Jan. 29, 1935. L. LARSEN 1,989,203

CHAIR

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Fig. 3.

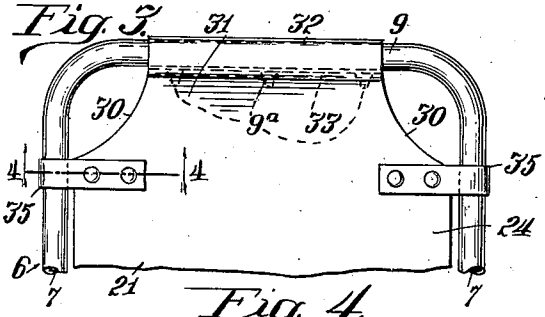


Fig. 4.

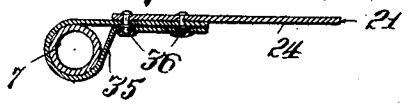


Fig. 5.

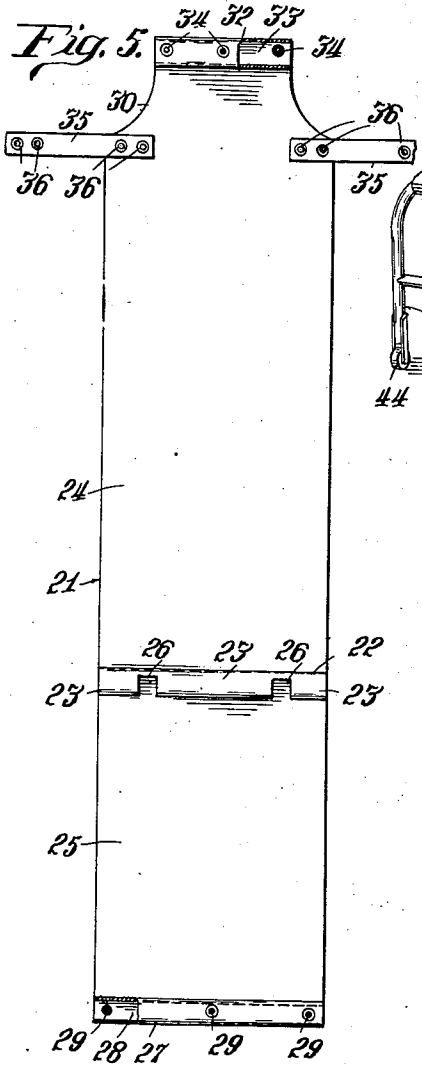


Fig. 1.

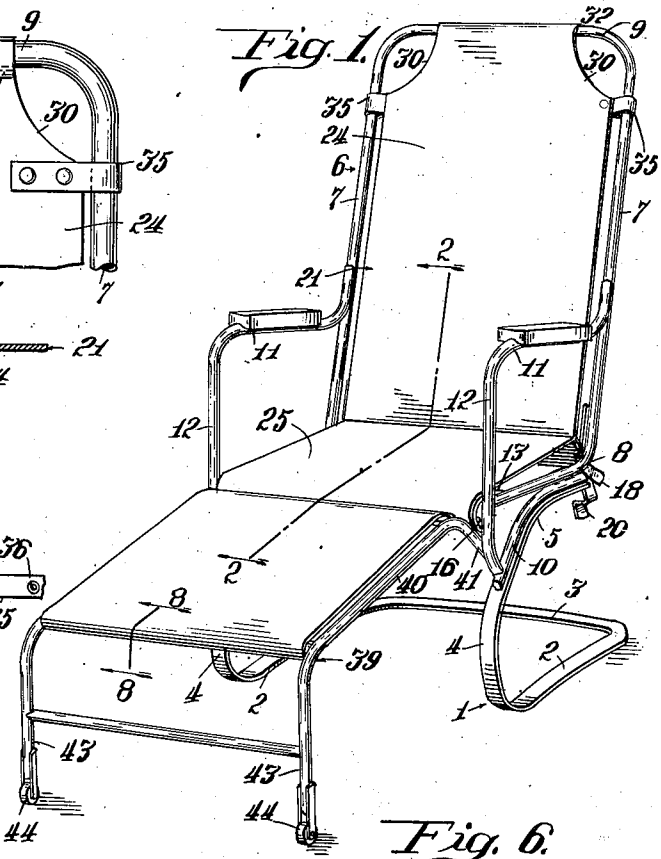
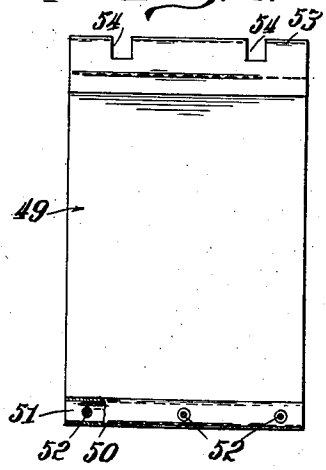


