W. W. EVANS.

Head-Rests for Dentists' Chairs.

No. 134,424. Patented Dec. 31, 1872.

Fig. 1.

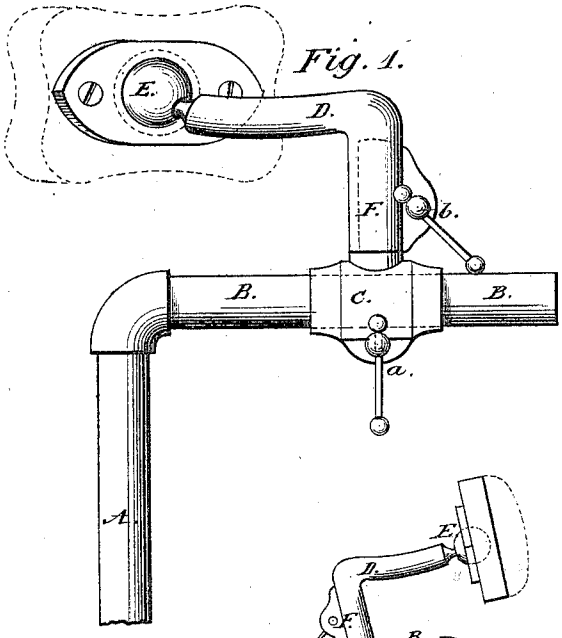


Fig. 2.

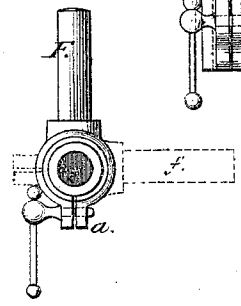


Fig. 3.

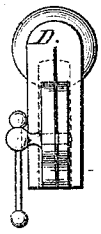
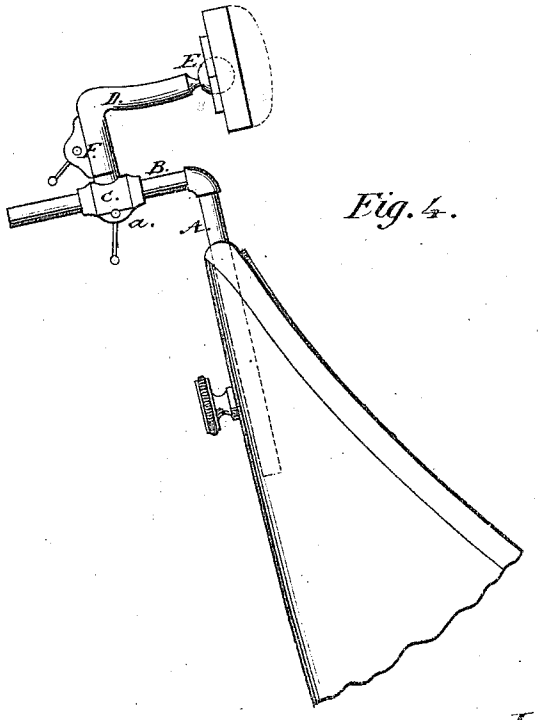


Fig. 4.



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UNITED STATES PATENT OFFICE.

W. WARRINGTON EVANS, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN HEAD-RESTS FOR DENTISTS' CHAIRS.

Specification forming part of Letters Patent No. 134,424, dated December 31, 1872.

To all whom it may concern:

Be it known that I, W. WARRINGTON EVANS, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Head-Rests for Dental Chairs, and in the method of operating the same; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists, first, in the combination of a rotating shaft with its rigid arm, as is hereafter described, and a sleeve or socket rotating freely upon a pivot to bring the head-rest parallel with the chair-back when the arm is turned to either side of the chair, and a slide secured by a clamp sliding on the rigid arm of the rotating shaft, and mounting a pivot, and having lateral motion with a sleeve or socket rotating on said pivot, on the end of which socket is a ball-and-socket joint; second, in clamps to secure the slide on the rigid arm of the shaft and the sleeve or socket on the pivot, by which I thoroughly command the rotatory and lateral motions.

In the accompanying drawing, Figure 1 is a side elevation; Fig. 2 is a back elevation of the pivot and slide; Fig. 3 is a back elevation of the sleeve or socket with side elevation of clamp; and Fig. 4 its application to the chair.

In describing Fig. 1, A is the rotating shaft, which slides up and down in the back of the chair. B B is a rigid arm attached to the shaft A, and upon which the slide C slips forward and back and rotates laterally. D is a sleeve or socket rotating upon the pivot; F and E, a ball attached to the sleeve for a ball-and-socket joint. *a* and *b* are clamp-screws.

Figs. 2 and 3 are back elevations of the pivot and slide F and C and the sleeve D, showing a side elevation of the clamps *a* and *b*. The fine dotted line *f'* in Fig. 2 indicates the lateral play of the pivot F, as shown in the white figure *f*, when the pivot is turned laterally to a right angle from its original upright position. B' indicates the cavity of the slide in slipping on the arm B.

The advantages of the clamps *a* and *b*, represented in Figs. 1, 2, and 3, are very great over set-screws and other forms of securing, as they secure a firm rigid hold at any angle, and with perfect simplicity and with little exertion.

In the lower figure, 4, A represents the shaft in the back of the chair, acting as a pivot in shifting the arm B from side to side or at any angle desired. For instance, say the arm is pointing directly back of the chair—the head-rest is in the center of the chair, with the slide C drawn back to the extremity of the arm B—if it is desired to bring the head-rest a little to one side, still maintaining the same position of the sleeve D, unclamp the shaft A and sleeve D and rotate around to the desired angle. If an extreme lateral position is desired, rotate the arm B to a right angle from its original position, loosening the clamp *b*, and rotating the sleeve D around at right angles with the arm B, changing the ball-and-socket joint to suit, and moving the slide C to desired position.

I am aware that the upright in the back of a chair is old, and that also a sliding upright is used with it to sustain the head-rest; but for want of a pivot above the slide the head-rest could not itself rotate, and so be brought into a plane parallel with the chair.

With the added pivot, which allows a complete revolution of the arm upon which the head-rest is secured, I am enabled to bring the head-rest to either side of the chair from its central point, and still keep it on the proper plane parallel with the chair.

I am also aware that the ball-and-socket joint applied to the head-rest is of itself old, and I therefore make no claim to this of itself; but

What I claim is—

1. The combination of the rotating shaft A and its rigid arm B with the sleeve D rotating freely upon the pivot F, either with or without the slide C, all constructed substantially as and for the purpose described.

2. The clamps *a* and *b*, when combined with the sliding and rotating sleeve D and slide C, substantially as described.

W. WARRINGTON EVANS.

Witnesses:

CHAS. H. WILTBERGER, Jr.

JOHN C. WILSON.