No. 794,116. PATENTED JULY 4, 1905.

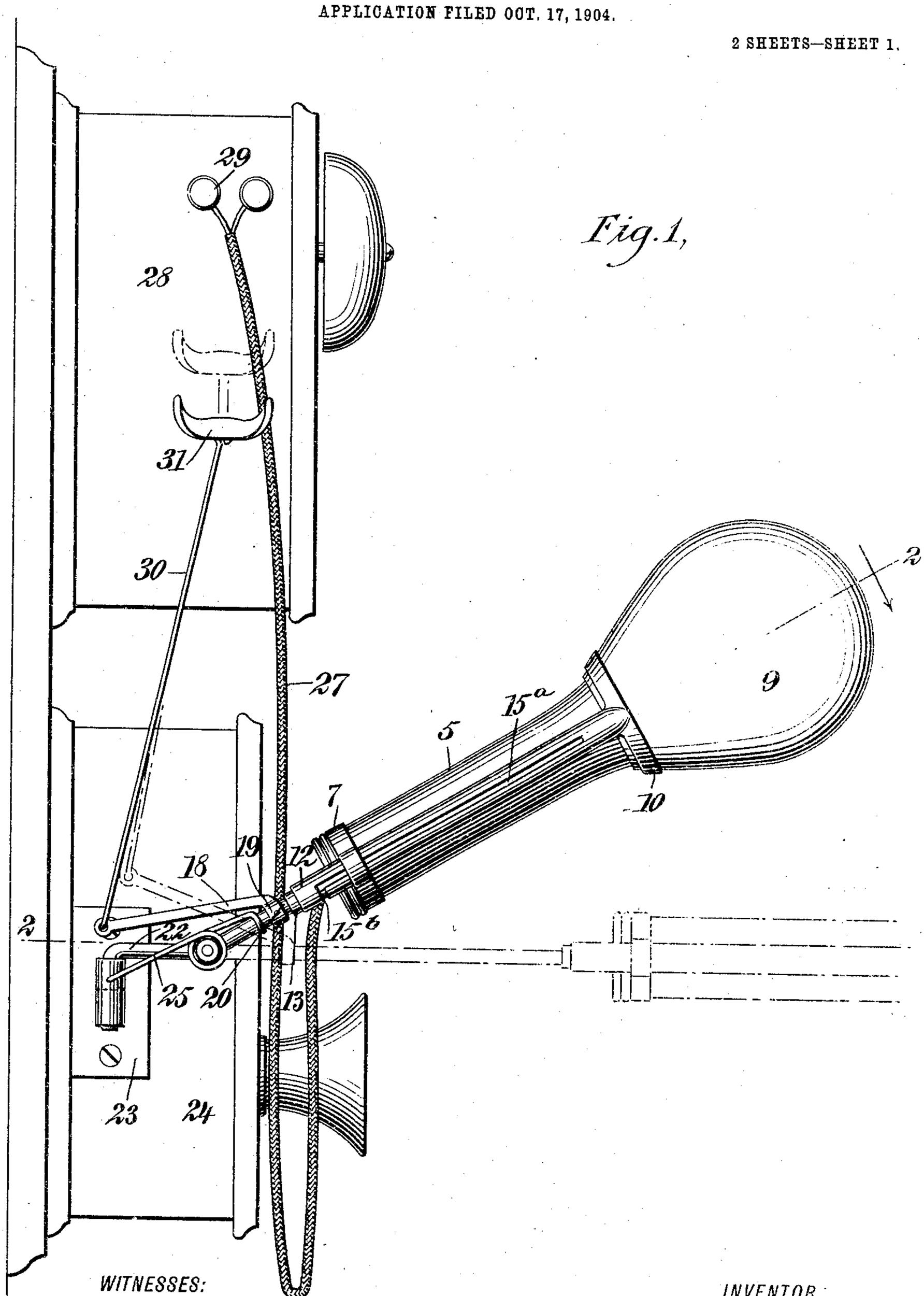
V. REBHUN.

TELEPHONE ATTACHMENT.

APPLICATION FILED OCT. 17, 1904.

2 SHEETS—SHEET 1.

Fig. 1,



WITNESSES:

Edward Thorpe.

