

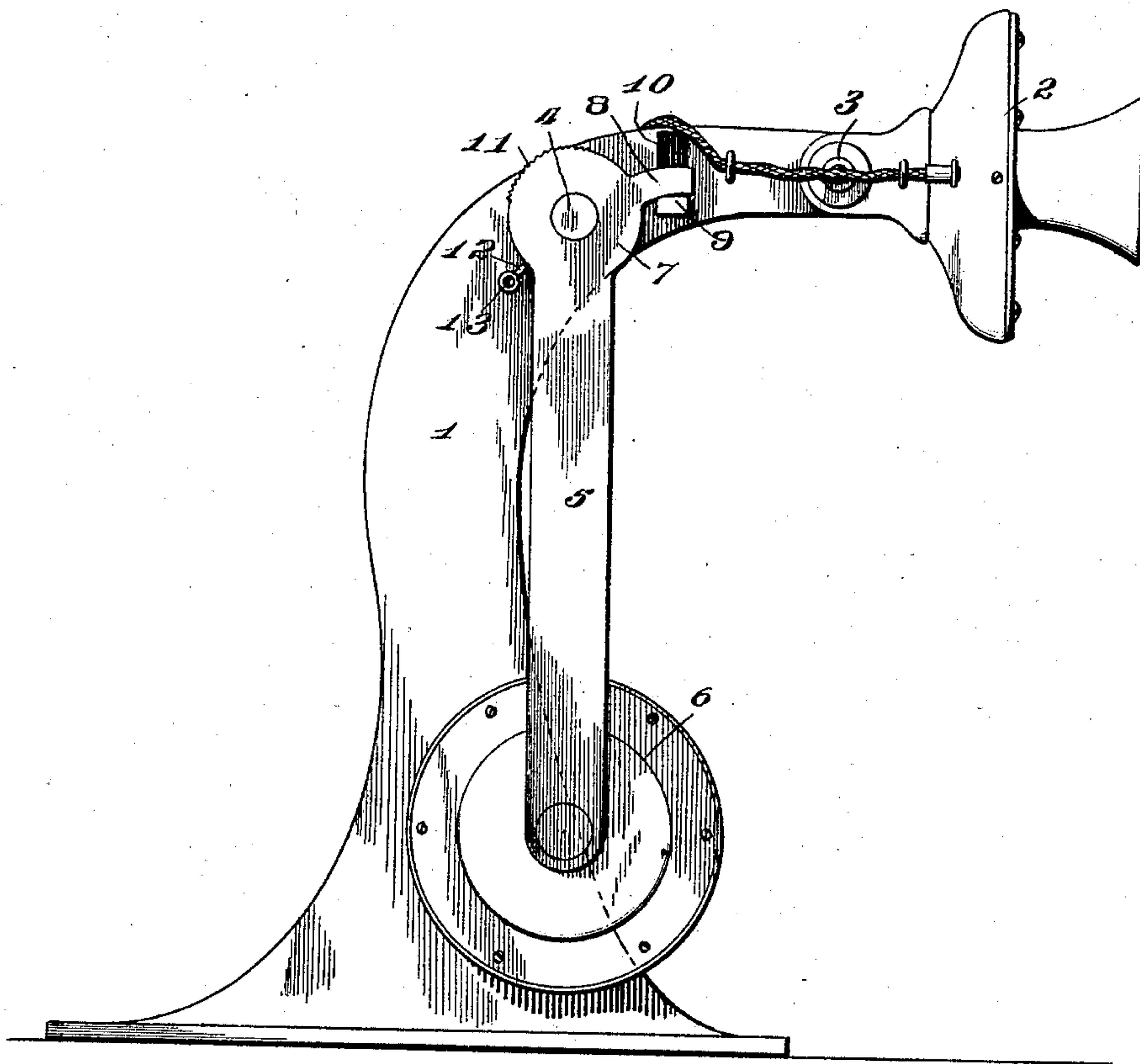
No. 717,218.

Patented Dec. 30, 1902.

T. C. KNOWLES.  
TELEPHONE TRANSMITTER.

(Application filed Apr. 1, 1902.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS C. KNOWLES, OF DENVER, COLORADO.

## TELEPHONE-TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 717,218, dated December 30, 1902.

Application filed April 1, 1902. Serial No. 100,931. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS C. KNOWLES, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Telephone-Transmitters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in telephone-transmitters.

Heretofore it has been customary to have the receiver of a telephone on the end of a string-like section of covered wire, so that the operator has it within his discretion whether or not he will speak directly in the transmitter or stand off at some distance. This custom is not only objectionable to the person at the other end of the line by reason of his not being able to understand clearly what is being said, but is also a serious objection to the operator in that it is very tiresome to stand in a listening position, holding the receiver in his hand while it is raised to his ear.

