

(No Model.)

G. W. SMITH.
Telephone Transmitter.

No. 235,707.

Patented Dec. 21, 1880.

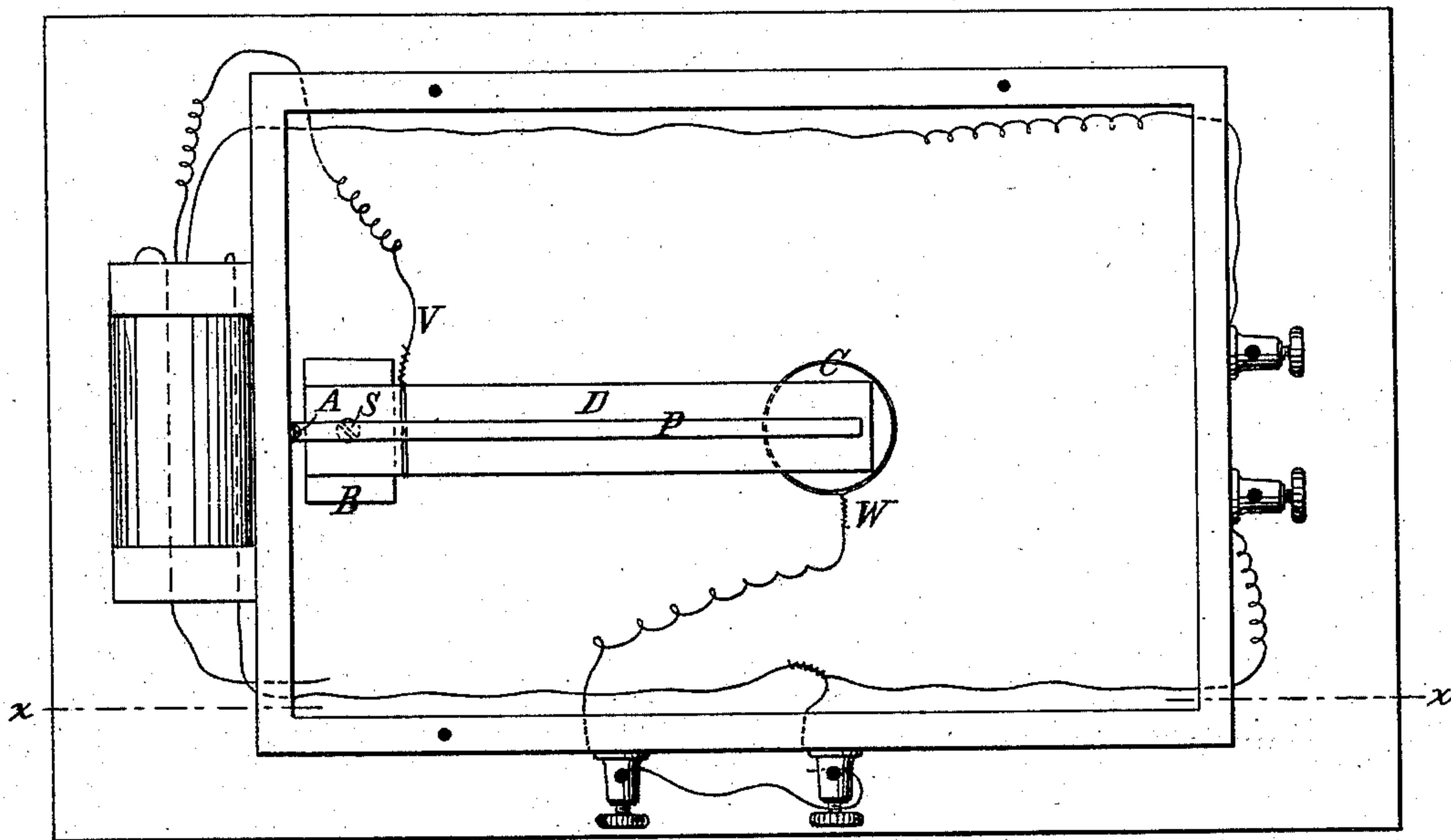


Fig. 1

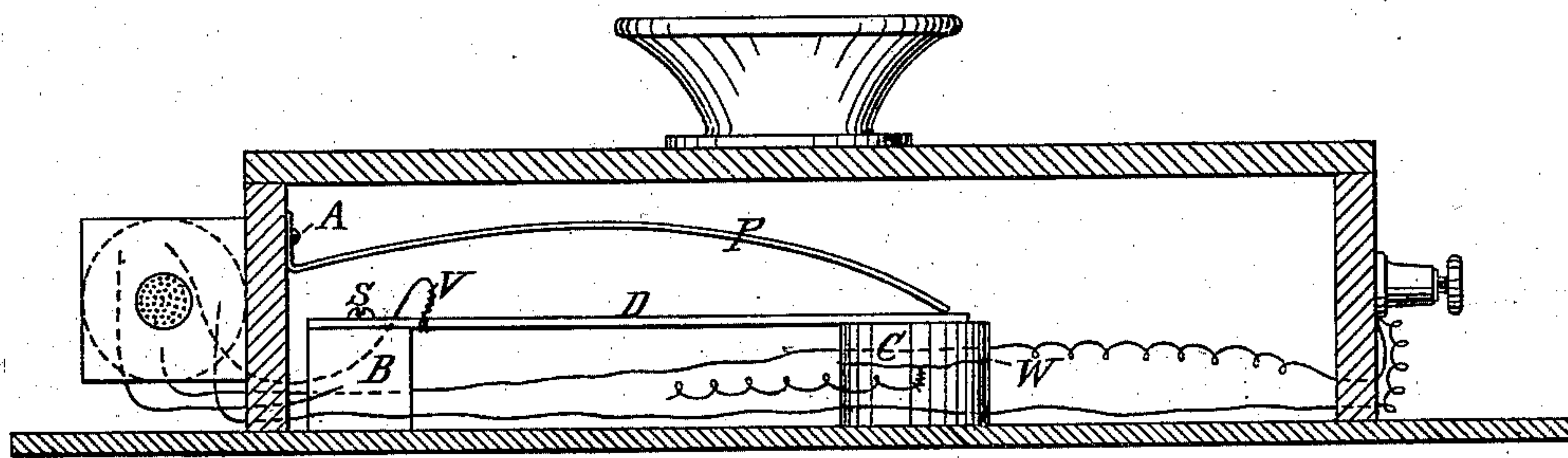


Fig. 2

Witnesses:

Samuel Lea
Edwin White

Inventor:

Geo. W. Smith.
per. D. L. J. Law.
Attorney

UNITED STATES PATENT OFFICE.

GEORGE W. SMITH, OF NEW HARTFORD, CONNECTICUT.

TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 235,707, dated December 21, 1880.

Application filed July 20, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SMITH, residing in the town of New Hartford, county of Litchfield, and State of Connecticut, have
5 invented a new and useful Improvement in Telephone-Transmitters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of
10 this specification.

My invention relates to that class of transmitters employing a local battery and an induction-coil.

In the accompanying drawings, Figure 1 is
15 a plan of the transmitter with the top removed. Fig. 2 is a sectional view of the above, and also shows the top of the case and the mouth-piece.

C is a block of carbon, glued or otherwise
20 attached to the bottom of the box or case of the transmitter.

D is the diaphragm, consisting of a strip of copper, brass, or other metal, attached to a block, B, of some non-conducting substance—
25 as wood—by means of the screw S.

P is a spring fastened at A, and having one end resting upon the metallic strip D, the object of which is to deaden any tones which otherwise might be given out by the metal it-
30 self.

One of the wires is attached directly to the carbon, as shown at W, the other connection being made at V with the metallic strip forming the diaphragm.

Carbon transmitters, as heretofore made, have been more or less complicated in construction, generally consisting of a thin disk or plate of carbon combined with some metal, as platinum-foil, and such plate of carbon, be-
40 ing very liable to break, also required protection.

My invention or transmitter is simpler in construction and less liable to be injured by use. It consists simply of a block of carbon,
