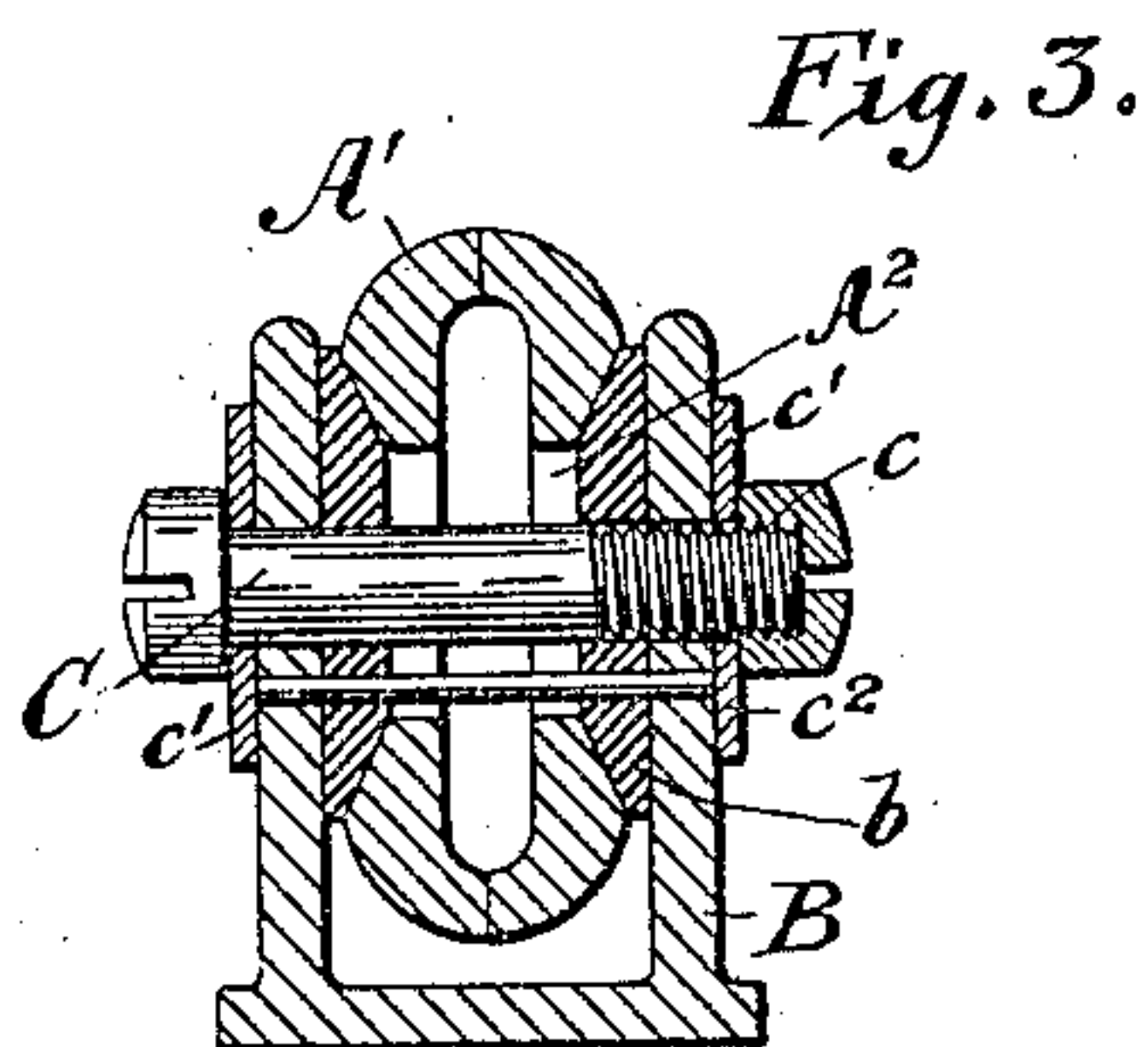
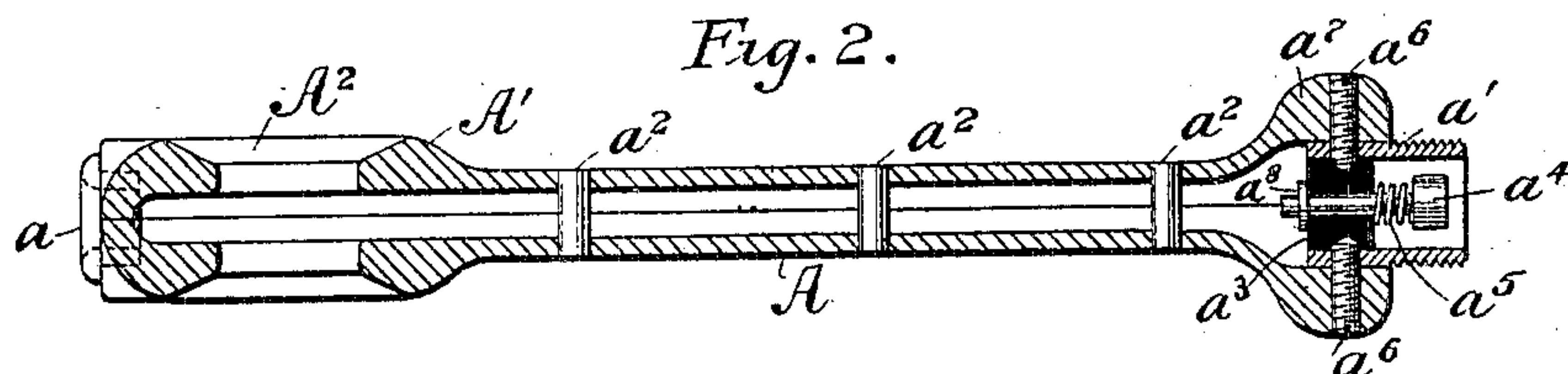
