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FOLDING CHAIR HAVING A FOLDING FOOTREST

Filed March 4, 1946

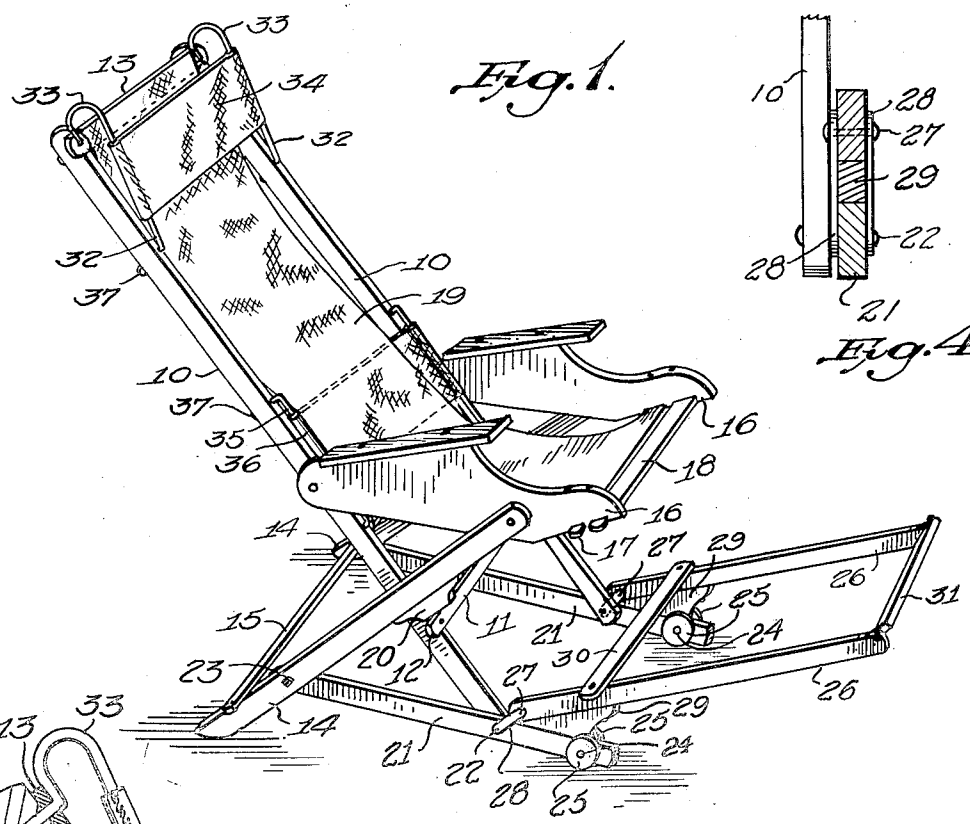


Fig. 4.

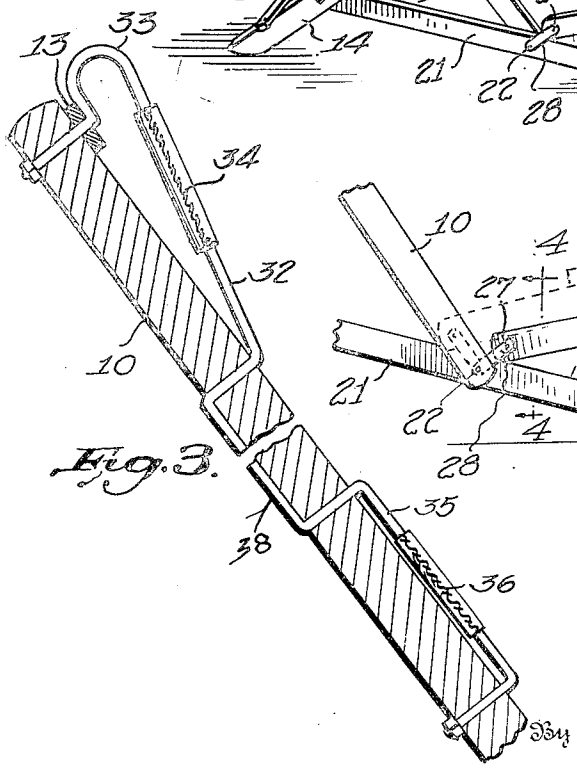


Fig. 3.

