

April 3, 1956

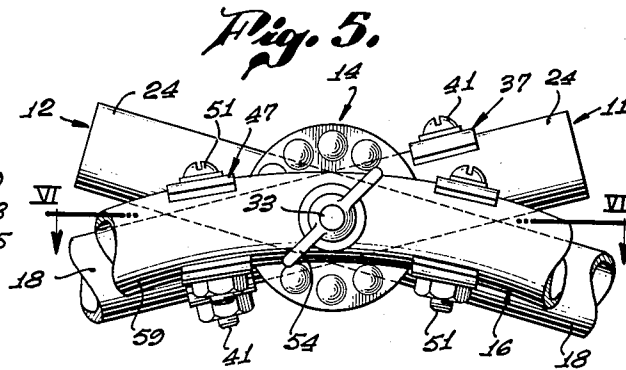
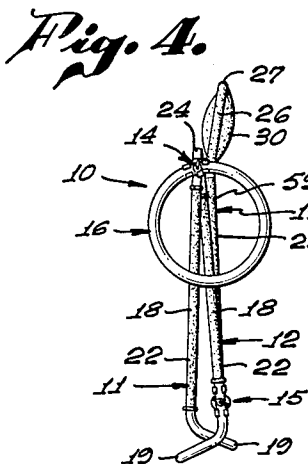
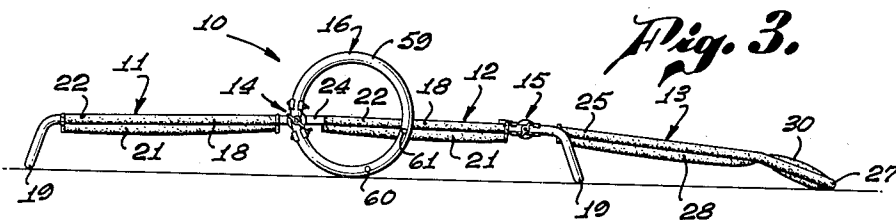
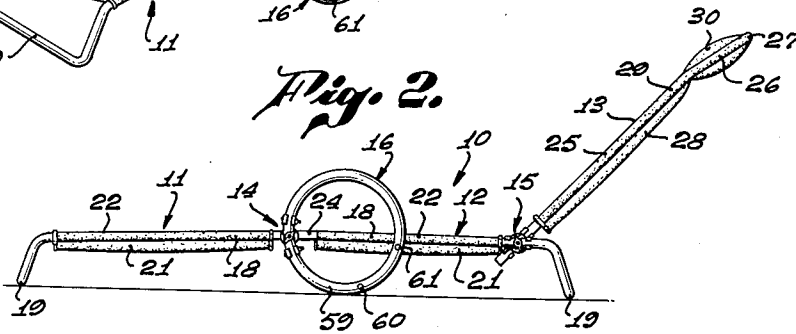
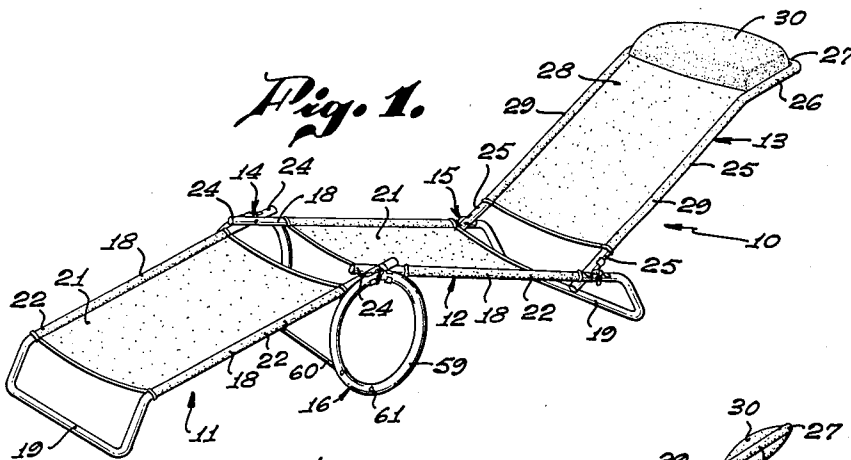
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2,740,465

