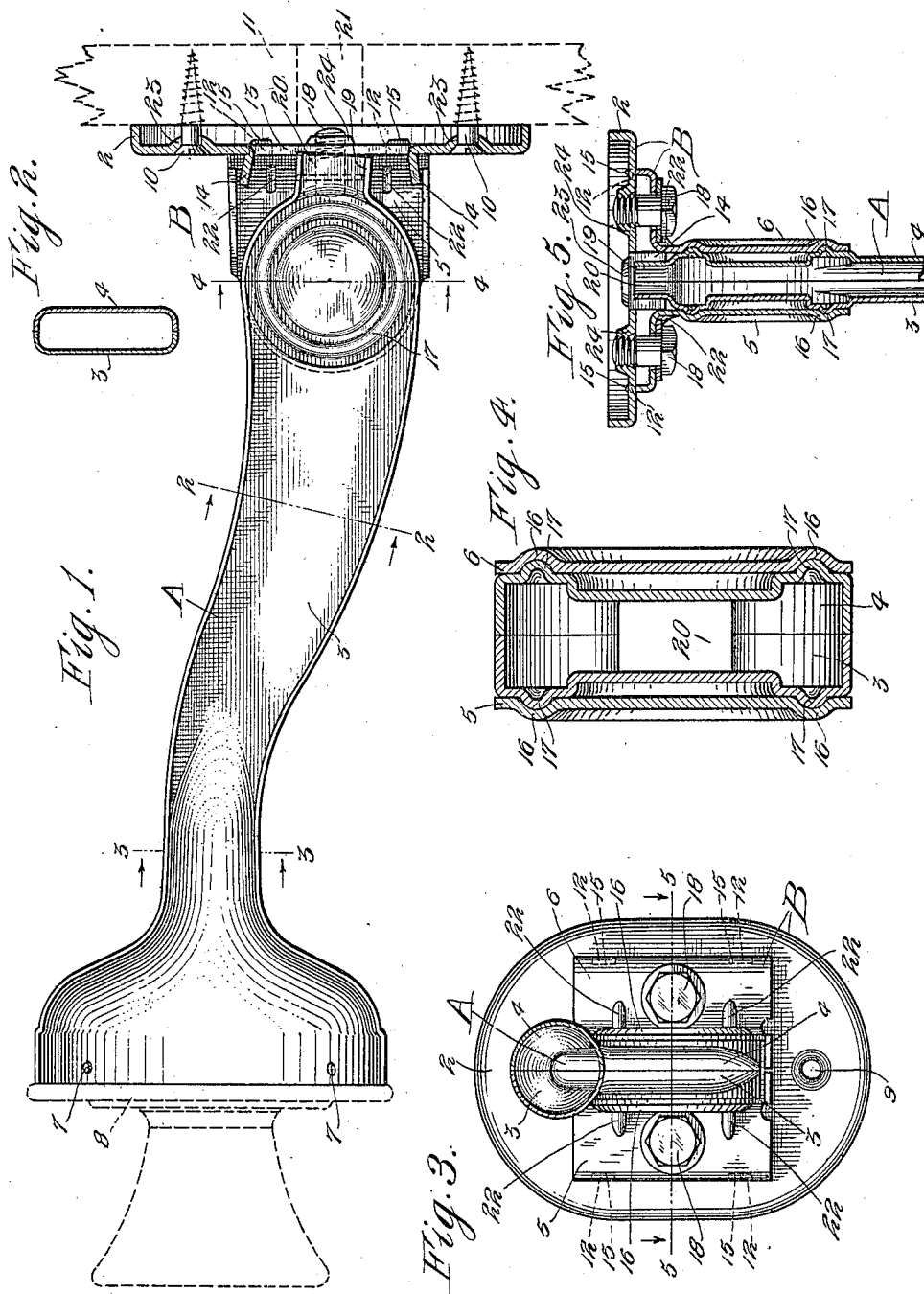


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PATENTED SEPT. 25, 1906.

H. J. GUTTMAN.
TELEPHONE TRANSMITTER ARM.
APPLICATION FILED NOV. 25, 1905.



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UNITED STATES PATENT OFFICE.

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TELEPHONE TRANSMITTER-ARM.

No. 831,855.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRY J. GUTTMAN, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Telephone Transmitter-Arms, of which the following is a specification.

My invention relates to telephone transmitter-arms for telephone-substations.

Generally stated, the object of my invention is to provide an improved and highly-efficient supporting structure involving a swinging arm to the free end of which a telephone-transmitter can be secured in any suitable known or approved manner or by improved means.

