July 1, 1952 A. C. HOVEN ET AL 2,601,891

CHAIR STRUCTURE

Original Filed June 28, 1948 2 SHEETS--SHEET 1

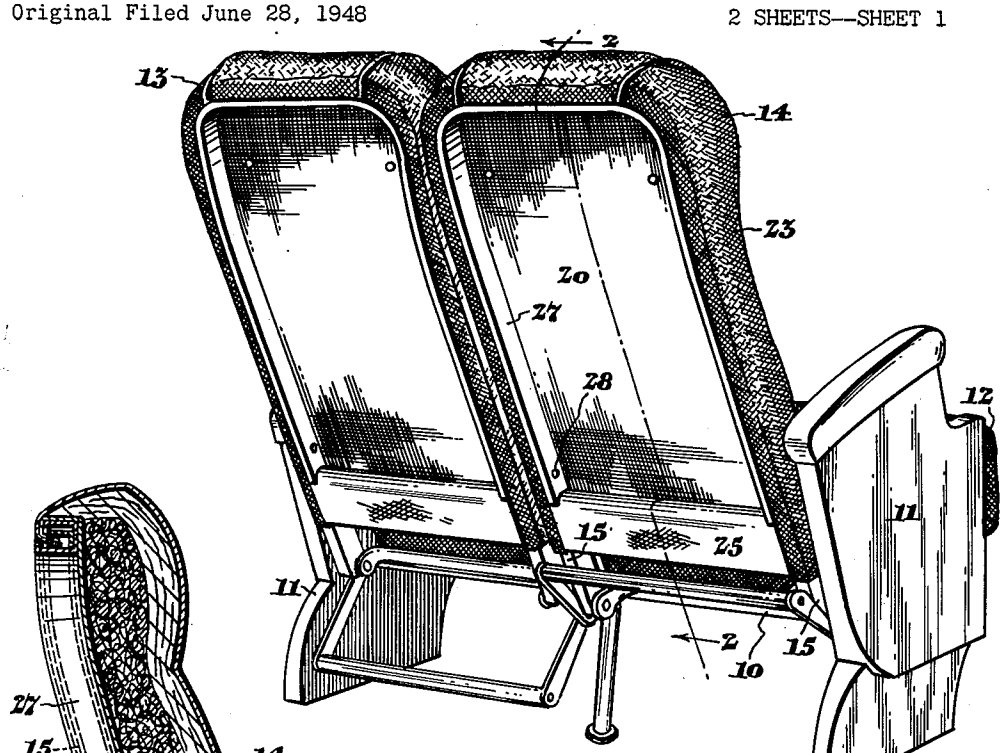


Fig. 1

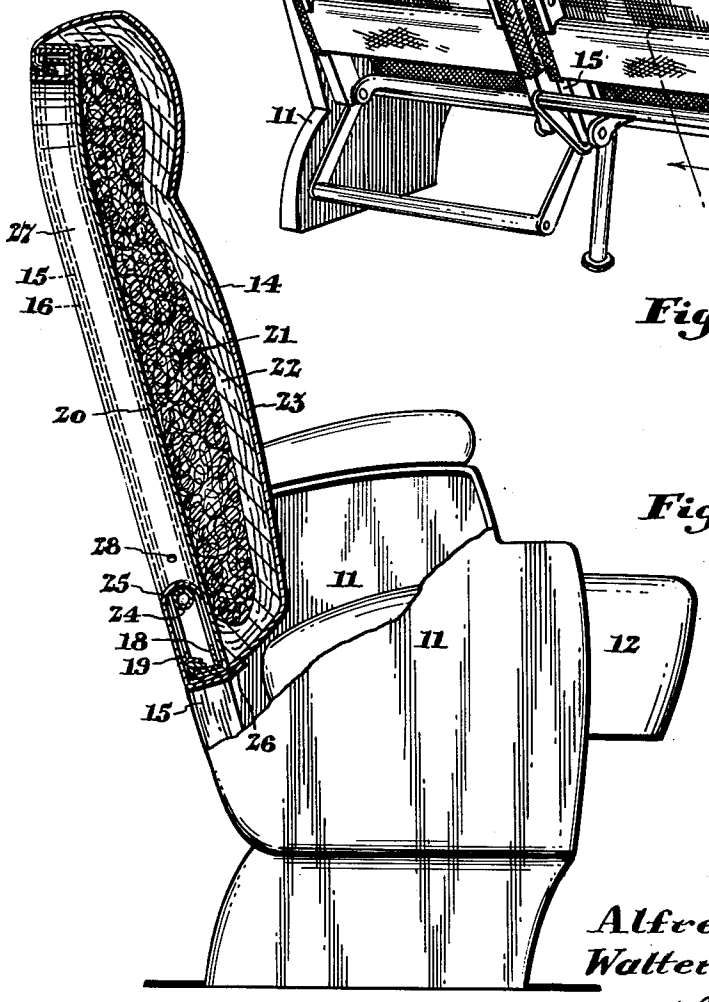


Fig. 2

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CHAIR STRUCTURE

