

(No Model.)

J. W. HAMILTON.
CHAIR.

No. 485,325.

Patented Nov. 1, 1892.

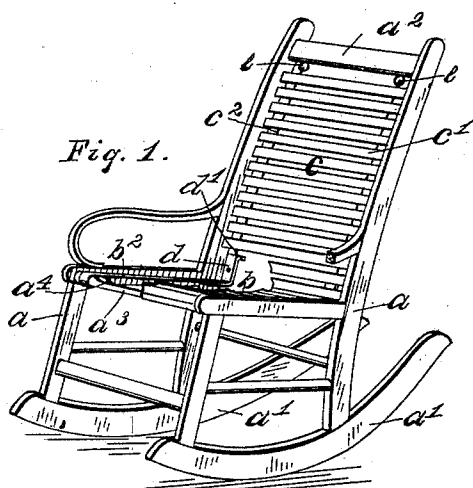


Fig. 1.

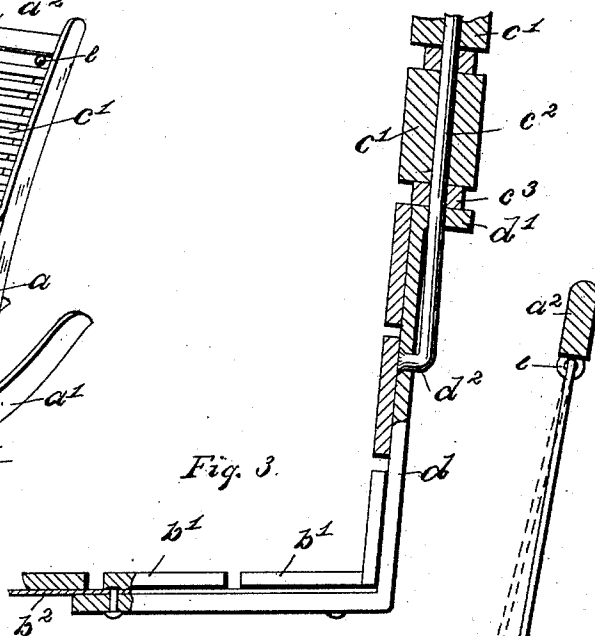


Fig. 3.

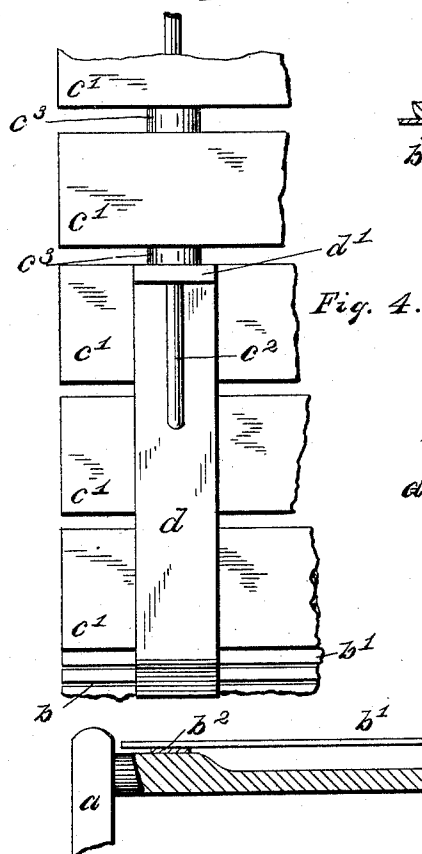


Fig. 4.

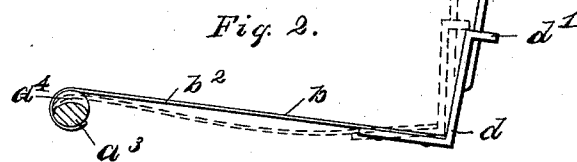


Fig. 2.

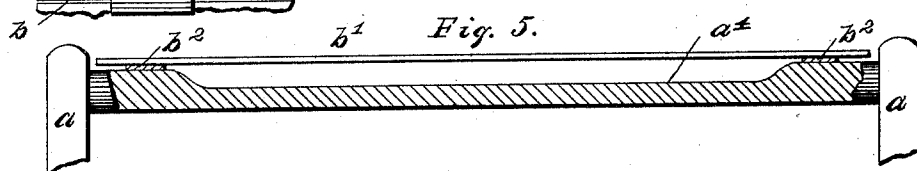


Fig. 5.

Witnesses.

H. C. Oster.
Frank Watt

Inventor
John W. Hamilton
By his Attorneys
Stacy & Shepherd

UNITED STATES PATENT OFFICE.

JOHN W. HAMILTON, OF SPRINGFIELD, OHIO.

CHAIR.

SPECIFICATION forming part of Letters Patent No. 485,325, dated November 1, 1892.

Application filed March 21, 1892. Serial No. 425,689. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HAMILTON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Chairs, of which the following is a specification.

My invention relates to improvements in chairs; and the object of my invention is to provide a chair having a flexible seat and back so constructed and arranged within a supporting-frame that the parts thereof will readily adjust themselves to the person of the occupant.

