Nov. 16, 1937. O. R. PLATTER 2,099,498

FOLDING CHAIR

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Fig. 1.

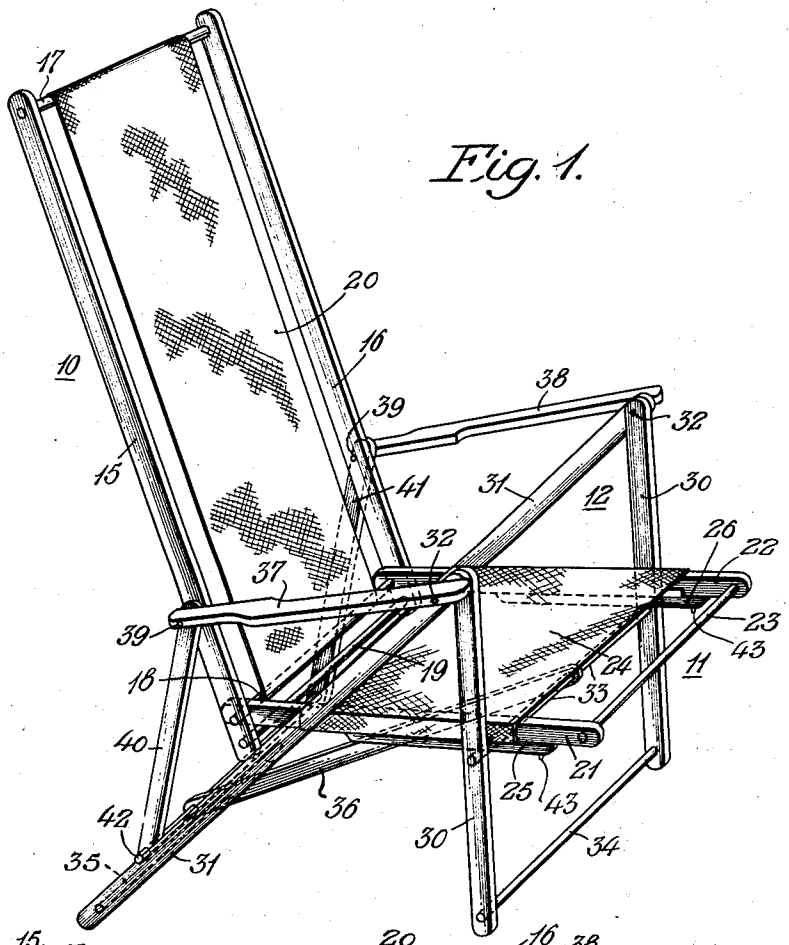
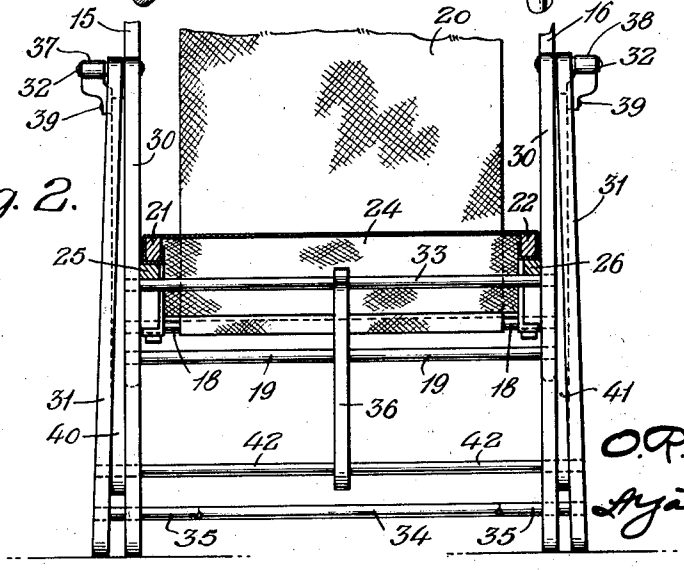


Fig. 2.