Fig. 6.



Inventor

Lewis Larsen

By Arthur McMillan

Attorney

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CHAIR

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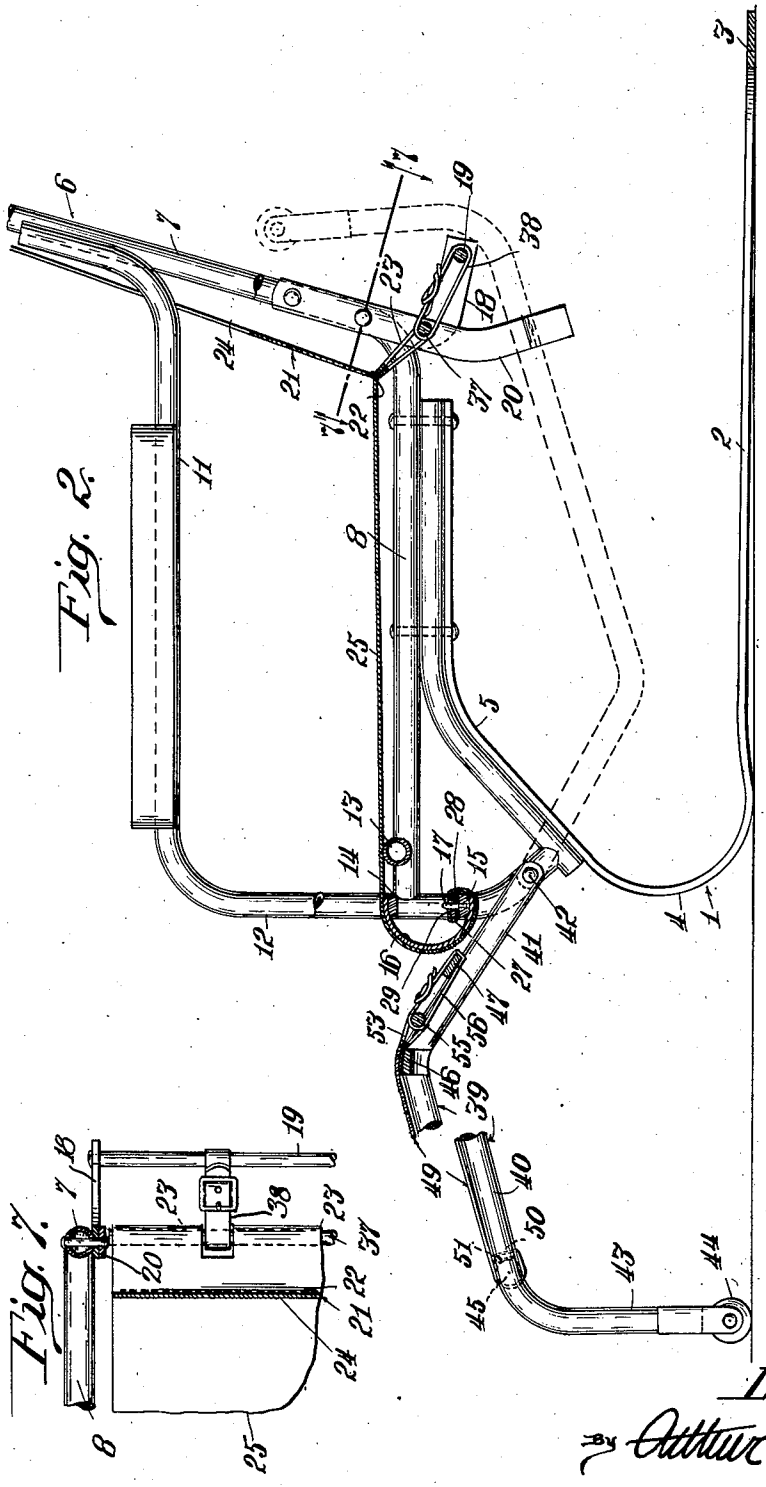


