C. ADAMS-RANDALL.

HEAD SUPPORT FOR TELEPHONE RECEIVERS.

APPLICATION FILED JAN. 20, 1914.

1,133,833.

Patented Mar. 30, 1915.

3 SHEETS—SHEET 1.

Fig. 1.

Fig. 2.

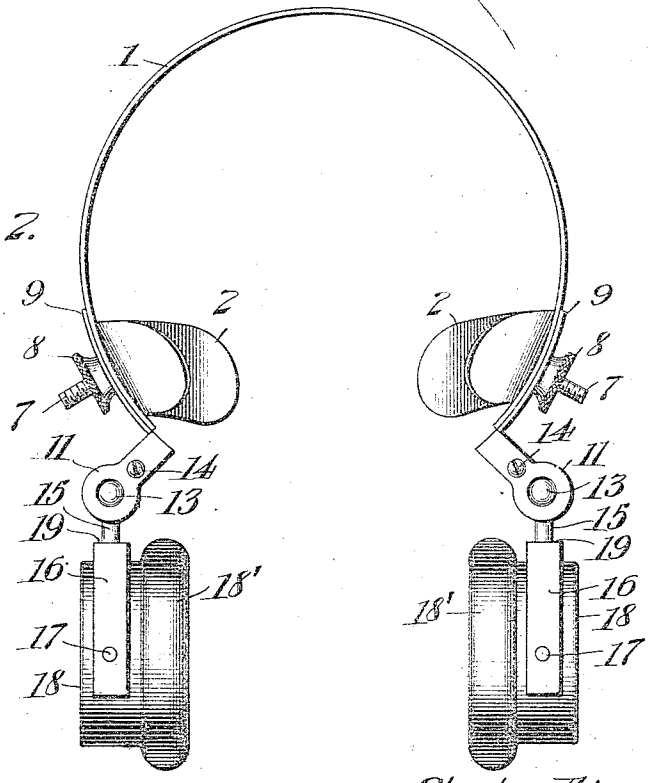

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Fig. 3.

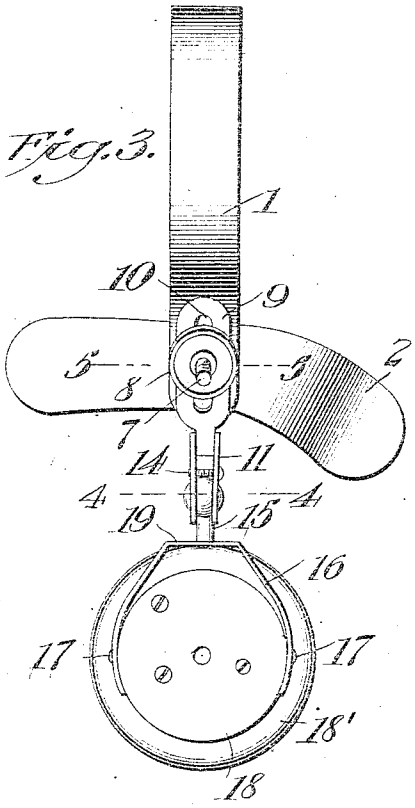


Fig. 4.

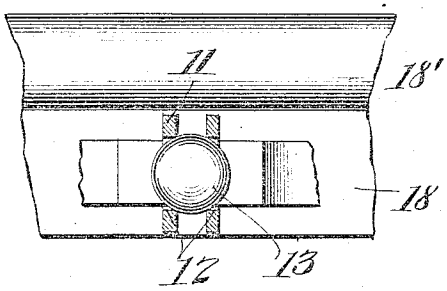


Fig. 5.

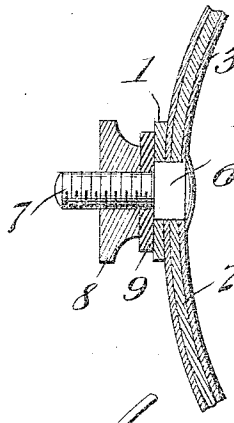


Fig. 8.

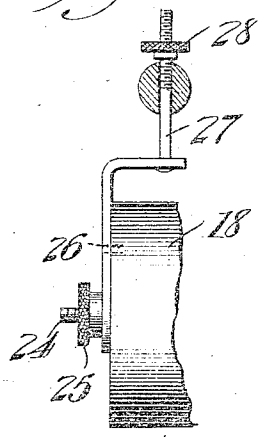


Fig. 6.