Special objects of my invention are to provide an improved friction-joint at the point of pivotal or swinging connection between the arm and its base, whereby the transmitter-arm may be satisfactorily adjusted to any desired position and retained in such adjusted position; to provide an improved construction and arrangement whereby the transmitter-arm may be made in two parts and put together to form a shell-like or hollow structure; to provide an improved construction and arrangement whereby the bearing in which the arm is mounted may be made in two parts and caused to have a frictional engagement with the said arm; to provide an improved construction and arrangement whereby the transmitter-arm structure as a whole may be readily put together to form a comparatively cheap, light, and strong support for a telephone-transmitter; to provide an improved construction and arrangement whereby the said transmitter-arm is also adapted to serve as a casing for concealing the transmitter conductor cords or connections and is provided with a flaring socket or end portion adapted to receive the transmitter itself, the latter being adapted to be secured to the arm by screws, and to provide certain details and features of improvement tending to increase the general efficiency and serviceability of a telephone-transmitter-supporting-arm structure of this particular character.

To the foregoing and other useful ends my invention consists in matters hereinafter set forth and claimed.

In certain respects, as will hereinafter more fully appear, my present invention is in

the nature of an improvement on the construction disclosed in Letters Patent No. 761,671, granted to me June 7, 1904.

In the accompanying drawings, Figure 1 is a longitudinal section of the transmitter-supporting-arm structure embodying the principles of my invention, the position of the telephone-transmitter at the end of the arm being indicated in dotted lines. Fig. 2 is a transverse section of the arm on the line 2 2 in Fig. 1. Fig. 3 is a sectional front elevation of the structure shown in Fig. 1, taken on line 3 3 in said figure. Fig. 4 is an enlarged transverse section on line 4 4 in Fig. 1. Fig. 5 is a horizontal section on line 5 5 in Fig. 3.

As thus illustrated the arm A comprise as couple of halves or sections 3 and 4. These two halves or sections can be stamped or pressed out of sheet metal, and when the same are put together they form a hollow arm or shell having a cup or enlarged socket or mouth-like opening at its forward end. This enlargement at its free or distal end is adapted to receive the telephone-transmitter, as indicated in dotted lines in Fig. 1. As shown, the said telephone-transmitter may be held in place by screws that pass through holes 7 in the flaring portions of the sections or halves 3 and 4. The said flaring end portions of the arm may be of any desired internal diameter, so as to receive any particular size of transmitter 8 that it may be required to hold. As illustrated, the base 2 is somewhat elliptical in shape when viewed from the front and is provided with holes 9, through which screws 10 pass to secure the base to any suitable frame 11. Preferably this base is also stamped or pressed out of one integral piece of sheet metal, and in addition to the said screw-holes there are four other holes 12, together with a slot 13, at the ends of which the metal is turned outwardly to form two lugs 14. The utility of this construction will hereinafter more fully appear. Also, as shown, the sides 5 and 6 of the friction-bearing are each stamped or pressed into shape and have sides that extend at a right angle to their attaching portions B and are provided with lugs 15, adapted to fit in the apertures 12. These two halves of the friction-bearing are formed with circular ridges or corrugations 16, which provide circular grooves on the inner faces of the two halves,

as shown more clearly in Fig. 4. It will also be seen that the two halves of the arm itself are formed with similar circular ridges or corrugations 17, which are adapted to fit the grooves formed by the ridges or corrugations 16. Thus the arm in its entirety is adapted to be held in the frictional bearing provided by the two halves and is adapted to be swung about an axis coincident with the center or axis of the circular ridges 16 and 17, whereby considerable frictional contact is insured, sufficient to hold the arm in any desired position. In addition it will be seen that these two halves of the friction-bearing are each provided with a hole through which a bolt 18 extends into a suitably threaded hole formed in the base 2 and suitably located thereon. Again, it will be evident that by means of said screws any suitable pressure may be applied to the two halves 5 and 6 of the frictional bearing for the purpose of maintaining the transmitter-arm A in any suitable or desired position—that is to say, for yieldingly maintaining it in any suitable position. In use the movement of the transmitter-arm is limited by the lugs 14, against which a short boss or projection 19, formed at the extreme rear end of the arm, is adapted to strike when the free or distal end of the arm is moved up and down. When the telephone-transmitter is properly adjusted in position, the leads or flexible conductors therefor extend through the hollow interior of the transmitter arm and base through the opening 20 at the end thereof and through the opening 13 in the base 2 to any point where it may be desirable to carry the same for the purpose of establishing the desired electrical connections. For example, these flexible connections may extend through the opening 21 in the frame 11 of a telephone-box. With this arrangement the transmitter-arm not only forms a casing for the back of the transmitter proper, but also serves as a hollow member or inclosure through which the conducting leads or cords may be carried to their desired points of connection. In the preferred embodiment of my telephone-transmitter-supporting-arm structure the sides or halves of the frictional bearing, together with the engaging surfaces of the transmitter-arm, form a frictional joint or swinging connection the tension of which may be very easily adjusted by means of the bolts 18. Furthermore, this frictional joint or construction may be very easily taken apart and put together.