Fig. 2.

Fig. 7.

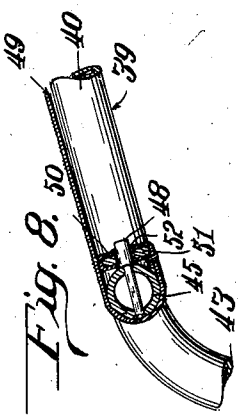


Fig. 8.

Inventor
Lewis Larsen
By Arthur Yates Nelson
Attorney

Patented Jan. 29, 1935 1,989,203

UNITED STATES PATENT OFFICE

1,989,203

CHAIR

Lewis Larsen, Menominee, Mich., assignor to Heywood-Wakefield Company, Boston, Mass., a corporation of Massachusetts

Application January 28, 1933, Serial No. 653,988

7 Claims. (Cl. 155—105)

This invention relates to improvements in chairs and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

One of the objects of the invention is to provide an improved chair more particularly adapted for outdoor use and which includes a metallic frame and a fabric or like covering providing the seat and back rest, the fabric and frame being so constructed as to permit a ready attachment and drawing taut of the covering into back rest and seat providing relation with respect to the frame.

A further object of the invention is to so construct a chair of this kind, that the fabric covering is supported as a rolled edge at the front end of the seat, to there avoid any substantially sharp corners.

Another object of the invention is to provide a chair of this kind having a spring base whereby the occupant may set up a teetering action in the chair and which chair also includes a forwardly extending leg or foot rest which may be swung into and releasably secured in an out-of-the-way position, beneath the seat, when the use of such a foot rest is not desired by the occupant.

The above mentioned objects of the invention, as well as others, together with the many advantages thereof will more fully appear as I proceed with my specification.

In the drawings:

Fig. 1 is a perspective view of a chair embodying the preferred form of my invention;

Fig. 2 is a longitudinal vertical sectional view on an enlarged scale, through the seat and adjacent portions of the chair as taken on the line 2—2 of Fig. 1;

Fig. 3 is a view in elevation on an enlarged scale, of the top end part of the back rest as looked at from the rear thereof;

Fig. 4 is a detail transverse sectional view on an enlarged scale as taken on the line 4—4 of Fig. 3;

Fig. 5 is a view in elevation of the seat and back rest fabric or covering when removed from the frame;

Fig. 6 is a view in elevation of the fabric or covering for the foot rest of the chair;

Fig. 7 is a detail horizontal sectional view through a part of the chair as taken on the line 7—7 of Fig. 2; and

Fig. 8 is a detail vertical sectional view on an enlarged scale as taken on the line 8—8 of Fig. 1.

In general, my improved chair which is more particularly adapted for use outdoors as upon a porch, lawn or in a garden, includes a base having yieldable side members made of flat spring stock. Associated therewith is a tubing structure made to provide a back rest frame and a seat frame respectively with the latter operatively secured upon the yieldable side members of the base.

A fabric covering is associated with said frames and is formed for a detachable connection at its ends with said structure and at a point between its ends, said covering is so formed as to be operatively engaged by suitable devices, in turn connected to a fixed part of the frame, whereby said fabric may be drawn into a taut condition providing the seat and back rest.