Walton Harrison

INVENTOR

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ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 2,

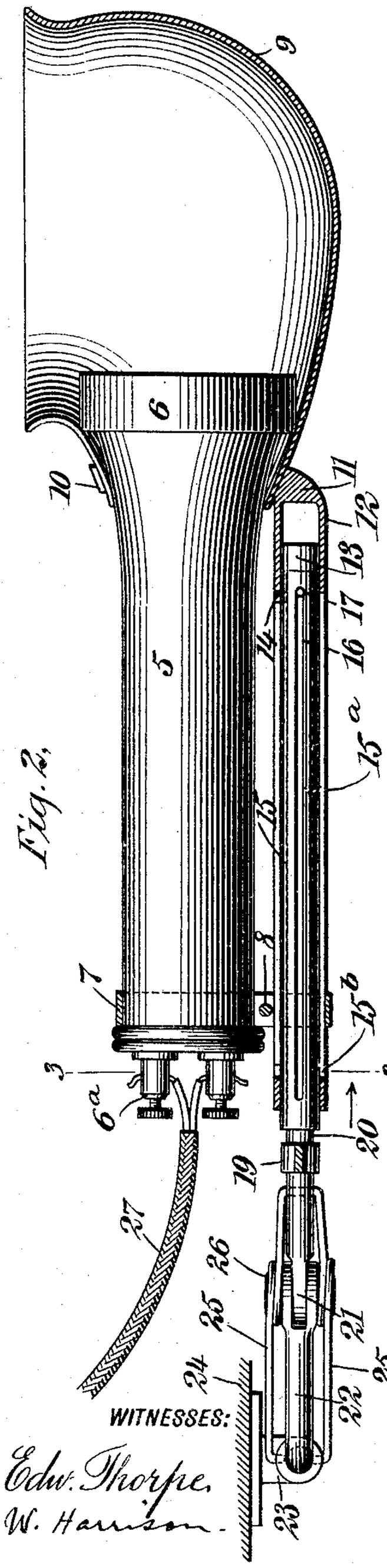


Fig. 4,

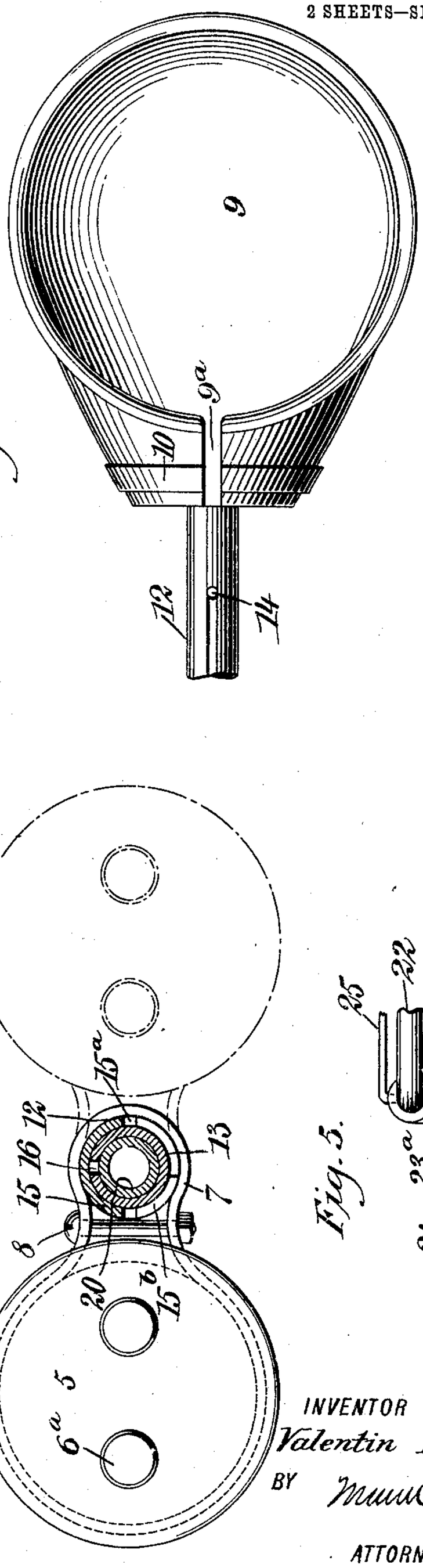
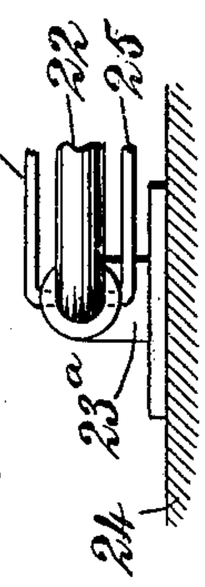


Fig. 3,

Fig. 5.