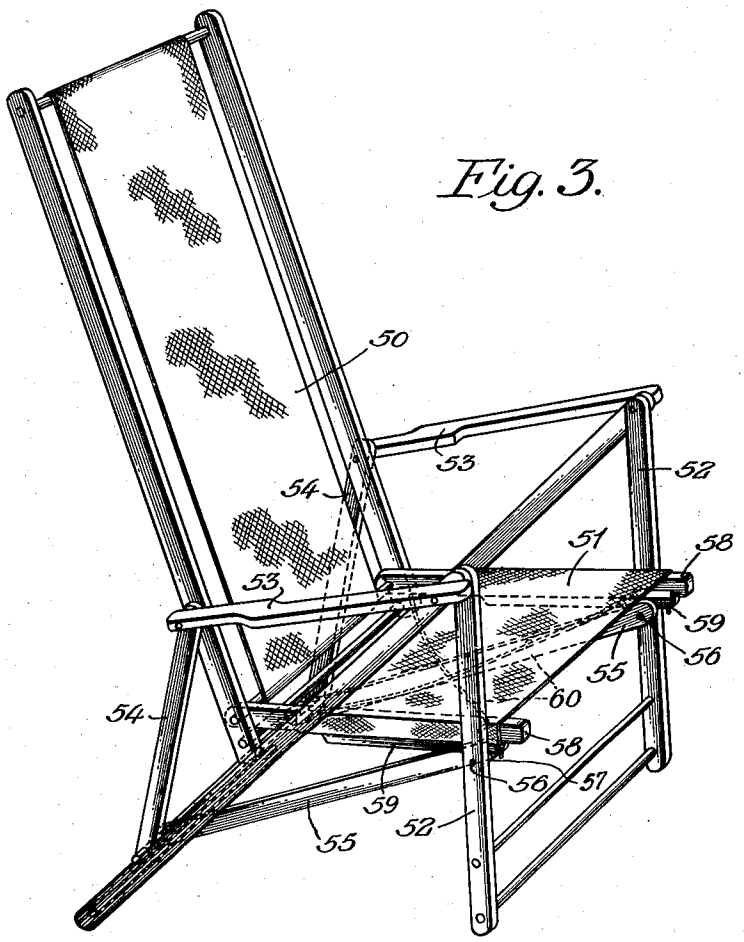
INVENTOR
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Nov. 16, 1937. O. R. PLATTER 2,099,498

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Fig. 3.



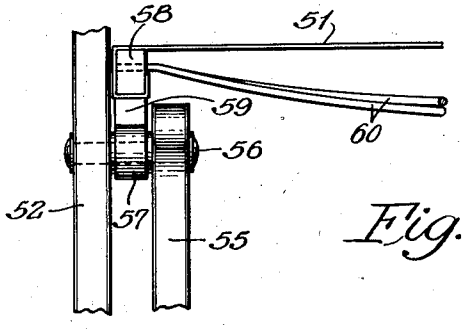


Fig. 4.

