

Sept. 28, 1943.

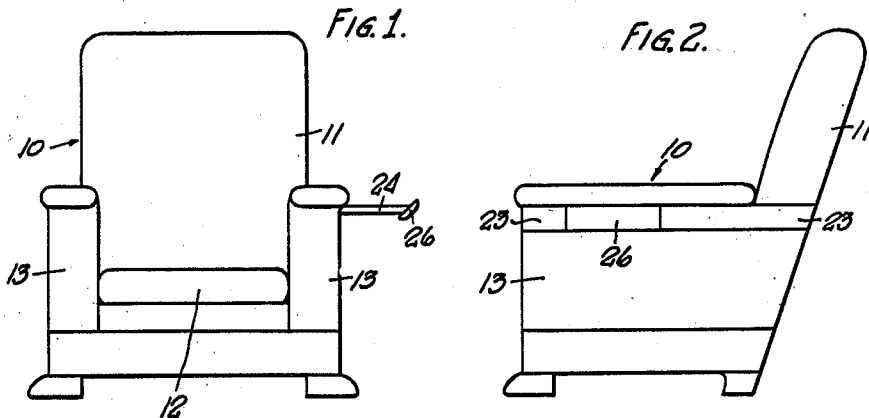
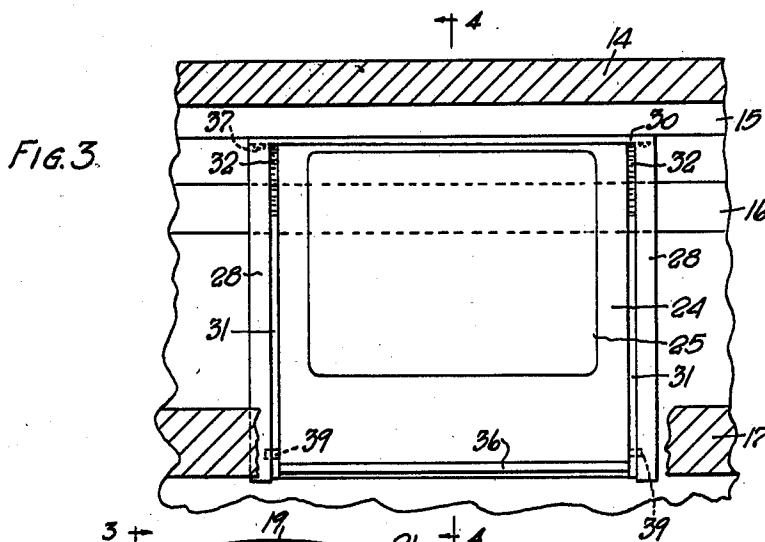
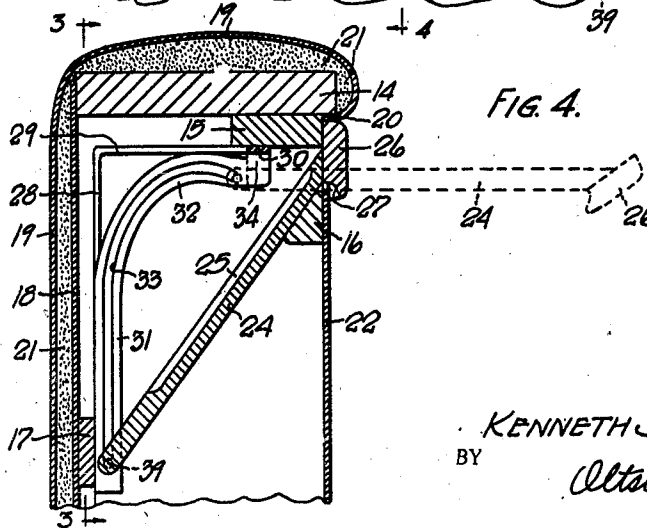
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2,330,627

EXTENSIBLE TRAY FOR UPHOLSTERED FURNITURE

Filed Oct. 26, 1940

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

FIG. 5.

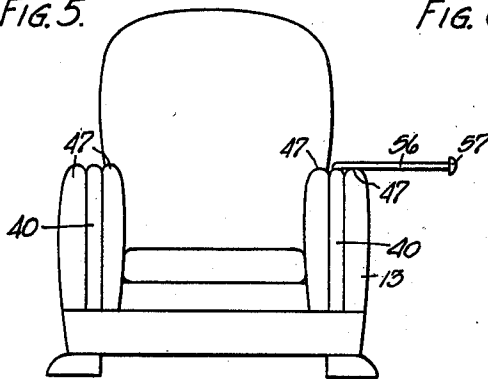


FIG. 6.

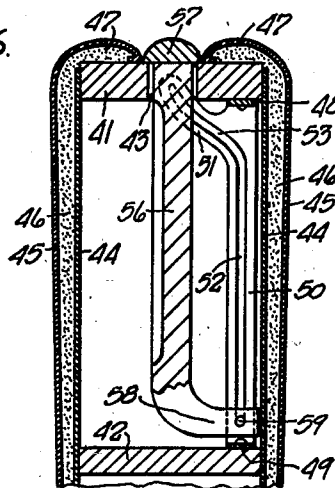


FIG. 7.

