

No. 635,812.

Patented Oct. 31, 1899.

L. SCHMIDT.
TELEPHONE TRANSMITTER ARM.

(Application filed Sept. 26, 1898.)

(No Model.)

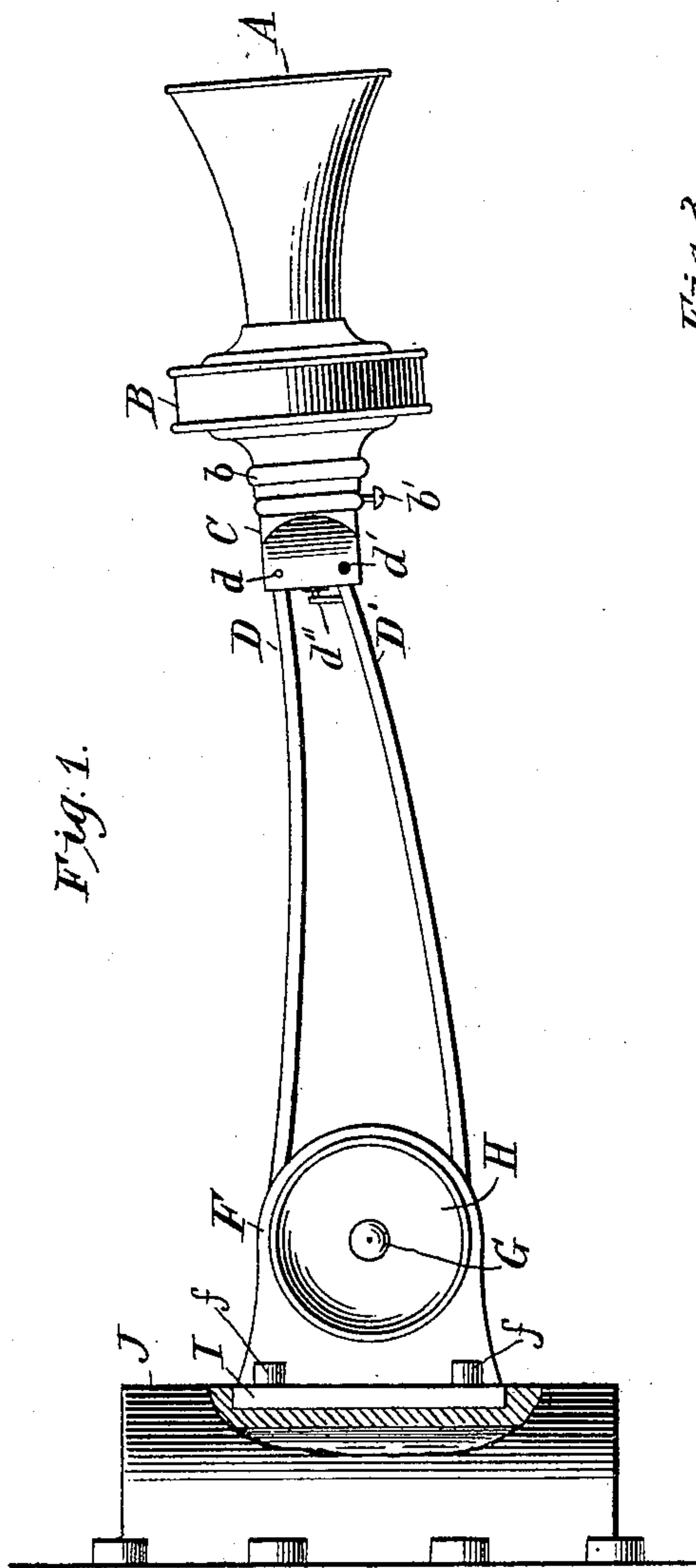


Fig. 3.