FOLDABLE LOUNGE CHAIR

Filed July 6, 1954

2 Sheets-Sheet 1



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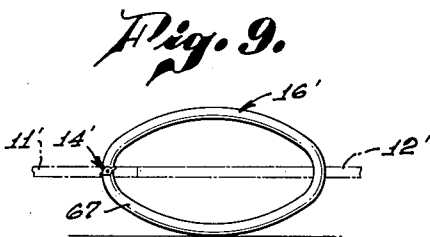
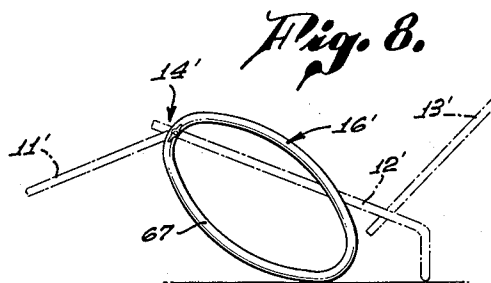
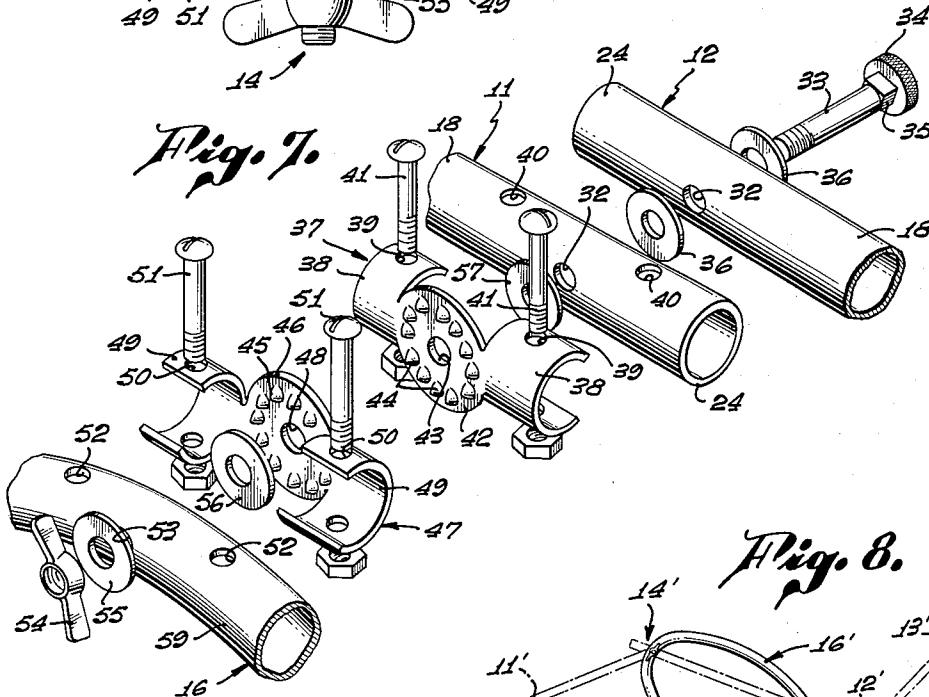
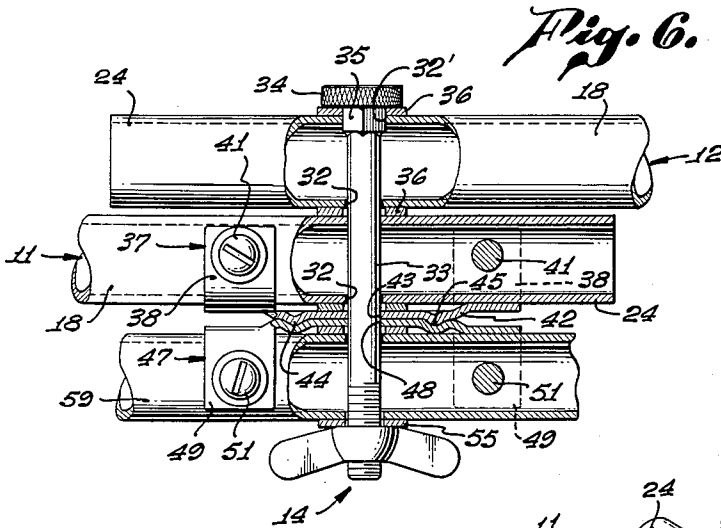
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FOLDABLE LOUNGE CHAIR

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Application July 6, 1954, Serial No. 441,478

3 Claims. (Cl. 155—105)

This invention relates to a lightweight, portable, foldable, multi-purpose reclining or lounge chair for use on the beach, patio, lawn, garden, or the like.

