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FOLDING ROCKING CHAIR

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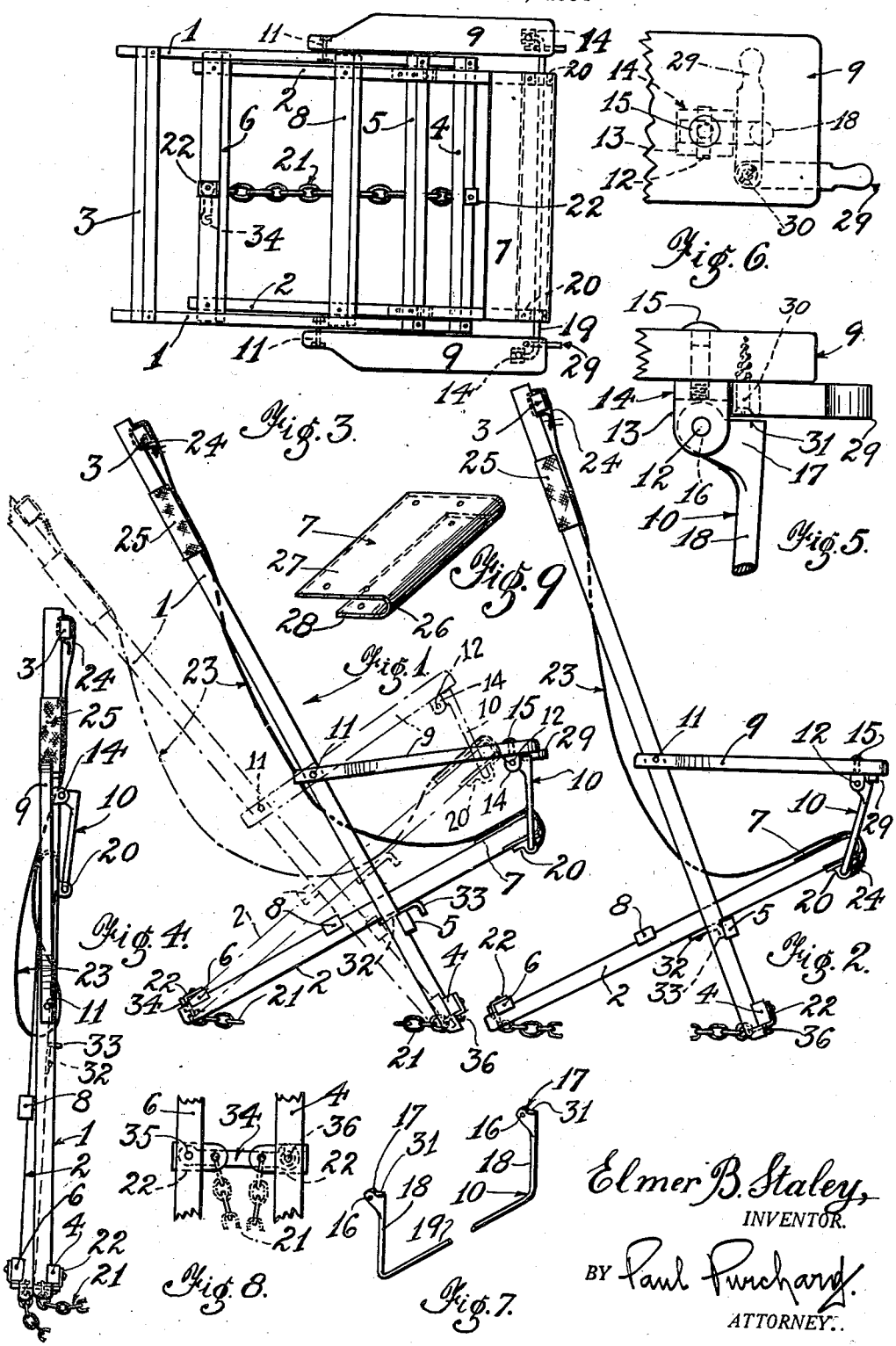


Fig. 3.

Fig. 6.

Fig. 5.

Fig. 9

Fig. 1.

Fig. 4.

Fig. 2.

Fig. 8.

Fig. 7.

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FOLDING ROCKING CHAIR

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4 Claims. (Cl. 155—56)

This invention relates to folding chairs and more in particular to such chairs having flexible seats and back-rests made, preferably, of canvas or other suitable textile material; said chairs being generally known as lawn-chairs or deck-chairs.

One of the primary objects of this invention is to provide a rockerless foldable lawn-chair which is constructed to afford considerable rocking movement to its occupant.