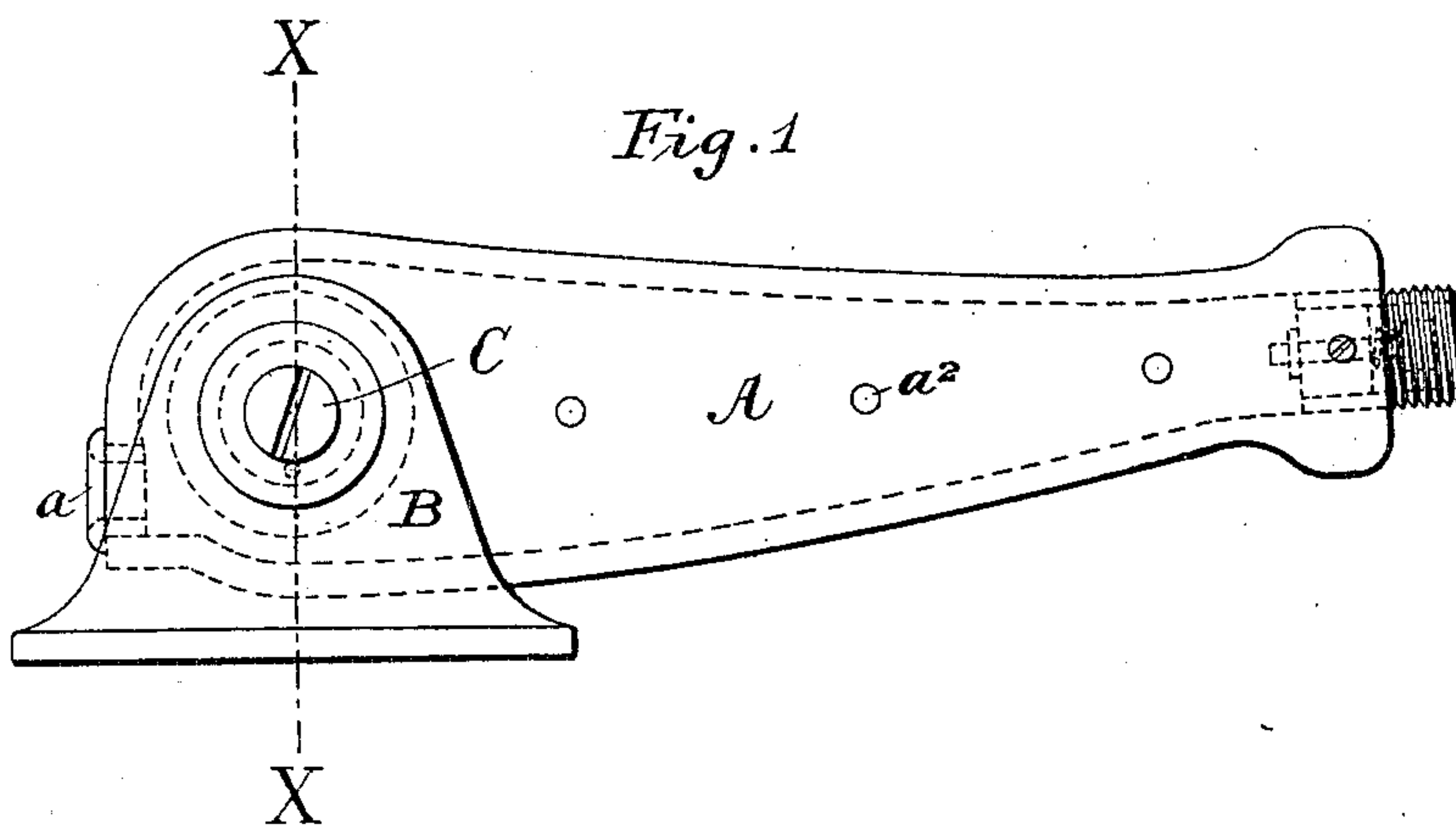


