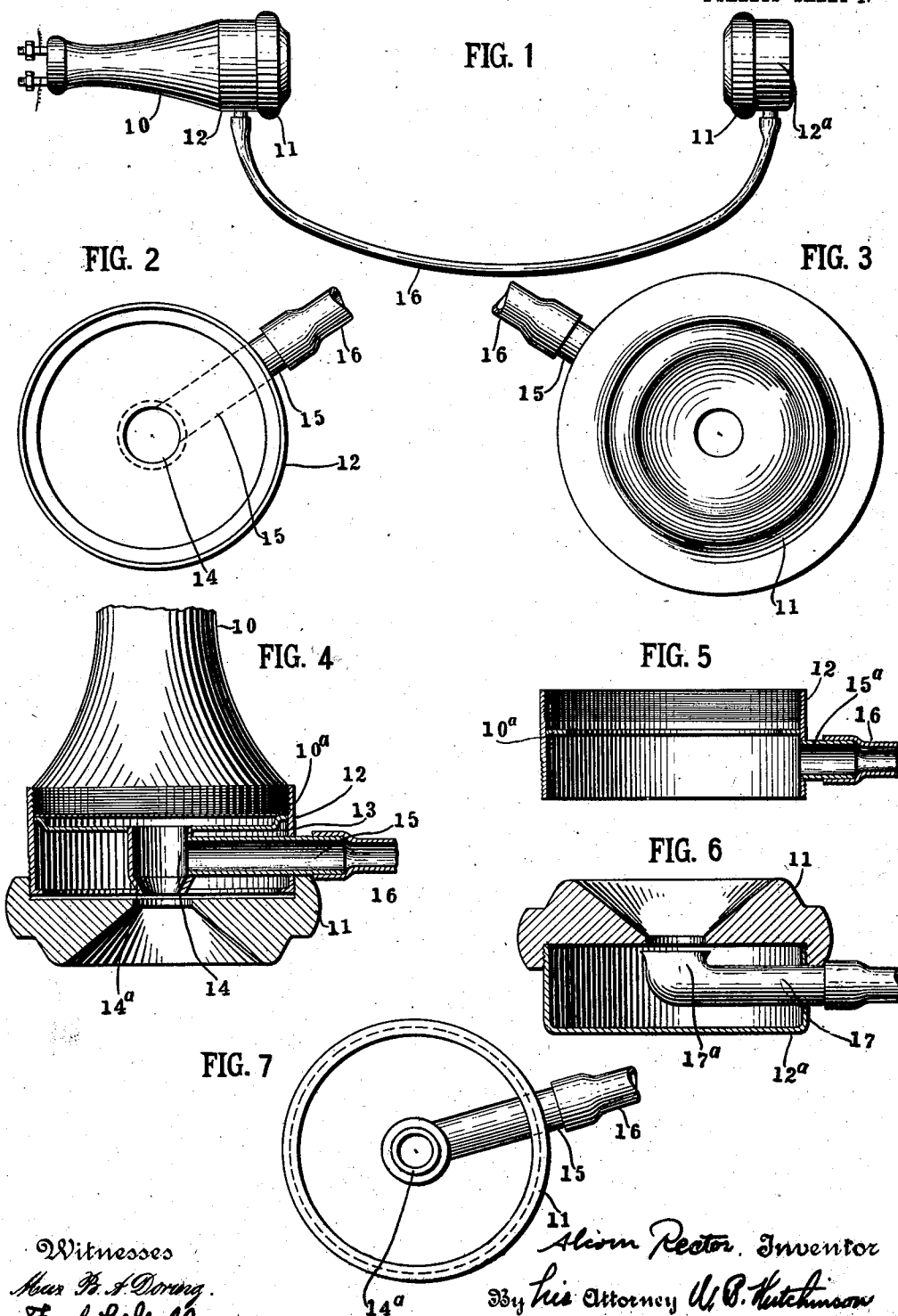


No. 847,691.

PATENTED MAR. 19, 1907.

A. RECTOR.
TELEPHONE ATTACHMENT.
APPLICATION FILED NOV. 24, 1906.

2 SHEETS—SHEET 1.



Witnesses
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Frank L. White.

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2 SHEETS—SHEET 2.

