No. 714,764.

Patented Dec. 2, 1902.

E. G. WATKINS.

SWIVELED CHAIR.

(Application filed July 30, 1901.)

(No Model.)

Fig 1.

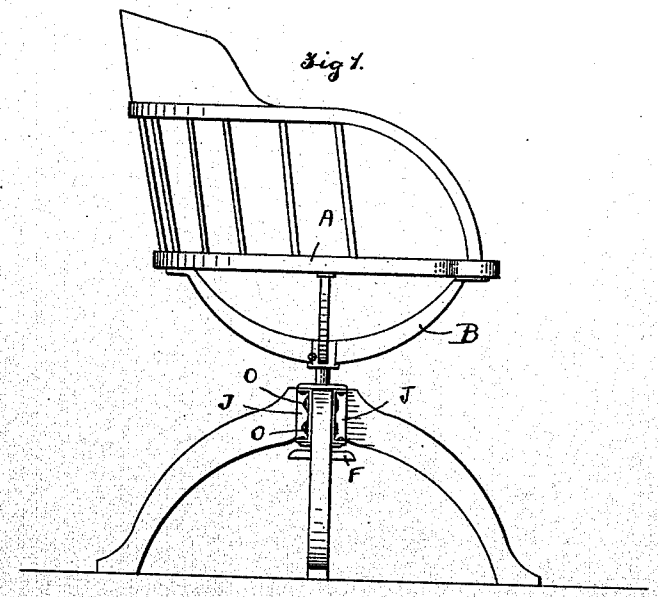


Fig 3.

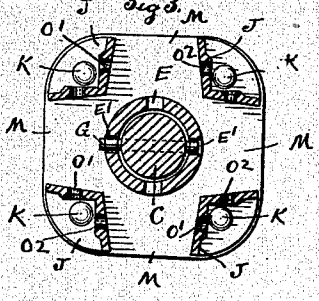


Fig 2.

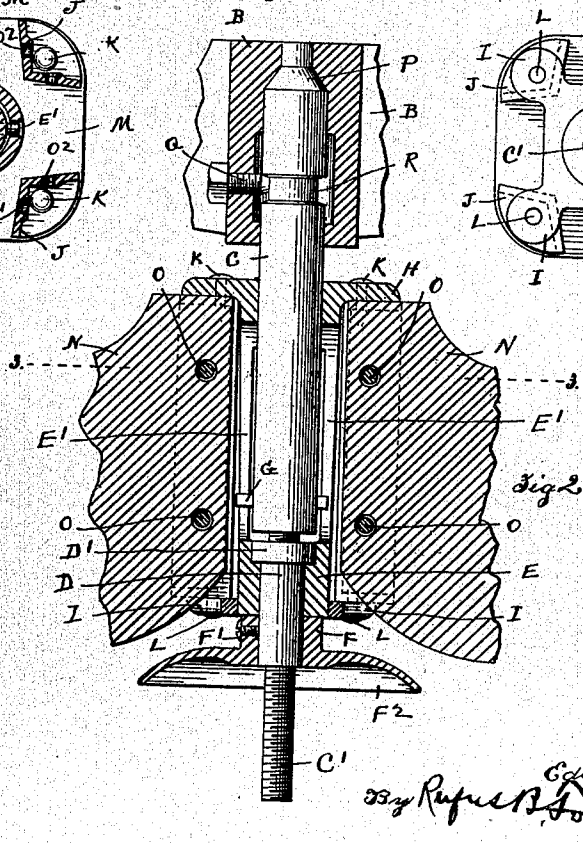
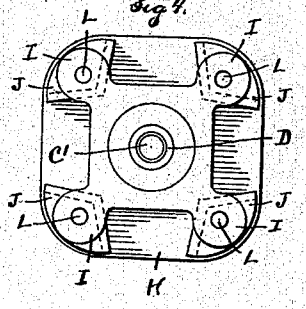


Fig 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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SWIVELED CHAIR.

SPECIFICATION forming part of Letters Patent No. 714,764, dated December 2, 1902.

Application filed July 30, 1901. Serial No. 70,301. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. WATKINS, a citizen of the United States, and a resident of Gardner, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Swiveled Chairs, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 represents a side elevation of a chair embodying my invention. Fig. 2 is a central vertical sectional view of a portion of the supporting-framework of the chair. Fig. 3 is a transverse sectional view on line 3 3, Fig. 2. Fig. 4 is a bottom view of the casting containing the nut for raising and lowering the chair and the pivoted clamping-pieces for holding the legs.

Similar reference-letters refer to similar parts in the different views.

My invention relates to that class of swiveled chairs in which the chair-seat is supported upon a spider mounted upon the top of a spindle capable of vertical adjustment by which the seat is raised or lowered, said seat being capable of rotating about a vertical axis; and my invention relates particularly to that part of the chair which comprises the casting in which a fixed nut is held and which comprises sockets for the chair-legs; and my invention consists in the construction and arrangement of parts, as hereinafter described, and pointed out in the annexed claims.

