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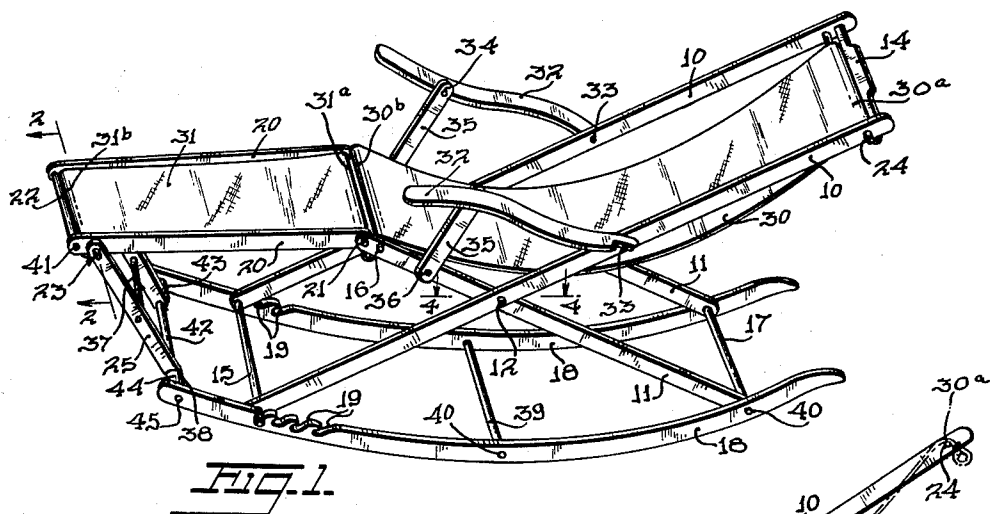
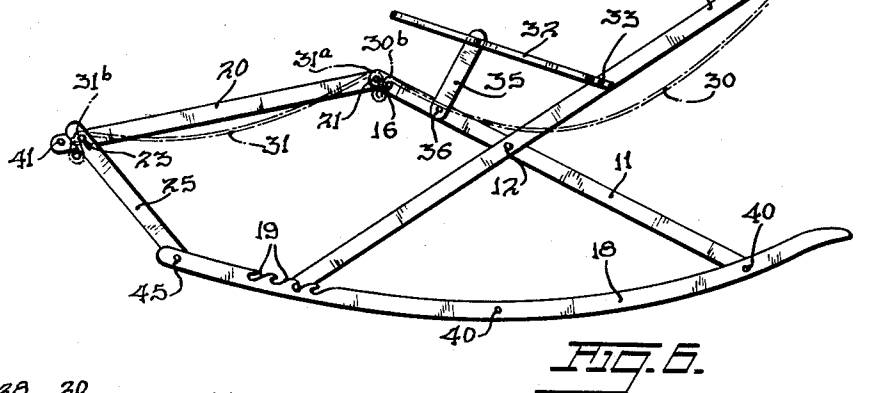
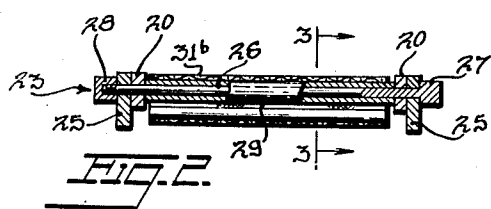
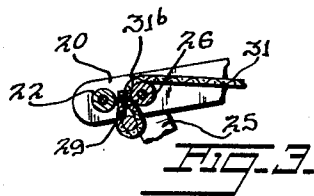
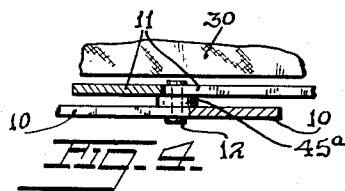
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2,543,543

COLLAPSIBLE BEACH ROCKING CHAIR

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2 Sheets-Sheet 1



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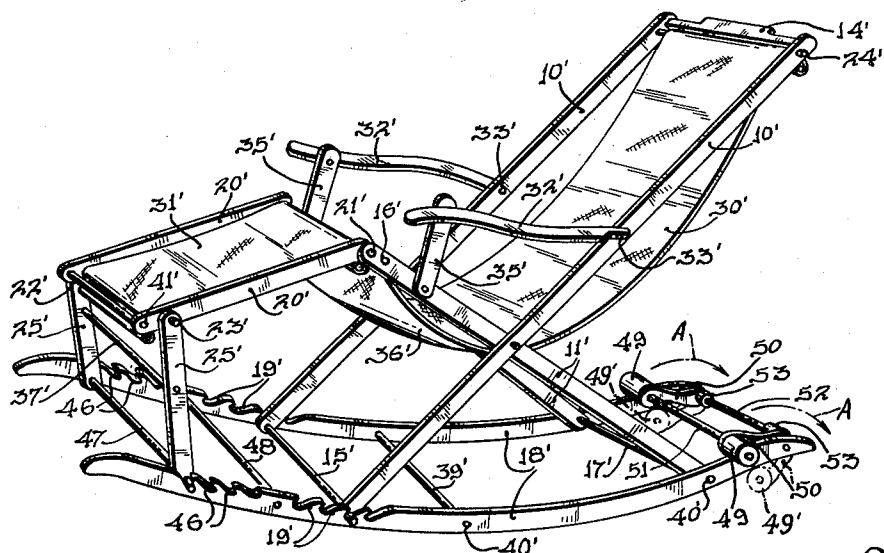


