(No Model.)

# W. GILLETT.

## TELEPHONE TRANSMITTER.

No. 401,743. Patented Apr. 23, 1889.

Fig. 2.

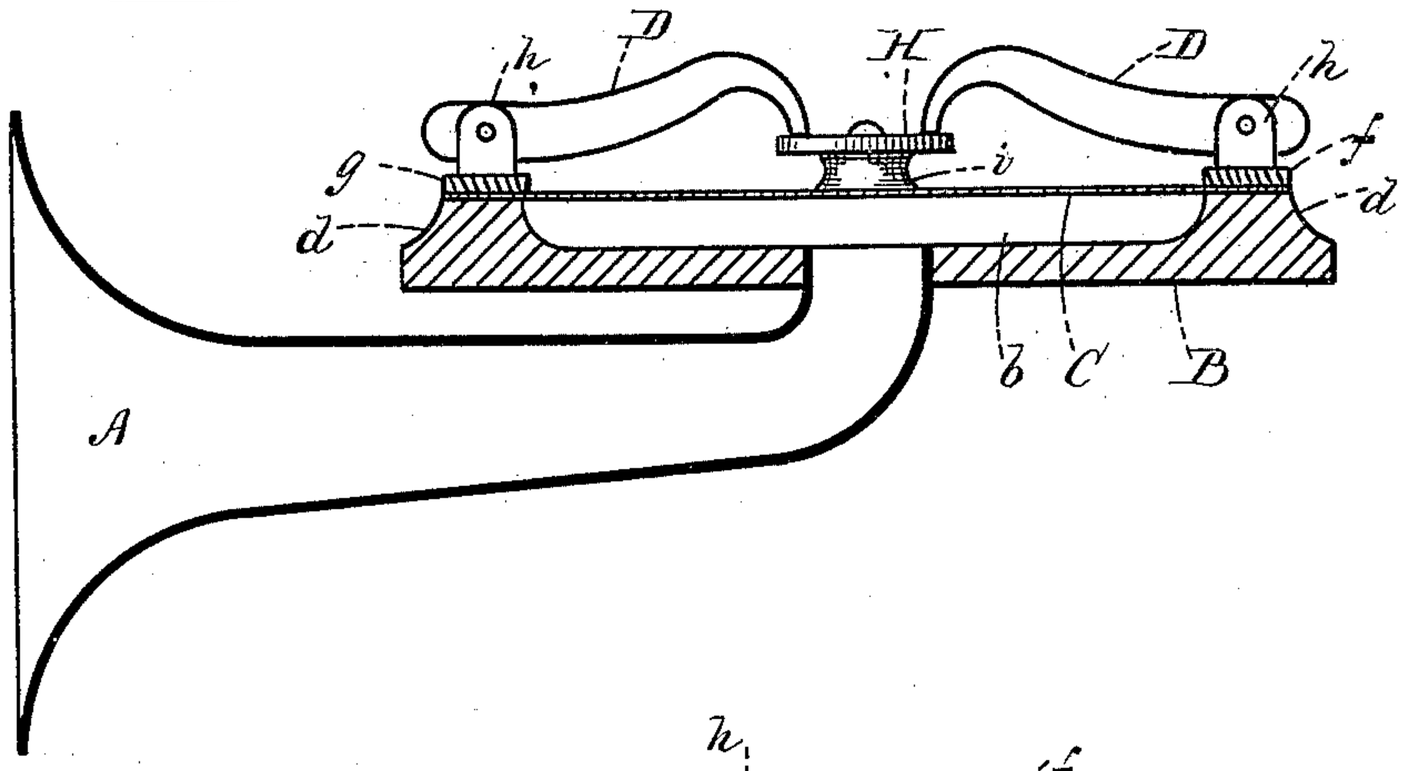
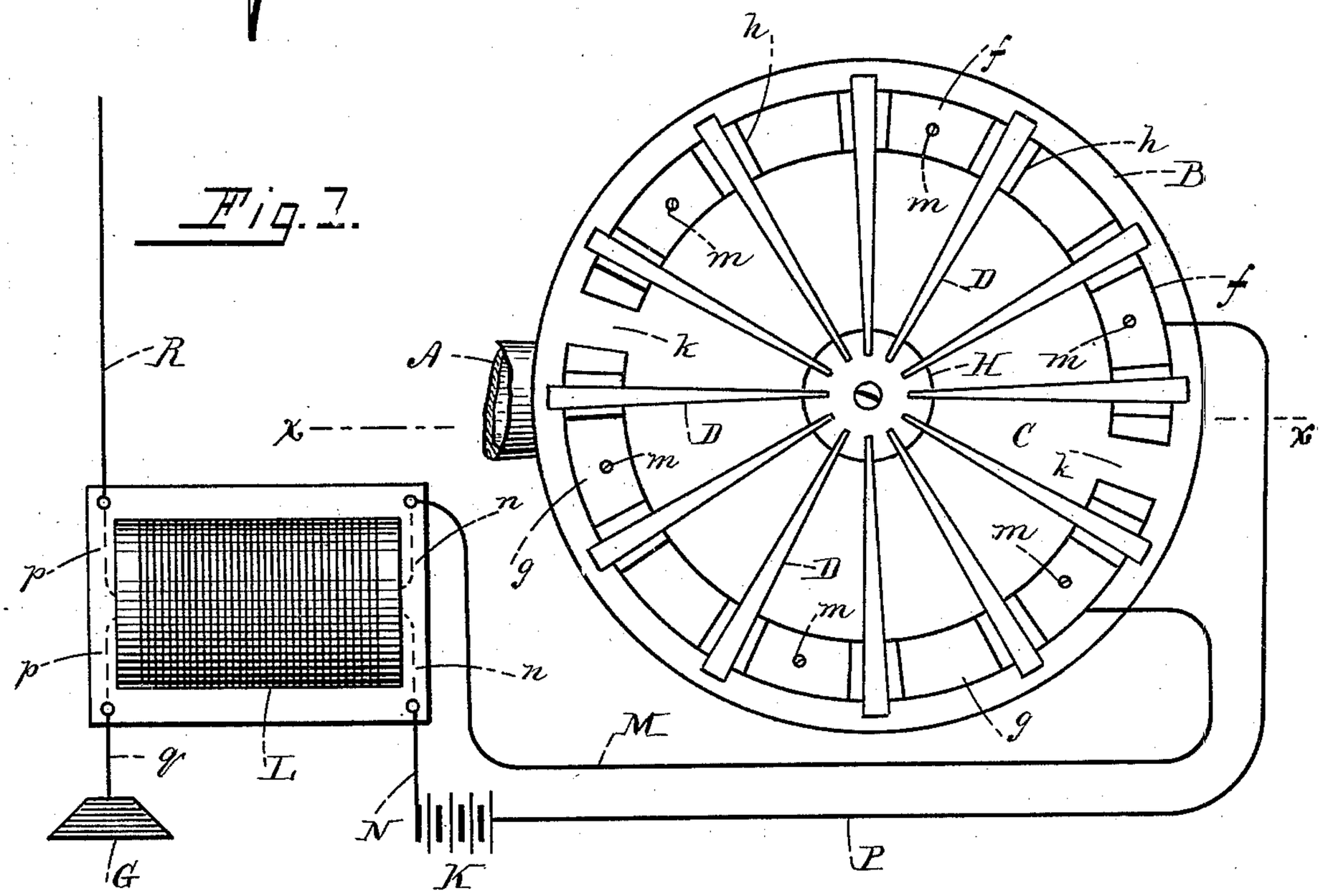



