

Sept. 30, 1958

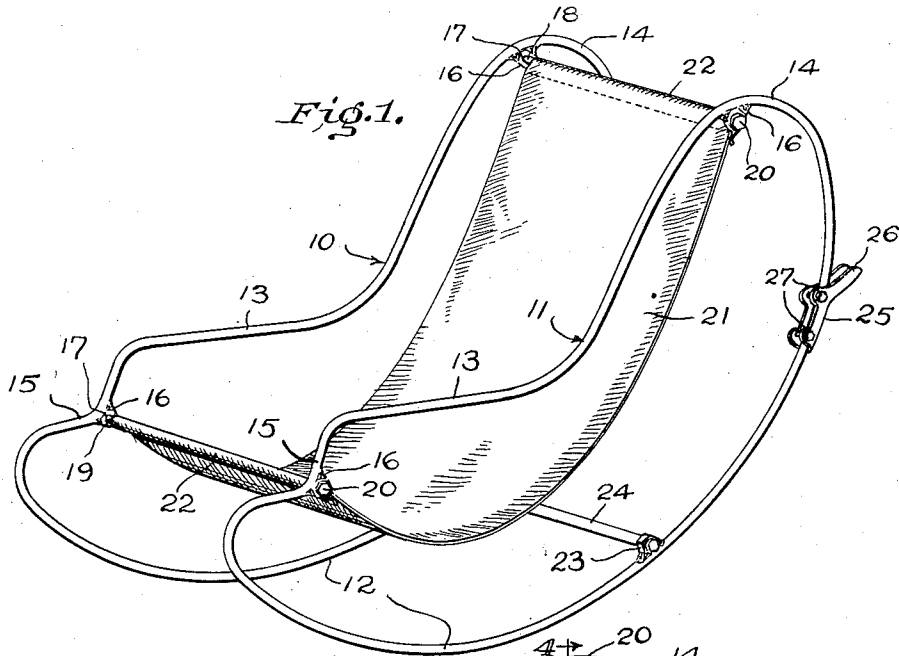
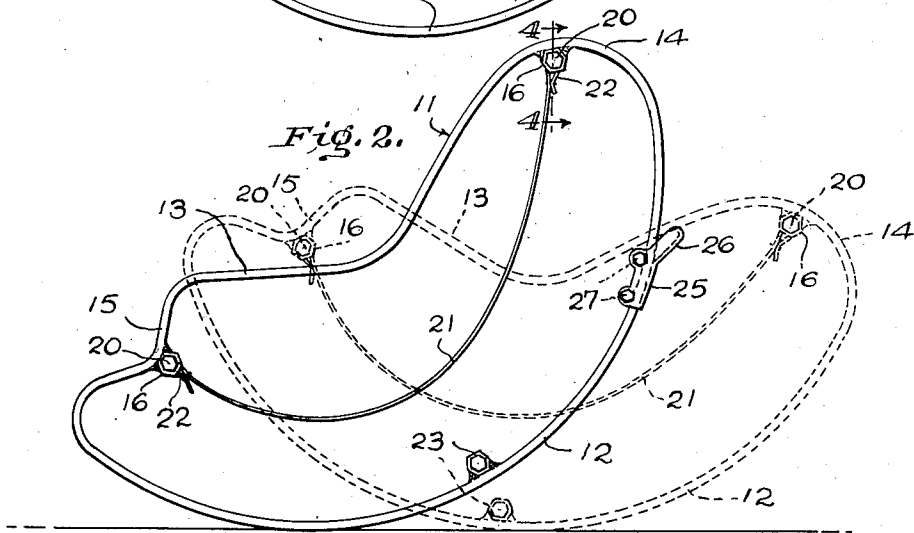
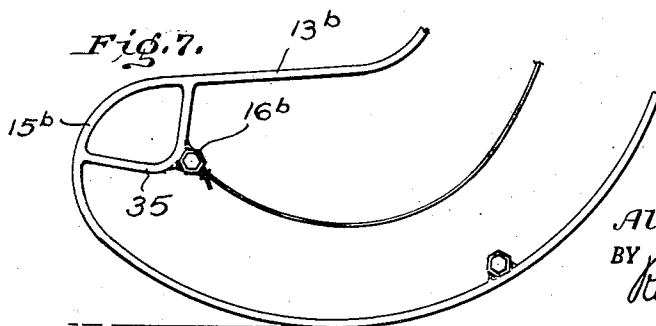
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2,854,062