A further object of this invention is to provide a folding chair in which the inclination of the back-rest may be changed into a more vertical position and maintained in such position rigidly or for rocking movement.

Another object of this invention is to provide a chair of this character which may be readily folded into substantially flat form, thus reducing the space required for storing the chair away or for transporting same; this chair being also adapted for equally rapid opening into seating condition.

Still another object is to produce a folding-rocking-chair which does not creep on the supporting surface while being rocked, as usually occurs with the common type of rocking-chair provided with curved rockers.

Furthermore, this invention is intended to cover folding-rocking-chairs possessing all the aforementioned features, which are simple in construction, strong, safe, light in weight and which are well suited for mass production at relatively low cost.

Additional features and advantages of this invention will appear in the following description considered in connection with the accompanying drawing forming part of this application.

In the drawing:

Fig. 1 is a side elevation of a folding-chair built in accordance with this invention, showing the two extreme positions in which the chair may be rocked.

Fig. 2 is a side elevation of the folding-chair showing the back-rest thereof adjusted in a more vertical position and transformed into a substantially rigid, non-rocking, chair.

Fig. 3 is a top plan view of Fig. 1, the canvas seat and back-rest being omitted.

Fig. 4 is a side elevation of the chair in its fully folded position.

Fig. 5 is a fragmentary side elevation of the mechanism used to hold the back-rest of the chair in a more erect position.

Fig. 6 is a top plan view of Fig. 5.

Fig. 7 is a perspective view of the common support for both arm-rests of the chair.

Fig. 8 is a fragmentary top plan view showing one method of holding the chair in its fully collapsed condition.

Fig. 9 is a perspective view of the front rest plate of the seat of the chair.

Referring to the various figures of the drawing, a folding chair built in accordance with this invention comprises a frame structure composed of a pair of duplicate side members each consisting of the long leg 1 and the short leg 2 freely crossing each other. The long legs on both sides of the chair are rigidly held in proper spaced and parallel relation by means of the end cross-bars 3 and 4 and the intermediate front stop-bar 5. The short legs are similarly held for free sliding movement between the long legs by the lower cross-bar 6, the front rest-plate 7 and by the intermediate rear stop-bar 8.

The long and short legs are hingedly connected together by means of the arm-rests 9 and the substantially U-shaped arm-rest-support 10. The arm-rests are hingedly secured at the rear ends to their respective long legs by the pivot or pin connections 11 and at the front ends to the upper ends of the arm-rest-support by means of pin connections 12 passed through both wings 13 of the bearings 14 secured to the undersides of the arm-rests by the bolts 15, the pins also engaging holes 16 drilled in the hinge-heads 17 of the vertical legs 18 of said arm-rest-support. These legs are connected together and held parallel in a common plane by the transverse bar 19 formed integrally therewith. The transverse bar is rockably mounted in suitable bearings 20 secured on the undersides of the forward ends of the short legs. A flexible element, such as the chain 21, serves to hold the lower ends of the legs at the proper distance; it is attached to the L-shaped cleats 22 secured midway of the cross-bars 4 and 6.

The flexible seat 23, preferably made of canvas, is secured at the upper end to the cross-bar 3 and at the lower end to the transverse bar 19, suitable tubular hems 24 being sewed in the canvas to receive said holding means. A cross strap 25, also of textile material, spanning the space between the long legs 1 and suitably secured thereto at the desired height, is used to provide an additional flexible support at the back of the seat 23.

The front-rest 7 is preferably made of sheet metal and is folded over to form a rounded bend 26 and is adapted to receive the rounded ends of the short legs between its flat sides 27 and 28. This front-rest not only holds the front ends of the short legs together, but it also provides a comfortable support for the popliteal parts of the occupant's limbs.

Adjustment of the back-rest into the more upright position illustrated in Fig. 2 is obtained by means of a metal pivoted stop 29 pivotally mounted at 30 on the underside of each arm-rest 9. When these stops are placed in a position substantially parallel to the heads 17 of the arm-

rest-support **10**, they will enable the latter to assume the substantially vertical position shown in solid lines in Fig. 1. However, when these stops are turned about at right angles into the position shown in dot and dash lines indicated in Figs. 5 and 6, so as to lay between the undersides of the arm-rests and the flats **31** in the heads **17** of the arm-rest-support, the latter will assume the forwardly inclined position and force the long legs **1** into the more upright position shown in Fig. 2. If desired, backward rocking movement may be eliminated, when the chair is in its more upright position, by means of the L-shaped metal stops **32** secured in the proper position on the underside of the short legs, so that the stop-lugs **33** will bear against the back side of the front stop-bar **5**. This position of the chair is especially suitable when the occupant of the chair is sewing, knitting or desires to assume a more erect sitting posture.

