

Aug. 8, 1933.

A. EURING

1,921,460

GARDEN CHAIR

Filed May 16, 1932

3 Sheets-Sheet 1

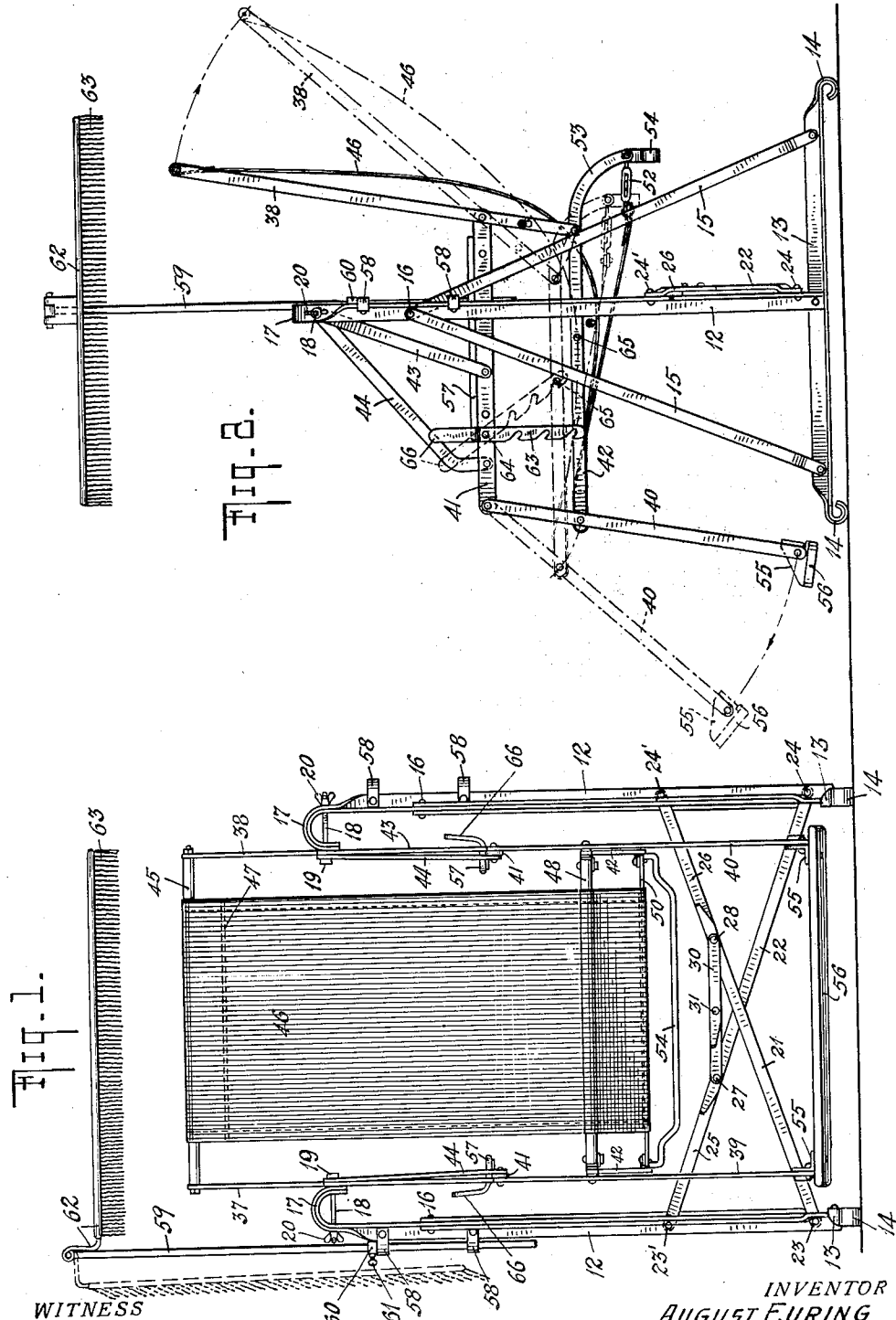


FIG. 1.