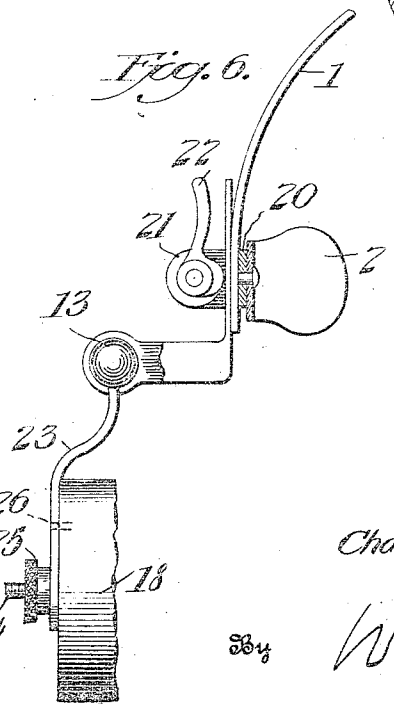
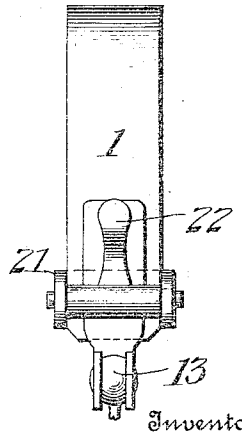


Fig. 7.



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3 SHEETS—SHEET 3.

Fig. 9.

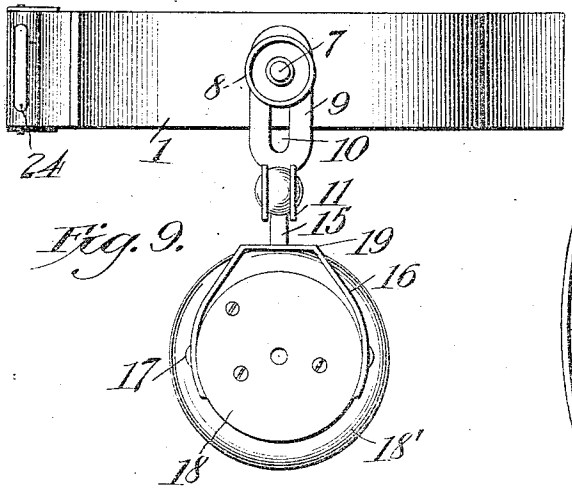


Fig. 11.

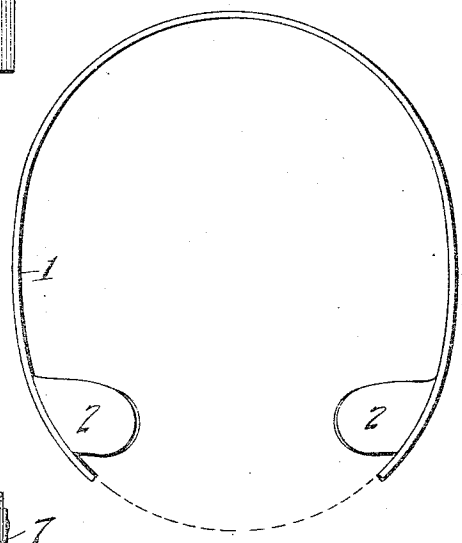
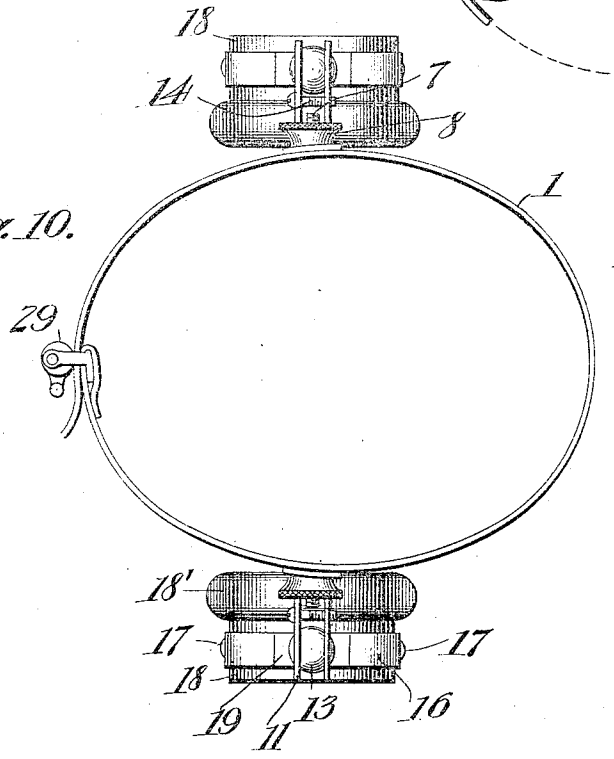