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Fig. 3

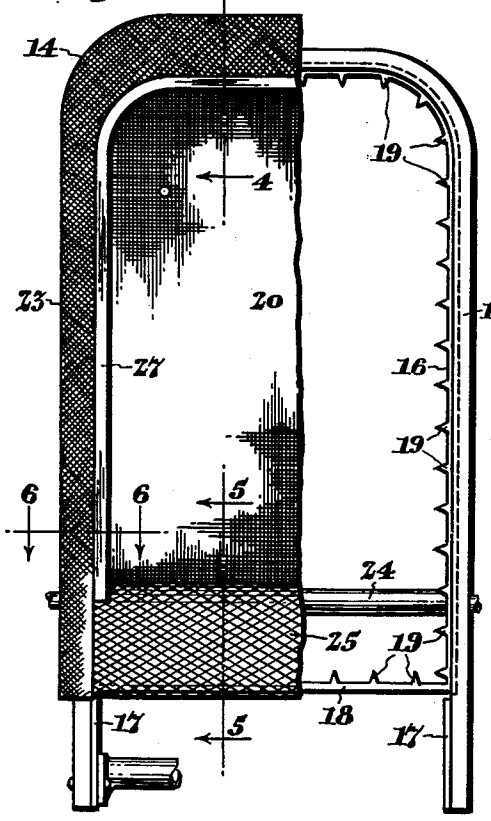
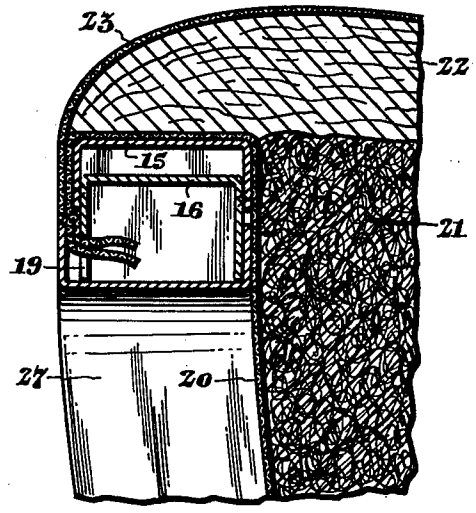


Fig. 4



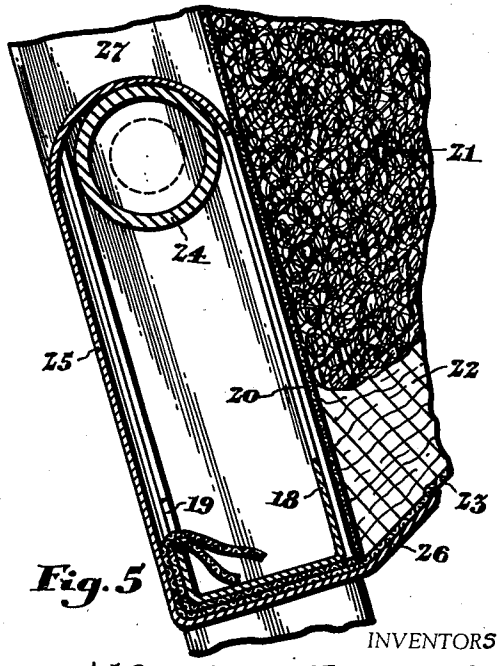
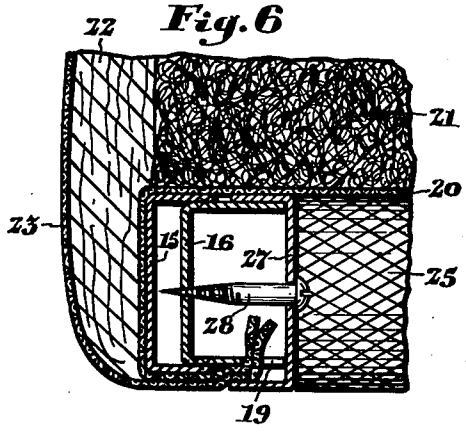