Generally speaking, the lounge chair of this invention provides a portable lightweight chair which embodies adjustable features for permitting use of the chair as a normal lounge with a horizontal seat and leg section and an upwardly inclined back section, for adjusting relative positions of the leg and seat sections so as to embody a selected somewhat convex contour for comfortably supporting the legs of the user, and for adjusting the leg, seat and back sections into virtually extended horizontal relation so that the user may recline in prone position as for sleeping or sunbathing. In addition, the chair of this invention may be readily foldable into a collapsed, compact structure for carrying in an automobile or for occupying a minimum of storage space.

The primary object of this invention is to disclose and provide a simple, lightweight construction and arrangement of a multi-section lounge chair which is adapted to serve several purposes.

An object of this invention is to disclose and provide an inexpensive interconnected sectional lounge chair construction which is easy to manufacture and to assemble.

A further object of this invention is to disclose and provide a foldable chair made of several pivotally interconnected sections which may be easily collapsed into compact form for storage.

Still another object of this invention is to disclose and provide a lounge chair which may be easily selectively adjustable to a desired contour of back, seat, and leg sections for providing maximum comfort to each individual user of the chair.

A still further object of this invention is to disclose and provide a foldable chair of several sections arranged in line wherein novel means are used to pivotally adjustably interconnect the several sections and wherein the sections may be selectively positioned relative to each other.

A still further object of this invention is to disclose and provide a novel arrangement of a plurality of interconnected sections forming a lounge chair wherein a selectively adjustable auxiliary support means is provided intermediate the ends of the seat and leg sections for adjusting the contour of the leg and seat sections of the chair.

This invention contemplates a lightweight, portable, foldable lounge chair comprising pivotally interconnected leg, seat and back sections whereby one section may be folded upon the adjacent section. A support means (which may also serve as an arm rest means) may be pivotally, adjustably connected to and between said leg and seat sections at a virtually peripheral point of the support means for turning about a transverse axis to vary the relative positions of the leg and seat sections by raising or lowering the pivot connection of the sections. A back section is pivoted to the seat section for adjusting the inclination of the back section. The contour of the

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chair may thus be selectively adjusted to comfortably accommodate a user.

These and other objects of this invention will be readily apparent from the following description of the drawings wherein exemplary embodiments thereof are illustrated.

In the drawings:

Fig. 1 is a perspective view of a lounge chair embodying this invention with the leg and seat sections in convex contour relation.

Fig. 2 is a side view of the lounge chair shown in Fig. 1 adjusted to normal lounge position with leg and seat sections lying in the same plane.

Fig. 3 is a side view of the chair shown in Fig. 1 with the leg, seat, and back sections adjusted to virtually horizontal reclining position.

Fig. 4 is a side view of the chair shown in Fig. 1 foldably collapsed for storage or carrying.

Fig. 5 is an enlarged fragmentary view of pivot means between the leg and seat sections of the chair of Fig. 1.

Fig. 6 is a top view of Fig. 5.

Fig. 7 is an exploded perspective view of the fragmentary parts shown in Figs. 5 and 6.

Fig. 8 is a fragmentary diagrammatic view of a different embodiment of auxiliary support means for a chair of this invention in one position.

Fig. 9 is a fragmentary side view of the embodiment shown in Fig. 8 in a second position.

Generally speaking, the portable, lightweight, foldable lounge chair 10 shown in Fig. 1 may comprise a leg section 11, a seat section 12 and a back section 13. Pivot means 14 and 15 interconnect the three sections. An adjustable auxiliary intermediate support means 16 may be pivotally, adjustably connected to the pivot means 14 for varying the relative positions of the leg and seat sections 11 and 12.

The leg section 11 and seat section 12 are virtually similarly constructed. Each section 11 and 12 may be formed of suitable lightweight metal tubing such as aluminum alloy. Each section 11 and 12 may be bent to substantially U-shape and may comprise parallel, spaced apart side members 18 lying in a plane and a transverse end member 19 lying in a plane spaced to one side of the plane of the side members 18. The transverse member 19 may be integral with side members 18, end portions of side members 18 being bent to space end member 19 from the side members. The end members 19 serve to support the leg and seat sections at opposite ends and to space the side members 18 above a supporting surface.

Each section 11 and 12 may be provided with a transversely extending, stretched, flexible fabric 21 of any suitable material, said fabric 21 being provided with longitudinally extending side sleeves 22 through which side members 18 may be sleeved. The length of fabric 21 extends for the major portion of the length of the side members 18 so as to provide a suitable supporting means for the body of the user.

The open ends of the U-shaped leg and seat sections face each other so that free end portions 24 of the side members may be disposed in close adjacent relation. The side members 18 of the seat section 12 may converge slightly inwardly so that they may be positioned between end portions 24 of the side members of the leg section 11 and pivotally interconnected as later described.