Referring to the accompanying drawings, A denotes the chair-seat, supported upon a spider B, which is mounted upon a spindle C, provided at its lower end with a reduced screw-threaded extension C′, which engages a cylindrical nut D, held in the lower end of a tubular casting E. The nut D is held from longitudinal movement in one direction by the flange D′, which is recessed in the tubular casting E, and also by a collar F, attached to the nut D by a screw F′ and provided with a flange F^2, adapted to be seized by the hand for the purpose of rotating the nut D.

The tubular casting E is provided on diametrically opposite sides with slots E′ E′, preferably closed at their ends, to receive the ends of a pin G, held in the spindle C, by which the spindle is held from rotation but allowed to move longitudinally. The tubular casting E is provided at its upper end with a flange H, and attached to its lower end are ears I, and between the flange H and the ears I are pivoted the angle clamping-plates J, with their upper ends pivoted upon the studs K and their lower ends pivoted upon studs L, the angle-plates J having a slight rocking motion upon their pivotal studs. When the four angle-plates J are placed in their normal position, the space M, included between the opposite sides of the angle-plates, is adapted to receive the dovetailed ends of the legs N. The ends of the chair-legs when inserted between the angle-plates J are clamped in position by tightening the angle-plates between the opposing sides of the legs by means of the clamping-bolts O. Each of the angle-plates J is pivoted loosely upon its pivotal studs K and L in order to allow sufficient lateral movement or side play to cause them to fit tightly against the sides of the chair-legs of varying thickness.

The upper end of the spindle C is tapered at P to form a bearing for the spider B, and the spider is held in position upon the spindle by means of a screw Q, having its end entering an annular groove R in the spindle C. The chair-seat is free to rotate upon the top of the spindle C without interfering with the adjustment of the chair, and the seat is raised and lowered when desired by the rotation of the nut D by means of the flanged collar F. The legs N are fastened into position by inserting their dovetailed ends between the clamping-plates J and drawing the clamps tightly against the sides of the legs by means of the clamping-bolts O, each of said bolts passing through a hole O′ in one of the angle-plates and having a screw-threaded section engaging the screw-threaded hole O^2 in the opposite plate. Any variation in the thickness of the chair-legs—such, for example, as that caused by the shrinking of the wood—can easily be taken up by tightening the clamping-bolts, and the legs can always be rigidly held, as the angle-plates J can be

tightly clamped against the sides of the legs, thereby varying the size of the sockets as determined by the thickness of the chair-legs.

In chairs of the above-described class in which the legs are held in a metal socket difficulty is frequently experienced in maintaining the legs firmly within the sockets, as a slight shrinkage of the wood of the legs causes it to loosen in the socket, and the movement of the leg within the socket incident to the use of the chair wears away the wood and increases the amount of lost motion of the leg. So far as I am aware, it has been customary in chairs of this class to secure the chair-legs in fixed metal sockets, and, so far as I am aware, it is broadly new to provide sockets for the chair-legs of varying dimensions capable of adjustment in order to correspond to the varying size of a wooden chair-leg.

The angle-plates J are so attached to the tubular casting E as to admit of their free movement to accommodate any variation in the thickness of the chair-legs; but I do not wish to confine myself to the specific method shown of pivotally attaching the plates at their upper and lower ends.

In some cases I prefer to omit the ears I and leave the angle-plates free at their lower ends and pivotally connected to the flange H at their upper ends.

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

1. In a chair, the combination with a casting to which the chair-legs are adapted to be secured, the casting having a counterbore extending from end to end through its vertical center, and provided with a slot which extends from the bore of the casting to its surface, said slot closed at its ends, of a seat-supporting spindle threaded at its lower end and extending through the counterbored center of the casting, means projecting from the spindle into the slot to prevent the spindle from turning, and a nut fitted to turn in the lower end of the casting and its threads fitted to the threaded end of the spindle to cause the latter to move endwise as it is turned.

2. In a chair, the combination of a casting and a seat supported thereon, of a series of angle-plates pivotally supported on said castings and arranged to inclose the ends of the chair-legs, chair-legs held between said angle-plates, and clamping-screws by which said angle-plates are clamped against the ends of the chair-legs, substantially as described.

3. The combination of a flanged casting, a series of clamping-plates pivotally held by the flanges of said casting and loosely mounted on their pivots, chair-legs with their ends inserted between said plates and means for clamping said plates against the chair-legs, substantially as described.

4. The combination in a chair of a tubular casting E provided with a flange H, angle-plates J pivoted loosely to said flange and adapted to embrace the ends of the chair-legs, clamping-bolts by which said plates are drawn together and legs with their ends inserted between said plates, substantially as described.

Dated this 26th day of July, 1901.

EDWARD G. WATKINS.

Witnesses:

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