Feb. 26, 1952 C. W. JOHNSON ET AL 2,586,952

HEADREST

Filed March 24, 1950

Fig. 1

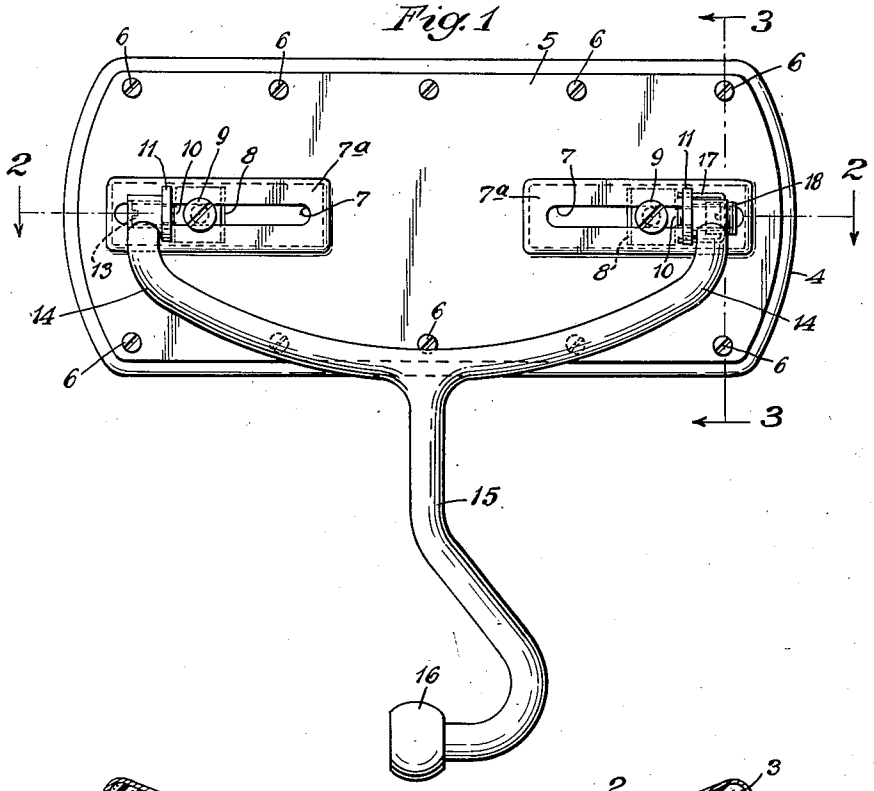


Fig. 2

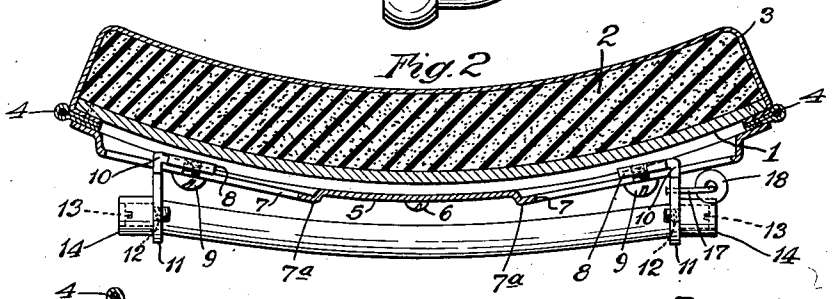


Fig. 3

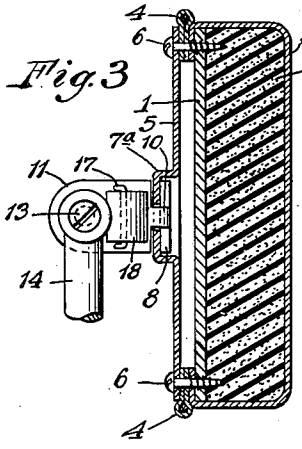


Fig. 4

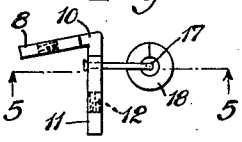


Fig. 5

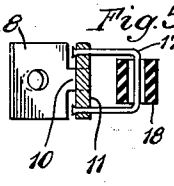


Fig. 7

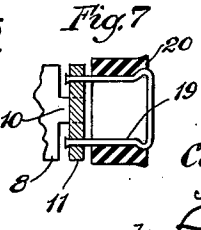
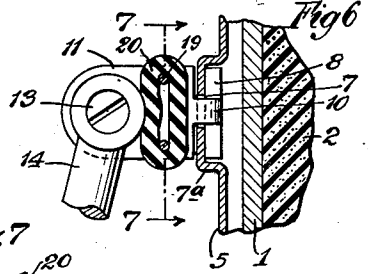


Fig. 6



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HEADREST

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Application March 24, 1950, Serial No. 151,682

14 Claims. (Cl. 155—177)

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This invention relates to a head rest, and particularly to a head rest for application to chairs, such as dental and surgical chairs.