No. 812,125.

PATENTED FEB. 6, 1906.

W. D. GHARKY.
TELEPHONE TRANSMITTER ARM.
APPLICATION FILED MAR. 7, 1901.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM D. GHARKY, OF PHILADELPHIA, PENNSYLVANIA.

TELEPHONE-TRANSMITTER ARM.

No. 812,125.

Specification of Letters Patent.

Patented Feb. 6, 1906.

Application filed March 7, 1901. Serial No. 50,258.

To all whom it may concern:

Be it known that I, WILLIAM D. GHARKY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Telephone-Transmitter Arms, of which the following is a specification.

My invention relates to adjustable transmitter-arms for telephone instruments, and has for its object principally the production of a pivoted frictional connection between the arm itself and its base or support which will dispense with machine-work in the parts, will be efficient and durable, and permit the easy adjustment of the arm, causing it to remain in the adjusted position.

A further object is the provision of efficient means for mounting the transmitter upon the arm and making electrical connection between it and the conductors connecting with the circuit-wiring of the rest of the instrument.

In attaining my objects I provide a conical frictional bearing between one end of the arm and the support and at the other end of the arm a plunger connection from the transmitter when it is in place and the conductor within the arm.

My invention is fully illustrated in the accompanying drawings, wherein like letters of reference indicate the same parts throughout.

Referring now to the drawings, Figure 1 is a side view of a transmitter-arm complete embodying my invention. Fig. 2 is a vertical central sectional view of the same, and Fig. 3 is a front sectional view taken on the line X X of Fig. 1.

A is the body of my new arm, which consists of a hollow shell formed of two complementary halves of cast metal secured together by rivets a^2 . At the rearward end is the circular enlargement A' , having a central depression on each side of the arm, the sides of which depressions slope toward a central aperture A^2 . In the construction of these bearings heretofore it has been necessary to center and drill a hole through which the binding-bolt is to pass and to mill the cheeks of the arm, so as to obtain true surfaces for contact with the supporting-lugs; but by my method of casting the hub with central conical depressions and a large hole and then providing conical bearing-rings b , presently to be described, no drilling or mill-

ing is required and a self-centering and adjustable joint is produced.

Friction-rings b , each having one face conically formed to fit the side depressions, are slipped into the depressions and the whole then placed between the lugs of the saddle B, adapted to be secured to a support, such as the instrument-box, the arm and rings together making a snug fit. In order to prevent the rings turning with the arms, holes are drilled therein to register with holes in the lugs and the pin c^2 inserted. The aperture A^2 in the arm is of sufficient diameter to admit this pin in addition to the screw-bolt C. This bolt is passed through washers c' on the outside of the saddle, the lugs of the saddle-rings b , and the arm and is secured by nut c . The flat face of each ring b rests against the inner side of one of the lugs of the saddle, while its conical face bears against the depression in the arm. When the nut c is tightened upon the bolt, therefore, the pressure upon the parts, owing to the resiliency of the lugs, produces a sufficient pressure between the rings b and the arm to maintain the latter in the position in which it is placed. Owing to the conical form of the bearing-surfaces and the play allowed the arm by the large diameter of the central aperture through which the bolt passes, a self-centering frictional bearing of great efficiency is produced. The rocking movement of the arm thus pivoted is limited by the saddle-base.