My invention provides for the arrangement of the parts, so that it will be unnecessary to hold the said receiver and also overcomes the other objection by causing the operator to speak directly into the transmitter. The former would add to the popularity of the phone and the latter would increase its efficiency.

With these and other objects in view my construction consists of an arm so pivoted to the support of the transmitter that when it is raised to the desired position to suit the operator the said arm will be held in such position by mechanical means and at the same time cause a communication to be made between the wires of the transmitter, and thus accomplish the same result as would be accomplished by removing the receiver from the hook as in the ordinary construction. This arrangement leaves the operator with free use of both his hands for the making of memoranda or taking or writing of messages or orders as they are received over the wire.

My invention is of simple construction, and consists of the combination of the various

parts to be hereinafter more fully described and claimed.

Reference being had to the accompanying drawing, the same being a side elevation view of my device as designed for desk use, the numeral 1 represents the customary standard or support, which is screwed or otherwise secured to the top of the desk and which curves to a horizontal plane at the top for about one-third its length, carrying at the end of said horizontal portion the ordinary transmitter 2, held in adjustable position by the joint 3. In the hollow of the said curved portion is provided a suitable lug or pivot-point 4, upon which is loosely swung the arm 5, the said arm carrying at its opposite end the receiver, as 6. Projecting from the enlarged portion 7 of the arm 5 is a suitable lug 8. This lug is arranged to one side and projects across the path of a second lug 9, protruding from within a slot 10, found in the side of the standard 1. This lug (actuated by mechanism not shown) is adapted when in its raised position (when the arm 5 is turned up) to form a communication between the wires of the transmitter, said communication to be broken when the arm is lowered. It can be readily seen by reference to the drawing that when the arm 5 is thus raised the lug 8 will be caused to also raise, moving on the arc of a circle struck from the center of the pivot-point 4 and allow suitable spring-pressure to raise the lug 9 and form the said contact. The joint at the pivot 4 being unavoidably a loose one, it is necessary to provide some means for holding the receiver in its raised position during operation, and to fill this requirement I form upon a portion of the outer periphery of the enlarged upper end of arm 5 a set of corrugations or teeth 11, designed to be engaged by the end of the projecting steel spring-arm 12 of the plug or screw 13. The said teeth extend about one-fifth the way around this enlarged portion and are so arranged that they do not engage the said spring-arm until the latter is within its lowest operative position. Of course other means might be employed to produce the same result—such, for instance, as an eccentrically-mounted steel ring or disk so arranged that it will bind against the smooth face of the head or enlargement 7 when the latter is turned up—



wardly. The arm 5 might also be modified so that its length could be adjusted at will, and various other modifications might be resorted to in the form and arrangements of the several parts, all within the spirit and scope of my invention. Hence I do not wish to limit myself to the exact construction herein shown and described; but,

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

1. The combination with a telephone-transmitter standard, of an arm pivoted thereto, a receiver permanently carried at the free end of said arm, a set of teeth formed on the circumference of the pivoted end and suitable means carried by the said standard for engaging the said teeth for locking the arm in a given position, substantially as described.

2. A receiver-arm for telephone-transmitters comprising a pivoted body portion, an arm projecting from one side thereof and carrying at its end a suitable form of receiver, a second arm projecting from the said body portion at an angle to the first for engaging a suitable lug in the side of the standard for breaking the circuit through the transmitter when the receiver-arm is in its lowered position, and teeth formed on the body portion for engaging suitable gripping means for holding the receiver-arm at a desired position, substantially as described.

3. The combination with a telephone-transmitter standard, of a receiver-arm pivoted

thereto, said arm being formed with a set of teeth extending for a portion of the circumference of the pivoted end thereof, and locking means carried by said standard for engaging said teeth, whereby said arm may be held in a given position when said teeth have been caused to engage the locking means, and said arm will be free to swing upon its pivot when the parts are not thus engaged, substantially as described.

4. The combination with a telephone-transmitter standard, of a receiver-arm pivoted thereto, an integral head formed on said arm for receiving said pivot, a second arm on said head for closing the circuit through the transmitter, and teeth formed on said head for engaging suitable gripping means for holding the receiver-arm in a desired position, substantially as described.

5. The combination with a telephone-transmitter standard, of a vertically-swinging receiver-arm pivoted thereto, and means for holding said arm in a desired position, said means comprising a spring-engaging tooth, a screw holding the same stationary to the standard and teeth formed on the end of said arm for engaging said tooth, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THOMAS C. KNOWLES.

Witnesses:

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