June 3, 1952 R. G. CUDINI 2,599,164

FOLDING CHAIR

Filed Aug. 13, 1947 2 SHEETS—SHEET 1

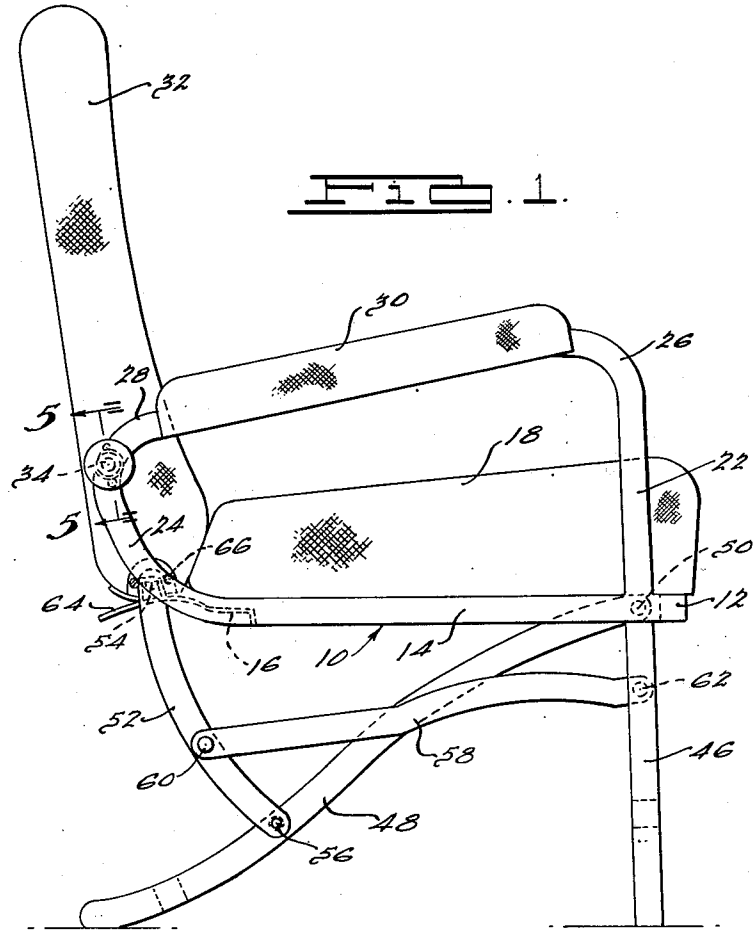


Fig. 1.

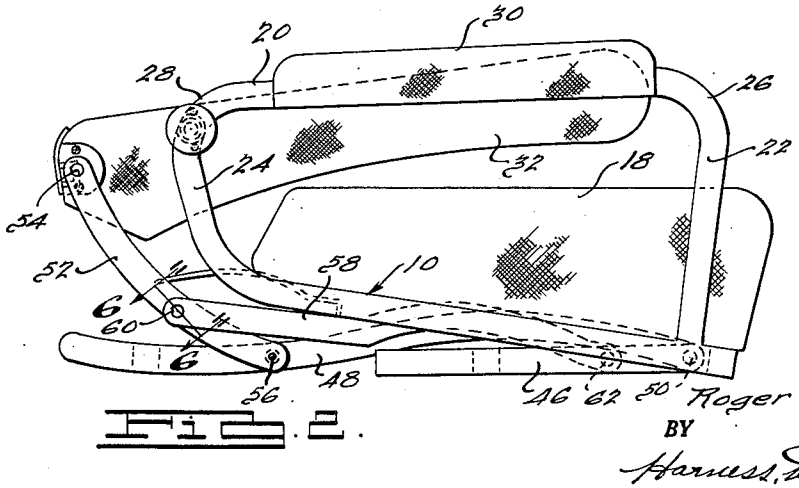


Fig. 2.

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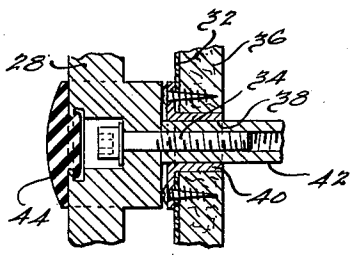


Fig. 5.

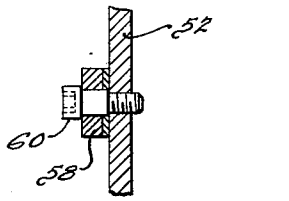


Fig. 6.