ROCKING CHAIR

Filed Oct. 5, 1955

2 Sheets-Sheet 1



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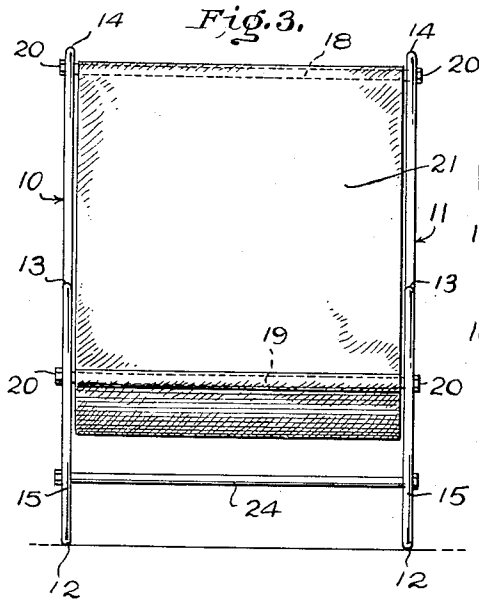
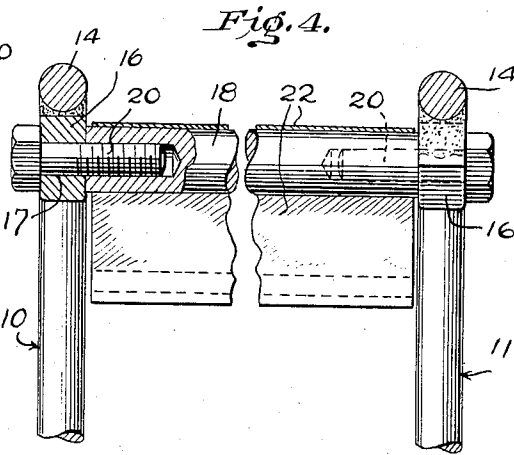
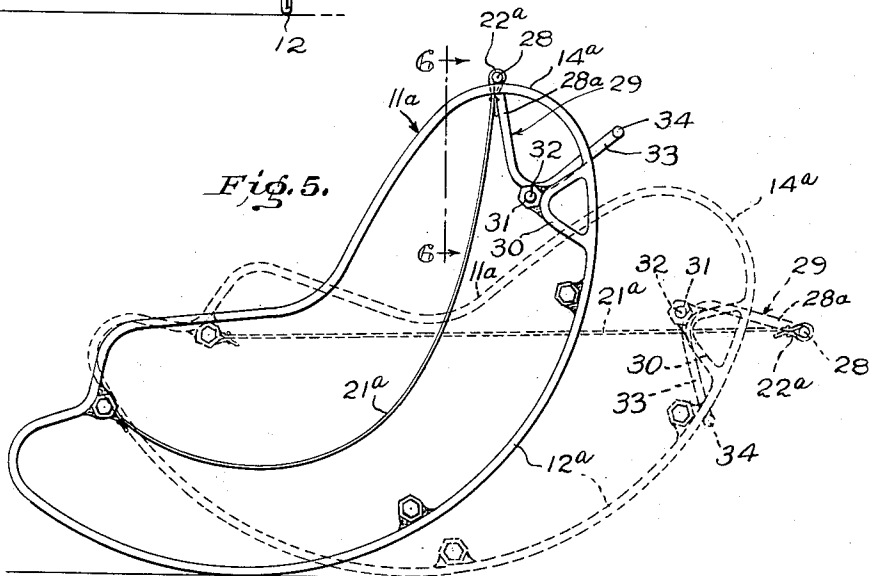
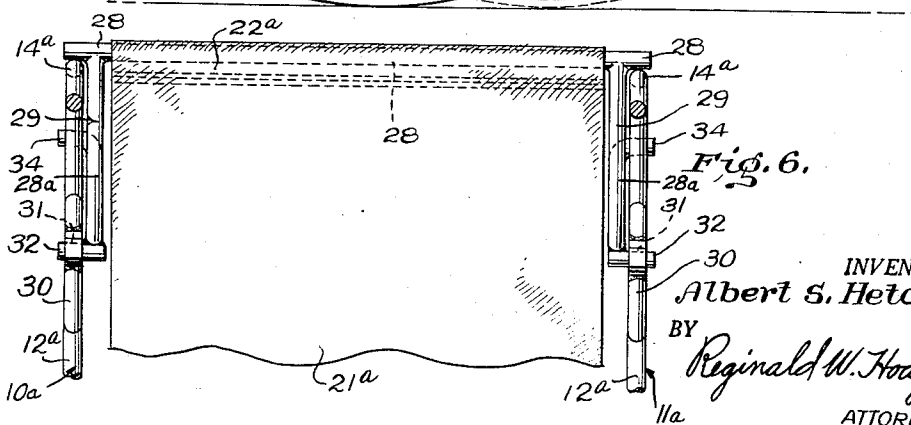
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ROCKING CHAIR

