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ADJUSTING DEVICE FOR CHAIR BACKS.

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1,246,659. Patented Nov. 13, 1917.

Fig. 1

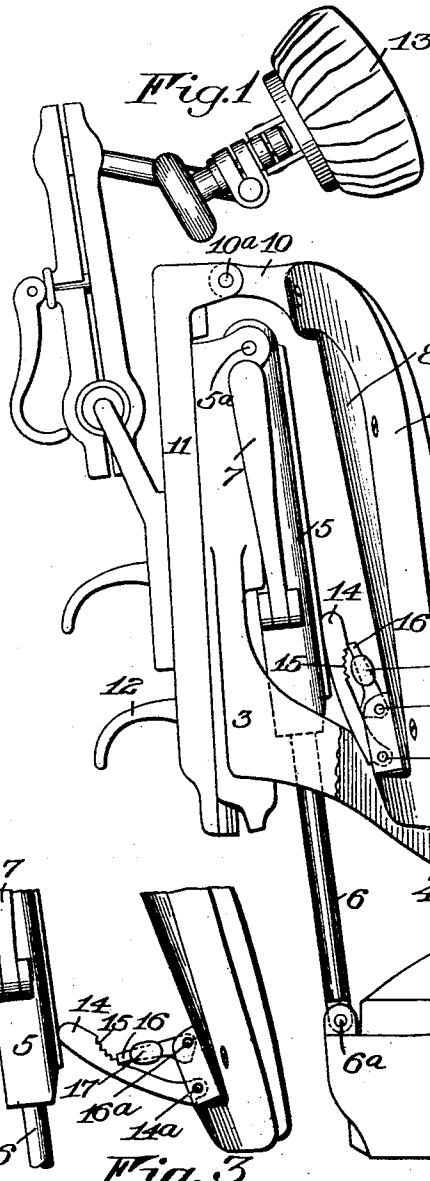


Fig. 2

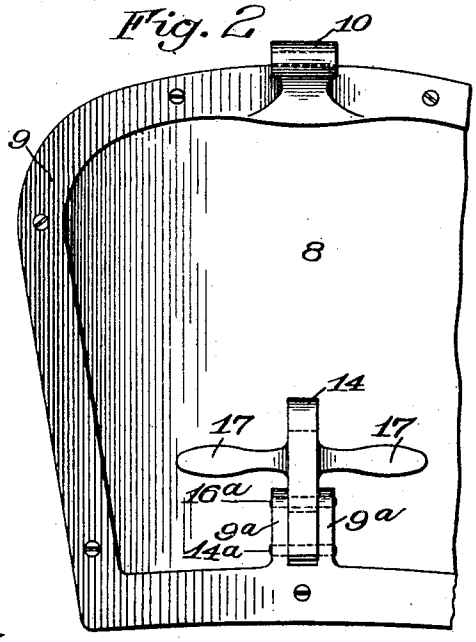


Fig. 3

Witnesses

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ADJUSTING DEVICE FOR CHAIR-BACKS.

1,246,659. Specification of Letters Patent. **Patented Nov. 13, 1917.**

Original application filed November 14, 1911, Serial No. 660,232. Patented May 4, 1915, No. 1,137,903. Divided and this application filed August 25, 1913. Serial No. 786,384.

To all whom it may concern:

Be it known that I, FRANK RITTER, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Adjusting Devices for Chair-Backs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to chairs particularly of that type adapted to be used by dentists and it has for its object to provide a new and improved form of adjusting mechanism for the back rest whereby it may be tilted to fit the hollow of the occupant's back and be retained in this position during the tilting of the chair back from one position of adjustment to another. To these and other ends the invention consists in certain improvements and combinations of parts all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is a side elevation of a chair back illustrating the adjusting mechanism constructed in accordance with my present invention;

Fig. 2 is a rear elevation of the back rest, and

Fig. 3 is a detailed view illustrating the operation of the adjusting devices and showing them in another position of adjustment.

Similar reference numerals in the several figures indicate the same parts.