FIG. 2.

WITNESS
G. V. Rasmussen

INVENTOR
AUGUST EURING
BY *Prescott & Seligman*
ATTORNEYS

Aug. 8, 1933.

A. EURING

1,921,460

GARDEN CHAIR

Filed May 16, 1932

3 Sheets-Sheet 2

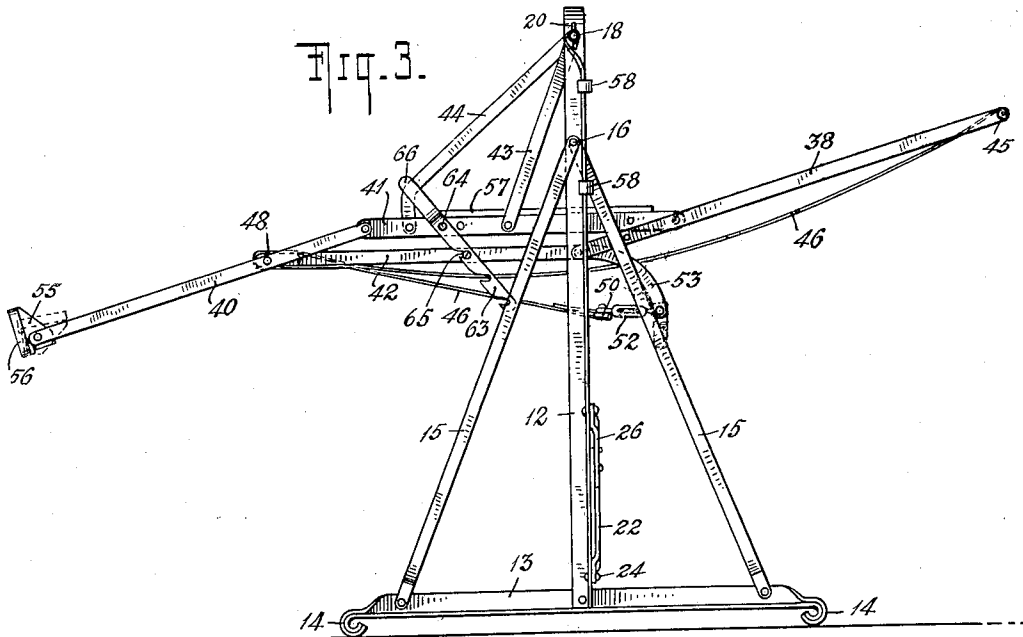
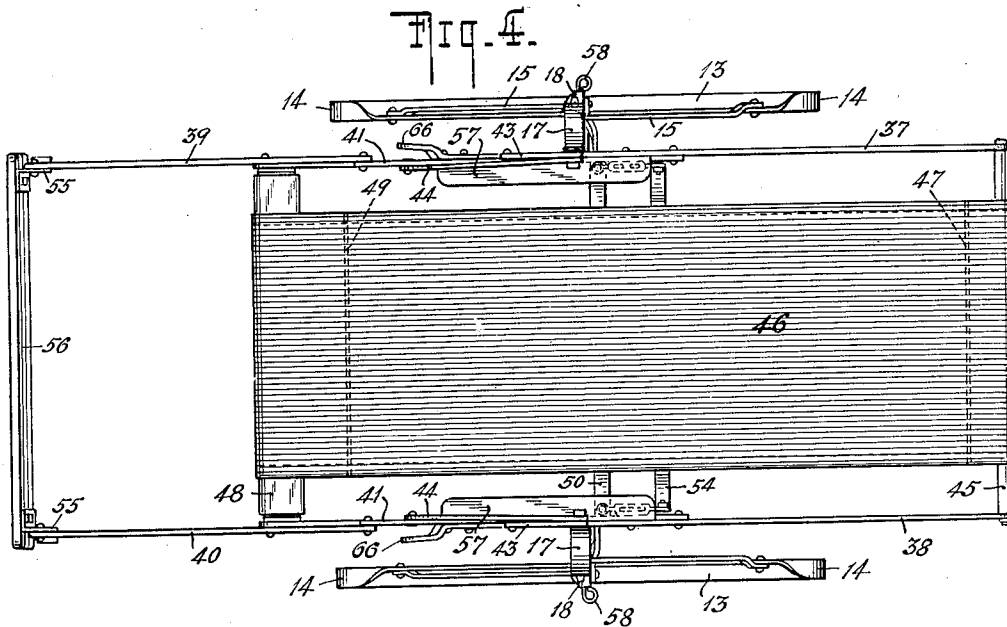
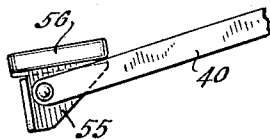


