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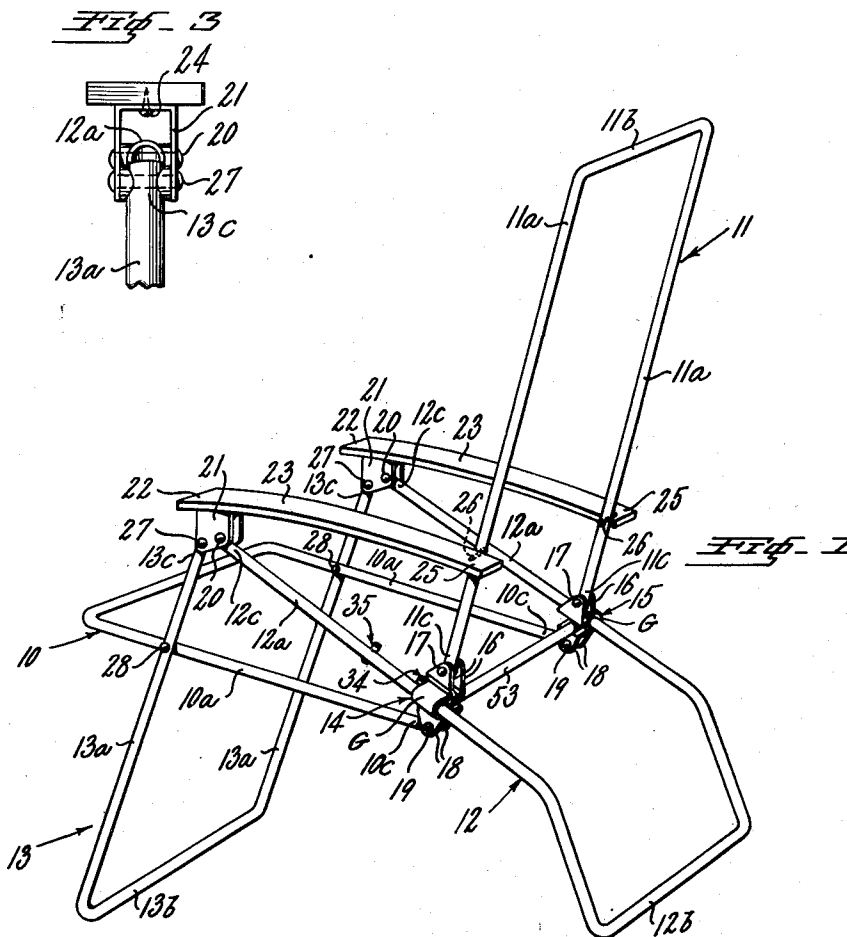
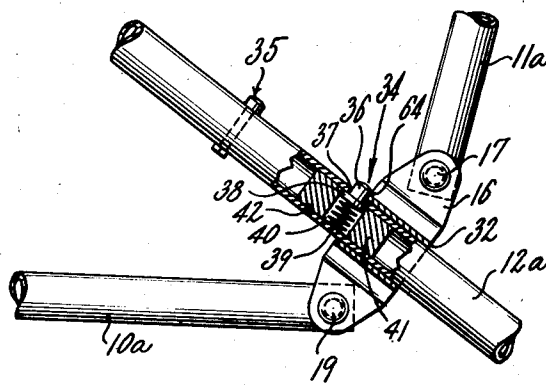
M. D. RECHLER