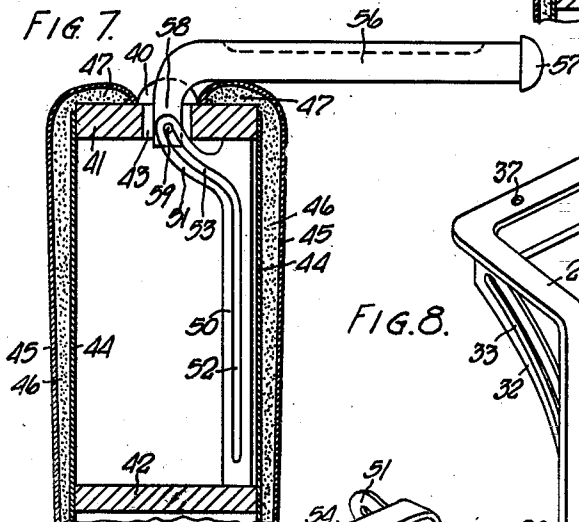


FIG. 8.

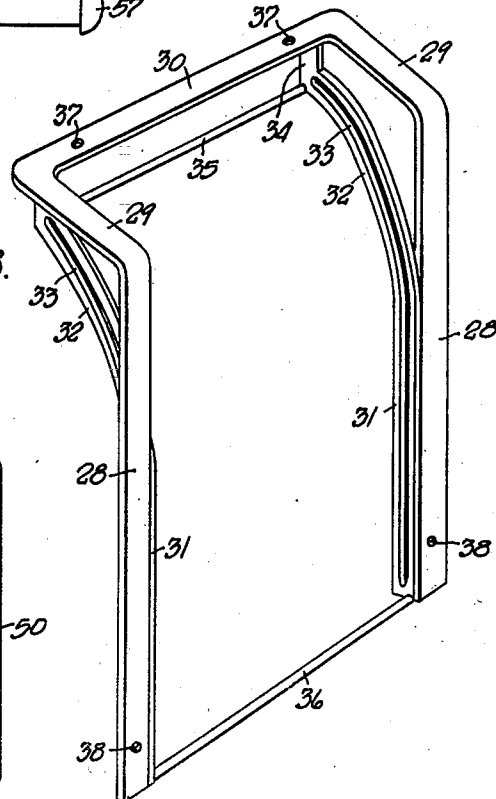
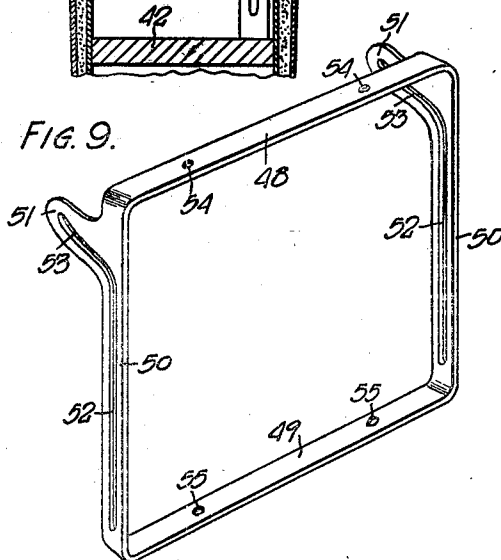


FIG. 9.



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UNITED STATES PATENT OFFICE

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EXTENSIBLE TRAY FOR UPHOLSTERED
FURNITURE

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Application October 26, 1940, Serial No. 362,995

2 Claims. (Cl. 155-128)

This invention relates to an extensible tray construction for upholstered furniture and particularly for upholstered chairs, davenports, settees, or the like.

In small apartments, and in homes where rooms are small and space is limited, it is difficult to fit an adequate number of tables, end tables, or stands into the room for the purpose of supporting plates, cups, glasses, and the like, when refreshments are served. Additionally, even where ample tables are provided, these are customarily highly polished and finished and it is not desirable to place utensils thereon, and it is especially desirable to avoid placing glasses or cups thereon by reason of the possibility of staining or marking the finish.

It is, therefore, the primary object of this invention to provide a chair or other seat having a hollow arm rest with a tray slidable in the arm rest and adapted to be selectively positioned entirely within the arm rest in substantially concealed relation or to be extended to operative position projecting laterally from the upper end of the arm rest.

A further object of this invention is to provide a chair or seat having a hollow arm rest with a frame therein for guiding and positioning a tray at and between extended and retracted positions.

A further object is to provide an extensible tray for an article of furniture wherein the tray is of simple construction, easy to operate, and substantially concealed when not in use.

A further object of the invention is to provide a chair having a hollow arm rest with a narrow, horizontal opening adjacent its upper end through which a tray member is shiftable, and means for guiding and supporting the tray in operative extended position, in retracted concealed position, and in movement between said positions.

A further object is to provide an upholstered chair having a hollow arm rest provided with trim members and with an opening interrupting said trim members in which a tray element is mounted for sliding movement to and from operative extended position and retracted concealed position, wherein said tray has a trim member at its outer end matching said first trim member and aligned therewith when the tray is retracted to substantially conceal the existence of the tray.