FIG. 8

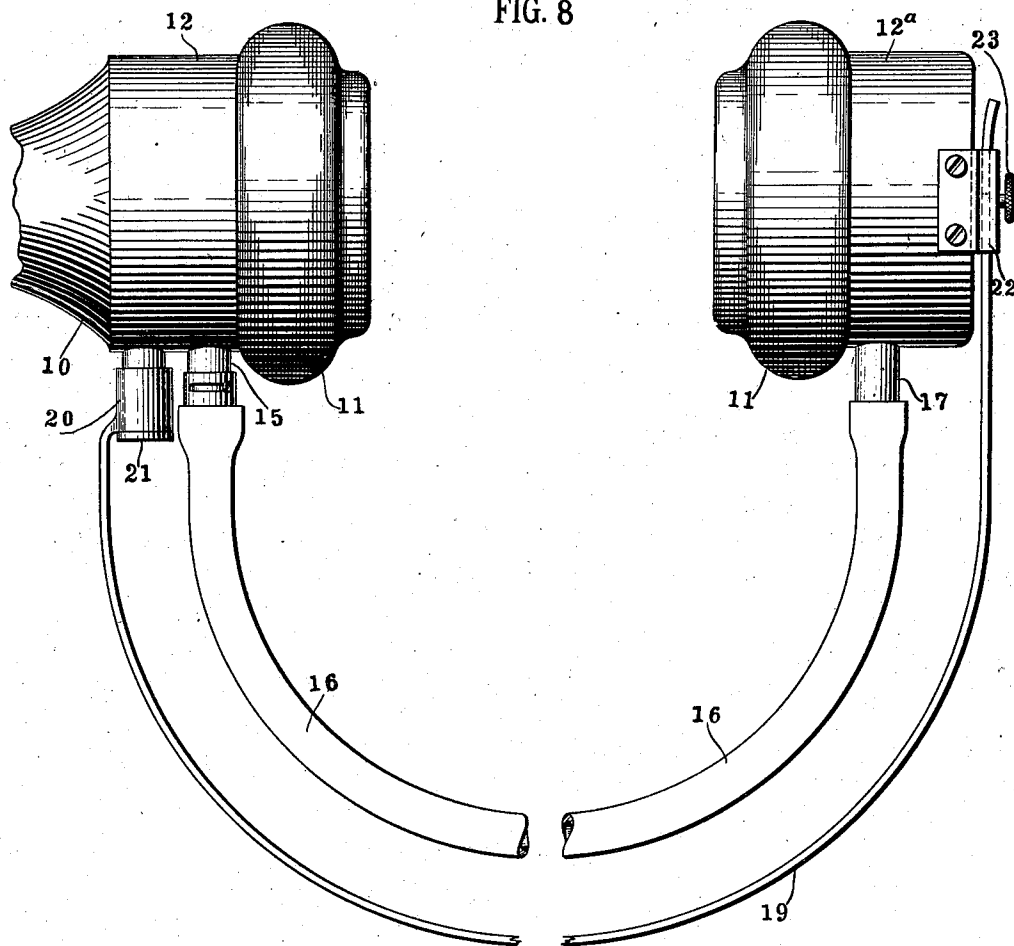
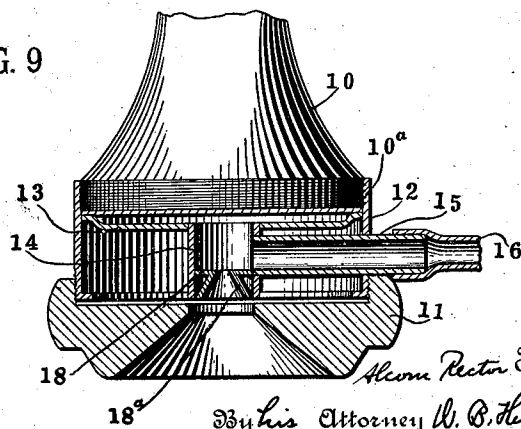


FIG. 9



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UNITED STATES PATENT OFFICE.

ALCORN RECTOR, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF, DANIEL O. SPRAGUE, AND ARTHUR P. SMITH, OF NEW YORK, N. Y.

TELEPHONE ATTACHMENT.

No. 847,691.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed November 24, 1906. Serial No. 344,853.

To all whom it may concern:

Be it known that I, ALCORN RECTOR, of the city, county, 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 improvements in telephone attachments; and the object of my invention is to produce a simple and inexpensive attachment which can be applied to the ordinary telephone-receiver without destroying or injuring any of the parts of the receiver and which will enable the sound to be conveyed to both ears instead of to one. Where the receiver is applied to the ear, as usual, there is more or less confusion, owing to the fact that the other ear is open to outside noises; but by providing a second receiving device to apply to the second ear, connecting the two receiving parts by a tube, and restricting the outlet to the first receiver, so that the sound-waves will be in part checked and diverted to the second, I find that hearing is rendered acute, and the slightest sound transmitted through the telephone is conveyed to the ear. My invention is intended to carry out this idea in a simple and practical manner.

With these ends in view my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a side elevation of my attachment as applied to the ordinary receiver. Fig. 2 is a plan view of the ring and attachment which is applied to the receiver. Fig. 3 is an end view of the receiver and attachment. Fig. 4 is a broken cross-section through a part of the apparatus. Fig. 5 is a cross-section of a slightly-modified form of the apparatus. Fig. 6 is a cross-section of the receiving-cup, which is applied to the second ear. Fig. 7 is an end view of the structure shown in Fig. 4. Fig. 8 is a broken enlarged detail of a modified form of the apparatus, in which the second earpiece and cup are held automatically to the second ear

of the hearer who is using the instrument; and Fig. 9 is a sectional view showing a modification which is really the preferred form of the device.