Fig. 1.

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# UNITED STATES PATENT OFFICE.

WEBSTER GILLETT, OF ST. JOHN, NEW BRUNSWICK, CANADA, ASSIGNOR TO JAMES STRATON, OF SAME PLACE.

## TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 401,743, dated April 23, 1889.

Application filed January 25, 1889. Serial No. 297,556. (No model.)

*To all whom it may concern:*

Be it known that I, WEBSTER GILLETT, of St. John, in the county of St. John, Province of New Brunswick, Dominion of Canada, have invented a certain new and useful Improvement in Transmitters for Telephones, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved transmitter and the electrical connections; Fig. 2, a vertical transverse section of the transmitter, taken on line *x x* in Fig. 1.

Like letters and figures of reference indicate corresponding parts in the two figures of the drawings.

My invention relates especially to that class of telephone-transmitters which are provided with pivoted electrodes; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the speaking-tube, B the body of the transmitter, C the diaphragm, and D the electrodes.

The body or base B consists of a disk of wood or other non-conducting material, and is chambered at *b* on the upper face, leaving an annular flange, *d*, at its edge.

The speaking-tube A is preferably arranged horizontally beneath the body B, and opens centrally through the bottom thereof.

The diaphragm C is disposed horizontally on the flange *d*, and is secured thereon by two arc-shaped nearly semicircular metallic plates or holders, *f g*, secured to the body B by screws *m*. Should the diaphragm be composed of metal, it is to be insulated in any suitable manner from the holders. A space, *k*, is left between the ends of the holders *f* and *g* sufficiently broad to prevent the passage of an electrical current from one to the other. A carbon disk, H, is mounted on a pliable cushion, I, composed of cork or similar substance, secured centrally to the diaphragm.

The electrodes D are composed of carbon or similar conducting material of the second class, and are pivoted at intervals in ears *h* on the circular holders *f g*, the outer ends of said electrodes being in conductive contact with said ears, and their inner free ends being curved or bent downward and resting on the carbon disk H. A conducting-wire, P, leads from one pole of an ordinary electric battery, K, and is connected with a metallic holder, *f*. The conducting-wire N, leading from the opposite pole of said battery, is connected to one end of a primary wire, *n*, of an ordinary induction-coil, L. A conducting-wire, M, connects the opposite end of the primary wire *m* of said coil with the metallic holder *g*. One end of the secondary wire *p* of said coil is connected by a wire, *q*, with the ground G in the usual manner, the opposite end of said secondary wire being connected by a conducting-wire, R, with a receiving-station. It will be seen that a complete circuit is thus formed from the battery K through the wire *p* to the metallic holder *f*, thence by its electrodes D to the carbon disk H, thence by means of the opposite electrodes D and holder *g* through the wire M to the primary wire *n* of the induction-coil L, and thence through the conducting-wire N to the battery.

In the use of my improvement the vibrations of the diaphragm caused by the sound passing through the tube A are communicated to the disk H, causing the degree of contact of the electrodes D to constantly change, and thereby produce variations in the electric current. The strength of the current in the primary wires of the induction-coil L is correspondingly affected, like currents being thereby imparted to the secondary wires of said coil, and conducted to the receiver of a distant station by the wire R, in a manner which will be readily understood by all conversant with such matters without a more explicit description.

I do not confine myself to the shape or number of electrodes shown, the number employed being dependent upon the degree of resistance in the transmitter.

It will be obvious that the apparatus de-

scribed requires no adjustment, the weight of the electrodes holding them lightly in contact with the disk or diaphragm, and rendering them substantially self-adjusting and the instrument exceedingly sensitive to sound impulses. Moreover, by this method of construction very heavy battery influences may be carried without injury, rendering the device especially applicable for use in transmitting sound over long distances and through high resistances.

Having thus explained my invention, what I claim is—

The combination of an insulating-base, a diaphragm, separate arc-shaped metallic plates secured to said base, and provided with upright ears disposed in pairs, an insulating-cushion on the center of said diaphragm, a carbon disk on said cushion, carbon electrodes pivoted at their outer ends in said ears, in conductive contact therewith, and resting at their inner ends on said disk, and electric connections for said arc-shaped plates.

WEBSTER GILLETT.

Witnesses:
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