Fig. 5

Fig. 6



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CHAIR STRUCTURE

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Original application June 28, 1948, Serial No. 35,616, now Patent No. 2,573,845, dated December 6, 1951. Divided and this application August 3, 1951, Serial No. 240,134

7 Claims. (Cl. 155—184)

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The present invention relates to chair structures and more particularly to a back construction for chairs of the recliner type, especially suitable for installation in motorbusses or other vehicles. This application is a division of our co-pending application Serial No. 35,616, filed June 28, 1948, which matured into Patent No. 2,573,845, on December 6, 1951.

The primary objects of the invention are to provide a recliner chair which is especially comfortable for the occupant thereof; to provide an improved upholstered back for the chair which may be quickly assembled; and in general to provide such a recliner type chair which is efficient in use, reasonably economical in manufacture, and attractive in appearance.

These and any other and more specific objects hereinafter appearing are attained by, and the invention finds preferable embodiment in, the structure hereinafter particularly described and illustrated by the accompanying drawings, wherein:

Figure 1 is a rear perspective view of a two-passenger chair of the recliner type adapted for installation in a vehicle;

Figure 2 is a view of the same partly in side elevation and partly in section taken substantially on the line 2—2 of Figure 1;

Figure 3 is a rear elevational view of a chair back for the structure, parts thereof being broken away to reveal the back frame;

Figure 4 is an enlarged, fragmentary, sectional view of the chair back taken on line 4—4 of Figure 3;

Figure 5 is an enlarged, fragmentary, vertical sectional view of the chair back taken on line 5—5 of Figure 3; and

Figure 6 is an enlarged, fragmentary, horizontal sectional view of the chair back taken on line 6—6 of Figure 3.

Referring now in detail to these drawings wherein like parts are designated by the same numerals in the several views, the chair there shown is of the two-passenger recliner type suitable for installation in a motorbus, and is mounted on supporting frame 10 including standards 11 which are secured to the floor of the vehicle in any suitable manner.

The chair seat 12 is of conventional upholstered construction and is supported on the supporting frame 10, preferably removably, by any suitable means.

The chair backs 13, 14 for the occupants of the two-passenger chair, have substantially identical construction, mountings and operating

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mechanisms, and therefore only one of them—the one on the near side of the structure as viewed in Figure 1—is shown and described here in detail. This chair back 14 is built upon a back frame comprising two frame units 15, 16 (see Figures 3–5 inclusive) fabricated of channel bars and bent to generally U-shaped configuration with the channels opening inwardly, and the frame unit 16 has its flanges welded to the flanges of the frame unit 15 with the webs of said units spaced apart to form a hollow rectangular cross-section providing a very strong back frame for the chair back. The leg portions of the outer frame unit 15 extend below the leg portions of the inner frame unit 16, and the channels at the extreme ends of the leg portions of the outer frame unit 15 are desirably closed by means of welded-on plates 17 (see Figure 3). The lower ends of the inner frame unit 16 are connected by a channel bar crossrail 18 (see Figures 3 and 5) secured thereto by welding. The rearwardmost flanges of the inner frame unit 16 and of the crossrail 18 are provided with integrally formed, inwardly extending spurs 19 for the attachment of upholstery.

The back frame defines an opening which is closed by a panel over which the upholstering is applied. This panel may be of rigid material such as sheet metal and secured to the front surface of the back panel as by welding. However in practice we prefer to make the panel of an upholstery sheet 20 of fabric, leather or the like, which is stretched over the front surface of the back frame and has its marginal edges drawn rearwardly around the outer periphery of the back frame and pinned onto the spurs 19, said spurs piercing the sheet 20 so as to secure it firmly in position on the back frame. Upholstery filling, here shown as comprising an inner layer of rubberized hair 21 and an outer layer of cotton padding 22 (although other upholstering materials, with or without springs, might be used) is disposed over the front surface of the upholstery sheet 20. A second upholstery sheet 23 likewise of fabric, leather or other suitable material, is stretched over the front surface of the upholstery filling and has its marginal edges likewise drawn rearwardly around the outer periphery of the back frame and pinned onto the spurs 19. This front upholstery sheet 23 is preferably tailored to give the chair a neat and attractive appearance, and the upper portion of the chair protrudes slightly forwardly to form a head-rest to which may be attached a towel in conventional manner.

