

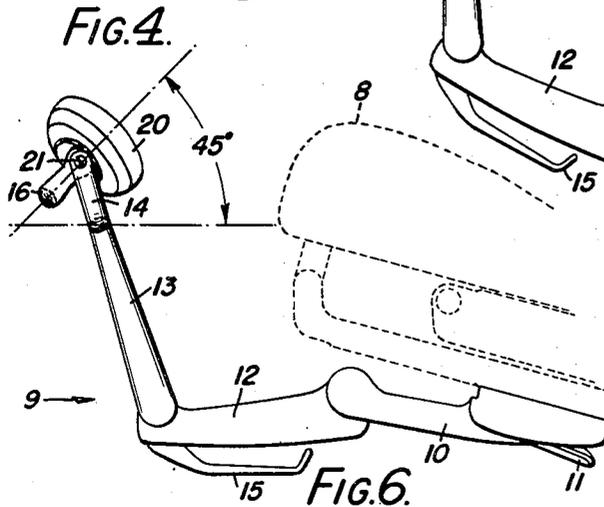
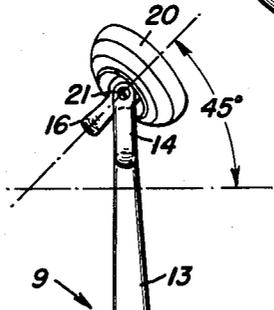
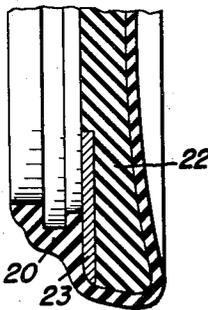
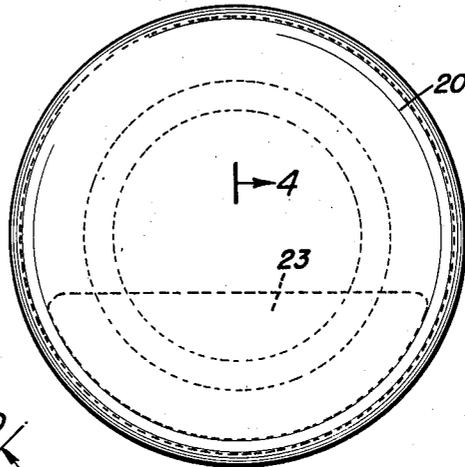
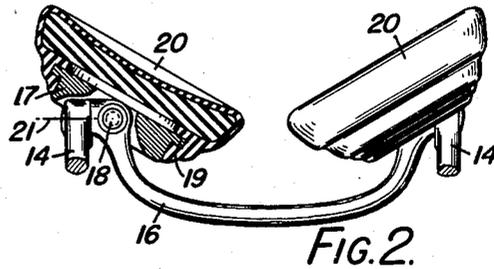
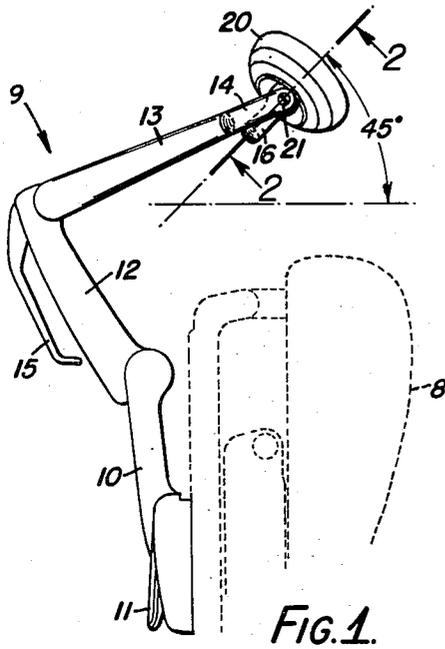
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2,828,811

HEADREST STRUCTURE FOR DENTAL OR MEDICAL CHAIRS

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2,828,811

## HEADREST STRUCTURE FOR DENTAL OR MEDICAL CHAIRS

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5 Claims. (Cl. 155-177)

My invention relates to headrests for operating chairs, such as may be utilized by the medical or dental profession, and more particularly to an improved headrest pad and mounting means therefor.

One object of my invention is to provide a headrest assembly in which the headrest pads thereof will maintain a substantially constant angulation relative to the horizontal regardless of the position of the chair back or the headrest assembly.

Another object of my invention is to provide a headrest assembly in which the angulation of the headrest pads thereof with respect to the horizontal may be easily adjusted by the dentist or surgeon.

A further object of my invention is to provide a headrest assembly, of the type described, in which the pads thereof are simple in construction and, therefore, can be manufactured economically but which also afford a maximum amount of comfort to a patient's head.

