Aug. 31, 1926. 1,598,042

E. A. BOHLMAN

HEAD RECEIVER SET

Filed March 9, 1922

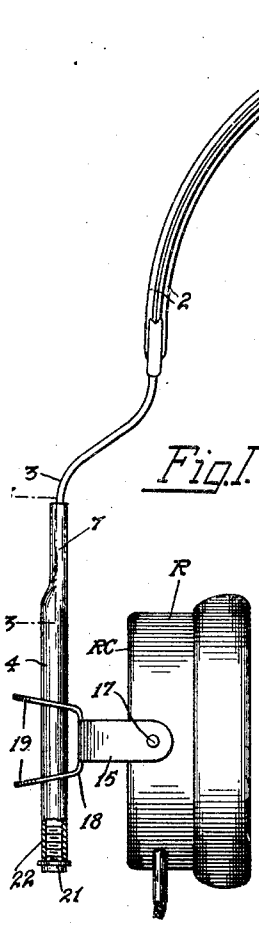


Fig. 1.

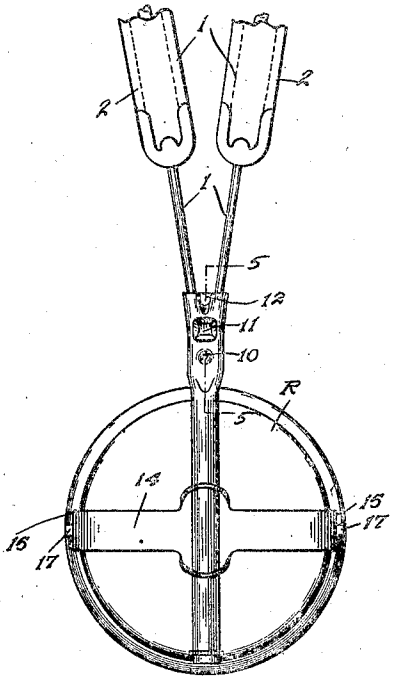
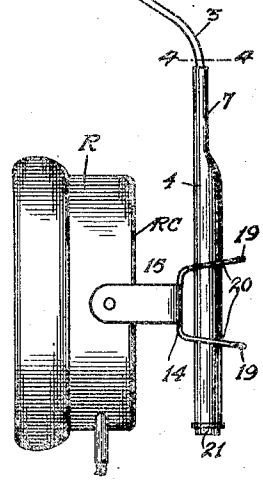


Fig. 2.



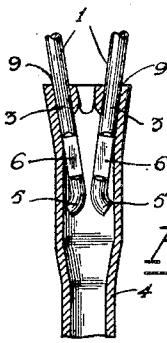


Fig. 3.

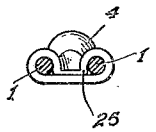


Fig. 4.

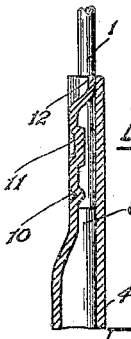


Fig. 5.

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UNITED STATES PATENT OFFICE.

ERNEST A. BOHLMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

HEAD RECEIVER SET.

Application filed March 9, 1922. Serial No. 542,220.

My invention relates to head receiver sets in general, and has to do more particularly with an improved receiver head set for use in telephone or wireless receiving, when it is desired to have two ear pieces properly fitted and held against the ears in the best positions for hearing and at the same time comfortably.

Prior to my invention various means of adjustment have been employed to adjust the ear pieces on the head band to accommodate heads of various sizes and shapes. Set screws and other devices have been used which required the removal of the set from the wearer's head to permit the proper adjustment desired. To overcome these objectionable features and to provide a simple means for adjusting the ear pieces I have provided an improved spring clamping member which is integrally formed with the ear piece supporting member, which, by means of frictional resistance, holds the receiver or ear pieces of the set in any position and enables adjustments to be readily made without removing the receiver set from the head of the wearer.

Another feature of my invention is the manner in which I secure the head bands to the posts supporting the adjustable spring clamping members, which members support the receivers, whereby the head bands are properly spaced relative to each other so that they will rest snugly upon the head of the wearer.

For a more complete understanding of my invention, reference may be had to the accompanying drawing, in which like reference characters in the several views denote like parts, and in which—

Fig. 1 is an elevation of a complete head set embodying my invention;

Fig. 2 shows a receiver and a clamping device and also the head bands secured to a common member in plan view;

Fig. 3 is a sectional view along the line 3—3 of Fig. 1 showing the two ends of a pair of head bands engaging the receiver supporting member or post;

Fig. 4 is a sectional view along the line 4—4 of Fig. 1; and

Fig. 5 is a sectional view along the line 5—5 of Fig. 2.