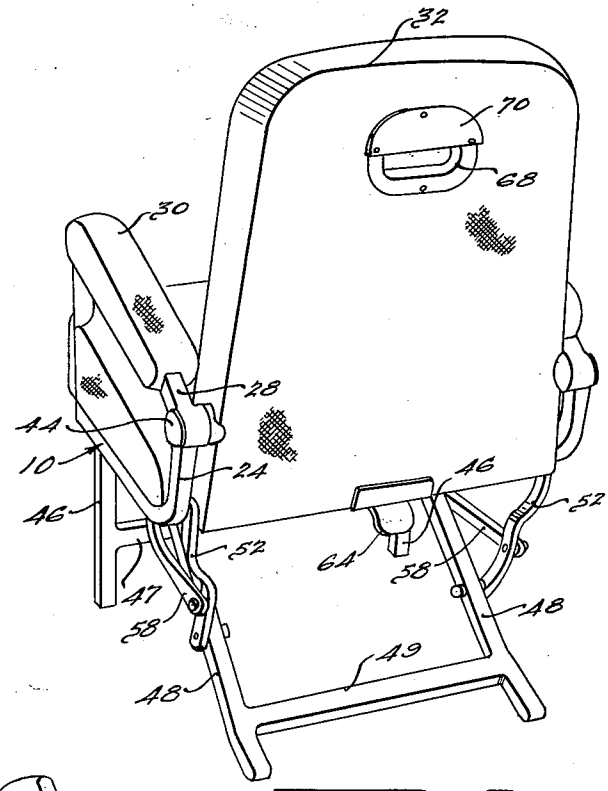


Fig. 3.

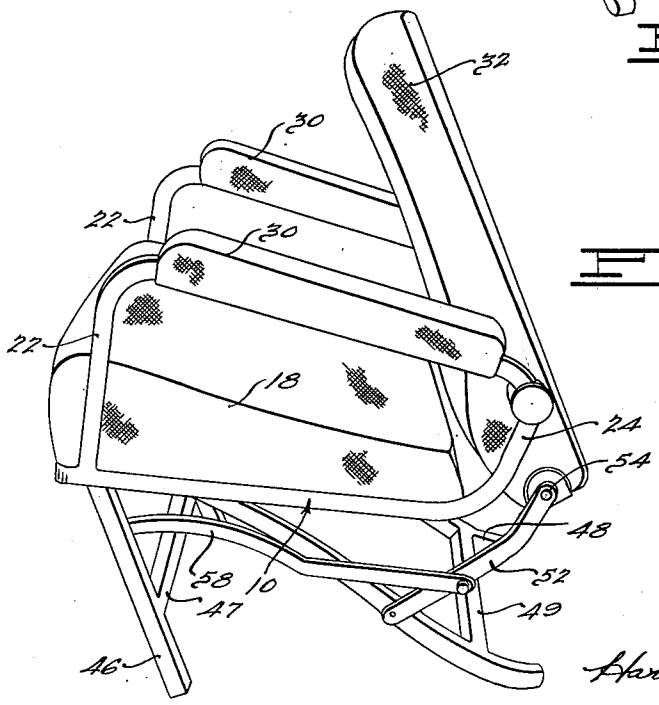


Fig. 4.

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UNITED STATES PATENT OFFICE

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FOLDING CHAIR

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Application August 13, 1947, Serial No. 768,444

2 Claims. (Cl. 155—139)

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The present invention relates to folding chairs.

The primary object of the present invention is to provide a lightweight folding chair which is comfortable in its set-up position, and which may be folded to a compact size for handling and storage.

Other objects of the invention will become apparent from the following specification, the drawings relating thereto, and from the claims hereinafter set forth.

In the drawings in which like numerals are used to designate like parts in the several views throughout:

Figure 1 is a side elevational view of a folding chair embodying features of the present invention and showing the chair in its upright, or "set-up," position;

Figure 2 is a side elevational view of the chair shown in Figure 1 and showing such chair in its completely folded position;

Figure 3 is a rear perspective view of the chair shown in Figure 1;

Figure 4 is a side perspective view of the chair shown in Figure 1 and showing it in a partly folded position;

Figure 5 is an enlarged cross sectional view, taken substantially along the line 5—5 of Figure 1; and

Figure 6 is an enlarged cross sectional view, taken substantially along the line 6—6 of Figure 2.

The folding chair of the present invention is primarily for use in passenger railroad trains, although it is also adapted for other uses where it is desired to fold the chair into a compact size when not in use for storage. The framework and operating links of the present invention are preferably made of extruded aluminum tubing so that the chair will be light in weight and have an attractive appearance.

Referring to the drawings, the chair comprises a rigid seat frame 10, having a front member 12 joined to side members 14 and a transverse rear member 16. An upholstered seat cushion 18 is supported on and suitably secured to the seat frame 10.

Arm rests are disposed at each side of the chair and include upper arm rest members 20 joined to the seat frame 10 adjacent the front and rear edges thereof by rigid upright frame members 22 and 24. The members 22 and 24 are joined to the arm rest members by curved portions 26 and 28, respectively. The arm rests 20 are, therefore, rigid with the seat frame 10. Upholstered arm rest pads 30 are disposed on

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and suitably secured to the arm rest members 20.

