

No. 771,946.

PATENTED OCT. 11, 1904.

F. W. ST. JOHN.

MEANS FOR SUPPORTING TELEPHONE RECEIVERS.

APPLICATION FILED APR. 27, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

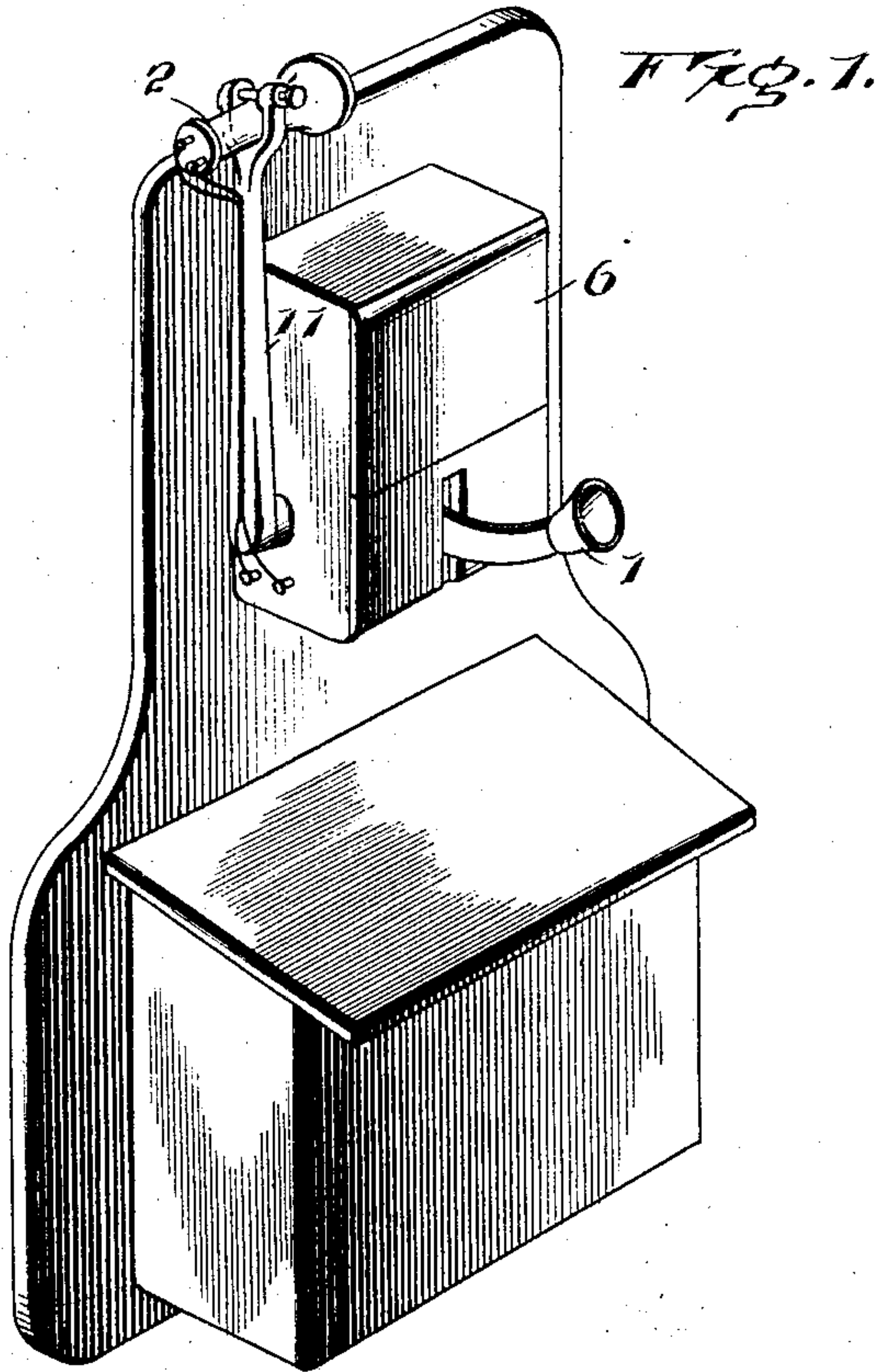
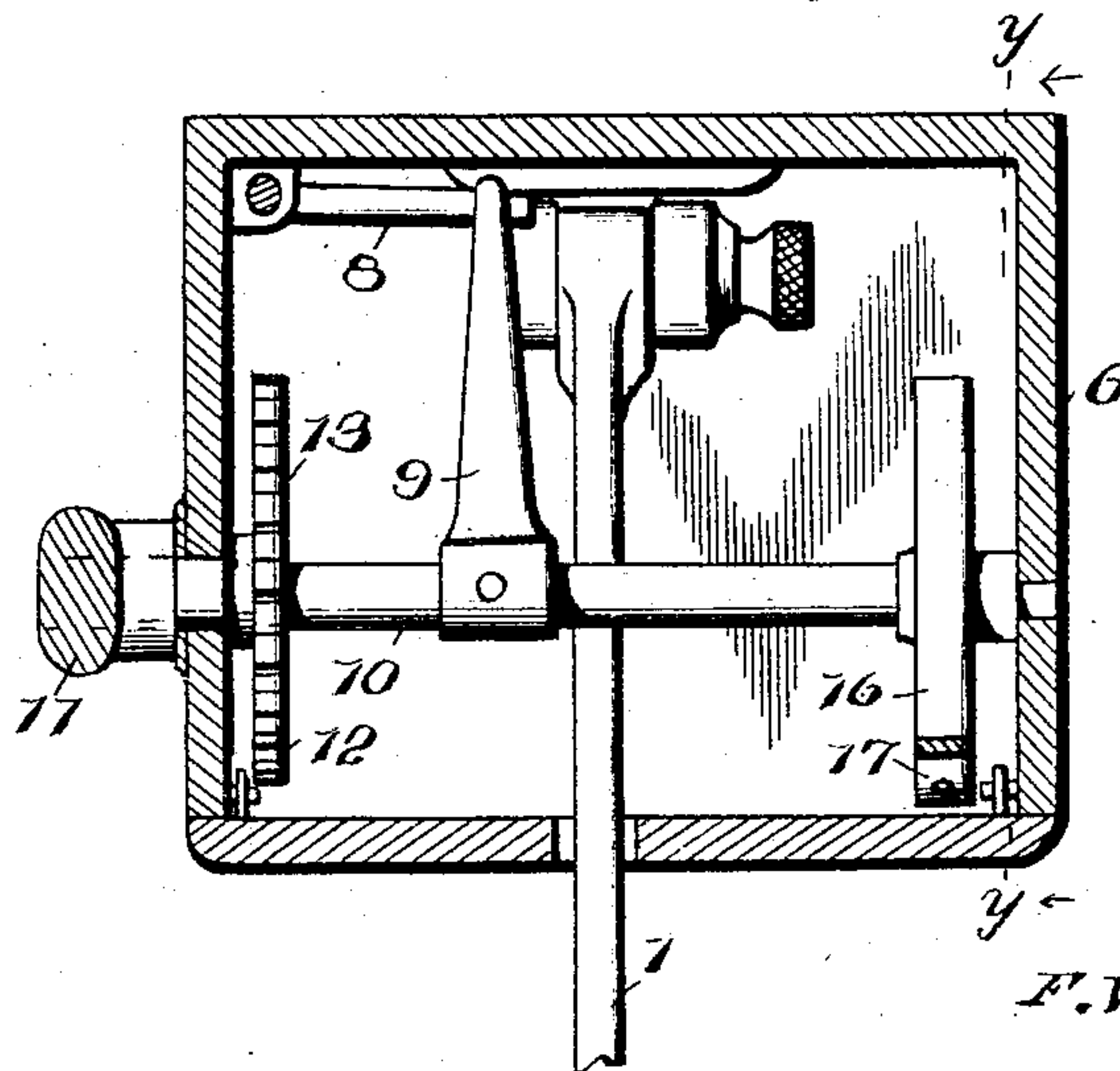


