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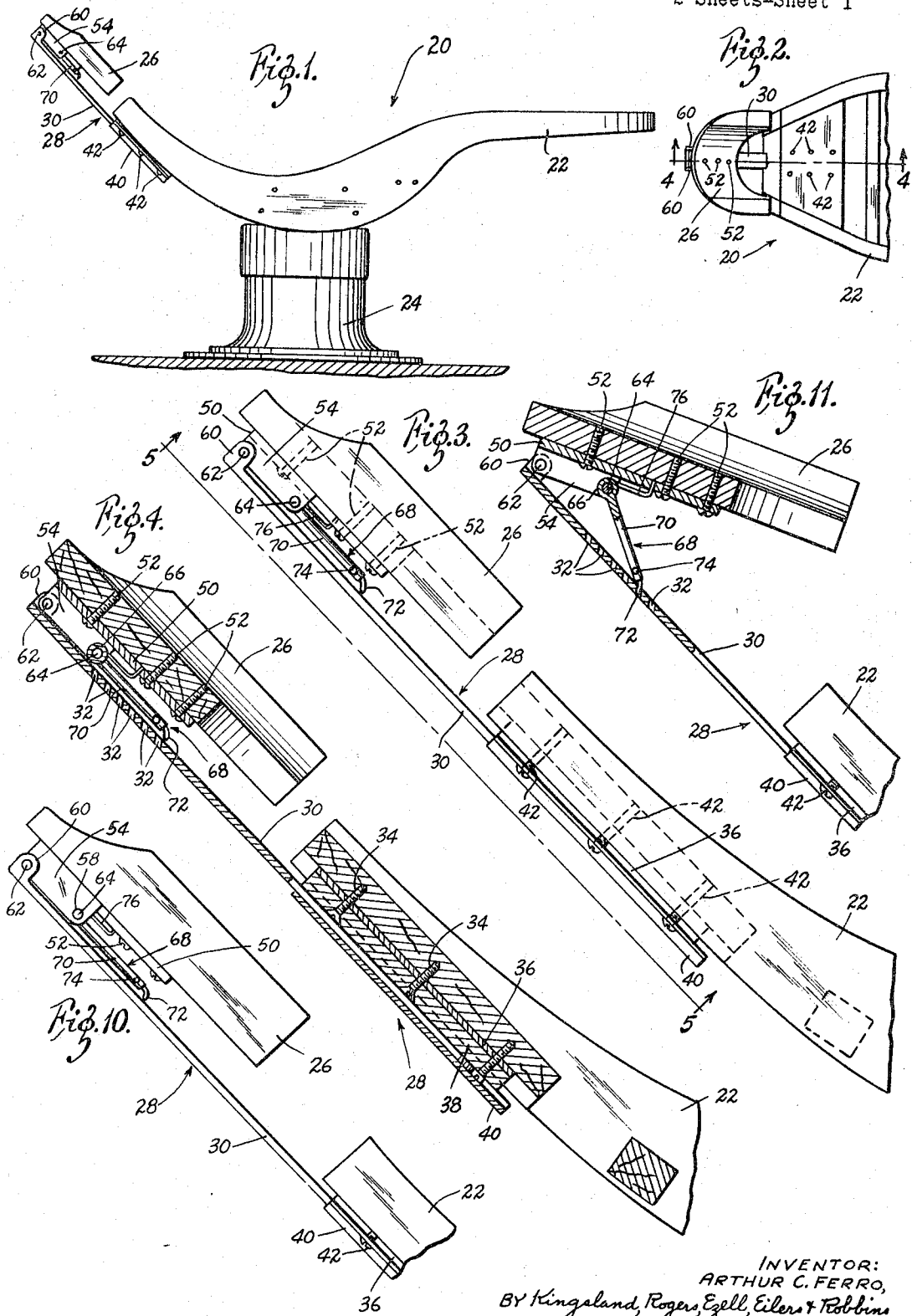
A. C. FERRO