At the front of the seat frame is provided a transverse extending knee rail or roll of a generously curved cross section about which the fabric engages. This rail eliminates any sharp corners at the front of the seat and provides a wide, smooth surfaced support for the fabric so that it cannot draw into wrinkles at this point.

In connection with what may be called the chair proper and which comprises the base, seat and back rest, a foot or leg rest is provided. This rest is so pivoted at its rear end to the chair proper, that when it is so desired, said rest may be swung up under the seat and there detachably secured in an out-of-the-way position and this without in any way interfering with the teetering action of the chair. Said foot or leg rest includes a frame of tubing and a detachable fabric or like covering which may be drawn into a taut condition during its attachment.

Referring now in detail to that embodiment of the invention, illustrated in the accompanying drawings:

1 indicates as a whole the base of the chair preferably made of flat strip, spring stock. As shown, said base includes upwardly bowed, floor engaging side members 2—2 which are connected together at their rear ends by a cross member 3. Each floor engaging member is bent upwardly at its front end as at 4 and then rearwardly to provide a portion 5 and to said portions a tubular framing is attached as will soon appear. The portions 5 are preferably disposed in the plane of but above the associated floor engaging members of the base.

6 indicates as a whole a tubing structure mounted on the base. This structure is formed to provide a back rest frame including substantially upright side members 7 and a seat frame including substantially horizontal side members 8—8, the top ends of the side members 7 being connected together by a cross member 9. On the underside of said member 9, are provided laterally spaced, downwardly extending buttons or studs 9a, best shown in Fig. 3.

Between each side member 8 of the seat frame and associated part 5 of the base is a brace or reinforcing member 10, the front end of which follows down the inclined front portion of said part, the members 8 and 10 and parts 5 all being connected together in operative relation in

any suitable manner. Associated with each set of side members 7 and 8 is an arm rest which includes a substantially horizontal arm rest supporting member 11 that is fixed at its rear end to an associated side member 7. Each arm rest also includes a substantially upright post 12 to which the front end of the associated seat frame member 8 is welded, said post extending downwardly beyond said member to be welded to the front end of the associated brace 10.

The front ends of both side members 8 are connected together by a cross tube 13 while the posts 12 of both arm rests are connected together by a pair of vertically spaced top and bottom flat bars 14 and 15 respectively. These bars form a support for a front rail 16 of a curved cross section to provide a rounded corner or roll at the front of the seat frame. The longitudinal top margin of the rail 16 engages upon and is preferably spot welded to the top surfaces of the bar 14 while the longitudinal bottom margin of said rail engages with and is preferably spot welded to the bottom surfaces of the bar 15. The top bar 14 is arranged in substantially the plane of the top of the seat frame side members 7 and on the bottom bar is provided a plurality of upstanding studs or buttons 17.

At the junction of each set of side members 7 and 8 of the back rest and seat frames, I provide rearwardly and slightly downwardly extending brackets 18 which are connected together by a cross rod 19. Also at said junctions there are provided downwardly extending, laterally flexible hooks 20, the purpose of which will appear later.

In connection with the seat and back rest frames, I provide means forming a seat and back rest, preferably of a good stout fabric. Such a means is shown in Fig. 3 and the same comprises a strip 21 of fabric such as canvas, of a width approximating the distance between the sets of members 7 and 8 and of a length substantially equally the combined lengths of said members. Said strip is stitched transversely at a point between its ends as at 22 to provide a transverse pocket 23 on its rear side and which pocket divides the strip into a back rest portion 24 and a seat portion 25. In both sides of said pocket, are laterally spaced cut-outs, or notches 26, the purpose of which will soon appear.

The free or bottom end of said seat portion of the strip as shown in Fig. 5 is stitched to there provide a transversely extending pocket 27 in which is located a flat metallic reinforcing bar 28, there being grommets 29 in said pocket and bar, spaced in accordance with the studs or buttons 17 of the bar 15 before mentioned.