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2 Sheets-Sheet 2



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2,854,062

ROCKING CHAIR

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2 Claims. (Cl. 155—69)

The present invention relates to rocking chairs, and more particularly, to chairs that are capable of being rocked backward to reclining positions whereby the knees of an occupant are elevated higher than his head.

The primary object of the invention is to provide a rocking chair which is especially designed for use by children, which is constructed and arranged for a rearward rocking motion of approximately ninety degrees, and which has the center of gravity thereof lowered to a location where there is little likelihood of a child doing bodily harm to himself should he deliberately rock the chair beyond the limits of its rocking surfaces.

Another object of the invention is to provide, in a chair of the character indicated, novel stops which may be adjustably attached along the rockers for engagement with the surface upon which the chair is rocked to limit backward rocking motion.

A further object of the invention is to provide, in a chair of the above character, a novel and simple construction whereby the chair may be conveniently knocked down for consuming the minimum amount of space when shipping or storing, and when assembled, provides a stable and substantially constructed chair.

A still further object of the invention is to provide, in a rocking chair of the character set forth, a novel construction and arrangement of parts whereby a loosely suspended flexible seat and back rest may be stretched taut to provide a soft resting surface upon which an occupant may lie.

It is also an object of the invention to provide a chair of the above-indicated character, which is simple and substantial in construction, economical to manufacture, and thoroughly efficient and practical in use.

These, together with various auxiliary features and objects of the invention which will later become apparent as the following description proceeds, are attained by the present invention, preferred embodiments of which have been illustrated, by way of example only, in the accompanying drawings, wherein:

Figure 1 is a front perspective view of the improved chair;

Figure 2 is a side elevation of the chair showing in full lines the position when an occupant is seated in the chair, and showing in dotted lines the position when an occupant is reclining in the chair;

Figure 3 is a front elevation of the chair;

Figure 4 is a fragmentary vertical section taken substantially on line 4—4 of Figure 2 and showing parts broken away;

Figure 5 is a side elevation similar to Figure 2 of a modified form of the invention;

Figure 6 is a fragmentary vertical section taken on line 6—6 of Figure 5; and

Figure 7 is a fragmentary side elevation somewhat similar to Figure 2, illustrating a further modification of the invention.