3,317,244

HEADREST FOR DENTAL CHAIR

Filed Oct. 22, 1965

2 Sheets-Sheet 1



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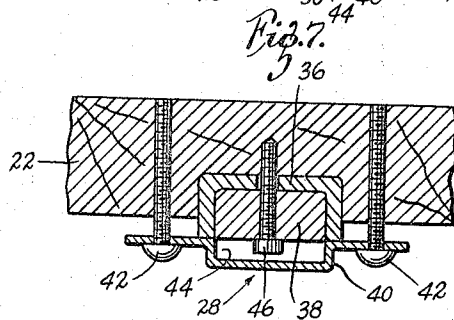
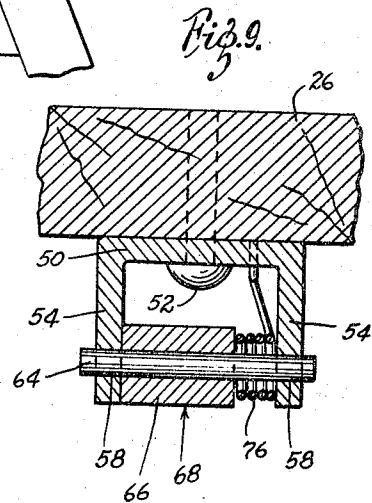
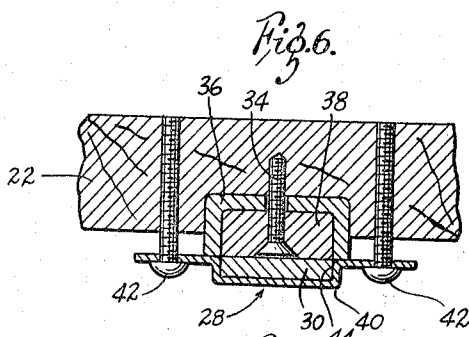
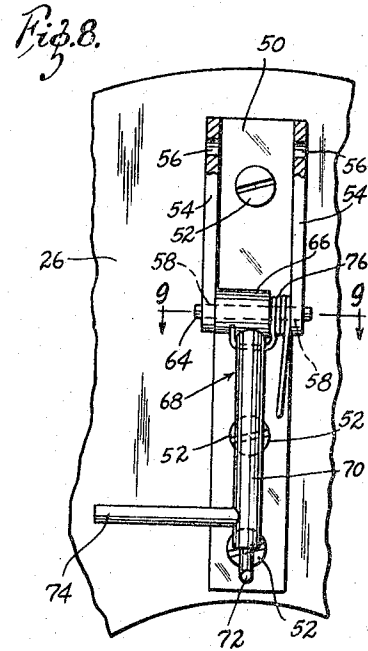
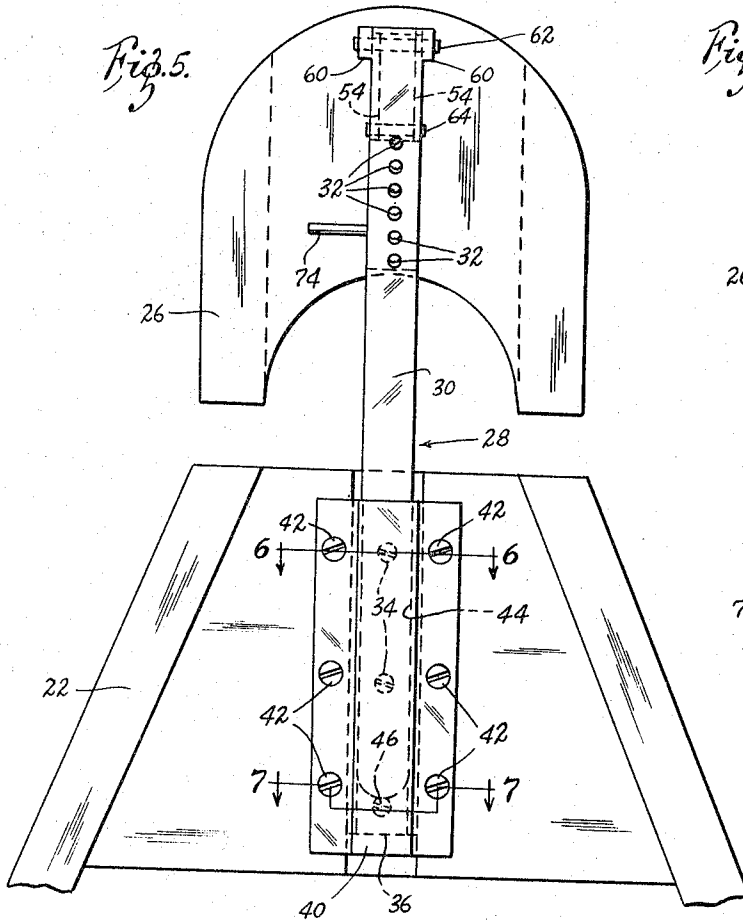
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## HEADREST FOR DENTAL CHAIR