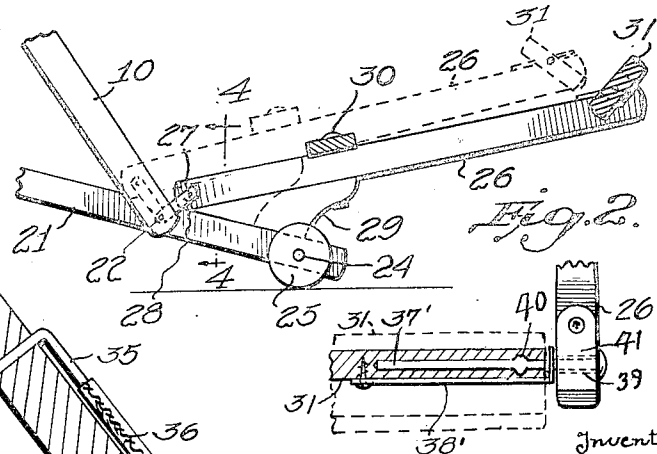


Fig. 2.

Fig. 5.

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FOLDING CHAIR HAVING A FOLDING FOOTREST

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1 Claim. (Cl. 155—171)

1

This invention relates to folding reclining chairs of the type commonly known as porch or lawn chairs.

More particularly the present invention relates to certain improvements in the chairs shown and described in my prior Patents 1,821,107 and 1,875,478.

One important object of this invention is to provide an improved form of foot rest shiftable between protracted and retracted positions so that it may be engaged by the feet when protracted or by the calves of the legs when retracted. Also, this improved foot rest adapts the chair to comfortable use by long and short legged persons.

A second important object of the invention is to provide an improved adjustable head rest for such a chair.

A third important object of the invention is to provide an improved adjustable back rest for such a chair.

A fourth important object of the invention is to provide improved means for stabilizing the foot rest against lateral sway when protracted.

With the above and other objects in view, as will be presently understood, the invention consists in general of certain novel features of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a perspective of the chair unfolded and with the foot rest in protracted position.

Figure 2 is an enlarged detail view in vertical section showing the foot rest protracted in full lines and retracted in broken lines.

Figure 3 is an enlarged detail showing a modification of the head and back rest arrangement.

Figure 4 is an enlarged detail section on the line 4—4 of Figure 2.

Figure 5 is a detailed view, partly in elevation and partly in section, showing the pintle arrangement for a foot rest used herein.

Referring to the chair in its set-up or erected position as shown in Figures 1 and 2, the back frame will be seen to consist of a pair of laterally spaced upwardly and rearwardly extending side bars 10 which are connected adjacent their bottom ends by a back frame cross bar 11. This bar lies in front of the bars 10 and its ends project outwardly beyond the bars 10 to form stops 12, the purpose of which will be presently explained. At the upper ends of the bars 10 these bars are

2

connected by an upper back frame cross bar 13.

The seat frame consists of two upwardly and forwardly extending side bars 14 which are connected adjacent their lower or rear ends by a rear seat frame cross bar 15. The upper or forward ends of the bars 14 are pivoted on the outside of arm bars 16 intermediate their ends and the rear ends of the arm bars 16 are pivoted to the bars 10 on the outsides thereof. These arm bars thus project forwardly of the bars 14 and beneath the forward ends of the bars 16 are secured the seat cross bars 17 and 18, the former being behind the latter and carrying one end of a fabric back and seat strip 19 which has its remaining end secured to the bar 13. On the under sides of the bars 14 are secured the bumper pieces 20 which, in the most forwardly inclined position of the back engage the stops 12 and thus limit such forward movement. It is to be noted that the members 16 tie the members 10 and 14 together above their points of intersection and may thus be termed upper tie members. Pivoted intermediate their ends to the lower ends of the members 10 are the lower tie members 21, bolts 22 forming this pivot connection. The rear ends of the members 21 are connected by bolts 23 to the members 14 at points spaced above the lower ends of the latter thus causing the members 21 to incline forwardly and downwardly when the chair is set up. The members 21 lie on the outer sides of the members 10. Extending through the forward end of each member 21 is a bolt or axle 24 the ends of which project in both directions so as to each support a pair of wheels 25 which support the forward ends of the members 21 in rolling relation to the ground or floor.