Fig. 11.

WITNESS
G. V. Rasmussen



INVENTOR
AUGUST EURING
BY *Robert Lehman*
ATTORNEYS

Aug. 8, 1933.

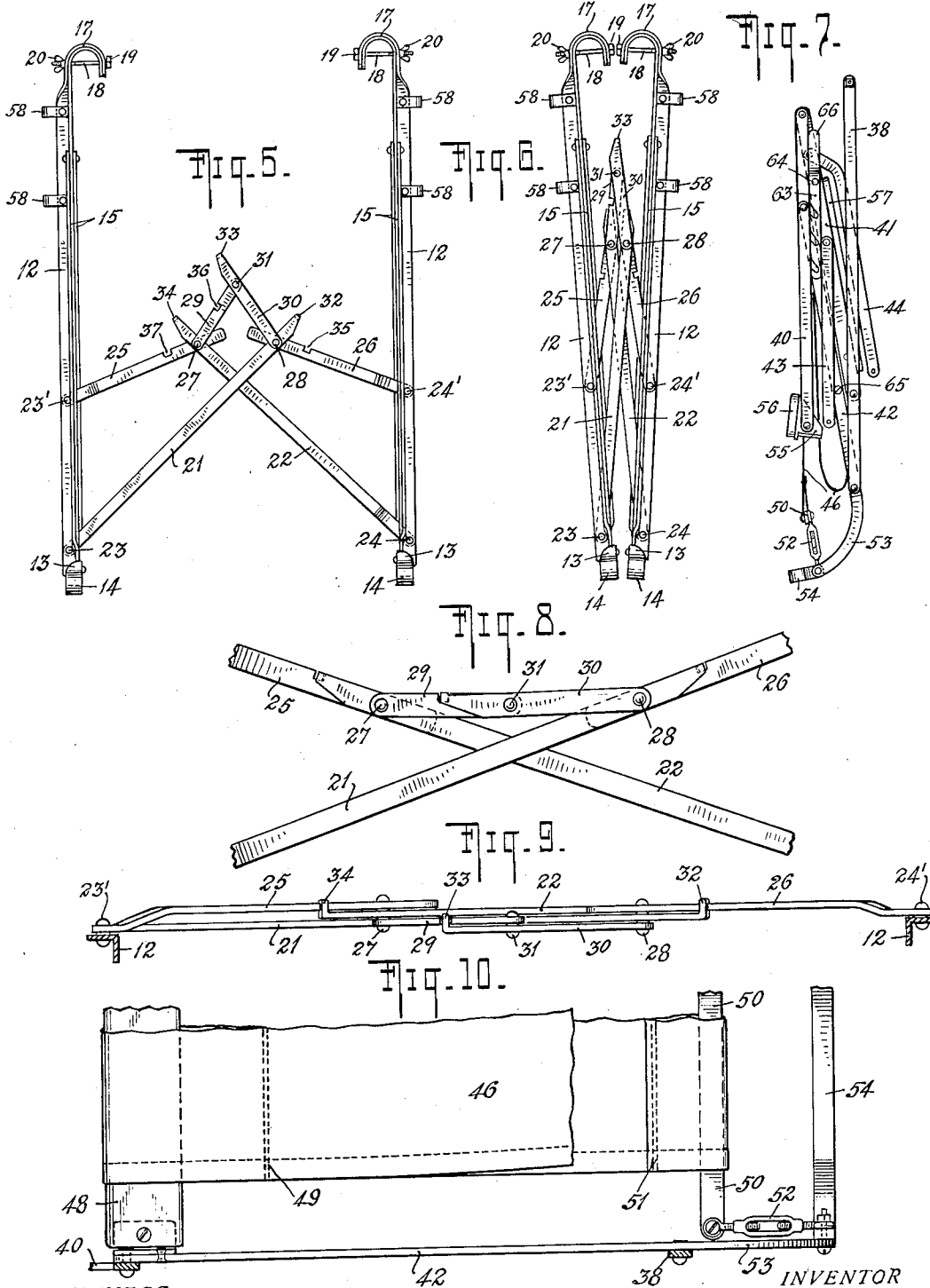
A. EURING

1,921,460

GARDEN CHAIR

Filed May 16, 1932

3 Sheets-Sheet 3



WITNESS

L. V. Rasmussen

INVENTOR
AUGUST EURING

BY *Pomeroy & Pomeroy*
ATTORNEYS

UNITED STATES PATENT OFFICE

1,921,460

GARDEN CHAIR

August Euring, Richmond Hill, N. Y.

Application May 16, 1932. Serial No. 611,461

2 Claims. (Cl. 155—67)

My invention relates to a chair and more particularly to a chair of the type which is adapted automatically to assume different positions of inclination to provide a comfortable sitting or lying posture for the occupant of the chair. My invention also contemplates the provision of a chair having a supporting structure which is collapsible so that such supporting structure may be folded into a compact form when the chair is packed for shipment or for sale. A more particular object of my invention is to provide a garden chair of the type described which is characterized by the comfort afforded the occupant thereof by the canvas member comprising the seat and by the simplicity of the elements making up the supporting structure for such canvas seat, permitting the same to assume various degrees of inclination automatically when the person occupying the chair assumes a relaxed position in the chair and leans backwardly into a semi-reclining position. Further objects of my invention will appear from the description hereinafter taken in conjunction with the accompanying drawings forming part of this specification.

In such drawings, Fig. 1 is a front view of my novel garden chair; Fig. 2 is a side view of the same showing the chair in upright position and in a slightly reclining position, which latter position is indicated in such figure in dotted lines; Fig. 3 is a side view of the chair in fully reclining position of the seat member; Fig. 4 is a top view of the chair in which the