Referring now more in detail to my invention as illustrated, I show a pair of head bands 1, each being suitably formed so as to fit snugly over the top of the head of the wearer. The arch of each head band 1 is encased between the strips of flat webbing 2 or some other suitable material to permit the head bands to rest upon the wearer's head in a comfortable manner. To each pair of ends 3 of the head bands 1, I secure a supporting member or post 4, and since both supporting members 4 and the manner in which they are secured to a pair of free ends 3 are alike, a description of one will suffice. The end 3 of the head band 1 has a portion 5 turned over slightly and a flat oblong depression 6, the purpose of which will presently be described. The supporting member 4 is cylindrical in construction and has its one end 7 flattened, but not enough to close the opening 8. The pair of ends 3 of the wires of the head bands are now placed into the opening 8 of the end 7, the said ends 3 being kept separated and in engagement with the wall 9 of the opening 8. The end 7 of the member 4 is now punched at 10, 11 and 12 to press the wall 9 of the opening 8 at 10 between the ends 5 of the wires 1, at 11 to press the wall 9 into engagement with the depressions 6, and at 12 to press the wall 9 together between the portions 3 of the head bands 1. The wall 9 engaging the depressions 6, securely holds the head bands in place against being moved in or out of the member 4. The wall 9 being pressed downward until it engages the opposite side of the wall at right angles as shown in Fig. 4, forms shoulders for the ends 3 and separates them so that the head bands are properly spaced relative to each other and maintained in such position in the manner just described.

Referring now to the supporting member for adjustably holding the receivers R in their adjusted positions, and since both supporting members are the same, description of one will suffice. I provide a supporting member 14, having its ends 15 turned back parallel to each other and each provided with an orifice through which the pins 17 extend. The pins 17 are suitably secured to the receiver casing RC to pivotally support the receiver R in position. To the back of the supporting member 14, and integrally therewith, I provide a U-shaped spring clamping member 18. The legs 19 of the U-shaped clamping member

18 diverge slightly so as to give them a tension when their free ends are forced toward each other for purposes as will presently be described. Each leg 19 is provided with an orifice 20 to permit the insertion of the cylindrical supporting member 4.

To insert the cylindrical supporting member 4 into the orifices 20 of the legs 19 of the member 18, the free ends of the said legs 19 are forced toward each other against their normal tension until they are substantially parallel with each other. The movement places the legs 19 of the member 18 at right angles with the member 4 and as the orifices are slightly larger than the diameter of the member 4, the same may be inserted into and the member 18 is free to move up and down on the member 4. When the tension is released from the free ends of the legs 19 of the U-shaped member 18, they assume their normal position as illustrated in Fig. 1, thus placing their legs 19 in angular relation to the member 4 such as to cause the legs 19 to grip the member 4 to prevent any lateral movement of the receiver supporting member 14 relative to the member 4, thus clamping the member 14 in place. The member 14 cannot now be moved up or down due to the frictional resistance existing between the legs 19 and the member 4.

To prevent the removal of the U-shaped clamping member 18 from the member 4, I provide a screw which has screw-threaded engagement with the end 22 of the member 4. The head of the screw 21 is slightly larger in diameter than the diameter of the orifices in the legs 19 of the member 18 so that the member 18 cannot be removed from the member 4 without first removing the screw 21.

From the above description, it may readily be seen that in order to adjust the receivers R up or down, as the case may be, to fit properly to the ears of the wearer, all that is necessary is to press inwardly with the fingers the legs 19 of a U-shaped clamping member 18 until the walls of the orifices 20 free the cylindrical member 4, whereupon the receiver supporting member 14 may be moved up or down until the receiver is properly fitted against the ear of the wearer. When this adjustment is obtained, pressure is released from the free ends of the legs 19, permitting the legs to move apart, causing the walls of the orifices 20 to again grip the member 4 to hold receiver supporting member 14 in its adjusted position. When the receivers R have been placed in their adjusted positions after the manner described, the U-shaped clamping member 18 may be rotated on the member 4 to permit the receiver to fit snugly against the ears of the wearer.

From the foregoing, it is apparent that I have devised a very efficient but cheap to construct receiver supporting device. I provide only one member for pivotally supporting the receivers and for adjusting the same relative to the posts which are attached to the head bands. I further provide only one member or post, for each receiver, to hold the two bands of the set in position. By inserting the ends of the wires in the posts in the desired manner and by then depressing the wall of the post in three places, I am able to firmly secure the posts to the head bands. By forcing the wall of the post at 12, as shown in Fig. 4, against the opposite side or wall of the post, the wall of the post at 25 extends down at right angles to a center line drawn across and just below the centers of the wires of the bands, thus making it impossible to force this depressed portion of the tube or post 4 outwardly if attempt is made to force the wires together.

While I have illustrated and described a preferred embodiment of my invention, it is to be understood that changes and modifications will readily suggest themselves, but I aim to cover all such changes and modifications as come within the spirit and scope of the appended claims.

What I claim as new and desire to secure by United States Letters Patent, is:—

1. A device of the character described including a pair of head bands, a cylindrical member permanently secured to a pair of ends of said head bands by having its inner wall pressed into engagement with the said pair of ends of said head bands, a receiver supporting member having a spring clamping member integrally formed therewith, said clamping member being provided with orifices through which said cylindrical member extends, said spring clamping member and said cylindrical member cooperating to permit adjustment of said receiver supporting member and to maintain the same in its adjusted position.

