

UNITED STATES PATENT OFFICE.

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RECLINING-CHAIR.

SPECIFICATION forming part of Letters Patent No. 609,177, dated August 16, 1898.

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To all whom it may concern:

Be it known that I, CLARENCE H. YOUNG, a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Reclining-Chairs, of which the following is a specification.

By my invention herein described there is provided a reclining-chair which may readily be converted into an extended couch and which at the same time involves very few and simple operative parts.

In the drawings hereto annexed, Figure 1 is a side elevation of a chair embodying my invention. Fig. 2 is a rear elevation of the same; Fig. 3, a longitudinal section of the chair when extended, and Fig. 4 a perspective view of the chair in its extended position, with parts broken away for convenience in showing the operative members of the chair. Figs. 5, 5^a, 6, and 6^a show details, on an enlarged scale, of portions of the chair mechanism.

My invention is shown and described as applied to a chair of the well-known "Morris" pattern, in which A is the chair-body and B the chair-back, hinged or otherwise pivotally secured to the chair-body A at *b*.

At or near the upper extremity of the chair-back B there is pivotally secured thereto at *d*³ the auxiliary leg-piece D, proportioned and adapted to swing down into a proper angular relationship with the chair-back B when the latter is extended to a horizontal position, and there to support the chair-back by bearing upon the floor.

Upon the chair-back B there is mounted the extensible head-rest C, which may be arranged to lie wholly within the framework of the chair-back when the latter is in its upright position, so as not to interfere with the ordinary disposition of the chair-cushions. The extensible head-rest C, when the chair-back is elevated and in its normal position, rests upon the slat or cross-piece *b*⁴, which joins the side pieces *b*¹ of the back B and is supported and secured in position at the other end by the pins *e*, which slide in the slot E cut on the inner side of the side rails *b*¹ of the chair-back. The adjustable head-rest C con-

sists of side rails *c* and cross-pieces *c*¹ and is in all essential structural respects a counterpart and extension of the chair-back B. The auxiliary leg-piece D is composed of two side pieces or legs *d*, connected by the cross-bar *d*¹.

On the chair-body a cross-piece *a*¹ is provided, which connects the two rear legs of the chair *a*, and to this cross-piece there is secured the connecting-rod attachment *a*².

The arrangement shown for automatically extending the head-rest and turning down the auxiliary leg-piece consists of rod connections F and G. The rod F is hung at one end to a hanger *d*², which is secured to the cross-bar *d*¹ of the leg-piece D. At its end the rod F has a loose or sliding bearing in the fixture *a*², which, as shown, consists of an open link with a suitable flange upon it for securement to the cross-bar *a*¹. The hanger *d*² is provided also with means for attaching the connecting-rod G, which is pivoted at its other end to a fixture *c*³ on the lower cross-bar *c*² of the extensible head-rest C.

As shown in Fig. 1, when the chair-back is made to assume any one of the three possible positions in which it is used simply as a chair the rod connections are inert so far as active operation upon the leg-piece and head-rest is concerned. This inactivity is secured by the backlash which is purposely provided at the connection *a*², the end of rod F merely playing up and down in the slot of link *a*² while the chair-back is moved from the solid to the dotted line position, as shown in Fig. 1.

As is usual in chairs of this type, the rod R serves to retain the chair-back in one of several desired positions.

When, however, the chair-back is moved below its extreme position, as shown in Fig. 1, the end of rod F reaches the limit of its free movement in the link attachment *a*² and immediately exerts a thrust upon the hanger *d*², and, assisted by its own weight, the leg-piece D descends, turning upon its pivot *d*³ until it assumes the position shown Figs. 3 and 4. At the same time the rod G has exerted its pull upon the lower end of head-rest C and the latter is drawn out to its farthest extended position. The head-rest may be left resting upon the cross-slat *b*⁴ or the rod R may be brought into use as a support

for the head-rest in the elevated position shown in Figs. 3 and 4, when the rod R is placed in the notches b^3 of the bolsters b^2 .

5 A return of the chair-back to its normal upright position causes the leg-piece D to fold up and the head-rest C to slide back to their closed positions.

It will be seen that the parts of the chair which are required to make it easily and readily convertible into a couch are few in number and simple in application. In fact very little readaptation will be required to apply the improvements here described to an ordinary Morris chair.

15 With relation to the connecting-rods F and G it is seen that both the auxiliary leg-piece D and extensible head-rest C are actuated from a fixed point on the chair-body as a basis of positive movement.

20 The two points represented by the bearing at c^3 and the hanger at d^2 are made to move with reference to the fixed point a^2 . The connections shown in the drawings annexed to this specification are (when the chair is being extended) a compression-rod between d^2 and a^2 and a tension-rod between d^2 and c^3 . The same relative motion between these two points may be obtained by rod connections in which the points c^3 and a^2 are directly instead of indirectly connected, leaving out the connection between d^2 and d^2 , so that when the chair is being opened into a couch both the connections will be in compression, or the connection which is to give motion to the point c^3 may be a direct rod to point a^2 , leaving out the rod connection between d^2 and a^2 , as shown in the figures, and substituting a rod connection between d^2 and c^3 . In short, as the three points form the apices of an imaginary triangle the relative movements of these points

may be secured by connections which represent any two of the three sides of the triangle.

What I claim, and desire to secure by Letters Patent, is as follows:

1. In a reclining-chair, the following elements in combination: the chair-body, a back pivotally secured thereto, an auxiliary leg-piece pivotally secured to the back, an extensible head-rest fitted to slide upon the back, and connecting-rods secured to the auxiliary leg-piece and head-rest, respectively, one of the said rods being connected to and adjusted with relation to a relatively fixed bearing in the chair-body so as to move the auxiliary leg-piece into supporting relationship with the back, and extend the head-rest, as the back moves from an upright to a horizontal position, substantially as described.

2. In a reclining-chair, the following elements in combination: the chair-body, a back pivotally secured thereto, an auxiliary leg-piece pivotally secured to the back, an extensible head-rest fitted to slide upon the back, a connecting-rod hung to the auxiliary leg-piece at one end and bearing on the chair-body at the other end, a connecting-rod between the auxiliary leg-piece and the extensible head-rest, the said rods being so proportioned and adjusted as to give to the leg-piece a movement on its pivot toward supporting relationship with the back and to extend the head-rest, when the back moves from an upright to a horizontal position, substantially as described.

Signed by me, at Boston, this 10th day of March, A. D. 1898.

CLARENCE H. YOUNG.

Witnesses:

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