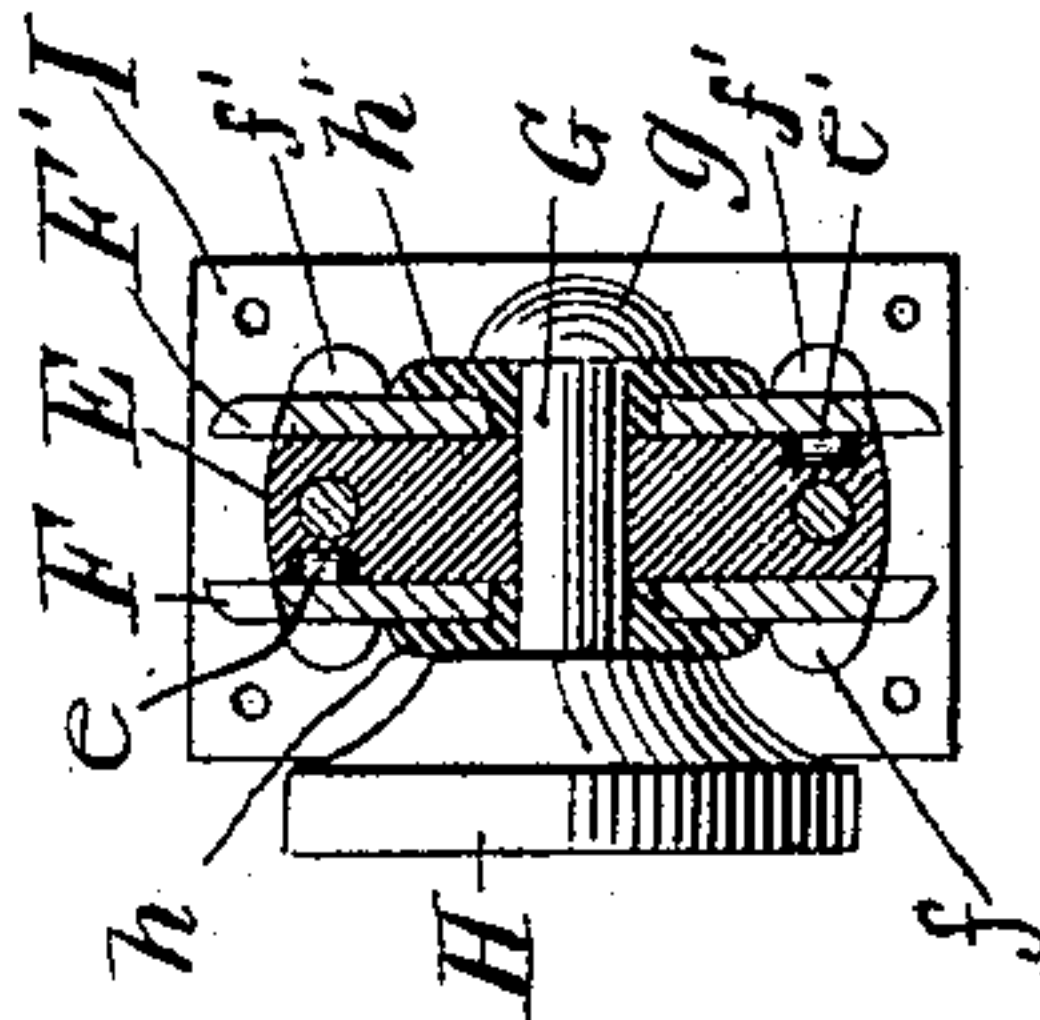
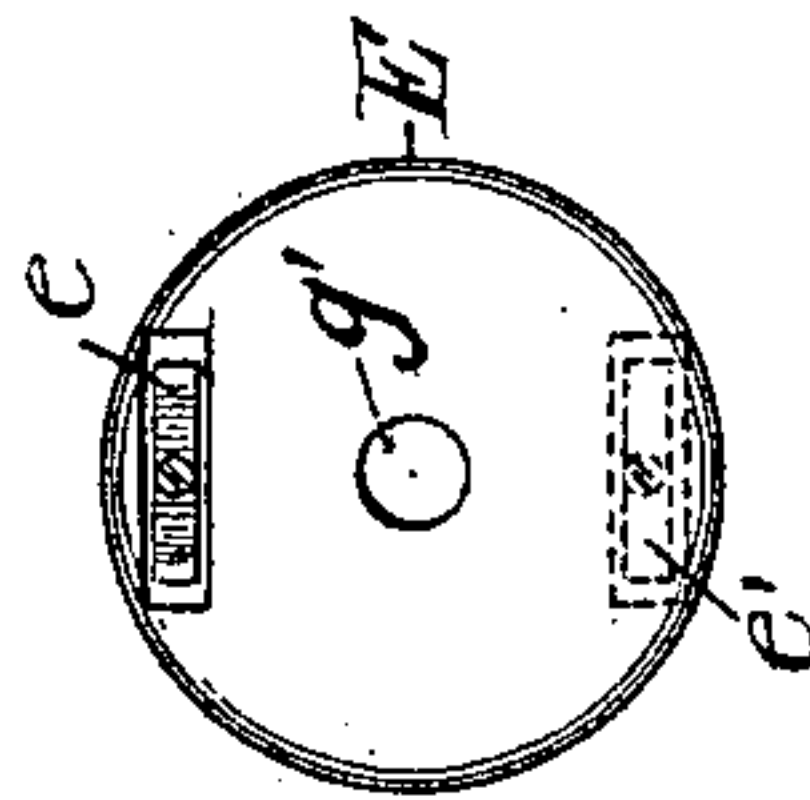


Fig. 2.



