elevation of my improved transmitter.

A is the frame or box, and B is the cap of same, and is provided with an aperture, C, of the usual construction.

D is the diaphragm, which may be secured in the frame in any suitable manner, and is in connection with one pole of the battery N through wire R and binding-post M.

Located behind the diaphragm, and at a short distance from it, is the induction-coil, between the core F of which and the diaphragm D is located a cushion of coiled or sponge wire or other conducting-cushion, E. The primary coil G of induction-coil is connected with the core F by wire I, and also with the battery N by wire R' and binding-post L. The secondary coil H is in connection with the line O by binding-post J, and with ground by wire P and binding-post K.

The operation is as follows: Upon speaking before the diaphragm D the same is set in vibration in accordance with the articulations. With these vibrations the coiled-wire cushion

E is compressed and expanded, thereby varying the resistance in the local circuit through the core F, primary coil G, local battery N, and diaphragm, whereby corresponding induced currents are set up in the secondary coil H, which are transmitted over the line-wire O to the receiver at the other station.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a telephonic transmitter, the diaphragm, core, and primary wire of an induction-coil in circuit, said core being arranged behind and in close proximity to the diaphragm, in combination with the secondary wire of said induction-coil, which is in circuit with the line and receiving-telephone, and a conducting-cushion arranged between the diaphragm and core, substantially as and for the purpose specified.

2. In a telephonic transmitter, the combination of the induction-coil, the secondary coil of which is to line and ground and the primary coil of which is connected with battery and core, with the diaphragm, which is connected with the battery and mechanically separated from the core by a conducting-cushion, the core, which is located behind and in proximity to the diaphragm, and cushion of conducting material, substantially as and for the purpose specified.

3. In a telephone-transmitter, the combination of the induction-coil, the primary wire G of which is electrically connected to the core F, and the secondary wire with the line O and ground, core F, cushion E, diaphragm D, wires R, R', and battery N, as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

J. MILTON STEARNS, JR.

Witnesses:

JOHN M. STEARNS,
RUSSELL A. GREEN.