seat member is in fully reclining position; Fig. 5 shows the standards supporting the seat member drawn to a slight extent towards each other so as to illustrate the spacing and bracing frame connecting such standards; Fig. 6 shows the standards in close proximity to each other and the spacing and bracing frame fully collapsed; Fig. 7 shows the seat member for supporting the canvas in fully collapsed position; Fig. 8 shows a detail of the spacing and bracing frame connecting the two standards in its spacing and bracing position; Fig. 9 is a plan view of the spacing and bracing frame in its operative position to space and brace the two supporting standards; Fig. 10 is a fragmentary plan view of the means for attaching the canvas to the seat frame; and Fig. 11 is a fragmentary side view of the foot support and one of the links upon which such foot support is mounted.

Referring more particularly to the drawings, in which similar reference characters identify similar parts in the several views, the seat struc-

ture is supported between two standards 12, 12 extending upwardly from two angled runners 13, 13 having curled foot members 14, 14 at each end thereof. The standards 12, 12 are braced and held in a vertical position by means of guy links 15, 15 each rivetted at one end to the runner 13 near an end thereof and secured at the other end to the standard 12, as by rivet 16. The upper end of each standard 12 terminates in a curved extension 17 extending inwardly and downwardly, such curved extension being provided with apertures through which is adapted to be passed a bolt 18 so as to have the head 19 thereof abut against the surface of the curved extension 17 facing the center of the chair, or against the side of the links supporting the seat structures, as hereinafter more fully described. A wing nut 20 is provided on the threaded end of the bolt 18 which has been passed through the outer of the apertures within the curved extension 17.