Referring now more specifically to the accompanying drawings wherein like numerals designate similar parts

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throughout the various views, the numerals 10 and 11 indicate generally a pair of laterally aligned identical side-supporting members which are shown as being constructed of wrought iron and each as being of a continuous open-frame construction with its peripheral surface substantially kidney-shaped. Side frames of such construction and shape provide with their longitudinally extending arc runs of greater radius long rocking surfaces 12 that extend entirely along their lower and rearward portions and also provide with the forward parts of their longitudinally extending arc runs of lesser radius arm rests 13. The greater and lesser longitudinally extending arc runs 12 and 13 are joined at the upper and rear ends of the frames by semicircular runs 14, while at forward and lower ends of the frames, the arc runs 12 and 13 are joined by rounded but indented runs 15.

Each open-frame side member is preferably constructed of a length of solid round stock by bending the same over a form and welding its ends together. However, thin wall tubular stock of larger diameter may be used, and the frame can just as well be constructed by first looping and welding the same in the shape of a circular hoop prior to collapsing a side of the hoop and bending said collapsed hoop to final shape over a form.

Directed inwardly of the outer confines of the open-frame side members 10 and 11 and at the semicircular runs 14 and indented runs 15 at opposite ends of the kidney-shaped frames are welded or otherwise secured to said runs lugs 16 provided with laterally extending openings 17 therethrough. An upper cross bar 18 extends between the inwardly directed lugs 16 at the rounded semicircular runs 14 while another cross bar 19 extends between the lugs 16 at the indented portions 15. The opposite ends of the cross bars 18 and 19 also have openings therein into which are threaded bolts 20 that extend through the openings 17 in the lugs and have their heads in engagement with the outer surfaces of said lugs. A strip of flexible material 21 which may be made of canvas or the like has looped portions 22 at opposite ends thereof through which the cross bars 18 and 19 extend. The loops 22 are formed by reversing and stitching the strip of flexible material upon itself. By referring to Figures 1 and 2, it can be seen that the length of the strip of flexible material is greater than the distance between the bars 18 and 19, thus providing sufficient sag in the strip of flexible material to provide therewith a seat and back rest.

Substantially midway of the rockers 12 of the side frames which are formed by the longitudinal arced portion of greater radius are secured, by welding or the like, additional inwardly directed lugs 23 between which extends a cross bar 24 that has its opposite ends attached to the lugs 23 in the same manner as that previously described. Thus, it can be seen that the three cross bars 18, 19, and 24, act as spacer elements that laterally align and unite the side frames. It can also be seen that the construction of attachment of the cross bars to the side frames is such that the chair may be easily knocked down in order to conveniently ship or store the same.

The long, slow arcs forming the rockers 12 of the identical kidney-shaped side frames 10 and 11, the locations of attachment of the strip of flexible material 21 relative to said rockers, and the amount of slack in the strip of flexible material all contribute to the provision of a rocking chair which may be rocked from a sitting position to an extreme reclining position of an occupant with little likelihood of tipping over. This construction and arrangement of elements provide a low and forwardly located center of gravity so that when the chair is rocked rearwardly and the occupant's head is only a few inches from the surface upon which the chair is rocked, the center of gravity remains forward and tends to return

the chair to an upright position. Should the momentum of backward motion rock the chair beyond the rearward extent of the rocking surfaces 12, the occupant's head is so near to the surface upon which the chair is rocked that there is little likelihood of the occupant being hurt if the chair does tip over.

In some instances, it may be desired to limit the rearward rocking motion to a lesser degree, and in order to accomplish this, there is provided a pair of stop elements 25 for attachment to and adjustment along the curved rocker portions 12 of the side frames 10 and 11. These stop elements have offset extensions 26 thereon that engage the surface upon which the chair is rocked. Each stop element 25, for the purpose of illustration, is shown as being a stamping made from sheet metal and as being substantially U-shaped in cross section for straddling a rocker portion 12. A pair of spaced bolts 27 extend through the straddling flanges of each stamping and have nuts thereon for clamping said flanges against opposite sides of a rocker portion.