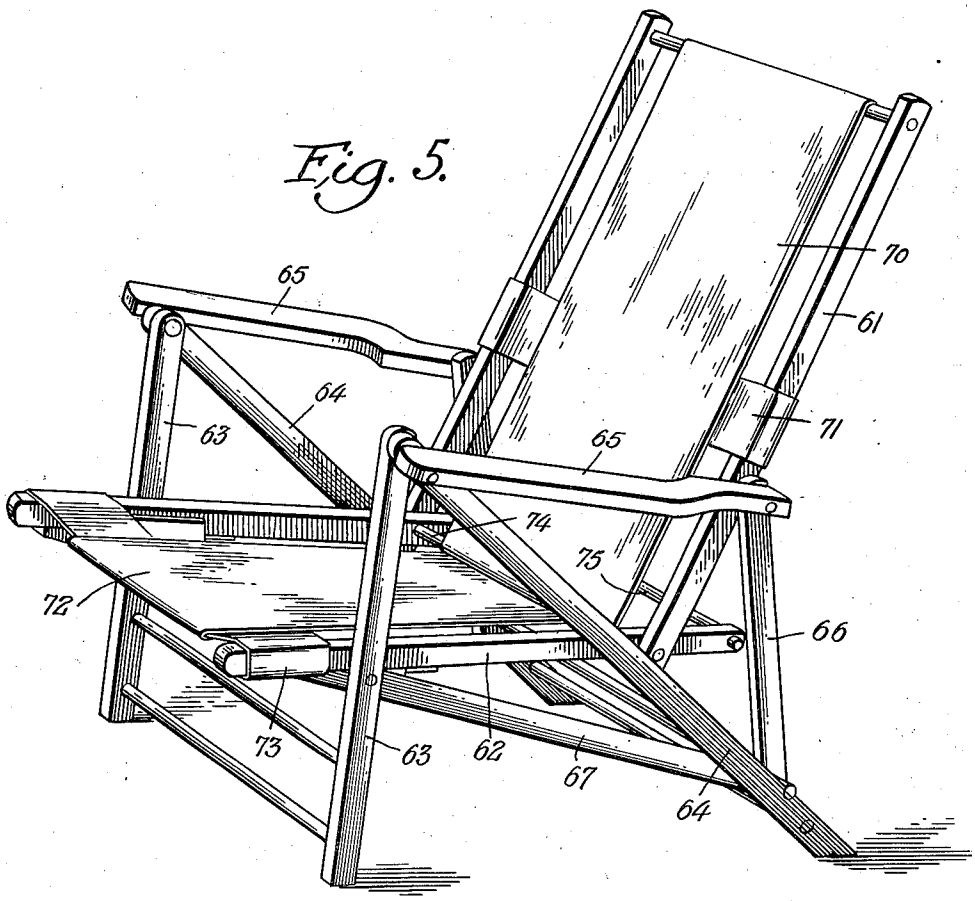
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Fig. 5.



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FOLDING CHAIR

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Fig. 6.

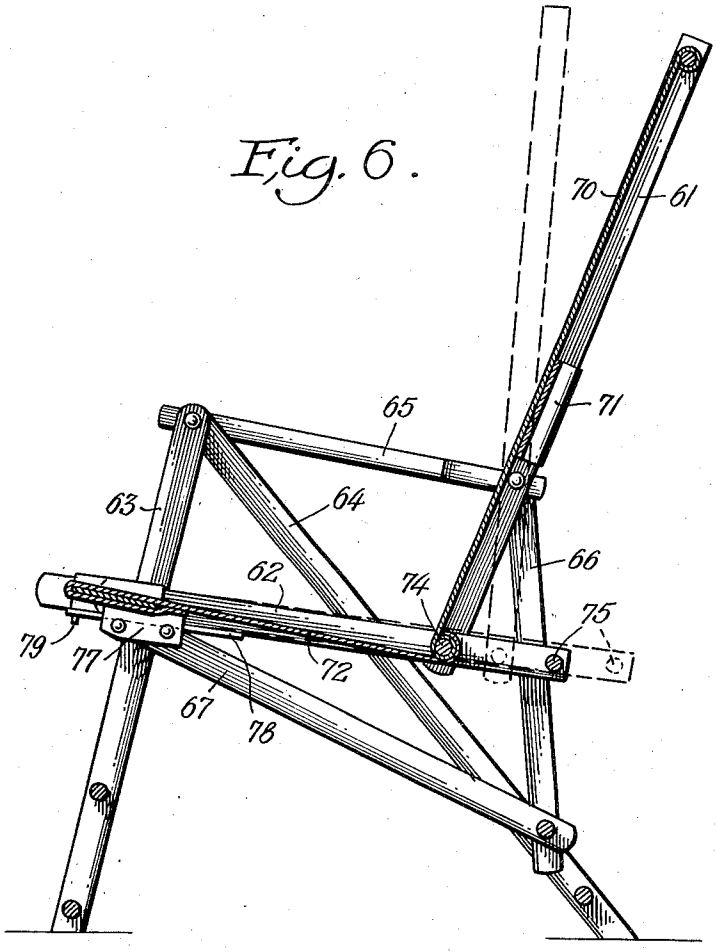
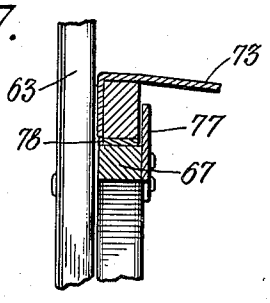


Fig. 7.