This application is a continuation-in-part of our co-pending application Serial No. 140,896, filed January 27, 1950.

This invention has for one object to provide a head rest of the type indicated so arranged that it may readily be adapted to and mounted upon standard existing chairs.

Another object is to provide a head rest of the type indicated arranged so that it may, without any alteration, be mounted upon a chair having standard fixtures of different sizes.

Another object is to provide a head rest of the type indicated with adjustable and movable parts so arranged that they may readily, and without substitution, removal or additional parts, be adjusted for attachment to fixtures of different sizes as now available on chairs presently manufactured.

Other objects will appear from time to time throughout the specification and claims.

The invention is illustrated more or less diagrammatically in the accompanying drawing, wherein:

Figure 1 is a rear elevation of the head rest positioned upon a standard supporting fork;

Figure 2 is a sectional view taken at line 2—2 of Figure 1;

Figure 3 is a sectional detail taken at line 3—3 of Figure 1;

Figure 4 is a side elevation of one of the attaching means;

Figure 5 is a section taken at line 5—5 of Figure 4;

Figure 6 is a sectional detail taken on an enlarged scale showing a modified attaching means;

Figure 7 is a section taken at line 7—7 of Figure 6.

Like parts are indicated by like characters in the specification and drawing.

1 indicates a base member which may be of metal, plastic, fiber board, or any suitable material which can readily be given the desired shape and which will thereafter retain such shape. 2 is a cushion member which may be of sponge rubber or other suitable material positioned on the front of the base member 1. 3 is a retaining cover of leather or comparable material which is positioned about the member 2, and, as shown particularly in Figures 2 and 3, extends somewhat about the edges of the member 1. A finishing bead 4 overlies the edges of the member 3, and it and the member 3 are held

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in place by plate 5 which may conveniently be made of metal, and it is held in place by screws 6, as shown in Figures 1 and 3. The member 5 is provided with two separated slots 7 and, as shown particularly in Figures 2 and 3, is spaced outwardly somewhat away from the member 1. The slots 7 are formed in flattened portions 7a. These portions are flat and furnish, in effect, guides or tracks for fastening members which include the parts 8 and which are positioned within the space between the members 1 and 5. They are reduced at 10 to extend through the slot 7 and are provided with portions 11 which extend outwardly away from the rear face of the member 5. The portion 11 is provided with a threaded perforation 12 adapted to receive a screw 13 which passes, through the end, which may or may not be enlarged, of a fork 14. The fork is secured to or formed integrally with an arm 15 which at its end carries a ball-like member 16 for attachment to a chair. The fork, arm and ball are standard equipment normally found on chairs as presently manufactured, and such forks are made in a variety of sizes. The supporting members 8, 11 are held in adjusted position in the slots 7 by screws 9. Means are provided for holding the head rest in adjusted position with relation to the fork. In the form shown in Figures 2, 3 and 4 in particular, these means include a member 17 secured to or fixed in the part 11. This member carries a roller or other rounded member 18 which bears against the enlargement at the end of one of the arms of the fork 14. The member 17 is preferably of spring material, and thus it and the member 18 cooperate to provide friction against the part of the fork which is contacted by the member 18. This friction is sufficient to hold the head rest in adjusted, tilted position.

In Figures 6 and 7 a modified form of friction device is shown. As thereshown, a member 19 is substituted for the member 17 of the earlier figures. It is approximately U-shaped, but is enlarged or spread at its outer or free end and a sleeve-like member 20 is slipped over it. This member, as well as the member 18, may be of rubber or comparable material. The member 20 is so arranged, as shown particularly in Figure 6, that it contacts an end of the fork 14 and exerts friction against it.

Although we have shown an operative form of our invention, it will be recognized that many changes in the form, shape and arrangement of parts can be made without departing from the

spirit of the invention, and our showing is, therefore, to be taken as, in a sense, diagrammatic.

The use and operation of this invention are as follows:

In the particular form hereshown, the head rest is complete without the fork 14 and the parts 15 and 16. Those parts are commonly found on chairs as now available on the market.

The head rest of the present invention is intended to be substituted on existing chairs for the head rest now sold with such chairs. To accomplish the substitution, the head rest originally sold with the chair is removed by loosening the screws 13 which engage parts on the conventional head rest. After the screws have been loosened, the conventional head rest is removed and the head rest of the present invention is substituted for it. Since the forks 14 are available in different sizes, it is frequently necessary to adjust the members 8 in the slots 7 by loosening the set screws 9 and moving the members 8 to the proper position for engagement with the fork, which is normally already in position upon the chair. When the members 8 have been properly adjusted, the set screws are tightened and the members 11 are then placed in proper position with relation to the existing fork to receive the screws 13. When those screws have been put into place, the substitute head rest is in proper position for use.