The back section 13 is similarly formed of U-shape and of suitably configured lightweight metal tubing. The side members 25 of the back section are spaced apart in parallel relation and are provided with slightly inclined end portions 26 which are integral with a transverse end member 27. The back section 13 may similarly include a transversely extending fabric 28 having a length ex-

tending for substantially the length of the side members 13 and provided with suitable side sleeves 29 for insertion therethrough of the side member 13. Between and supported by the inclined end portions 26 may be provided a suitable head pad 30, the inclination of portions 26 being such as to comfortably position the head of a user sitting in the lounge chair. The free ends of side members 25 of the back section 13 are positioned inwardly of and closely adjacent to the back ends of side members 18 of the seat section 12 and pivotally interconnected as later described.

Pivot means 14 and 15 are provided for respectively pivotally interconnecting the leg and seat sections and the seat section and back section. Pivot means 14 at each side of the chair includes aligned ports 32 (Figs. 6 and 7) provided in end portions 24 of the side members of the seat and leg sections. A pivot bolt 33 extends through said ports and may be provided with a head 34 having a square shank portion 35 adjacent thereto for nonrotatable engagement with a complementary square port 32' in adjacent portion 24 to prevent rotation of pivot bolt 33. Suitable washers 36 may be provided between the head 34 and end portions 24.

Each end portion 24 of leg section 11 carries a yoke means 37 which includes spaced apart C-section ends 38 for partially encircling the end portions 24 on adjacent sides of port 32. The C-shaped ends 38 are provided with aligned ports 39 and end portion 24 of the leg section 11 is provided with longitudinally spaced vertically disposed sets of ports 40. Screw bolt and nut assemblies 41 extend through aligned ports 39 and 40 for securing the yoke means 37 to the end portion 24 to prevent relative movement therebetween. Between ends 38 and integral therewith is a circular planar central member 42 provided with an axial port 43 for receiving pivot bolt 33. Around the circumferential margin of the central member 42 may be provided a plurality of circularly disposed outwardly directed lugs or projections 44. Projections 44 may selectively interengage and interlock with a plurality of complementary circumferentially arranged indentations or recesses 45 provided on a similar central circular member 46 of a yoke means 47. The central member 46 is axially ported at 48 to receive pivot bolt 33.

The yoke means 47 is constructed similarly to the yoke means 37 but faces in the opposite direction. Means 47 includes curved C-section ends 49 each having spaced aligned sets of ports 50 to receive screw bolt and nut assemblies 51 which may also extend through spaced sets of ports 52 on the support means 16 for securing yoke means 47 thereto. The support means 16 is provided with aligned ports 53 through which pivot bolt 33 extends for threaded engagement with a wing-type locking and securing nut 54. Suitable washers 55, 56 and 57 may be provided between the several members as shown.

In this embodiment the adjustable support means 16 is illustrated as a pair of circular, tubular members 59 for varying relative positions of the leg and seat sections 11 and 12 and the height of pivotal means 14 by turning of said members 59 about the transverse axis defined by pivot bolt 33. The circular, tubular members 59 at opposite sides of the chair may be interconnected transversely by a suitable transverse rod or bar 60 and may be provided with an inwardly extending stop pin 61 for limiting the turning of the circular member 59 about pivot means 14.

In Fig. 1 the circular, tubular members 59 are positioned to provide maximum height of pivot means 14 and to provide a convex contour configuration between the leg and seat sections 11 and 12. The axis of pivot bolt 33 is at its top uppermost position or at 12 o'clock with respect to the circular members 59.

Adjustment of circular members 59 to position the leg and seat sections 11 and 12 in virtually horizontal relation may be readily accomplished by loosening wing nuts 54 on the pivotal means 14 disengaging the interlocking members 42 and 46, and turning the tubular member 59 relative to the yoke means 37 to selected position. In this

case the axis of pivot bolt 33 is located at about 9 o'clock. When such desired horizontal relation is afforded between sections 11 and 12, the wing nut 54 may be tightened and the interlocking projections and complementary recesses on the cooperable yoke means 37 and 47 will hold the circular members 59 in selected position. The stop pins 61 in this position of the seat and leg sections engage the underside of the side members 18 of the seat section 12.

Relative turning movement between yoke means 37 and 47 is facilitated by the inclined complementary faces on each set of interlocking projection and recess. It is understood other means may be used to permit selectively rotating and holding the sections 11, 12, and support means 16 in desired position.