Fig. 10.



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UNITED STATES PATENT OFFICE.

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HEAD-SUPPORT FOR TELEPHONE-RECEIVERS.

1,133,833. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed January 20, 1914. Serial No. 813,165.

To all whom it may concern:

Be it known that I, CHARLES ADAMS-RANDALL, a citizen of the United States of America, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Head-Supports for Telephone-Receivers, of which the following is a specification.

This invention relates to telephony and, more particularly, to that branch of telephony which has to do with head supporting means for telephone receivers.

The main objects of the invention are:—to provide a supporting head band so constructed as to grip the head firmly so as to avoid displacement while, at the same time, so distributing the pressure as to avoid all unpleasantness or discomfort to the user; to so connect the receivers to said head band as to permit a quick adjustment of the same either tightly against the ear, in light contact therewith or completely removed therefrom without the necessity of removal of the instrument from the head of the operator, said adjustments being practically instantaneous; to provide a head support with the receivers so hung therefrom as to permit of three adjustments, viz:—a vertical adjustment, a universal adjustment about a given point, and a rocking adjustment of the receiver upon its horizontal axis; to provide novel means for quickly performing the vertical adjustment of the receiver.

As will be readily understood from my application for patent on head supports for telephone receivers, filed Feb. 19, 1913, Serial No. 749,432, on which the present invention is an improvement, the adjustments heretofore mentioned, and especially that permitting the receiver to be held closely to the ear, in light contact therewith, or completely removed therefrom will prove a boon to the operator required to use a head supported receiver in that it will permit such operator to quickly and easily relieve the close pressure upon the ear which is practically constantly maintained in the supports now in use and which results in much unpleasantness to the operator and, in fact, in many instances in positive injury.

With the foregoing and such other objects in view as may hereinafter more fully appear, my invention consists in the novel arrangement and construction of parts set forth in the appended specifications, more particularly pointed out in the claims, and which are shown in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the device, showing the same in place on the head of an operator. Fig. 2 is a front elevation of the device as the same appears when removed from the head. Fig. 3 is a side elevation. Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3. Fig. 5 is a detail sectional view taken on the line 5—5 of Fig. 3. Fig. 6 is a detail front elevation, partly in section, of a modified form of the device. Fig. 7 is a side elevation of said modification. Fig. 8 is a side elevation showing a further modification of the vertical adjusting means. Fig. 9 is a side elevation of a modified form of head band. Fig. 10 is a plan view of the same. Fig. 11 is a plan view of still another modification of the head band.

Referring to said drawings by numerals, a head band 1, of any suitable form and material, but preferably, as here shown, of arc shape and composed of resilient metal, is provided near the ends thereof with head gripping pads 2.

Pads 2 may be of any suitable and convenient form but they are preferably curved, as here shown to conform to the contour of the head with the longer portion of the pad lying to the rear of the head band and above and back of the ear of the user. The said pads are formed of any suitable material such as metal or fiber and may be suitably covered with leather or other suitable material as shown most clearly at 3, Figs. 5, or left uncovered if so desired. These pads may be fastened to head band 1 in any desired manner, but, as here shown, said pads are provided with square apertures adapted to aline with similar apertures formed in head band 1 and to receive

the square portion 6 of screw 7, which said screw through its engaging nut 8 serves to bind said pad and head band together and also support the receiver hanger.