Looking at Fig. 4 of the drawings, it will be seen that the arm, which is hollow throughout its entire length, is effectively supported by the two halves of the bearing. It is obvious that the different parts of my improved transmitter-supporting structure—the arm as well as the pedestal or base—may be of cast-iron or cast-steel; but I prefer to stamp or

press these different parts from sheet metal by means of suitable dies, which method I regard as a considerable advance in the art of making transmitter-supporting-arm structures.

In order to give stability and strength to the frictional bearing members 5 and 6 at points where the material is bent at right angles, fillets or ribs 22 are stamped or formed directly across the angle-section of the material, as shown in the drawings. Furthermore, it will be seen that holes 9 are suitably provided and that the depressions 23 are employed in order to give the metal stability and strength. This is also true, of course, of the portions 24, into which the bolts 18 are screwed. With this arrangement it will be seen that I provide a transmitter arm and base which is comparatively simple and cheap to manufacture and which is more durable than the ordinary arrangement. It is obvious, however, that the details of my invention may be changed or modified more or less without departing from the spirit of my invention. For this reason I do not limit myself to the exact construction shown and described.

With the foregoing construction, and as no pivot or bolt is employed for the arm to swing about, it is evident that the interior of the transmitter-arm presents a perfectly clear and absolutely-unobstructed passage throughout its entire length.

What I claim as my invention is—

1. A combined transmitter arm and casing comprising two longitudinal members widened at one end to receive entirely therein a transmitter, and provided with lateral screw-holes through which screws may be inserted to engage and secure the transmitter in place, and whereby such screw and transmitter constitute the means for fastening the two members together.

2. A combined transmitter arm and casing comprising two longitudinal hollow members provided with meeting edges, a two-part frictional bearing adapted to clamp the two members together at one end, and means for securing the members together at the other end, said means comprising lateral screw-holes through which screws may be inserted and screwed into the transmitter which the two members are adapted to receive at this end of the hollow arm formed by said members, whereby said screws also hold the transmitter in place.

3. A transmitter-arm comprising two longitudinal members, a pair of clamping-pieces for holding the said members together at one end, a base, and screws inserted through said clamping-pieces and into said base, said screws being adapted to be tightened for the purpose of causing said clamping-pieces to more firmly engage and hold the said longitudinal members together.

4. A transmitter-arm, a two-part frictional bearing in which one end of said arm is mounted, a base, and screws extending through the two parts of said bearing and into said base, said screws being adapted to be tightened to cause the said frictional bearing to more firmly engage and hold the said arm.

5. A swinging transmitter-arm composed of two longitudinal halves, a couple of clamping portions adapted to grip and hold the two halves together at one end of the arm, said clamping portions located at opposite sides of the arm, and screw-threaded means located entirely outside of said arm and adapted for varying the frictional grip of the said clamping portions on the end of said arm, said arm having a longitudinal bore or passage intersecting the axis about which it swings.

6. A hollow transmitter-arm provided at its rear end with a hollow and rearwardly-extending boss, a frictional bearing in which the rear end of the transmitter-arm is mounted, a base on which the said bearing is mounted, and forwardly-extending stops mounted on said base and adapted to engage said boss for the purpose of limiting the up-and-down swing of the arm, together with the tensioning or friction-regulating screws 18 18, located at each side of said boss.

7. A hollow transmitter-arm composed of two longitudinal halves provided at their rear ends with circular ridges having an axis coincident with the axis about which the arm is adapted to swing, a two-part frictional bearing provided with circular grooves adapted to engage the circular ridges on the arm, a base, and clamping-screws extending through the two parts of the bearing and into said base, said screws being adapted to be adjusted for the purpose of varying the frictional grip of the said bearing on the end of the arm.

8. A transmitter-arm provided at its rear

end with circular ridges having an axis coincident with the axis about which the arm is adapted to swing, a frictional bearing provided with circular grooves adapted to engage said circular ridges, and screw-threaded means located entirely outside of said arm and adapted for varying the frictional grip of the said bearing on the said arm, said arm having a longitudinal bore or clear passage intersecting the axis about which it swings.

9. A transmitter-arm, a base, a two-part bearing adapted to frictionally grip or engage the rear end of said arm, and means for varying the pressure of said bearing on the arm, the two parts of said bearing being removably secured to said base by said means.

10. A hollow transmitter-arm composed of two longitudinal and separable halves which are imperforate at their rear ends, a frictional bearing for clamping and holding the rear ends of said halves together, means for varying the pressure or grip of said bearing, and means for attaching a transmitter and thereby holding the forward ends of said halves together.

11. A transmitter-arm, a bearing for said arm, a base, and screws for varying the grip of the bearing upon the arm, said screws also inserted through the bearing and base to hold the same together.

12. A sectional hollow transmitter-arm, a bearing for holding the sections together at one end of the arm, a base, and screw-threaded means for varying the grip of the bearing upon the arm, said screw-threaded means also inserted through the base and bearing to hold the same together.

Signed by me at Chicago, Cook county, Illinois, this 21st day of November, 1905.

HARRY J. GUTTMAN.

Witnesses:

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