The modified form of invention shown in Figures 5 and 6 is substantially the same as that previously described with the main exception being the attachment of the upper end of the strip of flexible material to the side frames. In this case, a cross bar 28 of a crank frame 29 pivoted to side frames 10^a and 11^a extends through an upper looped end 22^a of a strip of flexible material 21^a and provides an adjustable support for the upper end of said strip of flexible material. The cross bar 28 is fixed slightly inwardly of its outer ends to a pair of crank arms 28^a of the crank frame and is outwardly of the side frames so as to engage the semicircular portions 14^a of the side frames with its opposite protruding ends to limit pivotal movement of the crank frame in a forward and downward direction and past a position whereby the strip of flexible material provides a seat and back rest. An inwardly directed bracket 30 with a bearing opening 31 therethrough is rigidly secured to the curved rocker 12^a adjacent the semicircular end 14^a of each side frame, and oppositely directed trunions 32 fixed to the crank arms 28^a of the crank frame 29 are rotatably received in the bearing openings 31 for providing the pivotal connections of the crank frame to the side frames. Each crank arm 28^a of the crank frame 29 has an angled extension 33 with an offset portion 34 on its free end that is adapted to engage a rocker portion 12^a for limiting pivotal movement of the crank frame in the opposite direction. By referring to the dotted line position shown in Figure 5, it will be observed that when the crank frame is swung to engage the offset portions 34 with the rocker portions 12^a, the strip of flexible material 21^a is stretched tight and has been moved past the pivotal connection of the crank frame to the brackets 30, thus, the pull exerted by the stretching of the strip of flexible material 21^a will retain the crank frame in this adjusted position. When the strip of flexible material is stretched taut, the rocking chair is converted into a rocking cot upon which an occupant may lie and rock.

In Figure 7 of the drawings, there is shown a modified form of the invention in which each of the pair of kidney-shaped side members have their forward lower ends semicircular, as at 15^b, in a manner similar to the semicircular upper portions 14 previously described, and at said semicircular portions, there are inwardly directed brackets 35 onto which are secured perforated lugs 16^b to which the forward lower cross rod is attached. This construction locates the canvas-carrying lower cross rod

in substantially the same location as that shown in the other forms of the invention, and at the same time, extends the arm rests 13^b further forward for obtaining a better hold when the chair is rocked backward.

In view of the above description, taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the construction, operation, and advantages of the improved rocking chair will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described preferred embodiments of the invention, various changes may be made without departing from the spirit and full intentment of the invention.

What is claimed is:

1. A chair comprising a pair of vertical laterally-aligned side-supporting members having substantially identical peripheral shapes, each member having its peripheral surface substantially kidney-shaped and forming with its lower longitudinally extending arced portion of greater radius a rocking surface that extends entirely along both its forward lower and rearward portions, each member also having a part of its upper longitudinally extending arced portion of lesser radius forming an arm rest, at least a pair of lugs secured to each of said side members, one lug being adjacent each rounded end of each side member and all lugs being directed inwardly of their respective side members, a pair of cross bars supported at their opposite ends by opposed lugs on different side members, said cross bars being located substantially adjacent opposite ends of said kidney-shaped side members, and a strip of flexible material having its opposite ends attached to said cross bars and forming therewith a seat and back rest for the chair, said strip of flexible material being loosely suspended between the cross bars to a degree that it is stretched to a curved position extending longitudinally and substantially midway of the arced portions of greater radii and the arced portions of lesser radii of the kidney-shaped side members when an occupant's body is in relaxed sitting position thereon.

2. A chair as defined in claim 1 wherein the support for one of the cross bars consists of a pair of crank arms pivotally connected to a pair of opposed lugs on different side members and connected at their free ends to said cross bar adjacent its opposite ends, said cross bar being movable to a position into engagement with peripheral surfaces of the side members upon swinging movement of said crank arms in one direction so as to limit movement of said cross bar in a position with the strip of flexible material supported in said previously mentioned loosely suspended position, and extensions on said crank arms that are also moved into engagement with peripheral surfaces of said side members to limit swinging movement of said crank arms in an opposite direction and thereby positioning said strip of flexible material stretched taut between said cross bars.

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