The top corner portions of said fabric strip are cut away as at 30 to provide a narrower end or tab 31. This tab is stitched to form a transverse pocket 32 in which is located a reinforcing metallic strip 33 and grommets 34 are provided therein and spaced laterally in accordance with the spacing of the buttons or studs 9a on the bar 9 of the framing 6. Stitched to the rear side of the back rest portion of said fabric strip near said cut-out corners, are laterally extending straps or tapes 35. These straps or tapes carry on those ends stitched to the fabric strip and on their free ends respectively, coacting parts of snap fasteners 36.

The fabric strip 21 is applied to the framing 6, as follows:

The free end of the seat portion 25 is brought around the knee rail or roll 16 and the grommets 29 are engaged with the studs 17 on the bar 15. In this operation, care is taken that the pocket 22 is disposed on the rear side of the strip. The tab 31 is then brought up over the front of the cross member 9 and then around the same and its grommets 34 are engaged with the buttons or studs 9a on said cross member.

A rod 37 of substantially small diameter is then inserted into the pocket 23 from one end and straps 38 are looped around the bar 19 and rod 37, the cut-outs 26 in said pocket allowing for the application of said straps. These straps which are provided with the usual buckles are pulled tight and this acts through the rod 37 to draw the seat portion 25 taut from its rear end and to draw down the back rest portion 24 from its bottom end so that the same becomes taut as best shown in Figs. 1 and 2. Thereafter the straps or tapes 35 are drawn around the side members 7—7 and the coacting parts of the fasteners 36 are operatively engaged. With such an arrangement, it is apparent that should the seat portion 25 and back rest portion 24 of fabric stretch under use, this stretch can be taken up by further drawing up on the straps 38 so that said fabric is again made taut to better hold against sagging under the weight of the occupant.

In connection with the construction before described, I provide a foot or leg rest for the chair and the same comprises a pair of laterally spaced side frame members 39—39 of tubing. Each side frame member includes an intermediate portion 40 which is normally inclined downwardly and forwardly from the knee rail or roll 16 and a rear end portion 41 which is inclined downwardly and rearwardly to extend under the knee rail or roll and there be pivotally connected as at 42 to the inner side of the bottom end of the post 12 of the arm rests. Each side frame member is further formed at the front end of the intermediate portion 40 with a leg 43 provided at its bottom end with a caster 44.

The side frame members are connected together by transverse members 45—46 and 47 respectively as best shown in Fig. 2, the former being a tube and the latter ones being flat bars. On the rear side of the tube member 45 are laterally spaced buttons or studs 48 best shown in Fig. 8.

Associated with the foot rest frame is a covering 49 as shown in Figs. 1 and 6. As appears from Fig. 6, this covering is a strip of fabric of a width approximating the spacing between the side frame members 39 of the foot rest frame and of a length somewhat greater than the distance between the cross members 45 and 46.

One end of said strip is stitched to there provide a transverse pocket 50 in which is located a metallic reinforcing bar 51 having grommets 52 extending therethrough. These grommets are spaced apart a distance corresponding to the spacing of the studs or buttons 48 on the member 45 and with which they cooperate. The other end of said strip is stitched to there provide a transverse pocket 53, with cut-out notches or recesses 54.

In applying the cover 49 to the foot rest frame, the grommets 52 are engaged with the studs 48 on the cross tube 45 of the foot rest frame and the covering is then brought around toward the top of said cross tube and over the cross bar 46. A rod 55 of small diameter is then inserted into the pocket 53 from one end and straps 56 are inserted in the recesses 54 and passed around the rod 55 and cross bar 47 as best shown in Fig. 2. The straps which are provided with the usual buckles

are then pulled tight and this will draw the covering 49 taut so that it is free from wrinkles after which the straps are buckled. Should the covering 49 sag in use, this sag may be removed by again tightening the straps.

Should it be desired to temporarily dispense with the foot rest, the chair is tilted backwardly about the cross bar 3 of the base as an axis and the foot rest frame is then swung about its pivots 42, into a position under the seat. In this movement of the foot rest frame, portions of the side bars 40 thereof, engage the spring hooks 20 and force them laterally outward until said side bars engage with a snap action with the shoulders of said hooks. This folded under position of the foot rest frame is best shown in dotted lines in Fig. 2. When in this position, the foot rest is out of the way so that the chair may be more easily moved about from one place of use to another. When the foot rest frame is in this folded under condition it in no way interferes with the teetering action of the chair.

