Nov. 3, 1936. H. A. FREEDMAN 2,059,940

BEACH CHAIR

Filed Aug. 5, 1935

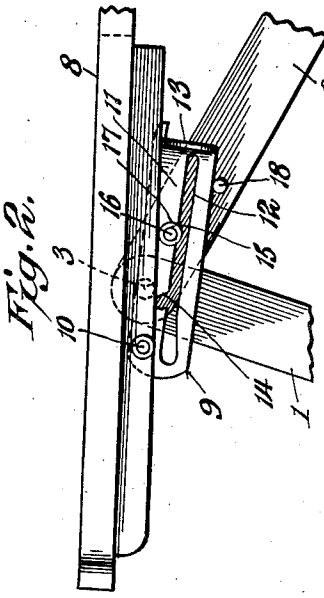


Fig. 2.

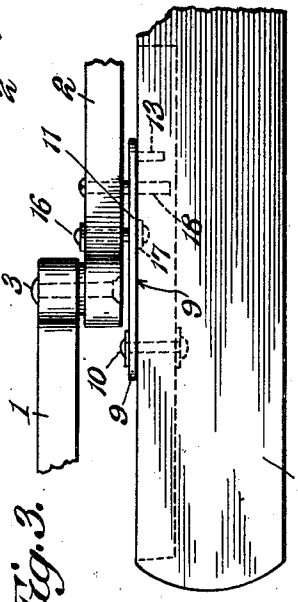


Fig. 3.

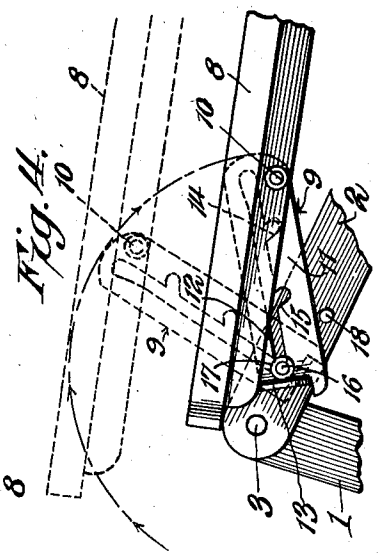


Fig. 4.

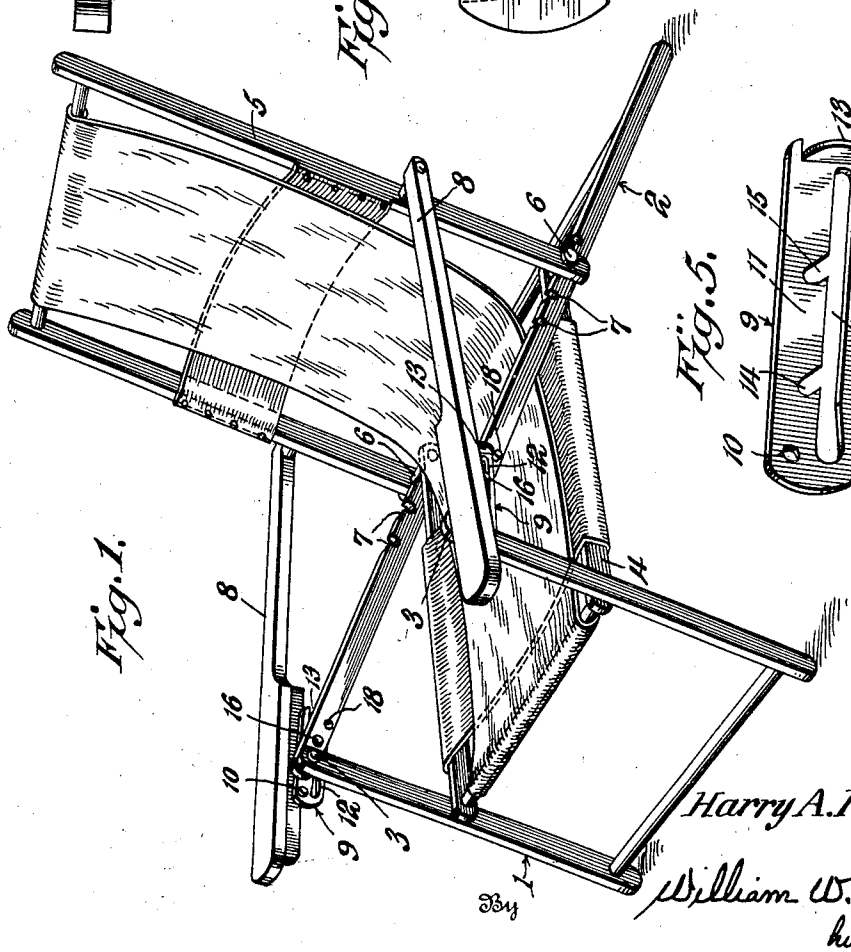


Fig. 1.