The receiver 10 is precisely as usual, and it has the customary earpiece 11. In applying my apparatus the earpiece is first removed and the ring 12 screwed to the receiver, as shown in Fig. 4, and the ring is preferably externally screw-threaded, so that the earpiece 11 can be screwed to the outer end of the ring, and thus no part of the receiver is destroyed. The ring 12 has a diaphragm 13, which is raised from the receiver end to provide an air-chamber, and the function of this diaphragm is to support the sound-tube 14, which registers with the opening through the earpiece 11; but the tube or channel 14 is preferably restricted at its outer end, as shown at 14^a, so that the sound-waves are thereby diverted through the branch tube 15, which leads from the tube 14 out through the ring 12.

The ring 12 has a flange 10^a, which may or may not be a part of the diaphragm 13 and which holds the ordinary receiver-diaphragm in place. The tube 15 connects with a rubber tube 16 long enough to permit the second earpiece 11 on the free end of the tube to be conveniently applied to the second ear of the party using the instrument. The second earpiece 11 is screwed to a cup 12^a, which has a tube 17, connecting with the rubber tube 16 and extending into the cup, the tube 17 having an upturned end 17^a, which comes opposite the opening in the earpiece 11. It will thus be seen that a party can apply the first earpiece 11 to his ear and leave the part 12^a dangling on the tube 16; but if it is necessary to hear better he can then apply the second earpiece 11 to his ear, and it will be found that he can hear the slightest sound.

If preferred, the ring 12 can be simply a plain ring, with the tube 15^a opening from the side; but it is far better to have the sound or vent tube 14 restricted, and the best way to do this is shown in Fig. 9. Here a disk 18 is fitted in the tube 14, and the disk has a very small opening through it, from which extends the diverging wall 18^a, so that the sound-waves passing through the small opening are then given a megaphone effect. The

disk 18 materially checks quite a large volume of sound and diverts the waves through the tube 15 to the second earpiece.

By checking and diverting the sound-waves, as stated, I find that it effectually prevents the disagreeable snapping or concussion usual in telephones when the connection is first made.

In some cases it is desirable to have the attachment so that the second earpiece 11 will be self-sustained and held at the second ear of the operator, and to provide for this the structure shown in Fig. 8 is suitable. As here illustrated, the flexible spring 19 supports the second earpiece and its cup 12^a, the spring having at one end a sleeve 20 or equivalent fastening device, and the sleeve fits over a supporting-stud 21 on the spring 12. The opposite end of the spring 19 is adjusted in a clip 22, which is secured to the cup 12^a, and the position of the spring in the clip can be fixed by the thumb-screw 23. The structure shown in Fig. 8 can readily be turned around, so as to remove the second earpiece from the ear as the sleeve 20 turns readily on the stud 21 and the ferrule in the end of the tube 16 turns on the tube 15.

From the foregoing description it will be seen that I have devised a simple apparatus which permits of the ready application of both earpieces to the ears of the operator and that the sound is diverted, so that the hearing is much more acute than when a single earpiece is used. It will also be noticed that if it is desirable to use both earpieces continually the structure shown in Fig. 8 is well suited to this purpose.

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

1. The combination with a single receiver having an earpiece, of a ring interposed be-

tween the earpiece and the body of the receiver, a cup having an earpiece, and a sound-tube leading from within the ring to the cup.

2. The combination with the single receiver having an earpiece, of a ring interposed between the body of the receiver and the earpiece, said ring having means for supporting the diaphragm of the receiver, a cup carrying an earpiece, a flexible tube extending from the ring to the cup, and means within the ring for diverting sound from the ring through the tube.

3. An apparatus of the kind described comprising a ring adapted for attachment to a telephone-receiver, said ring having a sound-tube with a restricted outlet adapted to register with the opening of the earpiece of the receiver, means for securing the ring to the receiver, a branch tube leading from said sound-tube laterally through the ring, a cup and earpiece, and a flexible tube leading from the aforesaid branch tube to the cup.

4. The combination with the receiver, of a ring adapted to be secured thereto, a sound-tube in the ring, a device in the tube to check sound-waves, a branch tube leading outward from the sound-tube, a cup and earpiece, and a flexible connection between the cup and the branch tube.

5. In a device of the kind described, the combination with the ring adapted for attachment to a telephone-receiver and provided with a longitudinal sound-tube, of a branch tube leading from the sound-tube, and a checking device in the sound-tube comprising a disk having an opening there-through, and a bell-shaped device leading from the said disk-opening.

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