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Patented Nov. 16, 1937 2,099,498

UNITED STATES PATENT OFFICE

2,099,498

FOLDING CHAIR

Orval R. Platter, North Vernon, Ind., assignor to North Vernon Industries, Inc., North Vernon, Ind., a corporation of Indiana

Application February 12, 1935, Serial No. 6,251

7 Claims. (Cl. 155—117)

This invention relates to folding or collapsible beach chairs or the like, and it is an object of the invention to provide an improved chair of simple construction in which the inclination of the back of the chair can be readily adjusted to afford comfort in use; and further to provide a chair of the above mentioned character having a sliding or adjustable seat pivoted to the back portion of the chair and supported and constructed in an approved manner; and further to provide a folding chair having a minimum number of cross bracing members but which will be sturdy and well braced when set up.

Other objects and advantages of the invention will appear from the following description of the several embodiments thereof shown in the accompanying drawings wherein—

Fig. 1 is a perspective view of a chair embodying the invention,

Fig. 2, a front elevation view partly in section of the leg and seat portions of the same,

Fig. 3, a perspective view of a modified construction,

Fig. 4, a detail view of a portion of the chair shown in Fig. 3,

Fig. 5, a perspective view of a further modification,

Fig. 6, a longitudinal sectional view of the chair shown in Fig. 5, and

Fig. 7, a detail view of the support for the seat.

Referring particularly to Figs. 1 and 2, a chair embodying the invention may comprise pivotally connected back, seat and leg frames 10, 11 and 12 respectively arranged to be collapsible when not in use in substantially the same manner as in the case of the chair described and claimed in my copending application, Ser. No. 711,745, patented November 5, 1935, Patent No. 2,020,207. The back frame 10 comprises two side rails 15 and 16 connected at the upper and lower ends by cross members or cross bars 17, 18 and 19. A strip 20 of heavy canvas or other suitable material is mounted upon the back frame 10 to form the back of the chair, as for example by attaching the same to the cross members 17 and 18.

The seat frame 11 comprises side rails 21 and 22 pivotally supported on the back frame, as for example upon the cross bar 18, and connected together at their front ends by a cross bar 23. A strip 24 of canvas or other suitable flexible material is secured to the seat frame 11 to form the seat of the chair, as for example by means of the clamping strips 25 and 26 underneath the side rails and arranged to fasten the ends of the seat strip to said rails, said strips also serving as glider strips or runners as will be hereinafter more fully described.

Each of the leg frames comprises a front leg 30 and a rear leg 31 pivotally secured together at or near their upper ends by a pin or bolt 32 to form an inverted V-shaped folding frame. The front legs 30 are connected together by upper and lower cross bars 33, 34 and the rear legs 31 are connected together by a similar cross bar 35.

Arm rests 37 and 38 are pivotally connected at the sides of the chair between the upper ends of the leg frames 12 and the sides of the back frame 10, as for example by the pins or bolts 32 on the leg frame and the pin or bolts 39 on the side rails 15 and 16 of the back frame 10. Supporting members or props 40 and 41 are likewise pivoted to the back frame, preferably by the pins or bolts 39. The supporting members 40 and 41 are connected together at their lower ends by a cross bar 42 which extends laterally beyond the supporting members, the ends of said cross bar being adapted to engage a notch or groove in each of the rear legs 31 when the chair is set up. In order to fold the chair, the rod or cross bar 42 is disengaged from the rear legs whereupon the back and seat frames, the front and rear legs 30 and 31, the arm rests 37 and 38 and the supporting members or props 40 and 41 may be compactly folded.