Fig. 2.



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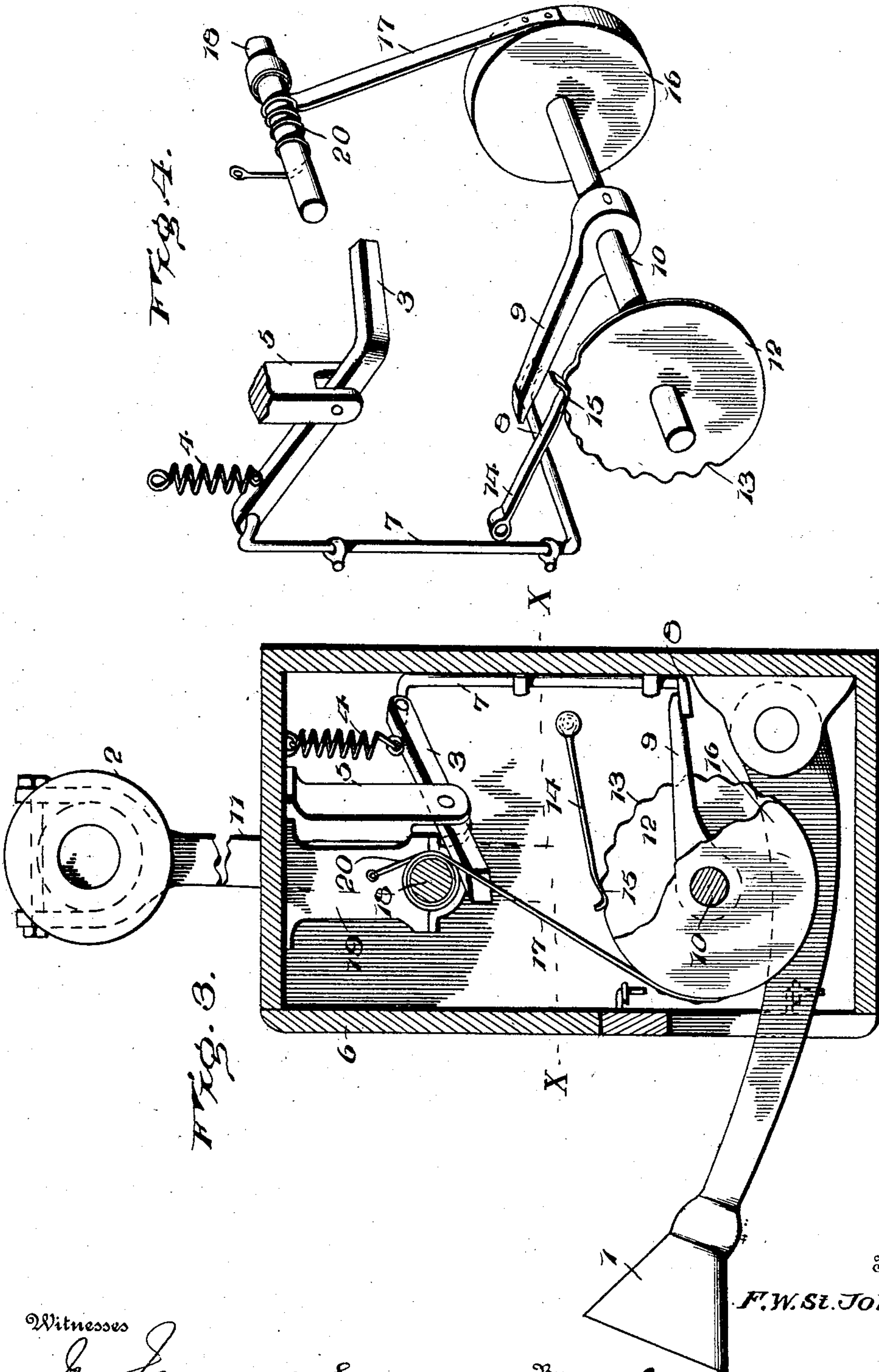
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Witnesses

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# UNITED STATES PATENT OFFICE.

FRANK W. ST. JOHN, OF COSHOCTON, OHIO.

## MEANS FOR SUPPORTING TELEPHONE-RECEIVERS.

SPECIFICATION forming part of Letters Patent No. 771,946, dated October 11, 1904.

Application filed April 27, 1904. Serial No. 205,170. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK W. ST. JOHN, a citizen of the United States, residing at Coshocton, in the county of Coshocton and State of Ohio, have invented certain new and useful Improvements in Means for Supporting Telephone-Receivers, of which the following is a specification.

This invention has relation to telephone apparatus, and is designed to provide a firm support for the receiver, thereby leaving both hands of the user free. Incidental to the construction the user must of necessity maintain an approximately predetermined distance from the transmitter, thereby insuring proper use of the instrument, which is essential to clear and distinct transmission of sound and articulate speech.