The opposite sides of the back frame are connected in their lower regions by a torque tube 24 (see Figures 3 and 5) which prevents twisting of the chair back, and a corrugated metal scuff-plate 25 is hooked over the torque tube 24 dependingly therefrom and has its lower edge 26 flanged forwardly and upwardly to embrace the lower portion of the upholstery sheet 23. A metal finishing rim 27, preferably decoratively chrome-plated, is of channel-bar construction and is bent to generally U-shaped configuration with the channel opening outwardly. This finishing rim 27 is applied to the back frame as best seen in Figures 3, 4 and 6, and secured thereto by means of screws 28, thus concealing the back frame, the spurs 19, and the raw edges of the upholstering sheets 20 and 23.

The opposite side portions of the back frame form posts by means of which the chair back is mounted on the supporting frame for tilting movement about a horizontal axis above and rearwardly of the seat bottom.

It will thus be seen that the invention provides a back construction for a chair of the recliner type which is simple and sturdy in construction, attractive in appearance and efficient in operation, and while but one specific embodiment of the invention has been herein shown and described it will be understood that numerous details may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

We claim:

1. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and provided with a series of inwardly extending spurs on its inner periphery; an upholstery sheet stretched over the front surface of the back frame and having its marginal edges drawn rearwardly around the outer periphery of said back frame and pinned onto said spurs; upholstery filling over the front surface of said upholstery sheet; and a secondary upholstery sheet stretched over the front surface of the filling and having its marginal edges drawn rearwardly around the outer periphery of said back frame and likewise pinned onto said spurs.

2. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and provided with a series of inwardly extending spurs on its inner periphery; an upholstery sheet stretched over the front surface of the back frame and having its marginal edges drawn rearwardly around the outer periphery of said back frame and pinned onto said spurs; upholstery filling over the front surface of said upholstery sheet; a second upholstery sheet stretched over the front surface of the filling and having its marginal edges drawn rearwardly around the outer periphery of said back frame and likewise pinned onto said spurs; and a finishing rim applied to the inner periphery of the back frame concealing the back frame, the spurs, and the marginal edges of said upholstery sheets.

3. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and defining an opening, said back frame being

provided with a series of inwardly extending spurs on its inner periphery; a panel applied to the back frame closing said opening; upholstery filling over the front surface of said panel; and an upholstery sheet stretched over the front surface of the filling and having its marginal edges drawn rearwardly around the outer periphery of said back frame and pinned onto said spurs.

4. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and defining an opening, said back frame being provided with a series of inwardly extending spurs on its inner periphery; a panel applied to the front surface of the back frame closing said opening; upholstery filling over the front surface of said panel; an upholstery sheet stretched over the front surface of the filling and having its marginal edges drawn rearwardly around the outer periphery of said back frame and pinned onto said spurs; and a finishing rim applied to the inner periphery of the back frame concealing the back frame, the spurs, and the marginal edges of said upholstery sheet.

5. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and comprising a pair of channel bars, one of said channel bars having its flanges secured to the flanges of the other channel bar with the webs of said bars spaced apart to form a hollow rectangular cross-section; and a chair back mounted on the back frame.

6. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and comprising a pair of generally U-shaped inwardly opening channel bars, one of said channel bars being secured within the other of said channel bars with the webs of said bars spaced apart to form a hollow rectangular cross-section; and a chair back mounted on the back frame.

7. In a chair structure: a supporting frame; a chair seat mounted on the supporting frame; a back frame mounted on the supporting frame and comprising a pair of generally U-shaped inwardly opening channel bars, one of said channel bars being secured within the other of said channel bars with the webs of said bars spaced apart to form a hollow rectangular cross-section, and one of said channel bars having spurs extending inwardly from one of the flanges thereof; a panel applied to the front surface of the back frame; upholstery filling over the front surface of the panel; and an upholstery sheet over the front surface of the filling and having its marginal edges drawn rearwardly around the outer periphery of said back frame and pinned onto said spurs.

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