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3 Claims. (Cl. 297-410)

The present invention relates generally to chair construction, and more particularly to a novel support for the headrest of a dental chair.

The present novel support fulfills the long existing need of a dental or similar chair headrest having infinite adjustment in respect to the body of the chair and pivotally mounted for ready movement.

In brief, the present novel headrest support includes a magnetic bar, a magnetic mount for the lower end thereof permitting infinite movement of the bar in respect to the mount within a predetermined range, and a pivotal connection between the upper end of the bar and a headrest automatically positioned upon manual raising of the headrest about the pivot and including simple release means.

Thereof, objects of the present invention are to provide novel support for the headrest of a chair which incorporates structure permitting infinite extension adjustment between the headrest and the body of the chair, which eliminates mechanically operable release mechanisms in the supporting structure, which permits adjustment between the headrest and body of a chair through the simple medium of pulling the headrest away from the body of the chair and returning it towards the chair body, as desired, which requires no adjusting means for the support, which includes automatically operable latching structure effective in pivoting the headrest to a desired angle and simple release means, which is adapted to function for many years with substantially no maintenance or repair, which is simple in over-all operation and requires minimum instruction for use, and which otherwise fulfills the objects and advantages sought therefor.

The foregoing and other objects and advantages are apparent from the following description taken with the accompanying drawings, in which:

FIGURE 1 is a side elevational view of a dental chair including the present novel headrest support;

FIGURE 2 is a plan view of the headrest, adjacent fragment of the dental chair body and connecting novel support for the former;

FIGURE 3 is an enlarged side elevational view of the part shown in FIGURE 2;

FIGURE 4 is an enlarged longitudinal cross-sectional view taken on substantially the line 4-4 of FIGURE 2;

FIGURE 5 is a bottom plan view of substantially the area indicated by the line 5-5 in FIGURE 3;

FIGURES 6 and 7 are further enlarged transverse cross-sectional views taken on substantially the lines 6-6 and 7-7 respectively, of FIGURE 5;

FIGURE 8 is a further fragmentary view of the upper portion of the novel support, parts being in cross-section;

FIGURE 9 is a further enlarged vertical cross-sectional view taken on substantially the line 9-9 of FIGURE 8;

FIGURE 10 is a side elevational view of the novel support, the headrest and a portion of the chair body; and

FIGURE 11 is a cross-sectional view of the upper part of FIGURE 4, but with the headrest in a raised position.

Referring to the drawings more particularly by reference numerals, 20 indicates generally a dental chair incorporating a main body 22, a base 24, a headrest 26, and a novel support 28 for the headrest 26 incorporating the principles of the present invention.

The support 28 includes an elongated bar or strap 30 of magnetic material at least in the lower part having a

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longitudinally extending group of apertures 32 towards one end which are at an angle to the bar surfaces. Secured to the back of the upper portion of the body 22 by screws 34 is a first channel-shaped member 36. Within the U-shaped member 36 is a permanent magnet 38 maintained in position by said screws 34 (FIGS. 4, 6 and 7). A second channel-shaped member 40 is secured to the back of the upper portion of the body 22 by screws 42 in opposed relation with the first channel member 36 to form with the permanent magnet 38 a closed passage 44 which receives the lower end of the bar 30, disposing one surface thereof against the permanent magnet 38 in holding relation, as is clear from the drawings. A lower screw 46 serves as a stop to determine the lowermost position of the bar 30 (FIGS. 5 and 7). Thus, infinite adjustment of the bar 30 in respect to the chair body 22 is provided.