Referring more particularly to Figs. 5, 8, and 9, in which the spacing and bracing frame connecting the two standards is illustrated in greater detail, such spacing and bracing frame comprises two links 21 and 22 secured at their lower ends to the standards 12, 12 at 23 and 24 about which points the links 21 and 22 are adapted to pivot. At suitable points 23' and 24' along the lengths of the standards 12, are pivotally secured links 25, 26 connected respectively to links 22 and 21 by pins 27 and 28. The points along the lengths of the standards 12 at which the links 25 and 26 are pivotally supported are determined by the lengths of the links 21 and 26 and 22 and 25 respectively when such links are brought into alignment as hereinafter described, such four links forming the spacing frame determining the distance by which the two standards 12 are to be spaced from each other. Pivotally mounted on the pin 27, is a link 29 and pivotally mounted on the pin 28 is a link 30, the links 29 and 30 being connected by a pin 31. Each of the links 21, 22, and 30 is provided at its free end with an angular lug 32, 33, and 34, respectively, projecting at right angles from such link and adapted to engage recesses 35, 36, and 37, respectively, provided in the sides of the links 26, 29, and 25. The recesses 35, 36, and 37 are positioned at such distances from the pivotal points of the links that the projecting lugs which are to engage such recesses will be brought exactly in alignment with such recesses so as to enter the same when the links 21 and 26 or the links 22 and 25 are

brought into alignment with each other so as to define the spacing of the standards 12, 12 from each other. It will be noted that the pin 31 (see Fig. 3) is below the line of centers of the pins 27 and 28. This feature produces a desired rigidity of the bracing frame when the same is in its bracing position, as an overt act is necessary to disengage the lug 33 from the recess 36 and any pressure exerted on any of the elements of the frame would tend to make it more rigid and efficient in its bracing action. A positive, as distinguished from an unintentional, act is thus necessary to collapse the bracing and spacing frame.

When the spacing and bracing frame just described is in its operative position, in which the component parts thereof are in the rigid position illustrated in Fig. 8, the standards 12, 12 are spaced from each other to support between them the seat structure to which is attached the canvas forming the seat proper. When the spacing and bracing frame is in its collapsed position, the two standards 12, 12 have been brought into proximity to each other as illustrated in Fig. 6.

The seat supporting structure comprises a pair of side members 37 and 38 (Fig. 1) and a second pair of side members 39 and 40 connected by pairs of links 41, 41 and 42, 42, each of the former of which is pivotally joined to the upper ends of side members 39 and 40. The lower connecting links 42 are pivotally joined to the side members 39 and 40 at a point removed from the upper ends thereof, such connecting links being also pivotally connected to the side members 37 and 38 at the lower ends thereof. The connecting members 41 and 42 thus form with portions of the side members 37, 38, and 39, 40 a parallelogram, the connecting members 41, 42 being maintained in a horizontal position at all inclinations of the seat. As a matter of fact, the connecting members 41 retain their fixed horizontal positions no matter what the inclination of members 37, 38 and 39, 40 (see Fig. 2). The connecting members 41 are supported from the bolts 18 passing through the upper curved portions of the standards 12 by means of links 43 and 44, link 43 being pivotally connected to the member 41 at a point approximately intermediate the ends thereof and link 44, having a bend near the lower end thereof, being connected at such end to the member 41 at a point near its front end. The seat structure is thus supported from the bolts 18 in the space defined by the standards 12, 12, the structure swinging freely upon such bolts and between said standards. While I have illustrated the links 43 and 44 as being mounted upon the bolts 18 outwardly of the curved portions 17 of the standards, it is obvious that they may be positioned within such curved positions. In such case, the aperture in the depending portion of the curved extension of each standard may be positioned slightly lower than the aperture in the other leg of the curved portion, so that the bolt passing through said apertures is somewhat inclined downwardly and inwardly. This inclination of the bolt will prevent the creeping of the links 43 and 44 along the bolt as the seat supporting structure is swung.