2. A device of the character described including a pair of head bands, a cylindrical member secured permanently to a pair of ends of said head bands by having its inner wall pressed into engagement with the said pair of ends of said head bands, a receiver and supporting means for the same, a U-shaped spring clamping member integrally formed with said supporting means, and having orifices provided in the legs of said U-shaped spring clamping member through which said cylindrical member extends, said U-shaped clamping member and said cylindrical member cooperating to permit the adjustment of said receiver to various positions and to maintain said receiver in its adjusted position.

3. A device of the character described

comprising a pair of head bands provided with two pairs of ends secured permanently to a pair of tubular posts by having the walls of their inner ends pressed into engagement with the respective pairs of ends of said head bands, said pair of posts adapted to maintain said pair of head bands separated from each other and in position relative to each other, a supporting member, a receiver pivotally supported by said supporting member, a U-shaped spring clamping member integrally formed with said supporting member and provided with a pair of orifices for receiving one of said pair of posts whereby said U-shaped clamping member cooperates with said one post to permit the adjustment of said supporting member and to maintain the same in its adjusted position, and a member for engaging the end of said one post to prevent the disassociation of said clamping member and said post.

4. In a device of the character described comprising a head band provided with a pair of hooked ends, a tubular rod secured permanently to said head band by having its inner wall pressed into engagement with the said pair of hooked end of said head band, a supporting member, a receiver pivotally supported by said supporting member, a U-shaped spring clamping member integrally formed on the back of said supporting member, the legs of said U-shaped clamping member being provided with orifices through which said rod extends, said U-shaped clamping member adapted to be moved in a lateral direction on said rod when its legs are pressed towards each other to permit the lateral adjustment of said receiver, and to maintain said receiver in its laterally adjusted position on said rod when the pressure on said legs is removed, and means engaging the one end of said rod for preventing the displacement of said clamping member.

5. In a device of the character described including a pair of head bands provided with two pairs of hooked shaped ends, secured permanently to a cylindrical supporting member by pressing the inner wall of said cylindrical member into engagement with one of said pair of hooked ends of said head band, a receiver and a member for pivotally supporting the same, a spring clamping member integrally formed with said receiver supporting member for adjustably supporting said receiver on said cylindrical supporting member, and a screw for preventing the disassociation of said clamping member relative to said cylindrical member.

6. In a device of the character described including a pair of head bands provided with two pairs of hooked ends and a pair of cylindrical members for permanently securing said pair of head bands in relation to each other by pressing the inner walls of the respective cylindrical members into engagement with the respective pairs of hooked ends of said pair of head bands, a pair of receivers and supporting members for the same, clamping members integrally formed with said receiver supporting members for adjustably supporting said receivers on said cylindrical members relative to said head bands, and means for preventing the disassociation of said clamping members and said cylindrical members.

7. In a device of the character described including a pair of head bands, a pair of cylindrical supporting members, two pairs of hooked ends formed on said head bands, said pair of head bands being permanently secured to said supporting members by pressing the inner walls of the cylindrical supporting members into engagement with the respective pairs of hooked ends of said pair of head bands and maintained in position and separated from each other by said supporting members, a pair of receivers and supporting members for the same, adjustable means integrally formed with said receiver supporting members for adjustably securing said receiver supporting members on said cylindrical supporting members.

8. In a device of the character described including a pair of head bands, a cylindrical supporting member adapted to receive a pair of ends of said head bands, the end portions of said pair of ends adapted to engage the inner wall of said cylindrical supporting member to permanently secure the said pair of head bands to said cylindrical member and to maintain the head bands separated and in position relative to each other, a receiver and supporting member adjustably supported on said cylindrical supporting member.

9. In a device of the character described including a pair of head bands, a pair of cylindrical mounting members, a pair of ends of said head bands mounted in the end of one of said pair of mounting members and the other pair of ends of said head bands mounted in the end of the other of said mounting members, said head bands maintained permanently secured in said mounting members by engagement with the inner wall of said cylindrical mounting members, a pair of receivers and individual, adjustable supporting means for the same, supported on said mounting members.

10. In a device of the character described including a pair of head bands, a cylindrical member, the end portions of said head bands being provided with a depression, said cylindrical member adapted to receive a pair of ends of said head bands and having a portion of its wall pressed inwardly to engage said depression in said end portions, and

also a portion of its wall pressed against and at right angles to its opposite wall and between the ends of said head bands to hold the same securely in said cylindrical member.

11. In a device of the character described, including a pair of head bands, a pair of cylindrical supporting members, the end portion of the ends of said head bands being provided with depressions, each of said cylindrical members adapted to receive a pair of ends of said head bands and having a portion of its outer wall indented so that the inner wall opposite the indentation engages said depression in said end portion, and also having a portion of its wall pressed into engagement with its opposite wall between said pair of ends to securely maintain said head bands in position in said cylindrical member.

Signed by me at Chicago, in the county of Cook and State of Illinois, this 7th day of March, 1922.

ERNEST A. BOHLMAN.