Fig. 5.

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BEACH CHAIR

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Application August 5, 1935, Serial No. 34,813

6 Claims. (Cl. 155—163)

This invention is directed to an improvement in folding chairs, more particularly of the so-called beach type, wherein provision is made for adjusting the inclination of the back with respect to the seat.

In my co-pending application filed April 24, 1935, Patent No. 2,042,252, there is particularly described a construction in which two different inclinations of the back relative to the seat may be readily provided for through appropriate manipulation of the arms of the chair without the necessity of the user leaving the seat. This construction provides for but two different inclinations of the back through arm movement, and as it is at least desirable to provide more than two inclinations of the back relative to the seat by the arm adjustment, the present invention, aiming at such result, may be said to be an improvement of the construction described in the above-noted application.

Furthermore, in the above-noted application, through the necessities of the mounting, the adjustment provided through the arm movement for the maximum inclination of the seat does not afford such position of the back as would practically permit a reclining position of the user.

The primary object of the present invention, therefore, is the provision of means, selectively operable by the user while occupying the seat of the chair and through manipulation of the chair arms, to position the back at a minimum inclination to the seat, at a maximum inclination thereto for practical reclining purposes, and at the same time provide for that inclination to a plurality of intermediate positions.

The invention is illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the chair constructed according to the present invention.

Figure 2 is a broken elevation viewed from the inner side, showing the parts in position to hold the back at an intermediate inclination.

Figure 3 is a plan of the same.

Figure 4 is a broken elevation, showing the parts in full lines in a position for maximum back inclination, the movement of the arm being indicated in dotted lines.

Figure 5 is a perspective view of one of the links.

The invention comprises a more or less conventional type of folding beach chair which, merely for the sake of convenience in description, may be said to include a front leg frame 1, a rear leg frame 2, with such frames pivotally connected at 3, a seat frame 4 pivotally connected to the front leg frame 1, and a back frame 5 pivotally connected to the seat frame 4 at 6. In this type of chair and as preferred, the rear leg frame 2 is formed with spaced notches 7 to selectively receive the extended portions of the pivotal connections 6 to provide for back adjustment through this detail, as is conventionally understood.

Arms 8 are pivotally connected at their rear ends to the back frame 5 and pivotally connected at their forward ends to links 9, which links are disposed on the outer sides of the leg frames. The pivotal points of connection 10 between the arms 8 and the links 9 are at the upper forward portion of the links. The links, shown more particularly in Figure 5, comprise metallic sections 11 formed with longitudinally ranging slots 12, the rear end of the links being turned laterally at 13 to provide a stop.

The slots 12 extend from a point substantially in alignment with the pivotal point 10 of the links to the stop 13, and the upper wall of the slot is formed at intermediate points with notches 14 and 15, which notches are spaced longitudinally of the slot wall and may be given that desired relative spacing with respect to the stop 13, as may be indicated by the inclination requirements of the chair back to the particular chair.

A pivot pin 16 extends through the slot 12 and is secured in the rear leg frame, a washer or other enlargement 17 being arranged on the pin 16 of a diameter exceeding that of the width of the slot. A stop 18 for each link is secured on the rear leg frame, these stops underlying the lower edge of the link and maintaining the links, in connection with the pivot 10, in substantially horizontal position when the links and stops 18 are in cooperation.

In the use of the chair for changing the inclination of the back through the manipulation of the arms, it will be apparent that when the arms are in normal position with the pin 16 in the rearward notch 15 and the link or links overlying and in contact with the stops 18, the arms will be in their forwardly adjusted positions, and as the arms are connected to the back 5, the latter will be at its forwardly adjusted position of inclination, all as shown in Figure 1.