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TELEPHONE-TRANSMITTER ARM.

SPECIFICATION forming part of Letters Patent No. 635,812, dated October 31, 1899.

Application filed September 26, 1898. Serial No. 691,862. (No model.)

To all whom it may concern:

Be it known that I, LAMBERT SCHMIDT, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Telephone-Transmitter Arms, of which the following is a specification.

My invention relates to adjustable supporting-arms for telephone-transmitters, intended more particularly for use in connection with telephone instruments of the kind generally known as "wall sets," by virtue of which the transmitter is held at a distance from its base-board and may be raised or lowered, so as to adapt it to the use of persons of varying height.

The object of my invention is to provide a novel transmitter-arm of this character that is light, graceful, and simple in construction and in which the use of a flexible conducting cord or cords between the movable transmitter and its stationary point of attachment is dispensed with and at the same time a thoroughly reliable and permanent continuous electrical connection between the movable and stationary portions of the transmitter is maintained.

To this end my invention consists of a transmitter-arm composed of two separated or converging metallic conducting-rods whose rear or diverging ends are inserted in or otherwise secured to a disk of insulating material and whose outer or converging ends are spanned by a socket adapted to contain a telephone-transmitter of any well-known or desirable type. The two conducting-rods are preferably curved and are so held and spaced by the disk and socket, respectively, that the whole forms a rigid framework, which constitutes the transmitter-arm proper.

My invention further consists in providing for this framework or arm a stationary clamp adapted to receive the said insulating-disk, which clamp may be attached to the casing containing the induction-coil of the same, and in providing means for pivotally and adjustably supporting said disk within the said clamp and for maintaining frictional electrical contact between the conducting-rods of

my transmitter-arm and the binding-surfaces of the stationary clamp.

My invention further consists of details of construction of my supporting-arm, which will hereinafter more fully appear.

In the accompanying drawings, Figure 1 is a side elevation of my transmitter-arm, showing the same attached to a casing adapted to contain the transmitter induction-coil. Fig. 2 is a side elevation of the insulating-disk, showing the contact-springs carried by it. Fig. 3 is a sectional elevation through the center of the supporting-clamp and disk, showing the details of construction and arrangement of the various parts.

Referring to the drawings, in which similar letters of reference indicate corresponding parts, A is the mouthpiece of a microphone-transmitter B, having a rearwardly-projecting portion *b*, which is adapted to enter a suitable socket or cup C, in which it is held by the set-screw *b'*. The socket or cup C, which in this instance is of metal, is in electrical connection with one terminal of the microphone or transmitter and has a central clearance-opening, through which the other terminal of the microphone is free to pass. Into the socket C are driven the two supporting-rods D D', the latter being surrounded by an insulating-bushing where it enters the socket C. The rods D D' are securely held within the socket by pins *d d'*, respectively, that pass through the side of the socket at its rear or narrowed part, as shown. The pin *d* may be of metal, while the pin *d'*, that holds the rod D' in place, is of ivory, hard rubber, fiber, or other insulating material. To the rod D' is secured a spring-finger *d''* or its equivalent, designed to make electrical connection between the rod D' and the central projecting terminal of the microphone-transmitter when the latter is placed within the socket C.

The rear ends of the rods D D' enter at diametrically opposite points the insulating-disk E, which is preferably made of hard rubber or its equivalent. The disk has a central opening *g'* and is provided at its opposite faces, at or near the points where the rods D D' enter it, with elongated depressions con-

5 taining contact-springs ee' , which are screwed to the rear ends of and make permanent electrical connection with the rods $D D'$, respectively. At either side of the disk E are metallic cheeks or face-pieces $F F'$, having feet ff' , respectively, by which they are secured to an insulating base-piece I , which, as shown in Fig. 1, is mounted in a depression formed in the front face of the casing J , containing the transmitter induction-coil. Through the cheeks $F F'$ and the disk E is passed a pin G , serving as a pivot about which the disk E may move. The pin G has at one end a head g and at the other is threaded to receive a clamping-nut H . Between the cheeks $F F'$ and the pin G and its head and nut are insulating-washers $h h'$.