The friction device, comprising either the members 18 or 20, furnishes sufficient friction against the fork so that the head rest, when tilted into any position within its limits of movement, will be retained in that position by friction. Tipping adjustment can, therefore, be accomplished merely by taking hold of the head rest and tipping it up or down. No parts need to be loosened or adjusted to accomplish this movement, and the friction is sufficient to hold the head rest into any position to which it is moved by an operator.

Since the members 7*a* are flat and are disposed at a fixed angle with respect to each other, movement of the parts 8 along the slots 7 does not alter the angle at which the parts 11 protrude. Hence, the angular relationship of the two parts 11 is not changed by their adjustment along the slots 7. The portions 7*a* are shown in the figures as being pressed, or otherwise shaped, outwardly beyond the plane of the member 5. They could be shaped inwardly equally well. The portions 7*a* are shown as integral with the plate member 5. They could, of course, be made separately and secured to the member 5. This feature of the invention is, therefore, not limited to the details of construction nor to the disposition of the member as shown in the figures, and for the purposes of the invention any construction of this feature in which the parts of the member 5 which interfit with the supporting parts 11 and which provide straight paths of movement for the members 11 rather than curved paths of movement for them is within the contemplation of the invention. If the plate 5 is merely slotted and the fastening members 11 are adjusted along the plate for adjustment to forks of varying dimensions, the relative angular disposition of the portions 11 would be altered with each adjustment. The provision of straight paths of adjustment for the members 11 permits adjustment of the members 11 without altering their relative angular relationship. As shown, they are parallel, and in any position of adjustment along the slot 7 they will remain parallel to each other.

We claim:

1. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for tilting movement, and a friction means positioned upon one of said attachment members and adapted to frictionally engage said main support.

2. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for tilting movement, and a friction means mounted upon one of said attachment members and adapted and positioned frictionally to engage said main support.

3. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for tilting movement, and a friction means adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

4. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for tilting movement, and a friction means mounted upon one of said attachment members adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

5. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for pivotal movement, and a friction means positioned upon one of said attachment members and adapted to frictionally engage said main support.

6. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for pivotal movement, and a friction means mounted upon one of said attachment members and adapted and positioned frictionally to engage said main support.

7. In combination in a head rest, a base mem-

ber, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for pivotal movement, and a friction means mounted upon one of said attachment members and adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

8. In combination in a head rest, a base member, a cushion member positioned thereon, a plate-like supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for tilting movement, and a friction means positioned upon one of said attachment members and adapted to frictionally engage said main support.

9. In combination in a head rest, a base member, a cushion member positioned thereon, a plate-like supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for pivotal movement, and a friction means mounted upon one of said attachment members adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

10. In combination in a head rest, a base member, a cushion member positioned thereon and secured thereto, a cover member surrounding said cushion member and engaging said base member, a plate-like supporting part secured to said base member and engaging said cover, a plurality of attachment members interfitting with said supporting part, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for pivotal movement, and a friction means mounted upon one of said attachment members and adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

11. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, said supporting part shaped to provide a plurality of straight line paths of adjustment for said interfitting members, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for movement, and a friction means adapted and positioned frictionally to engage said main support, said friction means comprising a spring support and a rubber-like member positioned thereon in engagement with a part of said main support.

12. In combination in a head rest, a base member, a cushion member positioned thereon, a supporting part secured to said base member, a plurality of attachment members interfitting with said supporting part, said supporting part shaped to provide two straight line paths, one for each of said interfitting members, said straight line paths being disposed at an angle to each other, means for securing said attachment members to said supporting part in a plurality of adjusted positions, said attachment members adapted to engage a main support for movement, and a friction means adapted and positioned frictionally to engage said main support.

13. In combination in a head rest, a head supporting base member, a head engaging cushion member positioned thereon, a supporting part on said base member, a plurality of attachment members interfitting with said supporting part, the supporting part and attachment members including engaging portions formed and adapted to provide a generally straight-line sliding connection between the attachment members and the supporting part connection, means for securing said attachment members to said supporting part in a plurality of adjusted positions, and means for preventing their unintended relative movement including a body of frictional material and means for supporting it between said supporting part and one of said attachment members.

14. The structure of claim 13 characterized by and including means for mounting said body of frictional material upon one of said attachment members in a position to engage the supporting part.

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