If now the arms are moved forwardly to disengage the links from the stop 18 and then the forward ends of the arms elevated and moved rearwardly on the pin 16 as a pivot, such movements will cause an arcuate path of travel of the ends of the arms and when the arms are lowered into operative position, the pin 16 will be at the end of the slot next the stop 13, the links will be

reversed from the positions shown in Figure 1, and the chair back will be inclined rearwardly to its maximum inclination. This relative movement of the links and arms is shown more particularly in Figure 4. In this connection, it is to be understood that the length of the slot 12 is such as to permit this maximum inclination of the back to afford with the seat a substantial reclining position.

If a reclining position of the back intermediate the minimum and maximum inclined position is desired, this may be readily secured by initially elevating the arms from a position where the back is in either minimum or maximum inclination to insure the positioning of the pin 16 in the slot 12, and then moving the arms forwardly if the back is to be moved from its maximum inclined position or rearwardly if the back is to be moved from its minimum inclined position. During this movement the pin 16 may be caused to cooperate with the notch 14 and the forward ends of the arms moved downwardly to insure that the pin 16 will enter the notch. The chair back is thus held at an inclination determined by the position of notch 14.

Thus, the user, solely through appropriate manipulation of the arms and without leaving his seat, may secure, in the specific instance illustrated, four distinct inclinations of the back relative to the seat, may readily and conveniently convert any selected inclination into any other inclination and may thus place within his control an easily operated means for adjusting the seat back for any position including an intermediate, a substantially upright or a substantially reclining position of the back.

Of course, the illustration of the two notches is intended to illustrate merely a plurality of such, as where necessary additional notches and additional corresponding seat inclinations may be provided for.

What is claimed to be new is:

1. A beach or lawn chair having a supporting frame, a seat connected thereto, a back frame connected to the seat and adjustable to positions of varying inclinations to the seat, arms connected at one end to the back frame, links pivotally connected to the arms and slidably connected to the supporting frame, means on the links to limit relative downward movement of the arms, the links permitting a swinging and sliding movement of the arms to vary the inclination of the back frame relative to the seat, cooperating means on the supporting frame and links to prevent sliding movement of the links relative to the supporting frame in either direction, and means on the supporting frame to engage the link and prevent swinging movement of the link when said cooperating means is functioning.

2. A beach or lawn chair having a supporting frame, a seat connected thereto, a back connected to the seat and capable of assuming various inclinations relative to the seat, arms connected to the back, and links slidably engaged at one end forming the sole connection between the arms and supporting frame, the links being formed with lateral projections to limit relative downward movement of the arms with respect to the links, said links permitting a swinging and sliding movement of the arms relative to the supporting frame to thereby correspondingly change the inclination of the back relative to the seat, the links and the supporting frame having interlocking means at spaced points in the sliding movement of the arms to predetermine a definite back inclination, and cooperating means on the links and supporting frame to prevent swinging movement of the arms during such interlock.

3. A beach or lawn chair having a supporting frame, a seat connected thereto, a back connected to the seat and swingable relative thereto to assume different inclinations with respect to the seat, arms connected to the back, links pivotally connected to the arms and slidably connected to the supporting frame, the arms being movable through the link connection to correspondingly move the back to a position of minimum or maximum inclination relative to the seat, the sliding connection of the links with the supporting frame provided with means for the selective interlocking of the links and supporting frame at points to maintain the back at inclinations to the seat intermediate the maximum and minimum, and a pin on the supporting frame to engage the lower edge of the link to prevent swinging movement of the link in one direction when interlocked, and means on the links cooperating with the arms to prevent swinging of the links in the opposite direction when interlocked.

4. A construction as defined in claim 3 wherein the sliding movement between the links and supporting frame is secured through a pin on the supporting frame moving in a slot in each link, and wherein the interlocking of the links is secured through notches offset and communicating with the slot to selectively cooperate with said pin.

5. A construction as defined in claim 3, wherein the means on the links cooperating with the arms to prevent swinging movement of the links in one direction includes lateral projections on the links at the ends thereof remote from their pivotal connection with the arms, said lateral projections engaging the arms to at all times to prevent movement of the arms below the normal.

6. A link for the purpose defined, comprising an appropriate length of metal formed near one end with an opening to permit pivotally connecting the link to the arms of a chair, the link being further formed with a longitudinally-extending slot substantially throughout the full length of the link, one end of the link being projected laterally to provide a stop extending above and below the slot, one wall of the slot having spaced offset communicating notches for interlocking function.

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