June 9, 1931. D. L. MOORE 1,809,349

SUPPORT FOR EAR PHONES

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Fig. 1.

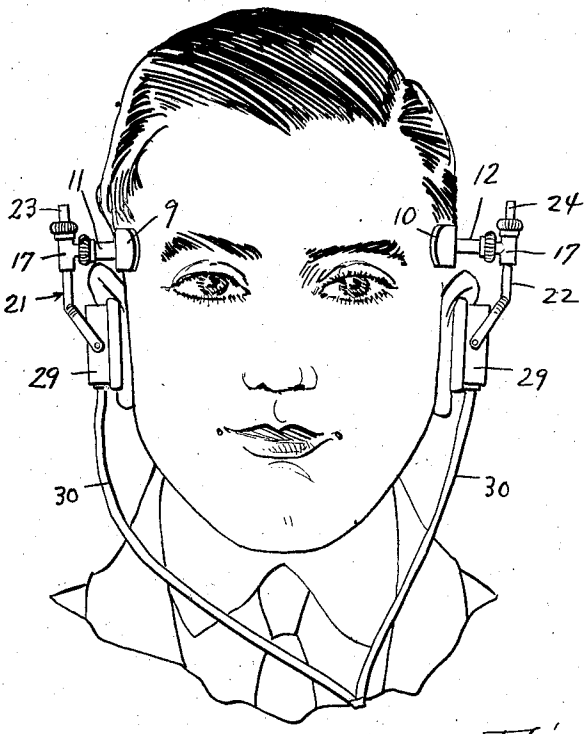


Fig. 2.

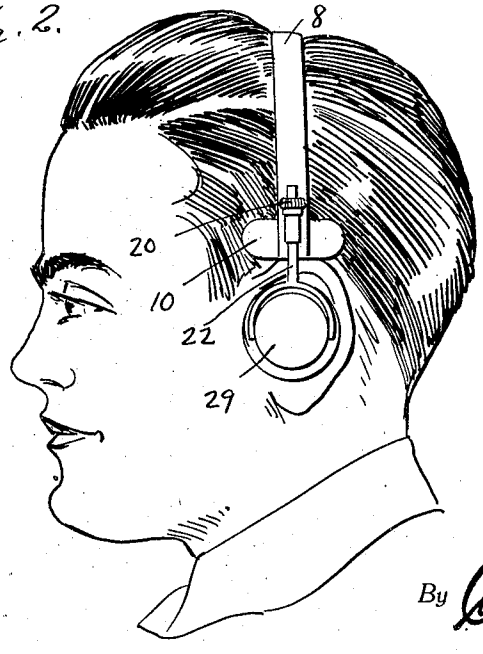
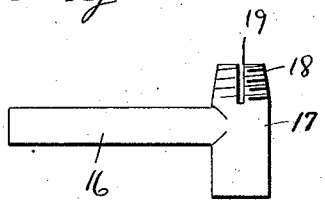


Fig. 6.



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Fig. 3.