The side members 37 and 38 are connected at their upper extremities by a circular bar 45, about which is passed the upper end of the canvas strip 46 and is secured thereon by means of stitching 47. The canvas strip 46 extends in

a loose fashion from such bar 45 down to a wooden bar 48 extending transversely between the side members 39 and 40 secured between the front ends of the links 42. The canvas strip 46 is passed about such bar 48, joined to its upper expanse by stitching 49 and then rearwardly to a transverse bar 50 about which it is passed and secured by stitching 51 (see Fig. 10). The bar 50 is supported at its extremities by turn buckles 52, secured to a downwardly extending portion 53 of the connecting member 42 (Fig. 2). A bar 54 serves to brace the curved projections 53 and to space them from each other. By means of the turn buckles 52, the tautness of the canvas seat 46 may be adjusted to any desired degree. It will be noted that such canvas seat hangs loosely enough to be capable of conforming to the body of the occupant of the chair so as to afford the greatest possible comfort while being capable of adjustment to suit the particular taste of the occupant.

Between the lower extremities of the side members 39 and 40 is mounted, by means of angle irons 55, 55 a foot rest 56 pivoted upon the ends of said side members 39 and 40 so that it may be made to assume the position thereof illustrated in Fig. 2 or that illustrated in Fig. 11 which is a more comfortable position when the seat is tilted backwardly in its fully reclining position.

Upon the connecting members 41 are provided arm rests 57, 57 which may be of wood or composition material. It will be noted, in connection with such arm rests, that the links 43 and 44 by which the swinging chair structure is supported from the standards 12, 12, are both positioned forwardly of the upper reaches of such standards. This construction adds considerably to the comfort afforded to the occupant of the chair, whether in the sitting, upright, position of the seat, or in the reclining position thereof, as it leaves a free space to the rear of the standards sufficiently large to permit a comfortable resting place for the elbow regions of the arms in any position of the seat.

Upon each of the standards 12, 12 are securely fastened in spaced relation a pair of bracket elements 58, 58 through which may be passed a circular rod 59 having slidably mounted thereon an adjustable stop collar 60 provided with a locking screw 61, the position of the collar 60 determining the extent to which the rod 59 extends through the eye members 58. Upon the rod 59, at its upper extremity, is pivotally mounted, in any suitable manner, a wire frame 62 of square or rectangular configuration, forming the supporting skeleton for a shade 63 adjustable to any position above the chair, by means of the rod 59 and lock nut 60, and which may be turned to one side of the chair, as illustrated in dotted lines in Fig. 1, by pivoting the same about the upper extremity of the rod 59.

My novel chair is provided with means for automatically locking the chair structure in any of a plurality of positions of inclination as the occupant leans backwardly within the seat, such means comprising a notched lever 63 (Figs. 2 and 3) pivoted at 64 upon the connecting member 41. The notches in the lever 63 are adapted to engage pin 65 protruding from the connecting member 42 as the latter is brought forwardly when the seat structure is inclined. The configuration of the notches in the lever 63 is

such that the pin 65 can ride outwardly from any one of said notches and engage the next succeeding notch as the seat is inclined. In order to release the seat from its fixed position at any degree of inclination, it is only necessary for the occupant to press the portion 66 of the lever 63, extending above the member 41, forwardly (see Fig. 2), thus disengaging the pin 65 from the notch of the lever 63 with which it had been in engagement.

