Sept. 21, 1937. W. B. CLARK 2,093,829

CONSTRUCTION OF BEACH CHAIRS AND THE LIKE

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Fig. 1.

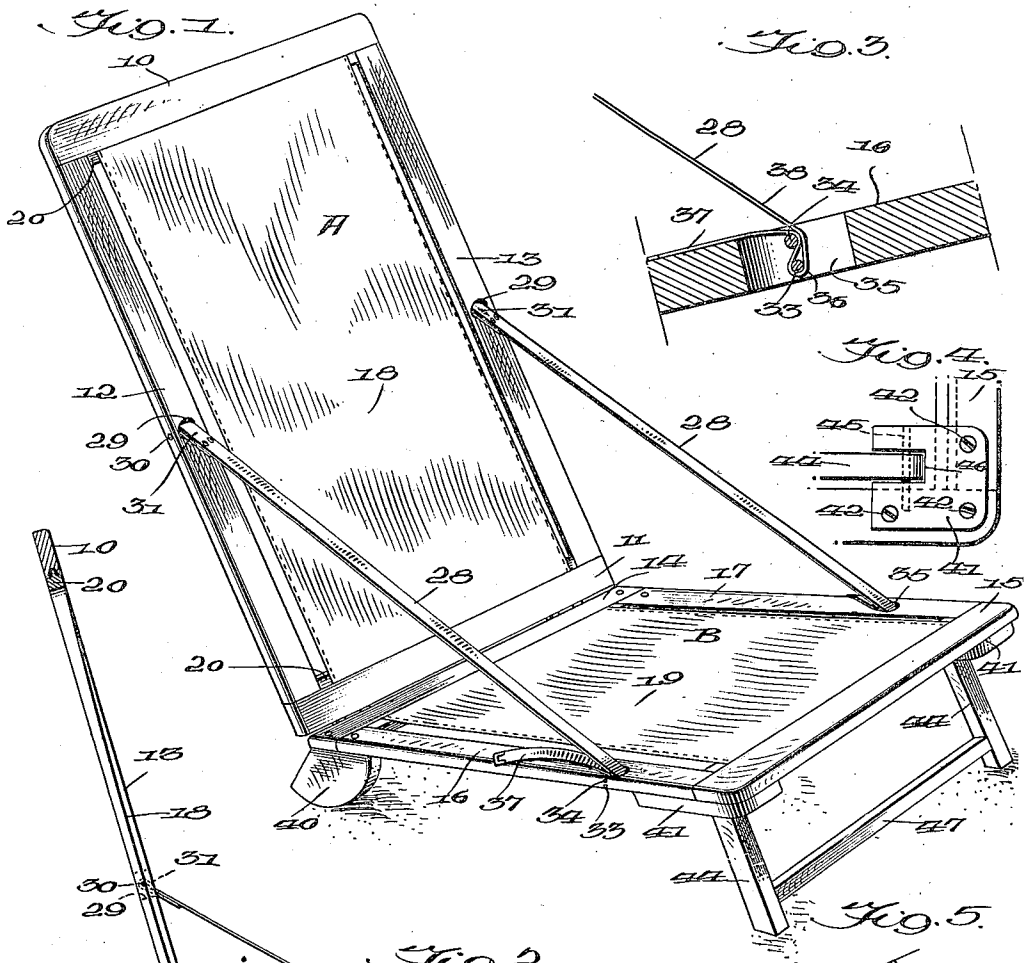


Fig. 3.

Fig. 4.

Fig. 5.

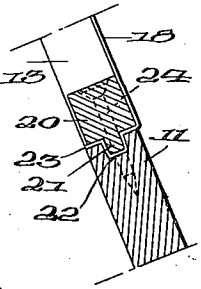
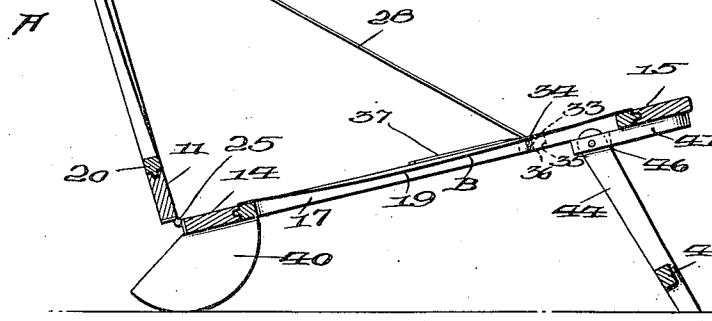


Fig. 2.