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UNITED STATES PATENT OFFICE.

VALENTIN REBHUN, OF SCHAGHTICOKE, NEW YORK, ASSIGNOR OF ONE-HALF TO JOHN LIDDLE, OF HOOSICK FALLS, NEW YORK.

TELEPHONE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 794,116, dated July 4, 1905.

Application filed October 17, 1904. Serial No. 228,713.

To all whom it may concern:

Be it known that I, VALENTIN REBHUN, a citizen of the United States, and a resident of Schaghticoke, in the county of Rensselaer and State of New York, have invented a new and Improved Telephone Attachment, of which the following is a full, clear, and exact description.

My invention relates to telephony, my more particular object being to provide means for improving the acoustic effects of the receiver, to enable the operator to avoid holding the receiver by hand, to enable the receiver to be adjusted to various positions of the head, and to accommodate the receiver to the use of persons whose hearing in one ear is better than in the other.

My invention further relates to certain constructional details and arrangements of mechanical parts relating to the telephone, as hereinafter described, and pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation showing my attachment mounted upon a telephone and ready for use. Fig. 2 is a fragmentary section, somewhat enlarged, upon the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a vertical section upon the line 3 3 of Fig. 2 looking in the direction of the arrow. Fig. 4 is a fragmentary side elevation of the resonator, and Fig. 5 is a fragmentary plan of the bracket applied to the opposite side of the casing.

The receiver is shown at 5 and is provided with the usual bell-shaped end 6, containing the diaphragm and the parts relating thereto, which may be of the usual construction. A clamp 7, provided with a bolt 8 and having, preferably, the form of an endless band, encircles the smaller end of the receiver for the purpose of holding it in position. A hood 9, made, preferably, of hard rubber, is mounted upon the bell-shaped end 6 of the telephone-receiver and serves as a resonator. This hood is made hollow, as shown, and is of such diameter and depth as to concentrate the sound-waves upon the ear of the operator when the said ear is placed against the open end of the hood. The hood 9 is encircled by a band 10, secured rigidly thereto, this band being integral with the end 11 of an outer tube 12. Both the hood 9 and the band 10 are provided with slots 9^a for permitting the passage of wires therethrough when the receiver is placed in position. The outer tube 12 fits slidably over an inner tube 13, which is provided with a guide-screw 14, passing through a slot 15 or 15^a in the outer tube 12, as will be understood from Figs. 2 and 3. The slots 15 15^a are longitudinal in form and lie parallel with the axis of the tube 12 and are connected together by a slot 15^b of such proportions as to represent a little more than a semicircle. The inner tube 13 is provided with a longitudinal slot 16, through which a pin 17 projects. This pin is mounted upon a rod 20 and serves to hold the same in proper alinement with the inner tube 13, while permitting a sliding longitudinal movement as between the same—that is to say, the inner tube 13 is slidable in relation to the rod 20, but has no angular or turning movement relatively thereto, and the outer tube 12 can be drawn out telescopically with reference to the inner tube 13 and also be turned angularly with reference to the same. The purpose of the telescopic movement between the rod 20 and the inner tube 13 is to enable the receiver 5 to be drawn out and pushed back, while the angular movement of the outer tube 12 relatively to the inner tube 13 enables the hood 9 to be adjusted at different angles. If desired, the receiver 5 may be turned to an angle of one hundred and eighty degrees with reference to the tube 13 and its accompanying parts, as will be understood by comparing the dotted and full lines in Fig. 3. By thus turning the receiver 5 a distance representing one hundred and eighty degrees, or a semicircle, the hood or resonator 9 is not only reversed