The forward end of the shell terminates in an enlargement a^7 , which is chambered to receive the nipple a' , the latter being externally threaded upon its outer portion to fit an internal thread upon the projecting boss of a transmitter-back. At the inner end of the nipple a' is placed a bushing a^3 of insulating material, and the shell and nipple are drilled and tapped to receive the screws a^6 , which pass through them and take into the bushing, thus securing the parts in fixed relative position. While I have shown only two of these screws, it is obvious that three, four, or a greater number may be employed when desirable.

The bushing a^3 is provided with a central perforation to receive the plunger a^4 , which has a stop a^8 upon its end, which projects into the interior of the shell, and a coiled spring a^5 , compressed between the bushing and the head of the plunger, which latter is platinum-

tipped for contact with a contact-pin upon the transmitter.

The circuit-wires from the battery and primary of induction-coil are led into the arm through a hole in the rear end of the arm provided with an insulating-bushing *a* and carried forward and soldered one to the inner end of the plunger *a*⁴ and the other to the nipple *a*⁵, these forming the terminals for connection with the transmitter. When the latter is screwed in place, its central pin contacts with plunger *a*⁴ and compresses the spring *a*⁵, making a firm electrical connection.

In practice a lock-nut is first screwed onto the nipple and afterward the transmitter is screwed down, when the nut is turned in the reverse direction and locks the instrument firmly in place.

Although I have described a specific form of arm embodying my invention, I do not wish to be understood as limiting myself or the scope of this invention to that form, as it is obvious that many minor changes in details of construction and arrangement of parts may be made without departing from the spirit of the invention.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A telephone-transmitter support comprising a base having spring cheek-plates, means to secure said base horizontally, and an arm secured to said base, comprising the following instrumentalities: two twin castings each concave on one side, with enlarged heads and bases, each head being also concave and the two heads when put together forming a circular cup, a threaded thimble secured to said cup, a spring-contact supported in but insulated from the cup and thimble, the base of each casting being substantially circular, with an annular cone-shaped depression in its outer face and a pivot-bolt opening through the center thereof, a channel formed in the edges of the flanges of the bases to register and so form an opening for passing the conductor-cords, the axis of said opening being approximately parallel to the face of the supporting base-plate, and a conductor led from the contact-thimble through the arm and the said opening, where it emerges above the base in every position of the arm, substantially as described.

2. In a telephone-transmitter arm the combination of the pair of mate castings having registering concave inner faces, a supporting-

base, an opening for passage of conductors in the heel or pivot end of the arm, a projecting flange or boss surrounding said opening in whole or in part, and a pivot-bolt securing the arm on the base, whereby the said boss or flange acts as a stop against the base, and prevents breaking or damaging the conductors by turning the arm too far up or down, substantially as described.

3. A telephone-transmitter support comprising a base having spring cheek-plates, means to secure said base horizontally, and an arm secured to said base, comprising the following instrumentalities: two twin castings each concave on one side, with enlarged heads and bases, each head being also concave and the two heads when put together forming a circular cup, a threaded thimble secured to said cup, a spring-contact supported in but insulated from the cup and thimble, the base of each casting being substantially circular, with an annular cone-shaped depression in its outer face and a pivot-bolt opening through the center thereof, a channel formed in the edges of the flanges of the bases to register and so form an opening for passing the conductor-cords, the axis of said opening being approximately parallel to the face of the supporting base-plate, with a projecting flange or boss to serve as a stop against the same and limit the motion of the arm, a pair of cone-washers with flat bases against the inner faces of the cheek-plates and cones in the arm-base depressions, and a pivot-bolt extending through cheek-plates, cone-washers and arm-bases, substantially as described.

4. A telephone-support comprising a base having cheek-plates, an arm composed of two twin concave members having their butt-ends held together between the cheek-plates, and turning on annular faces thereon; the outer or transmitter-carrying ends of the arm members being expanded so that when put together they constitute a cup, a circular transmitter-support secured within said cup, and means for securing the two halves of the arm around and to said transmitter-support, whereby they are held together, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM D. GHARKY.

Witnesses:

GRANVILLE L. RETTEW,
PAULINE DANIEL.