The pivotal means 15 which pivotally adjustably interconnects the back section 13 to the seat section 12 is constructed similarly to pivotal means 14 and is not described in detail for the purpose of brevity. Pivotal means 15 provide means whereby the back section can be adjusted to desired inclination and then secured in such position. In Fig. 3 the back section is shown positioned so that its end member contacts the supporting surface, the several sections of the lounge chair being disposed substantially horizontally and a user of the chair may lie in full reclining or prone position. When the chair is used as in Fig. 3, the body position of the user is reversed and the head of the user will be positioned at the end of leg section 11 and his feet may rest upon back section 13.

Folded and collapsed position of the chair is shown in Fig. 4 wherein it will be noted that the end member 19 of leg section 11 is received between the bent end portions of seat section 12 and the side members of the back section lie inwardly of the side members of the seat section. In folded position the chair may be readily carried by the circular tubular support members 59.

In the embodiment of this invention partially illustrated in Figs. 8 and 9, the leg, seat and back sections 11', 12', and 13' are constructed similarly to those described above. This embodiment differs in that adjustable support means 16' is formed by an elliptically shaped tubular member 67. The member 67 is connected to pivot means 14' in the same manner as member 59 and at one end of the long axis of the ellipse. The elliptical shape of member 67 permits the height of pivotal means 14' to be increased so as to provide more pronounced angular relationship between leg and seat sections 11' and 12' and thus afford greater convex contour to this portion of the chair and a greater range of adjustment. When the leg and seat sections 11' and 12' are positioned in virtually horizontal relation, the elliptical member 67 extends toward the back far enough to provide arm rest means for a user in sitting position.

It will be understood that the shape of the support means 16' may be varied as desired and may take the form of any conic section. While tubular hollow members 59 and 67 are illustrated, if desired, the support means 16 and 16' may be made of solid material and connected at a point adjacent to its periphery to pivot means 14.

It will be thus readily apparent that the lounge chair of this invention is readily and easily manufactured. Each of the leg, seat and back sections are made of simply bent tubular stock. The fabric means extending between the side members of the several sections is readily assembled by sleeving over the free ends of the U-shaped sections and, therefore, may be readily replaced when worn. The relationship between the leg, seat and back sections may be conveniently and easily varied so as to provide a selected chair contour most comfortable to the individual using the chair.

It is understood that other modifications and changes may be employed in the embodiments of the chair described above and all such changes and modifications

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coming within the scope of the appended claims are embraced thereby.

I claim:

1. A foldable, portable lounge chair comprising: a leg section, a seat section and a back section, each of said leg and seat sections being of U-shape having parallel side members and a transverse end member connected thereto and spaced to one side of said side members for supporting said side members in spaced relation to a supporting surface, the open ends of the U-shaped seat and leg sections facing each other with free end portions of the side members thereof in adjacent relation; pivot means interconnecting the adjacent end portions of said side members of said seat and leg sections; support means adjustably connected to said pivot means to vary the relative positions of the seat and leg sections and adapted to contact the supporting surface between said end members, said adjustable support means comprising a tubular member having a configuration of a conic section, the connection of said support means to said pivot means being at a point adjacent the periphery of the tubular member; and a back section of U-shape adjustably, pivotally connected to said seat section adjacent to the end member thereof.

2. A foldable, portable lounge chair comprising: a leg section, a seat section and a back section, each of said leg and seat sections being of U-shape having parallel side members and a transverse end member connected thereto and spaced to one side of said side members for supporting said side members in spaced relation to a supporting surface, the open ends of the U-shaped seat and leg sections facing each other with free end portions of the side members thereof in adjacent relation; pivot means interconnecting the adjacent end portions of said side members of said seat and leg sections; support means adjustably connected to said pivot means to vary the relative positions of the seat and leg sections and adapted

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to contact the supporting surface between said end members, said adjustable support means comprising a circular, tubular member; and a back section of U-shape adjustably, pivotally connected to said seat section adjacent to the end member thereof.

3. A foldable, portable lounge chair comprising: a leg section, a seat section and a back section, each of said leg and seat sections being of U-shape having parallel side members and a transverse end member connected thereto and spaced to one side of said side members for supporting said side members in spaced relation to a supporting surface, the open ends of the U-shaped seat and leg sections facing each other with free end portions of the side members thereof in adjacent relation; pivot means interconnecting the adjacent end portions of said side members of said seat and leg sections; support means adjustably connected to said pivot means to vary the relative positions of the seat and leg sections and adapted to contact the supporting surface between said end members, said adjustable support means comprising an elliptically shaped member having connection to the pivot means at an end of the longitudinal axis thereof; and a back section of U-shape adjustably, pivotally connected to said seat section adjacent to the end member thereof.

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