A bracket 50 is secured to the back of the headrest 26 by screws 52 and includes flanges 54 having two pairs of opposed openings 56 and 58. Opposed ears 60 are formed integral with or are secured to the upper end of the bar 30. A pin 62 extends through the opposed openings 56 in the bracket 50 and through openings in the ears 60 to pivotally mount the former upon the latter. A second pin 64 is mounted in the openings 58 and pivotally receives a sleeve portion 66 of a latch member 68, which also includes a finger portion 70 having a curved point 72. A release handle 74 extends outwardly from the finger portion 70 (FIG. 8). A coiled spring 76 mounted on the pin 64 has one end extending through an aperture in the finger portion 70 and another portion anchored in an aperture in the bracket 50 (FIGS. 8 and 11). The spring 76 biases the finger portion 70 clockwise viewing FIGURE 11.

It is clear from the drawings, particularly FIGURE 11, that the point 72 of the finger portion 70 will successively slide into the openings 32 as the headrest 26 is manually pivoted counterclockwise, or raised upwardly, and will support the headrest 26 in any selected elevated position within the range of the openings 32. The shape of the point 72 and the angular disposition of the openings 32 contribute to a wide range of adjustment and ease of functioning. To lower the headrest 26, the finger portion 70 is manually pivoted by the handle portion 74 counterclockwise viewing FIGURE 11 after the point 72 is free of an opening 32.

It is clear from the foregoing that the headrest 26 may be disposed in an infinite number of positions towards and away from the upper end of the body 22 within the range of movement of the bar 30, which insures a comfortable position for any occupant of the chair 20. The permanent magnet 38 may vary in strength, but should be of sufficient power to maintain the bar 30 and its supported headrest 26 against more than casual displacement force.

It is apparent that there has been provided a headrest support which fulfills the objects and advantages sought therefor.

It is to be understood that the foregoing description and the accompanying drawings have been given by way of illustration and example. It is also to be understood that changes in form of the elements, rearrangement of parts, and substitution of equivalent elements, which will be obvious to those skilled in the art, are contemplated as within the scope of the present invention which is limited only by the claims which follow.

What is claimed is:

1. In combination, a chair headrest support comprising a base, means for mounting said base on a chair body permitting infinite adjustment in respect thereto, including a permanent magnet, a support therefor and a guiding member for defining a path of movement for the base, the guiding member and the base having complementary, rela-

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tively slidable, mutually engageable surfaces to limit the said path of movement to reciprocation in a single plane, and means for connecting said base to a headrest for support thereof.

2. In combination, a chair headrest support comprising a base, means for mounting said base on a chair body permitting infinite adjustment in respect thereto, including a permanent magnet, a support therefor and a guiding member for defining a path of movement for the base, and means for connecting said base to a headrest for support thereof, said connecting means including a bracket securable to a headrest, a pivotal connection between said bracket and said base, and releasable means for locating said bracket and a headrest at selected angles to said base, including a finger member pivotally connected to said bracket and apertures in said base for engagement by said finger, said finger member being spring-biased into engagement with said base and slidable into and out of said apertures successively as said bracket and an attached headrest are pivotally moved into selected position, and manually operable finger release means permitting pivotal

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movement of said bracket and an attached headrest in the opposite direction.

3. The combination of claim 2 in which said finger member includes an angularly disposed free end and said apertures are disposed at a similar angle to the surface of the base thereby facilitating movement by the former into and out of the latter.

References Cited by the Examiner

UNITED STATES PATENTS

10	2,869,622	1/1959	Petersen et al. ....	297—408 X
	2,985,228	5/1961	Golden .....	297—410 X
	3,104,914	9/1963	Burton .....	297—407
	3,159,427	12/1964	Lawson .....	297—410
15	3,186,763	6/1965	Ferrara .....	297—410
	3,207,555	9/1965	Kerr .....	297—408 X
	3,209,729	10/1965	Zedaker .....	248—206 X

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