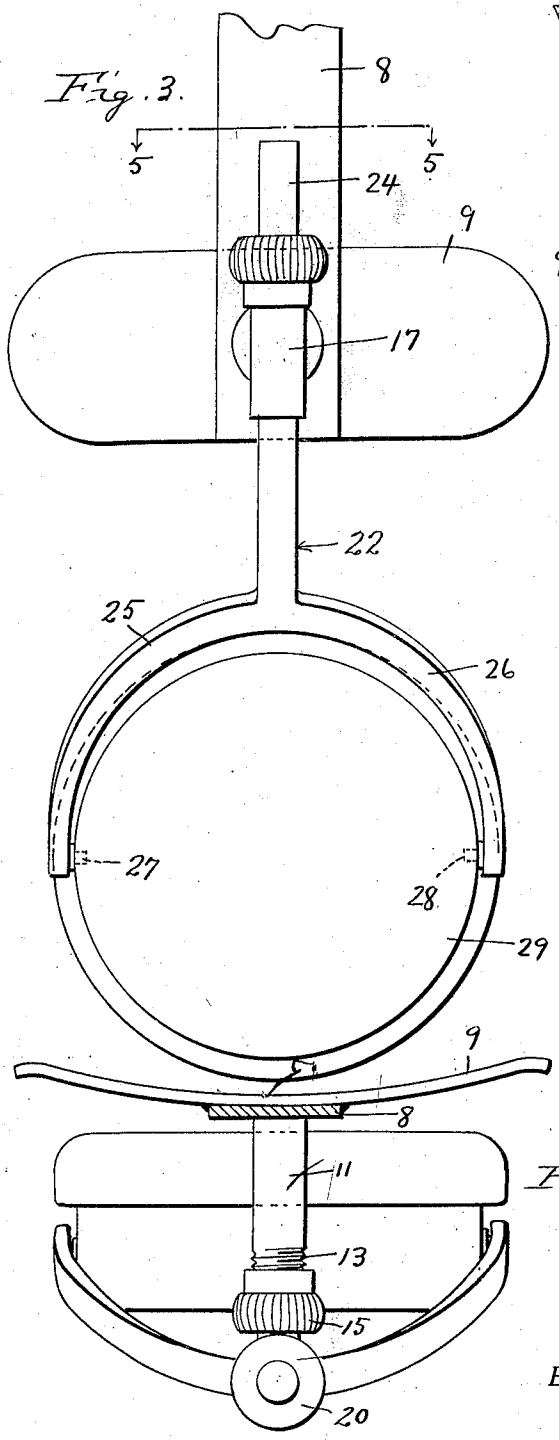


Fig. 4.

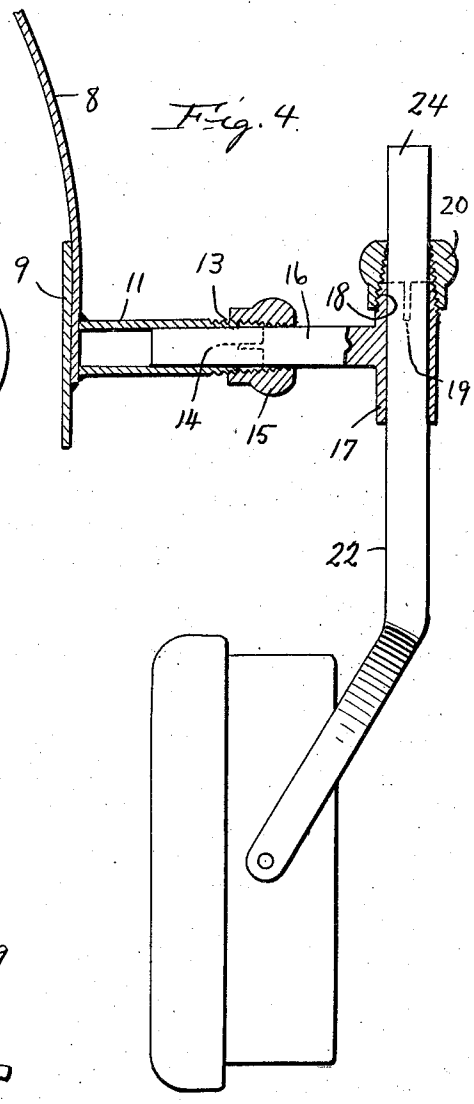


Fig. 5.

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UNITED STATES PATENT OFFICE

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SUPPORT FOR EAR PHONES

Application filed August 23, 1929. Serial No. 387,950.

This invention relates to a support for ear phones, particularly adapted for ear phones used in radio or telephonic reception.

An object of the invention is to provide a support for ear phones that provide for vertical and horizontal rotation and at the same time provides for vertical and horizontal adjustment.

Another and important object of the invention is to provide a head band that takes all of the pressure from the ears and that can be adjusted to suit all characters of heads of the persons using the ear phones.