In order to brace the leg frames of the chair when the chair is set up a bracing member 36 connects the cross bars 33 and 42. The bracing member 36 is preferably disposed midway between the leg frames as shown so that adequate bracing is effected by a single bracing member in place of the two or more members ordinarily employed. When the chair is set up the back of the chair may be adjusted as desired by the occupant, the back frame 10 being pivotally movable with respect to the leg frames and arm rests upon the pins or bolts 39. Tilting of the back of the chair causes the seat frame 11 to slide forwardly or backwardly upon the cross bar 33, the strips 25 and 26 connected to side rails 21 and 22 constituting glider strips bearing upon the bar 33. Suitable stop members such as pins 43 may be provided upon the clamping strips 25 and 26 in order to limit the movement of the seat frame rearwardly. The seat frame is limited in its movement in the opposite direction by the engagement of the cross bar 19 upon the lower end of the back frame 10 with the under side of the

side rails 21 and 22 of the seat frame. This bar 19 also limits the inclination of the back with respect to the seat with the forward portion of the seat resting on the seat supporting bar 33.

It will be apparent that the described construction provides a chair having a minimum number of component parts and that said component parts are of simple character. The detailed construction of the chair, including the seat frame and the supporting members therefor may be modified without departing from the scope of the invention. Thus, as shown in Fig. 3, the cross bar at the front of the seat frame may be omitted thereby providing a more comfortable chair.

The chair shown in Fig. 3 comprises a back 50, a seat 51, leg frames 52, arm rests 53 and props 54 arranged in substantially the same manner as in the chair shown in Figs. 1 and 2. In place of the central bracing member 36 two members 55 are provided adjacent the leg frames 52. The bracing members 55 are secured at their front ends to the front legs of the frames 52 by the pins or bolts 56. Rollers 57 are also pivotally supported by the bolts 56 and are interposed between the legs 52 and bracing members 55. The side rails 58 of the seat frame are attached to the seat 51 as for example by the glider strips 59 adapted to slide upon the rollers 57. When the chair is set up the side rails 58 are braced apart by reason of the location of the glider strips 59 between the front legs 52 and the upper ends of the bracing members 55. When the chair is folded the side rails 58 are held apart by the reenforcing bars or wires 60 which may be relatively light and flexible because they are not required to withstand the strain imposed by the weight of the occupant when the chair is set up. The bars or wires 60 are preferably bowed downwardly as shown more clearly in Fig. 4 in order that the seat 51 shall not contact therewith when the chair is occupied. Obviously the form and arrangement of the cross members or cross bars 60 underneath the seat may be modified, if desired.

A further modification of the seat and the supporting means therefor is shown in Figs. 5 to 7. The chair shown in these figures comprises a back frame 61, a seat frame 62, front and rear legs 63 and 64 on each side of the chair, arm rests 65 and supporting members or props 66 pivoted together in substantially the same manner as in the chairs shown in Figs. 1 to 4. The legs 63 and 64 are braced apart by the bracing members 67 corresponding to the members 55 in Figs. 3 and 4, said bracing members being pivoted near the front ends thereof to the front legs 63 and arranged to support the side rails of the seat frame 62. The back and seat of the chair may comprise strips of canvas or other flexible material. As shown, the back of the chair is formed by a longitudinal canvas strip 70 and a cross strip 71, and the seat comprises strips 72 and 73. The usual cross bar between the front ends of the side rails of the seat frame 62 is omitted and cross bars 74 and 75 are provided at the rear end of said frame. The cross bar 74 forms the pivotal connection between the seat and back frames and the cross bar 75 is arranged behind the cross bar 74 to impart the necessary rigidity to the seat frame when the chair is folded. When the chair is set up the side rails of the seat frame are held apart by engagement with the guide plates 77 riveted or secured in any desired manner to the upper ends of the bracing members 67. A glider strip 78 may be secured to the underside of each of the side rails of the seat frame 62 for engagement with the supporting members 67. Upon the tilting of the back frame when the chair is in use the extent of movement of the seat and back frames is limited by the stop pins 79 arranged to abut against the ends of the bracing members 67.

Various embodiments of the invention have been described in detail for purposes of illustration but it will be apparent that further modifications of the construction of the chair may be made without departing from the scope of the invention as defined in the appended claims.