My novel chair is characterized by a simplicity of construction and compactness not present in chairs of the same general type as represented by prior art structures. It will be noted that my novel construction affords particular comfort to the occupant of the chair in any degree of inclination of the seat. By reason of the fact that in my novel construction, no part of the straps supporting the seat structure occupies a position to the rear of the standards, sufficient elbow room for the occupant of the chair in any position, whether the upright sitting position or the reclining position, is provided rearwardly of the standards.

It is to be noted also that the flexible seat member of the chair in accordance with my invention is free of any and all supporting members positioned directly underneath such seat, so that no portion of the frame is in direct contact with the canvas body forming the seat at any part thereof and thus possibly interfere with the freedom of flexibility of the canvas strip forming the seat member. The length of the canvas is such that when it is almost flat, for instance, in the fully reclining position, no part of the canvas strip is in contact with the back rest bar 50. The seat is therefore extremely comfortable.

The compactness of my novel chair when the elements thereof are disassembled and collapsed for packing and shipment is a feature of my invention. The particular means, including the spacing and bracing frame, connecting the standards of the supporting frame, is a novel feature of my construction which I have described in detail but in which various modifications, particularly in the arrangement of the several parts, may be made without departing from my invention.

I claim:

1. In a chair of the type which is adapted to assume different positions of inclination to provide a comfortable sitting or lying posture for the occupant of the chair, the combination of a seat supporting structure, a flexible seat member supported on said structure, a frame upon which said seat supporting structure is mounted for swinging movement comprising two standards and a spacing and bracing frame connecting said standards including a pair of links secured at their lower ends pivotally to said standards, a second pair of links each pivotally secured at one end thereof to one of said standards at a point spaced from the connection of said first links with said standard and pivotally connected at points adjacent the ends of the first mentioned links to said links, said pairs of links defining by their lengths, when brought into alignment with each other, the spacing of said standards, said first mentioned pair of links

being provided at their free ends with angular lugs projecting at right angles therefrom, and said second pair of links being provided with recesses in the sides thereof at such distances from the pivotal connecting points of the links that the projecting lugs on said first mentioned links will engage such recesses when one of the first pair of links is brought into alignment with one of the second pair of said links and the second of said first mentioned pair of links is brought into alignment with the other of said second pair of links, said spacing and bracing frame including a bracing member comprising two link portions pivotally connected at one of their ends to the pairs of links spacing the standards from each other at the pivotal connecting points of said links, one of said link portions being pivotally connected at the other end thereof to the second link portion at a point spaced from the free end thereof, said second link portion being provided at such free end with an angular lug projecting at right angles therefrom and adapted to engage a recess in the side of said first mentioned link portion when the two link portions are brought into alignment, to brace the spacing links and standards by locking said spacing links in rigid position.

2. A collapsible supporting frame for swing chairs comprising a pair of standards and a spacing and bracing frame connecting the two standards including a pair of links secured at their lower ends pivotally to said standards, a second pair of links each pivotally secured at one end thereof to one of said standards at a point spaced from the connection of said first links with said standard and pivotally connected at points adjacent the ends of the first mentioned links to said links, said pairs of links defining by their lengths, when brought into alignment with each other, the spacing of said standards, said first mentioned pair of links being provided at their free ends with angular lugs projecting at right angles therefrom, and said second pair of links being provided with recesses in the sides thereof at such distances from the pivotal connecting points of the links that the projecting lugs on said first mentioned links will engage such recesses when one of the first pair of links is brought into alignment with one of the second pair of said links and the second of said first mentioned pair of links is brought into alignment with the other of said second pair of links, said spacing and bracing frame including a bracing member comprising two link portions pivotally connected at one of their ends to the pairs of links spacing the standards from each other at the pivotal connecting points of said links, one of said link portions being pivotally connected at the other end thereof to the second link portion at a point spaced from the free end thereof, said second link portion being provided at such free end with an angular lug projecting at right angles therefrom and adapted to engage a recess in the side of said first mentioned link portion when the two link portions are brought into alignment, to brace the spacing links and standards by locking said spacing links in rigid position.

AUGUST EURING.