The receiver hanger is composed of an elongated metal plate 9 provided with a longitudinal slot 10 adapted to receive the shank of screw 7 for the purpose of adjustably securing said hanger to the head band. Plate 9 is provided with an angularly disposed, bifurcated end 11. Said bifurcations 11 are provided with alining, circular apertures 12, said apertures being preferably reamed and adapted to journal a ball 13 placed between said bifurcations. Bifurcations 11 are suitably bored and threaded for the reception of a screw 14 through which the tension of said members upon the ball 13 may be regulated. Integral with said ball, or otherwise suitably joined thereto is an arm or rod 15 the other end of which is riveted, or otherwise securely fastened to the central point of a suitably bent receiver holding strap 16. Strap 16 is provided with pins 17 securely fastened therein and adapted to enter sockets formed for their reception in the casing of receiver 18.

As can be seen most clearly in Figs. 1, 2 and 3, the ends of strap 16 project below the journaling point, of pins 17 so that the motion of the receiver about said point is limited by the ends coming in contact with the usual rolled edge 18′ of said receiver; while the upper portion 19 of said strap is so formed and placed as to limit the receiver's motion in the opposite direction by contact with the aforesaid edge 18′.

In Fig. 6 is shown a modification of the device in which pad 2 has interposed between it and the head band 1 a plate 20; the said three members being riveted, or otherwise suitably joined. Journaled in the angularly disposed ends 21 of plate 20 is a cam lever 22 adapted to grip the plate 9 for the purpose of adjustably securing the same in place. This permits of a quicker and easier means of adjustment than the screw and nut heretofore described. In said figure is also shown a modification of the means of connecting the receiver. Instead of the Y shaped hanger heretofore described, a flat angle bar 23 is suitably fastened to ball 13 and is secured to the back of the receiver casing 18 by means of screw 24 and nut 25, the receiver being held from turning thereon by a stay pin 26 carried by said arm 23 and adapted to enter a suitable recess formed in the receiver casing for its reception.

In Fig. 8 is shown a modification of the vertical adjustable means. Ball 13 is provided with a bore passing through the center thereof, said bore being square in cross section and adapted to receive the rod 27 which is threaded for a portion of its length the remaining portion being square to prevent rotary movement of said rod with relation to the ball 13. A nut 28 is adapted to engage the threaded portion of said rod 27 for the purpose of vertically adjusting the receiver. As will be readily understood the connection of the rod to the receiver may be as here shown and as described with relation to the modification of Fig. 6 or it may be that shown in Figs. 1, 2 and 3.

A modification of the head band 1 is shown in Figs. 9, 10 and 11. In this form the band, instead of crossing the head in the usual manner, shown most clearly in Fig. 1, encircles the head. Said band may be of any suitable material and may be fastened by any suitable means such as the friction buckle 29. This form of band may also be of resilient material of practically horse shoe shape, provided with suitable pressure pads and adapted to encircle the head, with the central portion of the band in contact with the forehead and the pads in contact with the sides of the head near the back thereof. The said latter form is shown most clearly in Fig. 11.

In practice the device is placed upon the head of the operator in the usual manner, the nut 8 loosened and the receiver moved up or down to the proper position when the nut is tightened. The receiver may now be brought tightly against the ear to permit faint sounds to be detected, in which case it will fit the ear snugly because of its pivotal movement upon the pins 17, or the universal ball-joint means, and it may be quickly released from tight contact, when the sound is too loud for such contact, by a slight touch; or again it may be moved completely away from the ear when not in use and will remain in the desired position by the friction at the ball-joint.

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

1. In a head support for telephone receivers, a head band, a vertically adjustable arm secured to said head band, a universally adjustable receiver arm carried by said arm, and a receiver pivotally secured to said receiver arm.

2. In a head support for telephone receivers, a head band, a receiver arm, a receiver secured to said arm, and a cam lever carried by said head band and adapted to adjustably secure said arm to said band.

3. In a head support for telephone receivers, a head band, an arm secured to said head band, a receiver arm carried by said arm, a receiver attached to said receiver arm, and means interposed between the aforesaid arm and said receiver arm to permit of vertical adjustment of said receiver.

4. In a head support for telephone receiv-

ers, a head band, an arm secured to said head band, an angularly disposed portion on said arm, a receiver arm, a universal joint between said receiver arm and said angular portion, and a receiver pivotally secured to said receiver arm.

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

CHARLES ADAMS-RANDALL.

Witnesses:

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JAS. J. O'CONNOR.