I claim:—

1. A folding chair including, leg frames at each side of the chair each comprising a front and a rear leg pivotally connected adjacent to their upper ends, back and seat frames each having side rails pivotally connected adjacent to the rear end of the seat frame and lower end of the back frame as a rear supporting means for the seat, means between the rear legs of said leg frames and pivotally connected with the side rails of the back for supporting the back, an arm rest between the pivot of the supporting means for the back and the upper ends of each leg frame, a seat and back of flexible material on the seat and back frames, means for securing said flexible material seat on said seat frame including strip members secured to the lower portions of the side rails of the seat frame clamping the flexible seat material to said side rails of the frame, and means cooperating with the front legs of said leg frames and the under side of said seat material securing strips for slidingly supporting the forward portion of said seat frame.

2. A chair comprising side frames connected by cross bars, a back pivotally supported between said side frames, a seat pivotally supported by the back and slidable on one of said cross bars, said seat comprising side bars and a flexible strip of material extending over the sides thereof, clamping strips securing said flexible material on the under sides of the seat side bars and said strips slidingly engaging said supporting cross bar.

3. A chair comprising side frames connected by cross bars, a back pivotally supported between said side frames, a seat pivotally supported by the back and slidable on one of said cross bars, said seat comprising side bars and a flexible strip of material extending over the sides thereof, clamping strips securing said flexible material on the under sides of the seat side bars and said strips slidingly engaging said supporting cross bar, and stop pins on the seat for limiting the movement of the seat with respect to the frames.

4. A folding chair comprising foldable leg frames, a back frame pivoted to the leg frames, a seat frame pivoted to the back frame and supported on the leg frames, said leg frames including front and rear legs pivotally connected together at each side of the chair and said seat frame including side frame members, a strip of flexible material connected to the seat side frame members and providing a seat proper, means connecting the seat side frame members to one another at a point remote from the front extremity of the seat leaving the said extremity open and free of unyielding cross connecting members, and means carried by the front legs of the chair and said seat side frame members for

slidingly supporting the seat for backward and forward movement when the chair is set up.

5. A folding chair comprising foldable leg frames, a back frame pivoted to the leg frames, a seat frame pivoted to the back frame and supported on the leg frames, said leg frames including front and rear legs pivotally connected together on each side of the chair and said seat frame including side frame bars, a strip of flexible material connected to the seat side bars and providing a seat proper, cross members connecting the seat side frame bars to one another at a point remote from the front extremity of the seat leaving the said extremity upon and free of unyielding cross connecting members, and means carried by the front legs of the chair and said seat side rails for slidably supporting the seat for backward and forward movement when the chair is set up, said latter means being provided with means to brace the seat side bars against inward movement.

6. A folding chair comprising foldable leg frames, a back frame pivoted to the leg frames, a seat frame pivoted to the back frame and supported on the leg frames, said leg frames including front and rear legs pivotally connected together at each side of the chair and said seat frame including side frame rails, a strip of flexible material connected to the seat side rails and providing a seat proper, cross members connecting the seat side rails to one another at a point remote from the front extremity of the seat leaving the said extremity open and free of unyielding cross connecting members, means connected to the front legs providing grooved supports for the front extremities of the seat side rails when the chair is set up, said latter rails being provided with runners adapted to engage said supports when the chair is set up whereby the said side rails are slidably supported for backward and forward movement and at the same time braced against inward movement.

7. A folding chair comprising foldable leg frames, a back frame pivoted to the leg frames, a seat frame pivoted to the back frame and supported on the leg frames, said leg frames including front and rear legs pivotally connected together on each side of the chair and said seat frame including side frame bars, a strip of flexible material connected to the seat side bars and providing a seat proper, means connecting the seat side bars to one another at the rear extremity of the seat leaving the front extremity thereof open and free of unyielding connecting members, means carried by the front legs of the chair and said seat side rails for slidably supporting the seat for backward and forward movement when the chair is set up, said latter means being provided with means to brace the seat side bars against inward movement, and means connecting the seat side bars to one another to brace said bars against inward movement when the chair is folded and the seat raised.

ORVAL R. PLATTER.