An upholstered seat back 32 is pivotally connected to the arm rest frame by means of a pivot pin 34. A back 32 is disposed between the arm rests and pivotally connected thereto at the curved portions 28. The back cushion 32 may comprise side frame members 36 over which the upholstering is formed. Aligned openings 38 are formed in the back frame members 36 within which pivot bearings 40 are received and secured thereto by screws received within flanges formed on the bearings 40. A tubular pivot member 42 extends across the back and is rotatably received within the bearings 40. The ends of the tubular member 42 are tapped for the reception of the pivot bolt 34. The head of the pivot bolt 34 is received within a recess formed in the curved portion 28 and the back 32 is thus pivotally supported on the transverse tubular member 42. A finished button 44 may cover the recess formed in the curved portion 28.

Upstanding front legs 46 are disposed adjacent each of the front corners of the seat and forwardly and upwardly-directed rear legs 48 are disposed adjacent each side of the seat. Front legs 46 are braced by transverse frame member 47, and the rear legs 48 are braced by transverse member 49. The upper ends of the front legs 46 and the rear legs 48, at each side of the chair, are pivotally connected to the side members 14 of the seat frame by a common pivot pin 50.

Linkage means are provided for interconnecting the front legs 46 and the rear legs 48 with the seat back 32 so that upon forward pivotal movement of the back 32, the front and rear legs are folded against the underside of the seat frame 10 to the position shown in Figure 2. Similar linkage means are provided at each side of the chair, and each of said linkage means includes a curved link 52 having the upper end thereof pivotally connected to the side of the seat back 32 by means of a pivot 54 located adjacent the bottom edge of the seat back 32. The lower end of each link 52 is pivotally connected by means of the pivot pin 56, with its adjacent side leg 48 at a position disposed between the ends of said side legs. Another link 58 has its rear end pivotally connected to its adjacent link by a pivot pin 60 at a point between the pivots 54 and 56. The forward end of each link 58 is pivotally connected by means of a pivot pin 62 with its adjacent front leg intermediate the ends thereof. Pivot points of the links and legs are so located as to support the legs in an upright position, as shown in Figure 1, and fold the legs

to the position shown in Figure 2 upon forward pivotal movement of the back **32**.

The back **32** is held in its upright position by means of a releasable catch. Such catch includes a flat spring **64** located midway between the sides of the chair, and having its forward end fixed to the seat frame. A projection **66** is formed on the top surface of the spring **64** and is adapted to be received within a complementary recess formed in the under edge of the seat back **32**. Thus, when the spring **64** is depressed, the projection **66** is released from the recess and the seat back **32** is released for forward pivotal movement. Upon rearward pivotal movement of the seat, the spring **64** is automatically forced to a down position so that the projection **66** will snap into the recess and lock the back in its upright position until released.

For ease in handling, a finger grip is formed on the back of the seat back. Such finger grip may be in the form of a dish-shaped member **68** which is secured to the back end having a plate **70** partly covering the depression formed in the member **68** so that the fingers may grip the member **70** within the depression.

Formal changes may be made in the specific embodiment of the invention disclosed without departing from the spirit and substance of the invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. A folding chair comprising a seat frame, an upholstered seat cushion supported on and secured to said seat frame, rigid arm rest frames secured to said seat frame at opposite sides thereof, arm rest pads on said arm rest frames, an upholstered seat back disposed between said arm rest frames and pivotally connected thereto in spaced relation above the lower edge of said back and in spaced relation above said seat frame so that said back may be pivoted forwardly to a position between said arm rest frames and below the upper surfaces of said arm rest pads, said back being so proportioned that in the setup position of said chair the lower edge of said back is disposed adjacent the rear of said seat frame, front legs having the upper ends thereof pivotally connected to said seat frame adjacent the front thereof, back legs extending forwardly and pivotally connected to the seat frame adjacent the front thereof, and a linkage member pivotally connected to the back adjacent said lower edge thereof and pivotally connected to one of said back legs intermediate the ends thereof, and another linkage member pivotally connected to said last named linkage member intermediate the ends thereof and pivotally connected to one of said front legs intermediate the ends thereof, to fold said legs upon pivotal movement of said back to said position between said arm rest frames.

2. A folding chair comprising a seat frame, an upholstered seat cushion supported on and secured to said seat frame, rigid arm rest frames secured to said seat frame at opposite sides thereof, arm rest pads on said arm rest frames, an upholstered seat back disposed between said arm rest frames and pivotally connected thereto in spaced relation above the lower edge of said back and in spaced relation above said seat frame so that said back may be pivoted forwardly to a position between said arm rest frames and below the upper surfaces of said arm rest pads, said back being so proportioned that in the setup position of said chair the lower edge of said back is disposed adjacent the rear of said seat frame, front legs having the upper ends thereof pivotally connected to said seat frame adjacent the front thereof, back legs extending forwardly and pivotally connected to the seat frame adjacent the front thereof, and linkage means interconnecting the back adjacent said lower edge thereof with said front legs and said rear legs to fold said legs upon pivotal movement of said back to said position between said arm rest frames, said back, said rear legs, and said arm rest frames being so constructed and arranged that when said back is pivoted to said position said lower edge of said back is substantially aligned with the free ends of said rear legs.

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