To this end my invention consists, in connection with a supporting-frame, of a flexible back and a flexible seat connected together by rigid angular connecting-pieces, the back and seat thus formed being suspended within the frame from the top and front, respectively, so that a depression of the seat produces a corresponding movement of the back. I attain these objects by the constructions shown in the accompanying drawings, in which—

Figure 1 is a view of my improved chair in perspective, some of the parts being broken away to more clearly illustrate the construction thereof. Fig. 2 is a diagrammatic view illustrating the arrangement and suspension of the seat and back, together with their operation. Fig. 3 is an enlarged view, partly in section, of a portion of the same in detail, showing the angular connecting-pieces between the back and seat and the method of connecting the same. Fig. 4 is a rear elevation of the same. Fig. 5 is a detailed view, partly in section, of the front supporting connection between the seat and main frame.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, a represents the supporting-frame, which may be of any desired construction or conformation to support the seat b and back c , respectively. I have shown this frame aa with rockers a' ; but I wish it to be understood that the particular kind of frame is not essential, so long as it furnishes the proper supports for the seat and back, in the manner hereinafter more fully specified.

The frame a is provided at the top or

back portion with a cross-bar a^2 and at the front of the seat portion with a connecting rung or bar a^3 . The back c is constructed, preferably, of a series of slats c' , preferably perforated and strung on or otherwise secured to flexible supporting-wires c^2 , which extend along or through the entire series of slats. These slats are preferably separated by spacing-blocks c^3 , which are also preferably pierced to receive the supporting-wires c^2 . The seat b is also formed of flexible slats or cross-pieces b' , supported on each side on flexible supporting-strips b^2 , of leather, thin metal, or other suitable flexible supports. The supporting-wires c^2 of the back and the flexible strips b^2 of the seat are connected together at a suitable angle, preferably slightly greater than ninety degrees, by rigid angular connecting-pieces d . These pieces are preferably formed of steel and of sufficient size and thickness to secure the proper amount of rigidity. One of these pieces is preferably employed at each side of the seat and back at the rear corner thereof, though a greater number may be employed, if desired. The connecting-pieces are each formed at the top with a projecting ear or flange d' , through which the supporting-wire c^2 of the back is passed, the end of the wire being bent at right angles and riveted in an opening formed in the body of the connecting-pieces, as shown at d^2 . (See Fig. 3.) The flexible supporting-strip b^2 of the seat is secured to the other wing or leg of the angular connecting-piece d by rivets or any other suitable connection, as shown in Fig. 3.

The back is preferably secured to the cross-bar a^2 by screw-eyes e , which are inserted in the bottom of the bar a^2 , into which the wire is fastened in a well-known manner. The flexible supporting-strips b^2 of the seat are connected at their outer ends to the cross bar or run a^3 at the front of the frame aa . No other connection is formed between the frame and the back and seat. The result of this construction is that the rigid angular connecting-pieces d operate in the nature of bell-cranks to cause any movement of the flexible seat b to be transmitted to the flexible back c —that is to say, a depression of the flexible seat b^2 will produce a downward movement of the horizontal leg of the connecting-pieces d . This will produce an inward movement

of the top of the vertical leg of said connecting-piece, thus producing an inward movement of the back, as shown in dotted lines in Fig. 2. The result of this construction is that the seat and back are both adjusted to the person of the occupant by the weight of the occupant upon the chair.

In order to secure a yielding or cushion edge for the front of the seat, I preferably construct the cross bar or run a^3 with a central depression, as shown at a^4 , by cutting away the top of said bar, so that the flexible slat or slats b' of said seat, which stand over said bar, will be supported at the ends only, thus permitting a certain amount of flexibility to the seat at this point, permitting it to yield under the weight of the occupant.

A chair as thus described, it will be seen, is extremely simple in its construction, while at the same time it is readily and automatically adjustable to the person of the occupant by the weight of the occupant upon the seat.

Having thus described my invention, I claim—

1. In a chair, a supporting-frame and a flexible back and seat joined together by rigid angular connecting-pieces and supported in said frame at the top and front only of said back and seat, respectively, substantially as specified.

2. In a chair, a supporting-frame, a flexible seat and back arranged at an angle to each other and connected together by rigid angular connecting-pieces, a supporting-bar on said frame, from which the back is suspended at the top, and a cross-bar from which the front of said seat is suspended, substantially as specified.

3. In a chair, a supporting-frame having the top and front cross-bars, as described, a

flexible back suspended from said top cross-bar, said back being composed of a series of slats and flexible supporting-wires, rigid angular connecting-bars attached to said wires, and a flexible seat attached at one end to the front cross-bar of said frame and at the other to said angular connecting-bars, substantially as specified.

4. In a chair, a supporting-frame having a cross-bar at or near the top, flexible supporting-wires connected to said cross-bar, connecting pieces or slats attached to said flexible wires, rigid angular connecting-pieces below said slats, also connected to said wires, flexible seat-supporting strips connected to said angular connecting-pieces, and cross bars or slats on said flexible supporting-strips, said flexible supporting-strips being connected to a cross-bar at the front of said seat in said frame, substantially as specified.

5. In a chair, a flexible back and a flexible seat and rigid angular connecting-pieces forming a connection between said back and seat, said connecting-pieces being provided with projecting ears or flanges to which the back is connected, substantially as specified.

6. In a chair, a flexible back formed with transverse slats and supporting flexible wires, rigid angular connecting-pieces having ears or flanges perforated to receive said wires, said wires being bent and secured in the body of said angular pieces, and a flexible seat connected to said back by said angular connecting-pieces, substantially as specified.

In testimony whereof I have hereunto set my hand this 16th day of March, A. D. 1892.

JOHN W. HAMILTON.

Witnesses:

PAUL A. STALEY,
FRANK WATT.