(No Model.)

A. W. STEWART.

CHAIR.

No. 391,822. Patented Oct. 30, 1888.

Fig. 2.

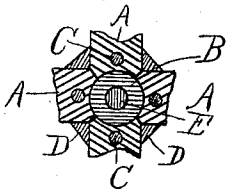


Fig. 3.

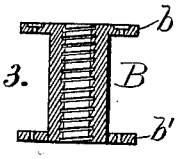


Fig. 1.

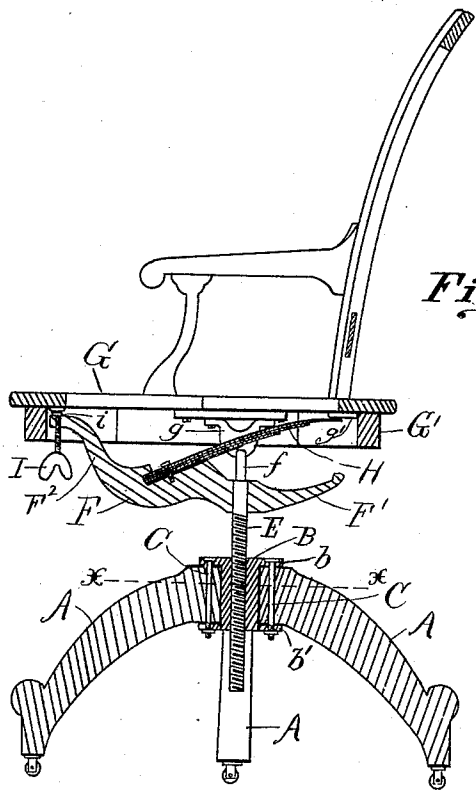
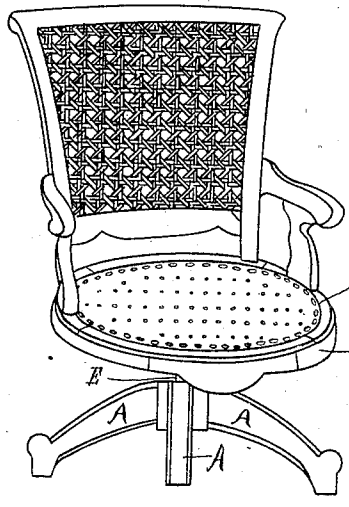


Fig. 4.



Attest

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UNITED STATES PATENT OFFICE.

ALEXANDER W. STEWART, OF CINCINNATI, OHIO, ASSIGNOR TO THE ROBERT MITCHELL FURNITURE COMPANY, OF SAME PLACE.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 391,822, dated October 30, 1888.

Application filed July 1, 1886. Serial No. 206,761. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER W. STEWART, a resident of Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

The various features of my invention and the advantages resulting from their use, conjointly or otherwise, will be apparent from the following description.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical central section of a chair embodying my improvement. Fig. 2 is a section taken at the line *x x*, Fig. 1, the legs being broken off. Fig. 3 is a vertical central section of the bearing in which the stem supporting the chair works. Fig. 4 is a perspective view of a chair embodying my improvements.

The chair belongs to the general class of rotating and tilting chairs. The base consists of a number of legs, A, preferably four, united at the bearing B. The bearing B is cylindrical, and is provided at its top with a flange, *b*. The legs A rest against the bearing, as shown in Fig. 2. Each leg is secured in its position by a bolt, C, which extends from the flange *b* through that part of the leg A which lies under the flange *b*, and then through the washer *b'*. The washer encircles the bearing B and slides upward thereon as the screws C are tightened, and thus is caused to tightly and securely clamp the legs A to the bearing B, the flange *b* forming one jaw or face of the clamp and the washer *b'* the other or opposing jaw of said clamp. A triangular block, D, is placed in each of the spaces between adjacent legs. These blocks accurately fit these spaces and form very efficient braces, strengthening the base materially. They are preferably held in place by gluing, but may be secured in position by more substantial means. The stem E, rigidly attached to the casting F, is provided with a screw-thread, which fits the thread on the inside of the bearing B. The casting F is provided with two arms, *f*, which project laterally, and are journaled in the bearings *g*, attached to the chair-bottom G, and constitute the axis on which the chair tilts. The spring H, preferably composed of several leaves, is securely attached to the casting F and projects backwardly, its tip fitting under the back part of the seat G. A bearing, *g'*, is preferably provided to protect the wooden frame. When the chair is tilted back, its motion is finally checked by the arm F', projecting rearwardly from the casting F. The casting F is also provided with an arm, F^2, which projects forwardly and upwardly under the front edge of the chair-seat G. A thumb-screw, I, is screwed up through the end of the arm F^2, and is provided at its upper end with a cap, *i*. The front edge of the chair-seat rests on the cap *i*, a buffer on the seat preferably forming the immediate bearing. Normally the spring H keeps the chair-seat against the cap *i*. When, however, the person occupying the chair throws his weight backward, the chair tilts backward against the pressure of the spring H, and, if the weight be sufficient, the chair is forced backward until the bearing *g'* rests on the arm F'. On releasing the weight the spring H forces the chair forward until it rests on the top of the screw I. By raising or lowering the screw I the inclination of the seat of the chair, when not tilted, is adjusted to suit the convenience of the individual using it.

A feature of considerable importance is the construction of the bottom of the chair. The ring G, which carries the seat proper, is made, as usual, in segments. Under the ring G is a downwardly-projecting rim, G', also made in segments. The segments of the ring G and the rim G' are so arranged as to break joints, as shown in Figs. 1 and 4.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a tilting-chair, the combination of a supporting-stem, the seat-carrying frame pivoted on the stem, a spring for raising the rear portion of the seat, and a set-screw acting against the tension of the spring and arranged to limit the forward movement of the seat, substantially as described.

2. In a tilting-chair, the combination of the chair-base, an adjustable supporting screw-stem mounted thereon, the seat-carrying frame pivoted to the stem, a spring connected with

the stem and bearing against the seat for raising its rear portion, and a set-screw carried by the stem acting against the tension of the spring for contact with the seat to limit the forward movement thereof, substantially as described.

3. In a tilting-chair, the anterior vertically-stationary support provided with an adjusting-screw, and the spring, as H, for raising the rear portion of the chair and keeping the front portion of the seat against the adjusting-screw when the occupant of the chair is not leaning back, substantially as set forth.

4. In a tilting-chair, the combination of the chair bottom or seat and the spider or casting F, having arms *f f*, to which the chair-seat is journaled or pivoted, and also arm F^2, and spring H, set into arm F^2, and having its free end impinging against the rear portion of the chair-seat and rear arm, F, the forward arm, F^2, being provided with the adjusting-screw I, against which latter the anterior portion of the chair-seat rests, except when the chair is tilted backward, substantially as and for the purposes specified.

5. In a tilting-chair, the combination of the chair bottom or seat and the spider or casting F, having arms *f f*, to which the chair-seat is journaled or pivoted, and also arm F^2, and flat spring H, set into arm F^2, and having its free end impinging against the rear portion of the chair-seat and rear arm, F, the forward arm, F^2, being provided with the adjusting-screw I, against which latter the anterior portion of the chair-seat rests, except when the chair is tilted backward, substantially as and for the purposes specified.

ALEXANDER W. STEWART.

Witnesses:
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