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CONSTRUCTION OF BEACH CHAIRS AND THE LIKE

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5 Claims. (Cl. 155—69)

This invention relates to the construction of beach chairs and the like and aims generally to improve the same.

As heretofore constructed, devices of this character have required that the user thereof vacate the chair or otherwise inconvenience himself in order to effect adjustment of its structure to provide for a change of the tilt of the chair or for a changed inclination of the back panel relative to the seat panel thereof, and in addition such chairs, when adapted for tilting, have had a tendency to overbalance if the occupant tilted the chair backwardly to a material extent. Furthermore, when the seat and back panels of such chairs have been fabric paned, if any provision at all has been made for facilitating tightening of the fabric, such provision has usually added materially to the weight of the chair or been difficult of operation. Certain of the novel features of my invention, severally and in various combinations, are particularly effective in obviating these objections, and in effecting a marked improvement in the construction of such chairs.

In the accompanying drawing of a preferred embodiment of beach chair illustrative of my invention,

Fig. 1 is a perspective view of such embodiment;

Fig. 2 a vertical sectional view thereof;

Fig. 3 a detailed sectional view of the novel back panel adjusting device embodied therein;

Fig. 4 a detailed view from below showing the illustrative mode of mounting the foldable legs; and

Fig. 5 a detailed sectional view showing the preferred mode of securing the fabric pane in the back and seat panels.

This illustrative embodiment, as clearly shown in Figs. 1 and 2, comprises a back section A and a seat section B, together with cooperating elements hereinafter described. The back section A and the seat section B may be of similar construction, as in the form shown, in which the back section is framed by end members 10 and 11 and side members 12 and 13, while the seat section is framed by end members 14 and 15 and side members 16 and 17. In the embodiment shown the back and seat sections A and B each further comprise a fabric pane or strip 18, 19, secured to opposed frame members thereof, herein the end frame members, and the securement thereof to at least one of the frame members is by a preferred means of my invention facilitating the securement and tightening thereof. In the form shown, the same means is applied to each securement of the fabric because of its simplicity, certainty, and cheapness, and that the construction of the same may be clearly apparent I have indicated in Fig. 5, on an enlarged scale, the securement of the end of the back strip 18 to the frame member 11. The securement, as shown in the drawing, is effected by means of a cleat member 20 provided with a tongue 21 shaped to enter a channel 22 formed in the inner face of the frame member (11, Fig. 5), and by catching the fabric (18, Fig. 5) between the tongue and the channel and then forcing the parts together, it will be seen that the entry of the tongue into the channel will carry the fabric with it, thus tightening the fabric. The cleat 20 may then be used as a guide in cutting off the fabric at its under edge, as indicated at 23, Fig. 5, and with this construction, three wood screws 24, or equivalent fastening, are ample to retain the parts in place. With this arrangement, in case of stretch and sagging of the fabric, it is a simple matter to tighten the same by simply removing the wood screws, pulling out the cleat, taking up on the fabric and replacing the parts, as the cleat will automatically draw the fabric tight as it is forced home, and upon cutting off the excess fabric as at 23, a completely "finished" appearance will be obtained. Similarly, the changing of fabrics for new or different ones is facilitated by this feature of my invention.

In the form shown, the back and seat panels A and B are swingably connected with one another by suitable means such as the hinges 25 (Fig. 2) and I provide novel means for adjustably setting the inclination of the back panel A relative to the seat panel B. In the preferred embodiment, this novel means comprises flexible straps 28, suitably secured to the back section, and herein to the side frame members 12 and 13, respectively; this securement being effected preferably by the construction shown, in which a recess or hole 29 is formed in each of the frame members 12, 13 (at about armpit height therein for the reason hereinafter explained) through which pintles 30 are extended, and engaged in bights or loops 31, formed as by folding over and riveting the ends of the straps 28.