with reference to the direction which it faces, but is shifted a distance approximating the distance from one of the operator's ears to the other. An arm 18, having an eye 19, is rigidly mounted on the rod 20, as shown in Fig. 1. The rod 20 is journaled at 21 upon an elbow 22, which is supported by a bracket 23 or 23ª upon the lower casing 24, these two brackets being alike, but disposed upon opposite sides of the casing, as indicated in Figs. 2 and 5. A wire spring 25 is bent around a pin 26, which serves as a pivot-pin and engages the under side of the rod 20. The upward tension of this spring against the rod 20 approximates the downward pressure of said rod, due to the weight of the receiver and of the resonator on the outer or free end thereof. As the elbow 22 may be placed upon either the right or the left hand side of the casing, accordingly as it is mounted in the bracket 23 or 23ª, the composite arm supported by the bracket may be placed upon the operator's left or right side, as desired. If the arm is upon the operator's left, the receiver occupies the position indicated by full lines in Fig. 2. If the arm is upon the operator's right, however, the receiver is shifted to the position indicated by dotted lines in Fig. 3. This arrangement enables the operator to accommodate the position of the receiver and resonator to the hearing of either ear and is of peculiar service where the operator is hard of hearing in one ear.

A double cord 27 is connected with binding-posts 6ª upon the receiver 5 in the usual manner, as shown in Fig. 2. This cord may be passed through the slot 9ª, so that the receiver may be mounted within the resonator without the necessity of unfastening the cord 27. The upper casing is shown at 28 and the binding-screws at 29. A pitman 30 is connected to the arm 18 and also to the switch-hook 31, as will be understood from Fig. 1.

The normal position of the apparatus will be understood from an inspection of Fig. 1. When the receiver 5 is pushed toward the lower casing 24, the weight of the receiver and resonator is virtually lessened, so that the arm 18 rises into the position indicated by full lines in Fig. 1 under tension of the spring 25, and this movement also causes the switch-hook 31 to be lowered. When the telephone is to be used, the receiver 5 is drawn out, preferably to its full length, the outer tube 12 sliding upon the inner tube 13. The operator now places his ear adjacent to the resonator 9 and is ready for conversation. When the conversation is over, he merely pushes the receiver 5 and resonator 9 back into the position indicated in Fig. 1, which restores the switch-hook 31 to the position indicated in full lines in said view. It will be seen, therefore, that the movements of the switch-hook 31 are the same as in the ordinary system, in which the switch-hook when not in use is weighted by the receiver.

It will be observed that the telescopic and angular movements of the arm automatically operate the switch hook and lever.

The attachment can be applied to any telephone in use without the substantial alteration of any part. The resonator virtually increases the sound and shuts out all foreign noises, thereby making the sounds more distinct and more easy to be heard. The holding of the receiver by the hand, which is very tiresome, is dispensed with.

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

1. In a telephone apparatus, an extensible device mounted at one end to be raised and lowered at the other, a receiver supported thereby, a switch-hook, a connection between the latter and the extensible device, and a member operating to maintain this device in one position when shortened and in another position when lengthened.

2. In a telephone apparatus, an extensible device mounted at one end to be raised and lowered at the other, a receiver supported thereby, a switch-hook, a movable connection between the latter and the extensible device, and a member operating to maintain said device in its raised position when shortened and in its lowered position when lengthened.

3. In a telephone apparatus, an extensible device mounted at one end to be raised and lowered at the other, a receiver supported thereby, a switch-hook, a movable connection between the latter and the extensible device, and a spring-support for said device operating to maintain the same in a raised position when shortened and in a lowered position when lengthened.

4. In a telephone apparatus, an extensible device mounted at one end to be raised and lowered at the other, a receiver supported thereby, a switch-hook, a movable connection between the latter and the extensible device, and a member normally maintaining the said device in its raised position when shortened, and adapted to yield to the shifted position of the parts when the device is lengthened.

5. In a telephone apparatus, an extensible device mounted at one end to be raised and lowered at the other, a receiver supported thereby, a switch-hook, a connection between the latter and the extensible device, and a member operating to maintain this device in one position when shortened and in another position when lengthened, said receiver being provided with a resonator.

6. In an attachment for telephones, the combination of a rod movable to different angles, an inner tube mounted upon said rod and slidable in the longitudinal direction thereof,

means for maintaining said rod and said tube in a predetermined relation, an outer tube mounted upon said inner tube and free to rotate relatively thereto within certain limits, a telephone-receiver, clamping mechanism for securing the same to said outer tube, and a resonator connected with said outer tube and with said telephone-receiver.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VALENTIN REBHUN.

Witnesses:
GEO. B. SAMPLE,
WILLIAM D. RALSTON.