This application is a division of a prior application filed by me November 14th, 1911, bearing the Serial No. 660,232 relating to dental chairs.

In illustrating the present invention I have shown it applied to a dental chair comprising the seat frame 1, which carries standards 2 on which is pivotally supported the back frame 3 having the forwardly extending arms 4 pivoted to the standards 2. The back of the chair is capable of being rotated from a vertical to a horizontal position and said back in addition to the frame 3 also includes two telescoping members 5 and 6 which are respectively connected to the back frame and seat frame by the pivots 5^a and 6^a. Any desired form of locking mechanism may be employed to retain the chair back in its adjusted angular position and in the present arrangement of the parts the locking devices are arranged on the member 5 and coöperate with the rod or member 6, the means for controlling them being indicated by the handle 7. The back rest as distinguished from the back frame of the chair is the portion 8 which is engaged by the occupant of the chair and it preferably comprises an open metallic frame 9, which is suitably upholstered, and has at its upper edge a rearwardly extending arm 10, pivoted at 10^a, either to the back frame 3 or to the adjustable slide 11, movable longitudinally on the said frame for the purpose of carrying the back rest toward or from the chair seat. 12 indicates the handle of the locking mechanism employed for retaining the slide 11 in place. The latter may also carry a head rest 13 which is mounted upon suitable supports permitting its universal adjustment.

It is particularly desirable in a dental chair to provide means for adjusting the angle of the back rest relatively to the back frame so that the lower portion thereof may fit snugly and comfortably the hollow portion of the occupant's back, and with this object in view I pivot the frame 9 at its upper end and upon its lower edge I provide a brace 14, the free end of which engages a portion of the back frame of the chair, as for instance, the member 5. The brace 14 is provided with a notched portion 15 which is curved slightly, as illustrated, and with which coöperates the pawl 6, also carried on the back rest. Both the brace and the pawl being pivotally mounted at 14^a and 16^a between a pair of upwardly extending ears 9^a on the lower rail of the back rest, as shown particularly in Fig. 2. The pawl 16 coöperates with the ratchet teeth 15 for the purpose of holding the lower end of the back rest in various positions of adjustment and the pawl preferably carries handle 17 projecting laterally from its opposite sides, by which it may be elevated to release the brace. By this adjustment of the parts the back rest may be adjusted in the first instance to comfortably fit the torso of a person seated in the chair, when in an upright position; and both the brace and pawl being

gravity operated and the latter automatically falling into engagement with the ratchet teeth 15 the operator is only required to push the lower end of the back rest forwardly, or the patient, seated in the chair may grasp its lower edge and draw the back rest toward him into the desired position. The arrangement of the parts is also such that they occupy only a small space and permit the lower end of the back rest to lie closely to the parts comprising the back frame of the chair, as shown in Fig. 1, or moved outwardly therefrom as shown in Fig. 3.

I claim as my invention:

1. In a chair, the combination with a back frame and a movable back rest thereon, of a brace arm attached to the lower end of the back rest and projecting upwardly therefrom and having its free end in contact with the back frame and a pawl also attached to the back rest adjacent said brace arm and coöperating therewith to sustain the back rest in various angular positions of adjustment relatively to the back frame.

2. In a chair, the combination with a back frame and a movable back rest thereon, of a brace arm pivoted on the lower end of the back rest and extending upwardly therefrom having its free end engaging the back frame, said arm having a plurality of ratchet teeth on its forward edge, and a pawl attached to the back rest above and in proximity to the pivot of the brace arm and adapted to automatically coöperate with the teeth thereon.

3. In a chair, the combination with a back frame and a movable back rest pivoted thereto at its upper end and composed of an open frame piece having a bottom rail, and a pivot lug on the rail projecting upwardly in the frame opening, of a brace arm pivoted at the bottom of the lug and arranged with its free end extending upwardly in contact with the back frame, a pawl also pivoted to the lug above the pivot of the arm and having its free end engaging the arm to hold it in its adjusted angular position to support the lower end of the back rest.

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Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."