Further objects of the invention are to provide, in a manner as hereinafter set forth, a support of the character referred to, which is strong, compact and durable, thoroughly reliable for its intended purpose, very simple in its method of assembly, very light in construction, simple in its operation and adjustment and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts as will be hereinafter more specifically described and illustrated in the accompanying drawings, wherein is disclosed an embodiment of the invention, but it is to be understood that changes, variations, and modifications, may be resorted to, without departing from the spirit of the claims hereunto appended.

In the drawings, wherein like reference characters denote corresponding parts throughout the several views:

Figure 1 is a front elevation of the head of the user, illustrating an application therewith of the device in accordance with the present invention.

Figure 2 is a side elevation thereof.

Figure 3 is a fragmentary enlarged side elevation of one side of the support.

Figure 4 is a fragmentary detailed sectional view of one side of the support.

Figure 5 is a sectional view, taken substantially on the line 5—5 of Figure 3, and looking in the direction of the arrows.

Figure 6 is a side elevation of the T-shaped section of the support.

Referring to the drawings in detail, the present invention includes a flat, resilient, metallic band, formed of steel or other like material of suitable width and thickness and formed in a semi-circle, the radius of which is such that the opposite end of the band terminates slightly above the ears of the normal person when placed over the heads as is clearly disclosed in Figures 1 and 2 of the drawings. Secured to the opposite ends of the band 8 are a pair of plates 9, 10, which are longitudinally curved and extend on the opposite sides of each end of the band. The plates 9, 10 may be lined on the interior thereof with rubber or other fabric, so as to provide a soft bearing surface when abutting the head above the ears. A pair of plates 9, 10, are secured to the inner face of the band 8.

A pair of laterally projecting hollow tubular sleeves 11, 12, are secured at their inner ends to the opposite ends of the band 8. The sleeves 11, 12, project in a horizontal plane and are fixed with respect to the band 8. The outer or free end of each sleeve is provided with tapered thread as at 13 and each of the sleeves are slit axially a portion of the length of the sleeve on the diametrically opposed sides thereof as is indicated at 14.

Mounted on the threaded end of each sleeve 11, 12 is a thumb nut 15, engageable with the slit threaded end thereof. The diameter of the opening is slightly larger than the stem 16 of the T-shaped member which extends through the nut 15 and is held in telescopic relation with the interior of each sleeve 11, 12. The stem 16 is therefore rotatable in each of the sleeves and is horizontally movable with respect thereto, providing two adjustments. After the stem 16 has been properly adjusted, the thumb nut 15 may be screwed upon the tapered threads 13 and by reason of the slit in the threaded portion of each sleeve, the stem 16 may be fixed with respect thereto.

The head 17 of each T-shaped member is a tubular sleeve adapted normally to be disposed in a vertical plane. The upper end of the head is provided with external tapered threads 18 and is split as at 19 in the threaded portion on the diametrically opposite sides

thereof. A thumb nut 20, having its interior provided with tapered peripheral threads is adapted for engagement with the threaded end 18 of the head 17. A pair of supporting rods indicated generally at 21, 22, have stems 23, 24, extending through each sleeve of the T-shaped members 17. When the thumb nuts 20 on each sleeve are loose, the stems 23, 24, are rotatable and vertically adjustable in the sleeve.

To fix the stems 23, 24, the thumb nut 20 is tightened upon the tapered threads, thereby forcing the split end of the T-shaped members together and holding the stems in fixed relation. The lower ends of each part 21, 22, is forked to provide oppositely disposed legs 25, 26, the continuity of which forms a semi-circular support. On the free ends of each leg 25, 26 are formed a pair of inwardly projecting trunnions 27, 28, which are rotatably anchored in the opposite side of a pair of ear phones 29—29. At a portion where the pointed end merges with the stem of each support 21, 22, the legs 25, 26 flare inwardly at an angle of about 120 degrees with respect to a vertical plane. Under normal conditions, the head 17 of the T-shaped members are positioned outwardly of the ears of the user, thereby exerting a pressure exteriorly of the ears and by reason of having the forked end flared inwardly provides a very comfortable and light bearing against the ears when the phones are in the listening position. The ear phones 29—29 are connected with a suitable conductor wire 30, which leads to the device being listened to, such as a radio, a telephone or the like. The earphones 29—29 may be of any conventional type.