The other ends of the straps are engaged in snubbers or like adjusting devices located in such relation as to be convenient to the hands of the occupant of the chair so that he may effect adjustment of the inclination of the back thereof without having to arise from the chair or assume an uncomfortable position to do so. While my invention in its broader aspects contemplates the use of various forms of such devices, the particu-

lar form disclosed herein is preferred because of its cheapness, simplicity and convenience. This illustrative form of snubber, best shown in Fig. 3, comprises a lower snubber member, herein the pintle 33, and an upper snubber member, herein the pintle 34, which is positioned slightly forward of, or directly above the pin 33. This positioning is particularly desirable, because with the strap 28 in the inclination shown, the substantially vertical arrangement gives a positive snubbing action not obtained if the pintle 34 is displaced materially rearwardly of the pintle 33, while providing for ready release of the snubbing action, the release of which would be difficult if the pintle 34 were considerably forward of the pintle 33. In the form shown, which I prefer, the pintles 33 and 34 are arranged in the seat section side frame members 16 and 17 in much the same way the pintles 30 are arranged in the members 12 and 13, and traverse the recesses or holes 35, similar to the recesses or holes 29, before described.

The manner of engagement of the straps 28 with the snubbing means 33, 34, and the mode of operation thereof will be clearly apparent from Fig. 3, which shows the strap 28 formed into a bight 36 about the pintle 33, with its strap end 37 and standing part 38 overlying the pintle 34, the standing part being uppermost so that tensioning of the same will snub the strap end 37 against the pintle 34.

With this arrangement, when the occupant of the chair wishes to effect an adjustment of the back angle, he has but to grasp the strap ends 37, which are located so as to be convenient to the hands, and exert a slight pull, relieving his weight against the back panel. This will pull the panel upwardly to any desired position. If the occupant wishes to assume a more reclined position, he has but to place a forefinger under each standing part 38 closely adjacent the pintle 34, and lift the standing parts forwardly and upwardly between the forefingers and thumbs. This simple act releases the snubbing action over the pintle 34 and allows the back section A to recline to any desired extent.

To materially augment the ease and comfort experienced by the occupant of chairs according to my invention, for preferred embodiments thereof I provide seat tilting legs, and I may also employ novel "rear rock-members" 40 which function to minimize tendency of the chair to overbalance if an occupant presses with his feet upon the ground and rocks the chair back and forth or to a backwardly tilted position which he may find particularly comfortable for him.

In the form shown, these "rear rock-members" 40, so called to distinguish them from ordinary rocking-chair rockers, are in the form of a 120° segment of a circle and are secured in underlying relation to the rear end of the seat section with their centers approximately at the rear edge of the seat section so that they in part extend rearwardly thereof. Due to this arrangement and the rolling contact of these members with the ground, as the chair is tilted rearwardly about them, their ground-contacting area runs backwardly along their arc and is thus gradually displaced rearwardly with reference to the seat panel, thereby tending to maintain the center of weight of the occupant and chair forwardly of the ground contacting area, and tending to avoid overbalancing of the chair.

The seat tilting legs above mentioned are, in the preferred embodiment of my invention, somewhat longer when the rock members 40 are provided than they would be if these members were omitted for the purpose of providing a cheaper model, but in either case I prefer to employ seat tilting legs of the construction clearly shown in Figs. 2 and 4, wherein block members 41 are suitably secured to the underside of the seat section at the front corners thereof as by screws 42, and provided with slots 43 in which the leg members 44 are pivoted on pintles 45, the slots and pivot points being so arranged that when the legs 44 are moved to the raised position shown in Fig. 2 their front faces will abut against the front ends of the slots 43, indicated at 46, avoiding the necessity of providing any special stops to prevent their swinging beyond this position. Thus this construction is particularly simple and effective. In addition it will be seen that the blocks 41 materially strengthen the front corners of the seat section B, which receive the most strain, and also that their added weight aids in preventing overbalancing of the chair when tilted backwardly. If desired, the legs 44 may be connected to move as one unit by means of a rail 47, as shown.