2,649,138

FOLDING CHAIR

Filed Nov. 2, 1948

3 Sheets-Sheet 1



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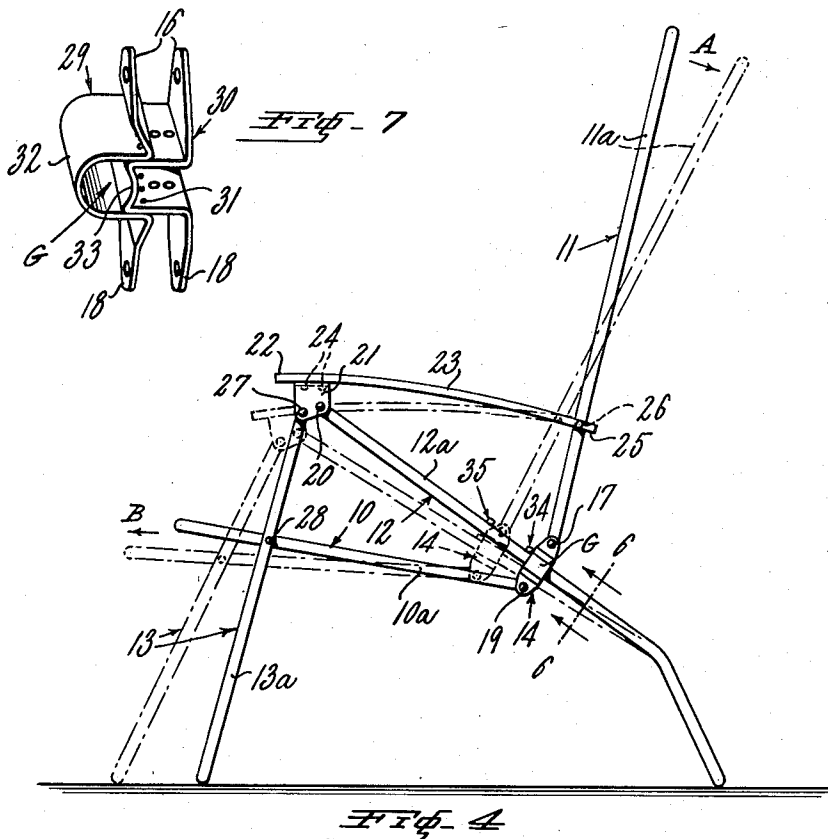
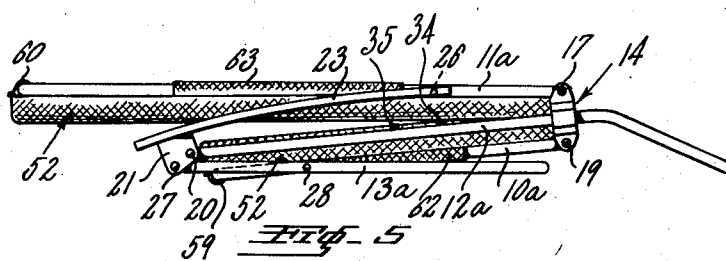
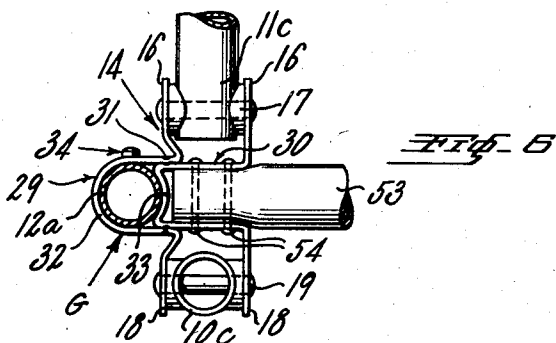
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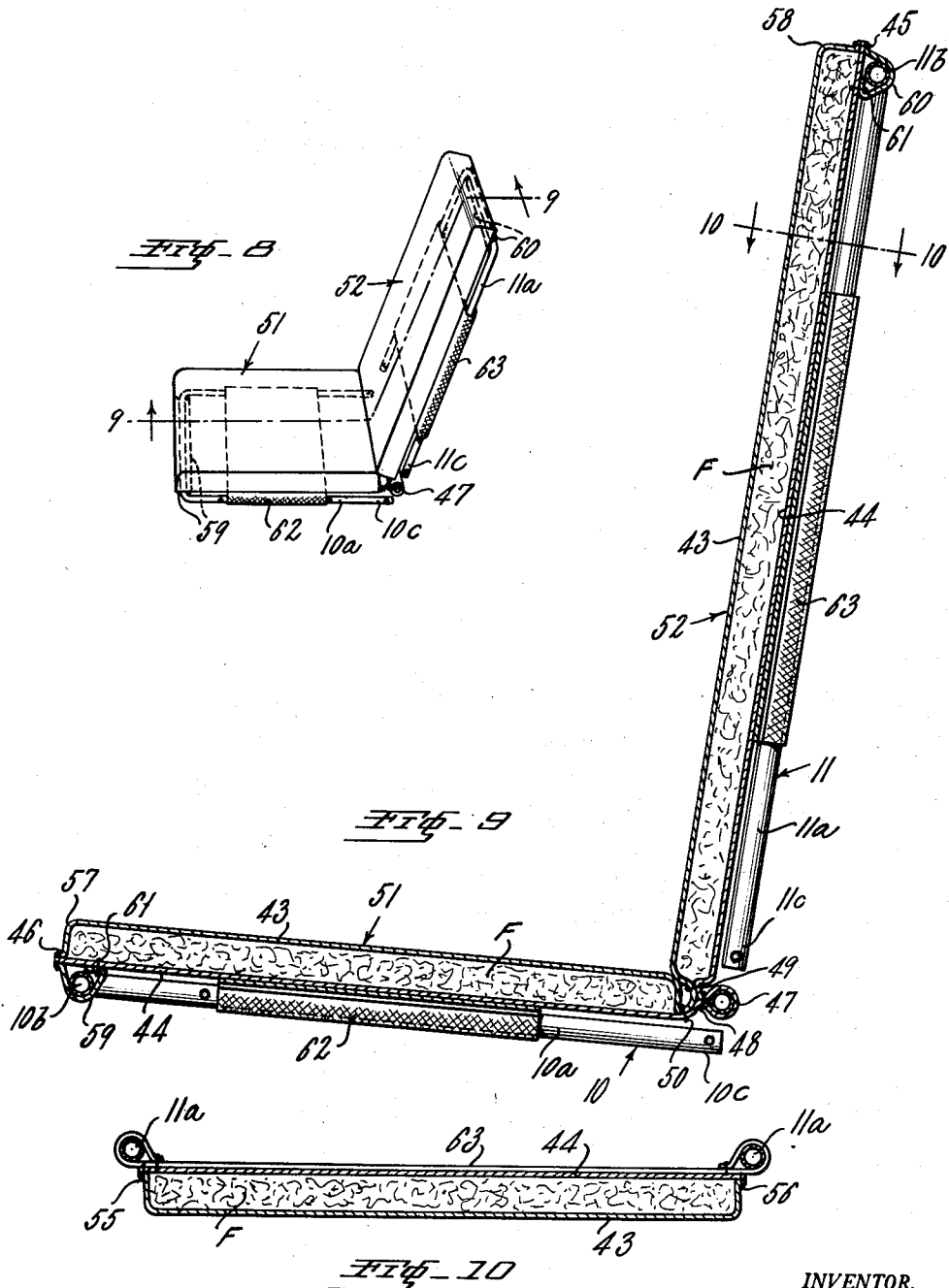
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2,649,138