FIG. 7

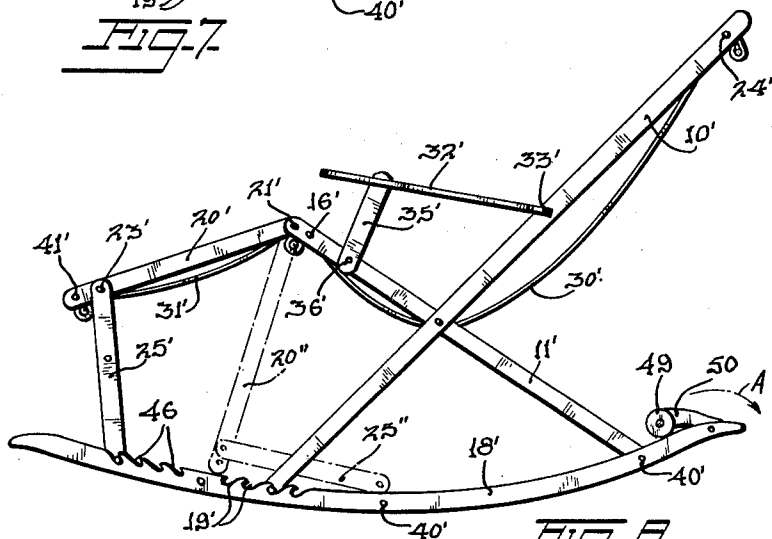
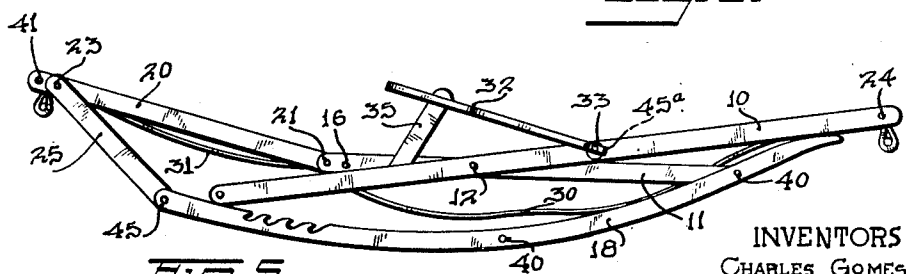


FIG. 8



UNITED STATES PATENT OFFICE

2,543,543

COLLAPSIBLE BEACH ROCKING CHAIR

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New York, N. Y.

Application August 14, 1947, Serial No. 768,610

1 Claim. (Cl. 155—76)

1 This invention relates to chairs, and particularly to a chair of the kind especially adapted for use as a piazza, deck or beach chair.

The general aim of the invention is to provide new and useful improvements in a rocking chair having inter-pivoted frame structures, and with canvas or other suitable flexible sheet elements variously arrangeable for constituting in combination with said frame structures supports for the seat, back and legs of an occupant of the chair.

An object is to provide a light weight, portable and collapsible arm chair which incorporates frame structures made up of straight members throughout, for giving an improved chair and yet one capable of being sold at a moderate price commensurate with the permitted low cost of manufacture.

A feature of the invention is the provision of readily removable securing means for the flexible elements, whereby the latter when soiled may be disconnected for laundering and when too worn may be removed for replacement by substitute elements.

Another feature of the invention is the provision of a means for practicably readjusting the said support for the legs of the chair occupant, to change its angle of inclination, independent of any resetting of other readjusting means provided for changing the angle of inclination of the back support; and this according to an arrangement, preferably, whereby said support for the legs may be even dropped substantially vertically, thus in effect to change the nature of the chair from a reclining, lounging or sun-bathing one to a chair in which the occupant may sit as in an ordinary chair having merely a seat support or merely seat and back supports.

A further feature of the invention is the provision of an instantaneously manipulable single means for transforming the chair when desired into one which is a non-rocking one.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a perspective view of one now preferred embodiment, in one adjustment of the parts.