As above mentioned, the attachments of the straps 28 to the side frame members 12 and 13 of the back panel A are located at about armpit height and this feature cooperates with the location of the snubbers conveniently under the hands of the occupant, to so position the straps 28 that they constitute comfortable arm or elbow rests for the occupant. As the back panel A, in the form shown, is made of sufficient height to support the head and as my improved construction greatly facilitates the obtaining of various comfortable inclinations of the several parts and avoids tendency of the chair to overturn, it will be perceived that the chair is most convenient and comfortable, as well as cheap and simple of manufacture and capable of folding compactly.

While I have described a preferred embodiment of my invention for the purpose of illustrating the same, I of course appreciate that my invention may be embodied in other forms and that my disclosure herein will suggest to those skilled in the art other particular constructions equivalent to those disclosed or which will be suggested thereby, and this is to be considered in interpreting the following claims.

I claim:

1. A beach chair including swingingly connected seat and back sections, means for adjusting the relative angular positions thereof and simultaneously operable by the occupant in normal sitting position, rock-members underlying the rear end of the seat section and extending rearwardly therebeyond, leg means adjacent the front portion of the seat section adapted, with said rock-members, to support the seat section in a normal rearwardly inclined position, said rock-members providing for a gradual rearward movement relative to the seat section of the ground contacting area thereof, as the chair is tilted backwardly beyond its said normal position by the occupant, and said rock members positioned adjacent to and extending rearwardly of the connected edges of the seat and back sections so as to normally maintain the center of weight of the occupant and chair forwardly of said ground contacting area to avoid overbalancing of the chair.

2. A chair including a seat section and a back section swingingly connected therewith, a flexible strap secured to each side of said back section at about arm-pit height thereon, a lower snubber

member carried by each side of said seat section, an upper snubber member above and adjacent thereto, said strap forming a bight about said lower member with its end and standing part overlying said upper member with the standing part uppermost whereby tensioning of said standing part effects snubbing of the strap end, and said snubber members being located adjacent the forward portion of said seat section convenient one to each hand of the occupant for simultaneous operation, said straps thus normally occupying an arm supporting position and said construction providing for equalized adjustment of the angularity of the seat and back sections by an occupant of the chair without necessitating that he arise therefrom for the purpose.

3. A chair including a seat section and a back section swingably connected therewith, said sections including side frame members, the side frame members of the back section having recesses therein at about arm-pit height, pintles traversing said recesses, flexible straps each secured at one end to one of said pintles, other recesses formed in the side frame members of the seat section near the forward ends thereof, a pair of pintles traversing each of said other recesses, the pintles of each pair being arranged substantially vertically one above the other and said flexible straps being extended and arranged to form bights about the lower pintles of said pairs with their ends and standing parts overlying the upper pintles of said pairs with the standing parts uppermost whereby tensioning of said standing parts effects snubbing of the strap ends, and whereby the occupant of the chair may raise the chair back by simultaneously pulling on the strap ends, or lower the same by simultaneously lifting the standing parts adjacent the bights to release the snubbing action thereof.

4. A chair including a seat section and a back section swingably connected therewith, straps secured to the back section at the sides thereof and at about arm-pit height, and "snubbers" arranged at the sides of the seat section in the forward part thereof, said "snubbers" comprising elements for receiving and releasably retaining the forward ends of said straps to hold said chair back in various positions and permitting simultaneous operation to adjust the same, said straps being automatically retained by said "snubbers" in adjusted position respectively, and said arrangement locating the straps to normally serve as arm rests and enabling the occupant to adjust the inclination of the chair back by manipulation with his hands at the points where they naturally lie while the occupant is retaining a comfortable position in the chair.

5. A chair including swingably and adjustably connected seat and back sections and provided with short rock-members underlying the rear end of the seat section secured thereto and extending rearwardly therebeyond, and short leg means pivoted at the front end of the seat section and adapted, with the rock-members, to support the seat section in a normal rearwardly inclined position, said rock-members providing for a gradual rearward movement, relative to the seat section, of the ground contacting area thereof as the chair is tilted backwardly from its said normal position, said legs being free to follow in contact with the ground, and said rock members positioned adjacent to and extending rearwardly of the connected edges of the seat and back sections so as to normally maintain the center of weight of the occupant and chair forwardly of said ground contacting area to avoid overbalancing of the chair.

WILLIAM BERNARD CLARK.