In accordance with this invention the receiver is attached to a supporting-arm, which in turn is carried by a shaft, with which means cooperate to hold the receiver in the desired position and to break the signaling-circuit and establish the talking-circuit when moving the receiver-supporting arm from the normal position.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a telephone embodying the invention. Fig. 2 is a plan section of the telephone and attachment on the line X X of Fig. 3. Fig. 3 is a vertical section of the invention on the line Y Y of Fig. 2 looking in the direction of the arrows. Fig. 4 is a perspective view of the operating means.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The telephone comprises the transmitter 1,

receiver 2, and switch mechanism of ordinary construction for shifting from the talking to the alarm circuit, and vice versa, these parts being of any usual type, according to the system installed.

The switch-operating lever is indicated at 3 and corresponds to the hook or arm from which the receiver 2 is usually suspended. Inasmuch as the switch is of well-known construction, the same has not been illustrated, since it forms no part of the invention. The spring 4 holds the switch-operating lever 3 in normal position—that is, with the talking-circuit closed. When the receiver is in normal position, the switch-operating lever 3 is moved so as to place the spring 4 under tension and to close the signaling-circuit and to open the talking-circuit in the manner well understood in the art of telephoning. A bracket or support 5, pendent from the top of the box 6, pivotally supports the lever 3. A rod 7 is engaged at its upper end with the lever 3 and is provided with an arm 8, which extends across the path of an arm 9, projected from a shaft 10, journaled transversely of the box 6 and provided at one end with an arm 11, having the receiver 2 firmly attached to its upper end. For convenience the upper end of the arm 11 is forked and receives the element 2, which is secured thereto in any substantial way.

Detent mechanism cooperates with the shaft 10 to hold the arm 11 and receiver 2 in the required position, and, as shown, said detent mechanism consists of a plate or disk 12, having a portion provided with teeth 13 and a spring 14, having its end 15 crimped or otherwise constructed to cooperate with the teeth 13 to hold the disk 12 and shaft 10 in the adjusted or located position. A wheel 16 is attached to the shaft 10, and a flexible connection 17 is made fast at one end to the wheel 16 and at its opposite end to a shaft 18, journaled to a side of the box 6 and to a hanger 19, pendent from the top of said box. A spring 20 is mounted upon the shaft 18 and is secured at one end to the hanger 19 and at the opposite end to said shaft 18.

Under normal conditions the arm 11 occupies a vertical position, as indicated most



clearly in Figs. 1 and 3, and the arm 9 presses downward upon the arm 8. When the receiver is moved forward and downward, the arm 11 is turned and the shaft 10 rotated and the switch-operating lever 3, being released, is moved by the spring 4 to break the signaling-circuit and establish the talking-circuit in the usual manner. As the shaft 10 turns, the end portion 15 of the spring 14 rides upon the teeth 13 of the disk 12 and holds the receiver in the desired position. The receiver 2 and its supporting-arm 11 are counterbalanced by means of the spring 20 and cooperating parts 18, 17, and 16. As the shaft 10 turns, the flexible connection 17 is unwound from the shaft 18 and the spring 20 is wound, the tension of said spring proportionately increasing as the leverage of the arm 11 increases when turning the same from a vertical to a horizontal position. The sides of the teeth 13 slope or incline in such a manner as to facilitate the riding of the bent end 15 of the spring 16 thereon when turning the shaft either to the right or to the left.

Having thus described the invention, what is claimed as new is—

1. In telephone apparatus, the combination of a pivotally-supported arm carrying the receiver, a coil-spring connected with said arm and adapted to have its tension increased proportionately as the arm is turned from a vertical to a horizontal position, a disk con-

nected with said pivoted arm for movement therewith, and means for exerting a yielding pressure upon said disk to hold the receiver in any adjusted position, substantially as set forth.

2. In telephone apparatus, the combination of a shaft, an arm attached to said shaft and carrying the receiver, a disk mounted upon said shaft and rotatable therewith and having teeth with their sides oppositely sloped, a yieldable detent cooperating with the toothed disk to hold the arm in an adjusted position, a wheel mounted upon said shaft, a spring-actuated shaft, and a flexible connection between said wheel and spring-actuated shaft, substantially as specified.

3. In telephone apparatus, the combination of a shaft, an arm attached thereto and carrying the receiver, detent and counterbalancing mechanisms cooperating with said shaft, arm 9 extended from the shaft, a switch-operating lever, a rod connected to said switch-operating lever and having a projecting portion normally engaged by the arm 9, substantially as set forth.

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

FRANK W. ST. JOHN. [L. s.]

Witnesses:

C. C. ERWIN,  
LEVI WILLIAMS.