It is to be understood that by describing in detail herein any particular form, structure or arrangement, it is not intended to limit the invention beyond the terms of the several claims, for the requirements of the prior art.

What is claimed is:

1. A supporting frame for earphones comprising a flat resilient metallic band of semi-circular configuration, a pair of plates secured to the ends of the band and extending on the opposite sides at right angles thereto, a sleeve secured at its inner end to each end of the band and projecting at right angles to the head of the user when the band is supported thereon, each sleeve having a threaded yieldable portion on its free end, a T-shaped member having a stem seated in and normally rotatable and horizontally movable with respect to the sleeve, means threadably engageable with the yieldable end of the sleeve for selectively locking the stem with respect to the sleeve, the head of the T-shaped member formed of a sleeve, having its upper end threaded and yieldable, a pair of forked supports, stems on the forked supports rotatably and vertically movable in the sleeves of the T-shaped members, means supported on the yieldable ends of the last-mentioned sleeves for locking the stems of the forked supports in selective position, the forked ends of the forked supports extending inwardly at an inclination to a vertical plane, and a pair of ear phones rotatably mounted in the forked support.

2. A supporting frame for ear phones comprising a flat resilient metallic band of semi-circular configuration, a pair of plates secured to the ends of the band and extending on the opposite sides at right angles thereto, a sleeve secured at its inner end to each end of the band and projecting at right angles to the head of the user when the band is supported thereon, each sleeve having a threaded yieldable portion on its free end, a T-shaped member having a stem seated in and normally rotatable and horizontally movable with respect to the sleeve, means threadably engageable with the yieldable end of the sleeve for selectively locking the stem with respect to the sleeve, the head of the T-shaped member formed of a sleeve, having its upper end threaded and yieldable, a pair of forked supports, stems on the forked supports rotatably and vertically movable in the sleeves of the T-shaped members, means supported on the yieldable ends of the last-mentioned sleeves for locking the stems of the forked supports in selective position, the forked ends of the forked supports extending inwardly at an inclination to a vertical plane, and a pair of ear phones rotatably mounted in the forked support, the radius of said band being such as to terminate about the ears of the user.

3. In a supporting frame for ear phones comprising a flat resilient metallic band of semi-circular configuration, a pair of plates secured to the ends of the band and extending on the opposite sides at right angles thereto, a sleeve secured at its inner end to each end of the band and projecting at right angles to the head of the user when the band is supported thereon, each sleeve having a threaded yieldable portion on its free end, a T-shaped member having a stem seated in and normally rotatable and horizontally movable with respect to the sleeve, means threadably engageable with the yieldable end of the sleeve for selectively locking the stem with respect to the sleeve, the head of the T-shaped member formed of a sleeve, having its upper end threaded and yieldable, a pair of forked supports, stems on the forked supports rotatably and vertically movable in the sleeves of the T-shaped members, means supported on the yieldable ends of the last-mentioned sleeves for locking the stems of the forked supports in selective position, the forked ends of the forked supports extending inwardly at an inclination to a vertical plane, and a pair of ear phones rotatably mounted in the forked support, the radius of said band being such as to termi-

nate about the ears of the user, the head of the T-shaped member normally disposed in a vertical position laterally of the ears of the user.

4. A supporting frame for ear phones comprising an arcuate band, a sleeve secured at one end to the band and having a threaded yieldable portion on its other end, a U-shaped member having a stem and normally rotatably and longitudinally movable with respect to the sleeve, means threadedly engaged with the yieldable end of the sleeve for selectively locking the stem with respect to the sleeve, the head of the U-shaped member being in the form of a sleeve which has its upper end threaded and yieldable, an ear phone support having a stem extending through the last mentioned sleeve and means supported on the yieldable end of the last mentioned sleeve for locking the stem in selective position.

In testimony whereof I affix my signature.

DONALD L. MOORE.