By raising the short legs, the stop-lugs **33** may be positioned ahead of the stop-bar **5** to permit of backward rocking of the chair, as indicated in Fig. 1.

A collapsed chair of this construction may be readily opened into seating position by simply pulling the forward ends of the short legs downwardly, thereby also causing the arm-rests **9** to assume the nearly horizontal position shown in solid lines in Fig. 1. An upward swing of said forward ends will collapse the chair into the position shown in Fig. 4, whereby the arm-rests will assume a longitudinal position in line with the legs of the chair, thus reducing the space requirement of the folded chair to a minimum.

The chair may be held in its fully collapsed position by means of a latch-hook **34** pivotally mounted at **35** on the cross-bar **6**, said latch-hook being adapted to engage a headed pin **36** secured in the cross-bar **4**.

To create a rocking motion, the occupant of the chair pushes upward with the tip of his or her feet resting on the ground to swing the back of the seat, respectively the long legs, into the extreme inclined position shown in dot and dash lines in Fig. 1, whereby the seat, arm-rests and the short legs will take the raised position similarly shown. The rounded ends of the legs resting on the floor act substantially as stationary pivots for the limited angular movement of said legs, and no creeping of the chair on the floor will be experienced while the sitter is rocking.

The backward rocking of the chair is limited by the rear sides of the long legs striking against the extensions of the back stop-bar **8** protruding beyond the short legs, and the extent of the forward swing is defined by the lower sides of the short legs striking against similar extensions of the front stop-bar **5**.

It will also be noted, that the strains occasioned by the rocking movements are taken up almost entirely by the rigid members of the chair and that the canvas seat is called upon to assume no other load except that due to the weight of the sitter.

While I have illustrated and described herein the preferred embodiment of my invention, and one which I have found to be practical, it may be thought desirable after continued experience to make slight changes in the construction, and arrangement of the details of my invention, and I intend to include in this application all such variations as fall within the scope of the appended claims.

I claim:

1. In a folding-chair of the character described, the combination of two pairs of intersecting legs, each pair comprising a long leg and a short leg; means to secure said long legs and short legs in spaced parallel cooperative relation; a flexible seat supported at its upper end by the long legs and at its lower end by the short legs; an arm-rest hingedly secured at the rear end to each long leg; a common arm-rest-support hingedly secured to the short legs; hinges connecting the front ends of the arm-rests to said support; pivoted stops hingedly mounted on the underside of the arm-rests and insertable between same and the arm-rest-support to reduce the relative angular movement therebetween.

2. In a folding-chair of the character described, the combination of two pairs of intersecting legs, each pair comprising a long leg and a short leg; means to secure said long legs and short legs in spaced parallel cooperative relation; a flexible seat supported at its upper end by the long legs and at its lower end by the short legs; an arm-rest hingedly secured at the rear end to each long leg; a common arm-rest-support comprising a cross-bar and a pair of parallel uniplanar legs having hinge-heads at their upper ends; means to hingedly connect said hinge-heads to the arm-rests; means to hingedly connect said cross-bar to the short legs; flats positioned on the hinge-heads, and pivoted stops hingedly mounted on the arm-rests and insertable between same and said flats to reduce the relative angular movement between said arm-rest and support thereof.

3. In a folding chair of the character described, the combination of two pairs of intersecting legs, each pair comprising a long leg and a short leg; means to secure said long legs and short legs in spaced parallel cooperative relation; a flexible seat supported at its upper end by the long legs and at its lower end by the short legs; an arm-rest hingedly secured at the rear end to each long leg; an arm-rest-support hingedly secured to each short leg; hinges connecting the front ends of the arm-rests to said supports, and pivoted stops mounted on said arm-rests and insertable between same and the arm-rest-supports to reduce the relative angular movement therebetween.

4. In a folding chair of the character described, the combination of two pairs of intersecting legs, each pair comprising a long and a short leg; means to secure said long legs and short legs in spaced parallel cooperative relation; a flexible seat supported at its upper end by the long legs and at its lower end by the short legs; an arm-rest hingedly secured at the rear end to each long leg; arm-rest-supports hingedly secured to the short legs; hinges connecting the front ends of the arm-rests to said supports; pivoted stops mounted on said arm-rests for pivotal movement in planes parallel therewith and insertable between same and the arm-rest-supports to reduce the relative angular movement therebetween.

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