FOLDING CHAIR

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Application November 2, 1948, Serial No. 57,881

1 Claim. (Cl. 155—117)

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This invention relates to folding chairs, the object being to provide a chair of this character which is compactly foldable to occupy very small space for storing, carrying and shipping.

One of the important features of the chair is its freedom from complexities, involving the use of a few simple parts enabling the chair to be produced with a minimum of machining operations.

Another feature is the provision of a novel adjustable stop mechanism in association with the folding frame, whereby the chair is easily changed from a sitting position to a reclining angle by a simple one motion movement of the back frame.

As a further departure from prior constructions, the chair has a pair of armrests connected at their forward ends by pivots directly to the structure of the folding frame, eliminating the overthrow linkage heretofore required to enable the back frame to be adjusted to its two positions of use.

In the present example of the invention the framework of the chair is produced from four interconnected U-shaped frame sections and pivotal fittings of light metal such as aluminum. A padded seat cushion and a padded back cushion are formed by two continuous pieces of fabric extending downward from the top of the back frame and then forward to the front of the seat frame with the padding material sandwiched between the two layers. A cross rod of the framework extends through a loop formed in the fabric adjacent the bottom of the back cushion to provide anchorage, and the two cushions are brought closely together in front of the loop. The chair is designed to simulate as near as possible the appearance of an upholstered living room chair and can be produced in the width of a settee, with the advantage that in either case this new type of furniture is foldable.

Various other features of advantage will appear as the description proceeds.

In the drawings which illustrate one of the practical applications of the invention:

Fig. 1 is a perspective view of the framework of the chair shown extended in sitting position and without cushions;

Fig. 2 is a view of a slidable link and stop mechanism with associated framework partly broken away in section;

Fig. 3 is a detail of a bracket and pivoted frame connections at the front of an armrest;

Fig. 4 is a side elevation of the chair framework showing two positions thereof as controlled by the stop mechanism;

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Fig. 5 is a side elevation of the framework and its cushions in folded condition;

Fig. 6 is a detail of the link and frame parts on the line 6—6 of Fig. 4;

Fig. 7 shows in perspective further details of the link;

Fig. 8 is a perspective view showing the arrangement of the cushions with respect to seat and back frames;

Fig. 9 is a vertical section on the line 9—9 of Fig. 8;

Fig. 10 is a transverse section on the line 10—10 of Fig. 9.

In the drawings the framework of the chair comprises four frame sections of U-shaped formation which have been bent to shape from light metal tubular stock such as aluminum or other suitable material. These sections are designated seat frame 10, back frame 11, rear leg frame 12, and front leg frame 13.

The seat frame 10 includes a pair of parallel side members 10a, a cross bar 10b and ends 10c. The back frame 11 has a pair of upwardly extending side members 11a, a cross bar 11b and ends 11c. The rear leg frame includes side rails 12a, cross bar 12b and ends 12c. In a similar manner the front leg frame 13 is characterized by parallel side members 13a, cross bar 13b and ends 13c. Links 14 and 15 are slidable on the side rails 12a and have the upper wings 16 to which the ends 11c of back frame 11 are connected by pivot pins 17 or other pivotal means of connection. The links 14 and 15 are also provided with lower wings 18 to which the ends 10c of seat frame 10 are pivoted by fastening means 19. The ends 12c of side rails 12a are suitably pivoted at 20 to brackets 21 which are secured to the under sides of the front portions 22 of arm rests 23 by fasteners 24. The rear portions 25 of arm rests 23 are secured by pivot elements 26 to the rising side members 11a of the back frame.