45 C, fastened directly to the bottom of the box or case of the transmitter. The carbon may be glued to the case, but any suitable means of attachment may be used.

Resting at one end directly upon the carbon
50 itself is the diaphragm D, consisting of a strip

of copper, the other end of which is fastened to a non-conducting support (shown at B) by means of a screw, S. This diaphragm may be attached to the sides of the case, or in any way most convenient, it only being essential that
55 it is fastened in such a way that its normal pressure upon the carbon may be adjusted by tightening or loosening the screw fastening it at its other end.

In place of copper I have employed as a dia-
60 phragm strips of brass or other metal.

It will be observed that in my transmitter the diaphragm itself is in direct contact with the carbon, there being no intervening sub-
65 stance between the two, and that the wires are attached respectively to the carbon and to the metallic strip forming the diaphragm. By this means I produce a transmitter both simpler and cheaper in construction and also more reliable in action.

In order to destroy any sound given out by the strip or diaphragm and make the sounds transmitted clearer, I employ a spring, which rests upon the diaphragm, as shown at P, and destroys any vibrations produced in the metal
75 itself.

I prefer to use a block of pure carbon; but prepared carbon made in any suitable form may be employed.

When words are spoken or sounds made in
80 the vicinity of the mouth-piece of the transmitter the metallic strip or diaphragm D is thrown into vibrations, which vary the resistance of the carbon, and thus control the current transmitting the sound.

What I claim, and desire to secure by Letters Patent, is—

1. In a telephonic transmitter, a carbon block or disk, or its equivalent, and a metallic strip, forming the diaphragm, resting directly upon
90 the carbon, the pressure of which is regulated by a screw at its farther end, substantially as and for the purpose set forth.

2. In a telephonic transmitter, the combination of the carbon block, the copper strip D,
95 and the spring P, substantially as described.

GEO. W. SMITH.

Witnesses:

CHAS. B. WHEELER,
J. L. WOODRUFF.