The foot rest includes a pair of side members 26 of the same thickness as the members 21. The sides of the members 26 lie in the same vertical planes as the corresponding sides of the members 21. The rear end of each side 26 carries a bolt 27 whereon is pivoted a pair of links 28 having their remaining ends pivoted on the respective bolt 22. Each pair of links 28 straddles a member 21 so that one link lies on the outer sides of the members 21 and 26 and the other on the inner side of said members and between the members 10 and 21. By this arrangement the member 10 is out of alignment with member 26 so that the latter may swing freely between the full and dotted line positions of Figure 2. Under the rear portion of each member 26 is a support 29 which engages on the member 21 to support the rest in forwardly and upwardly inclined position both when retracted and when protracted. Further,

in protracted position the support 29 lies between the wheels of a respective pair of wheels and when retracted the inner link 28 engages the inside of the member 10. Thus, the members 26 are restrained from lateral movement in both positions. Near their rear ends the members 26 are connected by a cross bar 30 and at their forward ends they carry a tiltable bar 31 for foot or calf engagement.

The head rest has a pair of side rods 32. One end of each rod 32 extends through end portions of members 10 and 13 and is bent at 33 to form a bolt attachment to one of these members. From the bends 33 these members incline downwardly and pass through the members 10. A webbing strip 34 has its ends sewed to form tubes slidable longitudinally of the members 34 so that this head rest may be vertically adjusted by simple sliding movement. The head rest, of course, lies in front of the back strip 19.

The back rest includes a pair of rods 35 having their ends extending through the members 10 and on these rods is slidably mounted a webbing strip 36 which lies behind the back strip 19 and is adjustable longitudinally thereof.

In the form shown in Figure 1 the rods 32 and 35 are made from separate lengths of rod and the lower ends of rods 32 and upper ends of rods 35 are secured by nuts 37. In the form shown in Figure 3 the nuts 37 are eliminated and the corresponding ends of members 32 and 35 are connected by a stretch 38 so that each head and back rest rod is made from a single length of material.

In folding the chair it is simply necessary to swing the member 15 upwardly and then swing the member 31 upwardly as shown in my prior Patent 1,875,478.

As shown in Figure 5 at each end of the foot rest 31 there is provided an L-shaped plate 38' which is secured to rest 31 by screws or other suitable means. A pintle 37' passes through one end of each member 26 and into the rest 31. This pintle is provided with an enlarged portion 40 to securely hold the pintle in the foot rest. The outer portion of each pintle passes through the short leg of one of the L-shaped members 38' and rests in a slot 39 in the member 26. When thus assembled a plate 41 is secured to the member 26 by rivets or the like to cover the slot 39 and thus hold the outer end of the pintle in the slot whereby the foot rest may readily turn.

It is to be noted that the member 35 as shown in Figure 1 can go entirely through the bar 10 and can be secured by nuts 37 or any other suitable securing means or the ends of the member 35 may be pointed and driven into the bar 10 to a sufficient depth to hold the member in position to receive the webbing 36.

What is claimed, is:

In a folding chair a back frame including spaced side members and lower tie members in sidewise relation to said side members and pivoted thereto, a rest frame including side members spaced equally with the lower tie member and positioned in alignment therewith thereabove at their rear ends, elongated links connecting the rear ends of the rest frame sides with said tie members whereby the rest frames may swing forwardly and rearwardly on said tie members, the rear ends of the rest frame side members being provided on the undersides with supports engaging the tie members at the lower limit of swinging movement of said rest frame, and a pair of wheels at the forward end of each said tie member, said supports resting between the wheels of respective pairs in forward position of the rest frame, whereby said wheels prevent lateral movement of the rest frame at its connection with said links.

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