20 As will be seen from inspection of Fig. 3, the springs ee' of the disk E (which, as already stated, are secured to the ends of the rods $D D'$) are in continuous frictional contact respectively with the metallic cheek-pieces or brackets $F F'$, that are mounted upon the non-conducting base I , and these
 25 springs make continuous sliding contact with said cheek-pieces when the transmitter-arm is moved about its pivotal point G . By tightening the nut H the arm supporting the transmitter may be clamped sufficiently tight to
 30 hold it in any position into which it may be moved by a person using the telephone. The cheek-pieces $F F'$ are in connection, through binding-screws (not shown) entering the feet ff' from the rear of the base-piece I , with
 35 the primary of the induction-coil and the local battery of transmitter-circuit in the usual manner by means of connections leading therefrom.

40 It will be evident that the socket G may be of insulating material and that the ends of the conducting-rods $D D'$ may terminate therein in contact surfaces or clamps of any desirable form adapted to hold and make electrical contact with the transmitter-terminals, and it will also be apparent that in
 45 lieu of a separate socket or cup G the base portion b of the transmitter B may be directly mounted across the ends of the rods $D D'$, although I prefer to use the arrangement
 50 shown. I may also in some cases mount the cheek-pieces or brackets $F F'$ directly upon a base-board or other support independently of the induction-coil casing J when occasion requires.

55 My adjustable transmitter-arm is easily and economically manufactured, consists of few parts, that are not subject to derangement, provides a direct conducting-path to and from the transmitter without the employment of conducting-cords that are liable
 60 to break or of binding connections to work loose, and it forms at the same time a light and attractive yet perfectly rigid arm of such construction as to permit the transmitter or
 65 the arm itself to be entirely removed from

and replaced within its support without interfering with wiring.

While I have shown herein one particular form of construction in which I have successfully embodied my invention, it will be
 70 obvious that the precise construction illustrated by me may be considerably modified or departed from in the matter of details without departing from the spirit of my invention.

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

1. In a support for telephone-transmitters, the combination of a fixed bracket having conducting-surfaces and a pivoted arm secured within said bracket, said arm being formed of two conducting-rods separated and insulated one from the other and having at their inner terminals contact-springs bearing upon
 85 said conducting-surfaces, and carrying at their free ends a transmitter whose terminals are in electrical connection with said rods.

2. In a support for telephone-transmitters, the combination with a fixed bracket having conducting-surfaces of an arm pivotally secured within said bracket, said arm consisting of a friction-disk located between said surfaces, and conducting-rods extending from said disk and insulated from one another and
 95 carrying at their free ends a telephone-transmitter, and contact-springs that bear upon said conducting-surfaces and are connected to said rods, substantially as set forth.

3. In a support for telephone-transmitters, the combination of a socket or holder for the transmitter, a pivoted insulating disk or support therefor, and rigid conducting-rods between said socket and support, one of said rods being in electrical connection with the
 105 wall of said socket and the other being insulated therefrom.

4. In a support for telephone-transmitters, the combination of a socket or holder for the transmitter, conducting-rods extending from said socket and terminating in an insulating disk or sleeve mounted in a pivoted support, a clamping-nut for varying the degree of friction between said disk and its support and means for maintaining electrical connection
 115 between the said conducting-rods and the said support, substantially as set forth.

5. As a new article of manufacture, a transmitter-arm composed of two separated, converging, metallic conducting-rods having their diverging ends secured to a pivoted insulating frictional contact-disk and having their converging ends spanned by a socket adapted to contain a telephone-transmitter,
 125 substantially as set forth.

6. As a new article of manufacture a support for telephone-transmitters comprising a base or casing designed and adapted to contain an induction-coil, a bracket mounted upon said base and provided with conduct-
 130

ing-ears, an insulating-disk clamped between
said ears and capable of a rocking motion
within the same, a pair of rigid conducting-
rods mounted upon or terminating within
5 said insulating-disk and in electrical connec-
tion at their forward ends with the terminals
of a telephone - transmitter, and contact-
springs at opposite sides of said insulating-
disk in electrical connection with the said

rods and adapted to bear upon said conduct- 10
ing-surfaces, substantially as set forth.

Signed at New York, in the county of New
York and State of New York, this 23d day of
September, A. D. 1898.

LAMBERT SCHMIDT.

Witnesses:

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H. HOFFMAN.