Front leg frame 13 has its upper ends 13c pivoted to the brackets 21 by fasteners 27. The side members 10a of seat frame 10 have forward portions pivotally connected at 28 to the side members 13a of the front leg frame 13, the parts being designed and arranged to place the cross bar 10b at a considerably extended position outwardly from the front of the chair beyond the pivots 28.

The slidable links 14 and 15 may be constructed as shown in detail in Figs. 6 and 7 wherein two sheet metal pieces 29 and 30 are bent to shape and formed with the upper and lower wings 16

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and 18, the pieces being secured together in any suitable way, preferably by spot welding as at 31. The metal is further shaped at 32 and 33 to provide a rounded guide G having proper clearance for easy sliding movement along the side rails 12a while supporting the frame sections 10 and 11.

The two positions of the chair are controlled by a releasable stop 34 and a fixed stop 35. The releasable stop 34 may comprise a push button 36 projecting through an opening 37 in the side rail 12a and having a flange 38 backed by a spring 39 contained within a recess 40 of a plug 41 fixed within the rail 12a as by punching the metal at 42. Fixed stop 35 may be a bolt, pin or other appropriate form of abutment. The operation of these stops will be explained later in the description.

In order that the chair may simulate as near as possible, and may be used to replace the usual upholstered living room chair, it is provided with nicely designed cushions of proper thickness and proportions to carry out this desirable effect.

The disposition and construction of the cushions are shown in Figs. 8, 9, and 10, with enough of the framework to illustrate their application thereto while the other parts of the chair structure are eliminated for clarity of illustration. According to the construction shown, the cushions consist of two sheets of fabric 43 and 44 fastened together at the top of the back frame 11 by stitches 45 and extending downward along the back of the chair and then forwardly over the seat frame 10 to the front edge thereof where they overlie the cross bar 10b and are stitched together at 46. A loop 47 is formed in the rear sheet 44 by stitching at 48, and the sheets are sewed together at 49 and 50 forming the bottom of the back cushion and the rear closure of the seat cushion. The spaces between the two sheets are filled with padding material F to give them the substantial appearance of upholstered furniture and are fastened together at their side edges by stitches 55 and 56. The two interconnected cushions thus formed are anchored by the loop 47 to a cross rod 53 extending between the links 14 and 15 and secured thereto by bolts or rivets 54 or by welding. The front end 57 of the seat cushion 51 and the top end 58 of the back cushion 52 overlie their respective cross bars 10b and 11b. A crosswise tape 59 stitched at 46 and 61 to the seat cushion extends around the bar 10b and holds the end 57 of the cushion in place, while a similar tape 60 stitched at 45 and 61 holds the top end of the back cushion anchored to the cross bar 11b. The foregoing arrangement gives support at the front and top of the cushions in both the vertical and lateral directions, and is further reinforced by a strap 62 beneath the seat cushion and a strap 63 behind the back cushion.

In the normal sitting position of the chair the frame sections take the positions shown in full lines in Fig. 4 wherein the push button 36 of

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the releasable stop 34 provides an abutment against the side edge 64 of the link 14 so that the link is held at that point and cannot ride up any further along the side rail toward the front of the chair. To adjust the chair to the reclining position shown in dot-dash lines, the push button 36 is pushed down to permit the link 14 to slide thereover. The back frame and the seat frame are next moved in opposite directions as indicated by the arrows A and B, causing the link 14 to slide forwardly along the side rail 12a until it reaches the fixed stop 35. During this movement the armrests 23 are automatically adjusted to their new positions by reason of their direct connections to the frame ends 12c and 13c through the medium of the brackets 21. A reverse movement of the links 14 and 15 toward the back of the chair causes the frame sections and cushions to be folded to the compact condition shown in Fig. 5.

I claim:

A two position folding chair comprising arm rests, a front leg frame and a rear leg frame pivoted at their upper ends to the front portions of said armrests, said rear leg frame including side rails, links slidably mounted on said side rails, a seat frame provided with rearwardly extending ends pivoted to said links, a back frame pivoted at its lower ends to said links, pivotal connections between said seat frame and said front leg frame, pivotal connections between said back frame and the rear portions of said armrests, a spring pressed element carried by one of said side rails and constituting an abutment against the associated link when the back frame is in one of its positions of use, said element being depressible to allow the link to slide thereover and into engagement with a second abutment carried by the rail, said seat frame, back frame, front leg frame, rear leg frame and armrests moving in unison to their new positions when said links slide on the side rails toward their different positions, said chair being brought to folded condition by moving said links rearwardly along said rails away from the abutments.

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