Fig. 2 is an enlarged detail view, being a section taken on the line 2—2 of Fig. 1.

2 Fig. 3 is a section taken on the line 3—3 of Fig. 2.

Fig. 4 is also an enlarged detail view, being a section taken on the line 4—4 of Fig. 1.

Fig. 5 is a side elevational view of the chair of Figs. 1—4, collapsed.

Fig. 6 is a side elevational view of Fig. 1.

Fig. 7, like Fig. 1, is a perspective view, showing a modification, in one possible adjustment of the parts.

Fig. 8 is a side elevational view of the chair of Fig. 7.

Referring to the drawings in detail, and first particularly to Figs. 1—6, the chair shown includes the pair of like straight frame members 10, and the pair of like straight frame members 11. Each of the members 10 is pivoted to a different one of the members 11, as indicated at 12.

Above the pivots 12, the members 11 together provide the sides of the chair back, and below said pivots, said members provide the fore legs of the chair; said members being joined at their tops by a cross piece 14 and at their bottoms by a cross rod 15, thus establishing a rectangular quadrilateral frame.

Forward of said pivots 12 the members 11 provide the sides of the chair seat, and rearward of said pivots said members provide the rear legs of the chair; said members 11 being joined near their forward ends by a cross rod 16 and at their rear ends by a cross rod 17, thus establishing another rigid rectangular quadrilateral frame.

Said cross rod 17 also serves to pivotally couple the frame last mentioned and a pair of like rockers 18. Each of said rockers has a plurality of notches 19, and each of the notches of one rocker is aligned with a different notch on the other rocker. Within any selected pair of said aligned notches the oppositely projected ends of the cross rod 17 are adapted to rest.

Forward of the frame including the members 11 extend the two like straight members 20, joined at their rear ends by the cross rod 21 to the forward ends of the members 11; said members 20 being connected at their forward ends by a cross rod 22.

Set also in the rectangular frame thus established by the members 20 and the elements 21 and 22, this frame providing a leg support, is the cross rod 23. And set also in the frame established by the members 10 and the elements 14 and 15 is the cross rod 24.

The cross rods 16, 24, 21 and 23 are of like construction, the details of which construction are shown in Fig. 2, in connection with the cross rod

23; which details—it first being noted that a pair of like straight members 25 are suspended by the cross rod 23 from the frame which includes the members 20—will now be described.

Referring to said Fig. 2, said cross rod 23 is comprised of a rod 26 integrally carrying at one end a cylindrical head 27 and threaded at its other end. A cylindrical internally threaded head 28, like the head 27, is screwed on the threaded end of the rod 26. To maintain proper spread of the frame, a sleeve 29 is on the rod 26.

The cross rod 15 may, like the cross rods 16, 24 and 21, be of a construction similar to that just described, to maintain proper spread of the lower ends of the members 10 and to provide the end projections of the cross rod 15 which as already explained coact with the notches 19 of the rockers 18.

However, the purpose of providing the illustrated and described construction for the cross rods 16, 21, 24 and 23 is to make these readily withdrawable, for permitting a canvas back and seat member 30 and/or a canvas leg support member 31 to be readily removed for laundering. Each of the canvas members 30 and 31 at each of its opposite ends has a marginal portion folded under, and then stitched in place across the member as indicated in Fig. 1 at 30^a, 30^b, 31^a and 31^b. Thus at each end of each member 30 and 31 a hollow seam or transverse pocket is provided for receiving the main length of the appropriate one of the cross rods 16, 21, 23 and 24; thereby removably to hang in place the two canvas members as shown in Fig. 1, and as indicated in Fig. 3 in the case of the forward end of the canvas member 31.

The chair arms 32 are respectively pivoted as indicated at 33 to the members 10, and said arms are also pivoted at 34 to positioning struts 35 each pivoted to one of the arms 11.

The members 25 which depend from the leg support frame including the canvas 31, are themselves included in a frame completed by an intermediate cross rod 37 and a bottom cross rod 38, which latter serves also to pivotally connect said frame with the rockers 18. Said rockers are coupled intermediate their ends by a cross rod 39.

Said cross rod 39 is similar in construction to the cross rod 17 which couples the rear end portions of the rockers 18; each of said cross rods incorporating in a well known manner a central rod 40 headed over at opposite ends at the outer sides of the rockers and carrying a sleeve between the rockers. The same construction, including the central rod 41, is employed for the cross rod 22 at the forward end of the leg support including the canvas 31, and for the cross rod 37.

In the case of the cross rod 38 near the forward ends of the rockers 18, an analogous construction is employed, except that three sleeves 42, 43 and 44 are spaced along the central rod 45 here used.