Other objects and advantages of my invention will be set forth in the claims and will be apparent from the following description when taken in connection with the accompanying drawings, in which:

Fig. 1 is a side view of the device constituting this invention as applied to a dental or medical practice chair, a portion of which is shown in dotted outline;

Fig. 2 is a view, partly in section, of the headrest assembly shown in Fig. 1, and taken along the lines 2-2 thereof in the direction indicated by the arrows;

Fig. 3 is a plan view of one of the headrest pads forming part of this invention;

Fig. 4 is a fragmentary sectional view of the pad shown in Fig. 3 and taken along the lines 4-4 thereof; and

Figs. 5 and 6 are views similar to Fig. 1 showing the position of the headrest pad relative to the horizontal when the back of the dental practice chair is in different inclined positions.

The present invention is shown as applied to a dental or medical practice chair having a back rest 8; a head rest assembly generally indicated by the numeral 9; and a seat and foot rest (not shown). The head rest assembly includes a head rest slide 10 and a slide release 11. The headrest slide 10 may be adjusted in position with respect to the back frame indicated in dotted lines. The head rest slide 10 is pivotally connected to the lower end of a bar 12, the upper end of which pivotally supports the shank bar 13 of a yolk 14. The head rest assembly 9 further includes a conventional head rest locking lever 15.

The yoke 14 pivotally supports at its free ends an inner yoke or head rest carrier 16. A head rest pad plate 17 is pivotally mounted at each end of the carrier 16 by means of a pivot bolt 18, as shown in Fig. 2. The plate 17 is preferably circular in shape and is provided with an annular flange 19. A head rest pad 20 preferably of rubber is rotatably mounted on the plate 17 and is provided with a soft interior material 22, such as sponge rubber.

Normally, with the head rest carrier 16 free to rotate

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in the yoke 14 about the axis 21, the pads would occupy a horizontal position because of the head rest carrier 16. This position of the pads is modified by the means of my invention. For this purpose a crescent-shaped weight 23 is positioned within each of the head rest pads 20 between the plate 17 and the soft material 22 but free of the plate. The weight is preferably positioned at a location below the longitudinal axis, the axis 21 about which the head rest carrier is free to rotate.

The pad 20 is mounted on the plate 17 in such a manner as to permit the free rotation of the pad 20 relative to the plate 17. The weight 23 is secured in a fixed position relative to the pad 20. This can be effected by molding the weight 23 within the soft material 22. Thus the weight rotates with the pad.

Sufficient weight is provided in each of the pads so that the plane of the pads will occupy a position approximately 45° to the horizontal. This may be otherwise expressed by stating that a line normal to the plane of the headrest and passing through the axis 21 will make an angle of 45° with the horizontal. This has been found to be the most comfortable position for the head of a patient. Since the pads and the headrest carrier 16 "float" in the yoke 14 (about the axis 21), the pairs will "float" to the 45° position regardless of position of angulation of the back rest or the position of the head rest adjustments 12 and 13. This is illustrated by a comparison of Figs. 1, 5 and 6.

If the dentist or physician wishes to adjust the position of the pads to an angle greater than 45° all that is necessary is for him to rotate the pads 20 and the weights 23 on the plate 19 to bring the center of gravity of the weights closer to the axis 21. This rotation shifts the weights 23 so that less weight is below the axis 21 and the weights exert a lesser torque thereby adjusting the angle of the pads to, for example, 50° with respect to the horizontal.

While I have shown and described the preferred apparatus of my invention, it will be apparent that various changes and modifications may be made therein, particularly in the form and relation of parts, without departing from the spirit of my invention as set forth in the appended claims.

I claim:

1. In a headrest assembly, a circular plate, a headrest element rotatably secured to said plate, and a weight fixedly mounted within said headrest element between the latter and said plate and offset with respect to the center of the circle defining said plate.

2. In a headrest assembly, a circular plate, a headrest element carried by said plate, means carried by said plate and cooperating with said headrest element to permit the rotation of the latter relative to said plate about an axis of rotation, and a weight mounted within said headrest element, offset with respect to said axis and rotatable therewith.

3. A headrest assembly for use in connection with an operating chair comprising, in combination, a support having a horizontally extending pivot about which said headrest assembly may freely pivot, said headrest assembly including a headrest pad, said headrest pad being weighted on one side of said pivot more than on the other side so that when the assembly is permitted to "float" on said horizontally extending pivot the plane of headrest pad will assume an acute angular position with respect to the horizontal.

4. A headrest assembly in accordance with claim 3 wherein the weighting of the pad is accomplished by a weight in the pad and means are provided for shifting the center of gravity of said weight toward or from said

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pivot to change the angularity of the plane of the pad with respect to the horizontal.

5. In a headrest assembly having an outer supporting yoke, an inner yoke mounted within said outer yoke for free "floating" pivotal movement about a horizontal axis, a circular plate mounted on each end of said inner yoke, a head rest element rotatably mounted on said circular plate, and means mounted in said cup-shaped element to control the free "floating" position of said cup-shaped element relative to the horizontal, 10

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said means comprising a weight secured to said head rest element offset with respect to its center.

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