The improved chair, though light in weight, is strong and durable and is extremely comfortable for the occupant, whether the foot rest frame is in its extended operative position or in its folded under position.

While in describing the invention, I have referred in detail to the form, arrangement and construction of the various parts thereof, the same is to be considered, only as illustrative, so that I do not wish to be limited thereto except as may be specifically set forth in the appended claims.

I claim as my invention:

1. In a chair of the kind described, means providing an open seat frame including side members, an upright post at the front end of each side member, top and bottom, vertically spaced bars between said posts at opposite sides of the seat frame, said bottom bar having studs on the upper side thereof, a knee roll member of a substantially semicircular hollow cross section fixed along the inside of its top and bottom margins to said vertically spaced bars respectively, and a fabric seat member passing about said knee roll member and provided at one end with a reinforcing member detachably connected to said studs on said bottom bar.

2. A chair embodying therein an open frame including side members and cross members, a fabric member for the frame, means connecting the end portions of said fabric member to two of said cross members, means providing a pocket in another portion of said fabric member, a rod arranged in said pocket, said pocket having openings therein to expose portions of said rod, and adjustable members engaged with said portions of the rod exposed through said openings and with a third cross member of the frame and operable to draw said fabric member taut between said two cross members.

3. A chair embodying therein an open frame including side members and cross members, a fabric member for the frame, means connecting the end portions of said fabric member to two of said cross members, means providing a pocket in another portion of said fabric member, a rod arranged in said pocket, said pocket having openings therein to expose portions of said rod, and adjustable straps passing about a third cross member of the frame and through said openings and about portions of the rod exposed through said openings and operable to draw said fabric members taut between said two cross members.

4. A chair embodying therein an open frame including side members and cross members, a fabric member for the frame having a transverse pocket with openings therein and dividing said fabric member into two portions, means connecting a part of each portion to two of said cross members, a rod arranged in said pocket and parts of which rod are exposed through the openings in said pocket, and means passing around said parts of said rod exposed through said openings and around another of said cross members for drawing said rod toward said last mentioned cross member and to tauten both portions of the fabric member in an endwise direction.

5. In a chair of the kind described, a seat frame including at the front thereof, top and bottom vertically spaced bars, the bottom bar having studs on the upper side thereof, a knee roll member of a substantially semi-circular hollow cross section fixed along the inside of its top and bottom margins to said vertically spaced bars respectively, and a fabric seat member passing about said knee roll member and provided at one end with a reenforcing member detachably connected to said studs on said bottom bar.

6. A chair embodying therein means providing a seat and a back rest frame, including side members, a transversely extending knee roll member of curved cross section at the front of the seat frame, a cross member at the top of the back rest frame, a transverse member spaced to the rear of the junction of the side members of the seat and back rest frame and secured to the side members, a fabric member including a seat and a back rest portion, means for securing the free end of the seat portion to the front of the seat frame after passing about said knee roll member, means on the free end of the back rest portion for securing the same to said said cross member at the top of the back rest frame, a transverse pocket in said fabric member at a point between said seat and back rest portions, a rod in said pocket, and means passing around portions of said rod exposed through openings in said pocket and around portions of said transverse member and operable to draw said rod in said pocket toward said transverse member and to simultaneously tauten said seat and back rest portions of said fabric member.

7. In a chair, a seat frame and a back rest frame, the latter including a top cross bar, a knee roll at the front of the seat frame, a fabric member having a transverse pocket between its ends which divide said member into a seat portion and a back rest portion, there being laterally spaced openings in said pocket, means for securing the front end of the seat portion to said knee roll, means for securing the top end of the back rest portion to said cross bar, a second cross bar rigidly secured to said frames near the junction thereof, a member loose in said pocket, and means engaged with said second cross bar and portions of said member in said pocket that are exposed by reason of said openings, said means being operable to draw said rod toward the second cross bar.

LEWIS LARSEN.