The compact manner in which the chair may be collapsed is shown in Fig. 5; each member 11 being inwardly displaced from the adjacent member 10, at the pivot 12, by a spacer 45^a, as shown in Fig. 4. As the parts are shown in Fig. 1, almost a chaise longue is provided. According to the setting of the oppositely projected ends of the cross rod 15 in the various notches 19 of the rockers 18 the chair is rearranged. The farther back the selected notches, the closer the chair back is to the vertical.

Referring to the modification of Figs. 7 and 8, the parts there shown and marked with primed

reference numerals are the same or substantially the same, respectively, as the parts indicated in Figs. 1-6 by corresponding reference numerals without primes.

In Figs. 7 and 8, however, the rockers 18' are provided with a second series of notches 46. The frame including the members 25' is interchangeably engageable with different ones of the notches 46, and there is associated with the rear ends of the rockers 18' a single means instantaneously adjustable to transform the chair to a non-rocking one.

Thus, for coaction with said notches 46, the lower ends of the members 25' are connected by a cross piece 47 similar in construction to that of the cross piece 15'. By virtue of this provision, the angle of extension of the leg support frame including the canvas 31' may be changed, by adjustment of the members 25' relative to the notches, independently of variations of the chair back inclination, by adjustment of the members 10' relative to the notches 19'. Also, as shown in Fig. 7, the leg support frame including the members 20' may be lowered substantially to the vertical, as indicated in dot and dash at 29'', the frame including the members 25' becoming then disposed as shown at 25''. Because of the lack of pivotal fixation of the cross rod 47 relative to the forward ends of the rockers 18', the latter are connected by a cross rod 48 similar in construction to the cross rod 39'.

The single means for transforming the chair to a non-rocking one comprises a pair of cylindrical blocks 49 of fairly soft rubber or the like, which normally lie across the upper edges of the rockers 18', as shown in full lines. Supported on arms 50, the blocks 49 rest by gravity on the tops of the rockers 18', after being so placed when the chair is set up. Said arms 50 are apertured at their upper ends and extended through these apertures is a rod 51 on the opposite ends of which are secured the blocks 49. Said arms are also apertured at their lower ends, through which apertures there is extended a rod 52 joining the rockers 18' which at its opposite ends passes through the same. Collars 53 are fixed on the rod 52, to maintain the arms 50 spread to hold the blocks 49 across the tops of the rockers 18' when the blocks are to be inoperative. Whenever it is desired to render said blocks operative to make the chair a non-rocking one, the rod 51 is swung in a clockwise direction as indicated by the arrows A in Figs. 6 and 7 to transfer the blocks to the locations indicated in dot and dash at 49' in Fig. 7, under the bottoms of the rockers.

While we have illustrated and described the preferred embodiments of our invention, it is to be understood that we do not limit ourselves to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention, as defined in the appended claim.

Having thus described our invention, what we claim as new and desire to secure by United States Letters Patent is:

A chair comprising a pair of rockers, a first rectangular quadrilateral frame having straight side members, a second similar frame having straight side members, pivotal connections between each of the first named side members and one of the second named side members, said connections intermediate the ends of said side members, said first frame above said connections providing the side parts of a back sup-

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port framing means and below said connections providing a pair of fore legs for the chair and said second frame above said connections providing the side parts of a seat support framing means and below said connections providing a pair of rear legs for the chair, said rear legs near their lower ends pivoted to the rockers about fixed points thereon near their rear ends, said rockers forward of their mid portions having notches therein, means carried by said first frame and outwardly projected beyond the side members thereof adjacent the lower ends of said fore legs for co-engagement with selected ones of said notches, an elongated flexible sheet secured across one end to said first frame near its upper end, said sheet secured across its other end to said second frame near its forward end, said sheet acting as a seat and back support, there being a third rectangular quadrilateral frame having straight side members, said third frame pivotally connected at its rear end to said second frame near its forward end so that said members provide the side parts of a leg support framing means, an elongated flexible sheet secured across its opposite ends to said third frame near the opposite ends of the latter, said sheet acting as a leg support, there being a fourth rectangular quadrilateral frame having straight side members, said fourth frame pivotally connected at its top to the front end of said third frame, the rockers having other notches therein than those first mentioned, means carried by the fourth frame and outwardly projected beyond the opposite sides thereof for co-engagement with selected ones

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of the last named notches, whereby the inclination of said leg support may be varied independently of variation of the inclinations of said first and second frames, the means for thus securing said flexible sheets comprising cross rods one extending through the side members of said first frame and one extending through the side members of said second frame and two extending through the side members of said third frame, each of said cross rods having enlarged heads at opposite ends, one of said heads being removably carried by each cross rod for ready take-down of the cross rods to permit removal of said sheets, and one of said cross rods constituting the pivot-proper of the aforesaid means for pivotally connecting said second and third frames.

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