Other objects will be apparent from the description, drawings, and appended claims.

In the drawings:

Fig. 1 is a view of an upholstered chair in front

elevation, illustrating my extensible tray in extended position.

Fig. 2 is a view of the chair in side elevation.

Fig. 3 is an enlarged fragmentary longitudinal vertical sectional view of my improved tray construction applied to the arm rest of a chair and taken on line 3-3 of Fig. 4.

Fig. 4 is an enlarged fragmentary transverse vertical sectional view of the arm rest of a chair having my improved, extensible tray applied thereto, and taken on line 4-4 of Fig. 3.

Fig. 5 is a view of a chair in front elevation illustrating a modified embodiment of my invention with the tray in extended position.

Fig. 6 is an enlarged fragmentary transverse vertical sectional view of the arm rest of the chair illustrated in Fig. 5 and showing my improved tray in retracted position therein.

Fig. 7 is an enlarged fragmentary transverse vertical sectional view of the arm rest of the chair shown in Fig. 5 with my improved tray illustrated in extended position.

Fig. 8 is an enlarged perspective view of the guide frame work accommodating application of a tray to an arm rest, somewhat modified from that illustrated in Figs. 1 to 4, inclusive.

Fig. 9 is a perspective view of the guide frame work accommodating application of a tray to an arm rest as illustrated in Figs. 5 to 7, inclusive.

Referring to the drawings, and particularly to Figs. 1 to 4, inclusive, and 8, which illustrate the preferred embodiment of my invention, the numeral 10 designates a chair having back 11, a seat 12, and arm rests 13. The chair is preferably of the upholstered type which is built around a frame work suitably padded and covered with upholstering material. While the invention is here illustrated as applied to a chair, it will be obvious that it might also be applied to davenports, settees, or any other article of furniture which is provided with a hollow substantially vertical chamber to accommodate the same.

As best illustrated in Figs. 3 and 4, the construction of the arm rest of a chair may comprise a horizontal top frame member 14, suitably secured to the other parts (not shown) of a chair frame, a cleat 15 secured to the lower face of frame member 14 adjacent the outer side thereof to constitute a nailing-strip, and a second nailing-strip or cleat 16, preferably of triangular cross sectional shape, secured to the frame work of the chair below the cleat 15 with its outer surface preferably in alignment with the outer edge of the cleat 15. Another frame element 17 may be

suitably secured to the frame of a chair at the lower inner side of the arm rest and in horizontal position with its thin edges horizontally disposed. The upholstering of a chair usually involves the securing of a sheet of backing material 18 to the inner edge of member 14 and the inner face of cleat 17, a piece of upholstering or finishing cloth 19 suitably secured to the frame of the chair at or below the level of the seat and extending upwardly at the inner side of the arm rest to and around the outer edge of the top member 14 to be secured at 20 to the outer under face of top member 14. Suitable padding or filler material 21 is interposed between the top member 14 and the upholstering cloth 19, and between the upholstering cloth 19 and the backing sheet 18. Another piece of upholstering material 22 is secured at its upper end to the nailing strip and extends downwardly at the outer side of the arm rest to the bottom of the chair.

I propose to utilize my invention in connection with a chair having a horizontal trim strip 23 positioned at the outer side of each arm rest below the top roll thereof and adapted to be nailed to the cleats 15 and 16.

In practicing my invention, I interrupt the trim strip 23 adjacent the forward end of the outer side of the arm rest. Within the arm rest, I mount a tray member 24 formed of any suitable material, such as wood, ply wood, composition board, or the like, preferably having one face thereof recessed at 25. This tray is of a length substantially equal to the length of the aforesaid opening and of a width greater than the width of the arm rest. The tray is normally supported in inclined position within the interior of the hollow arm rest, and has its outer edge beveled to normally extend in the plane of the outer face of the members 15 and 16. To this outer beveled edge of the tray is secured a trim member 26 conforming in contour and decorative effect to the trim member 23 and normally aligned with said member when the tray is retracted, to form a substantial continuation of said trim member and thereby substantially conceal the existence of the tray within the chair. The trim member 26 may be provided at its lower edge with a hand-gripping undercut groove 27 to facilitate gripping of the edge for the purpose of withdrawing the tray.

Within the hollow arm rest, I mount a rigid guide frame of a construction substantially as illustrated in Fig. 8. This frame comprises a bar bent to form a pair of parallel vertical runs or portions 28 spaced apart a distance slightly greater than the length of tray 24, horizontally forwardly projecting portions 29 at the upper ends of portions 28, and a cross piece 30 between the outer ends of portions 29. Guide bars 31 are secured to the inner edges of the frame portions 28 and extend vertically for the major portion of the height of said portions 28, and said bars 31 are curved forwardly at 32. The guide bar 31—32 is provided with an elongated slot 33 extending substantially the full length thereof. The upper forward ends of the guide bar 32 are preferably supported by vertical bars 34 secured to and depending from the cross bar 30 adjacent the ends thereof. A second cross bar 35 extends between the lower ends of the vertical supports 34 in spaced relation below the cross bar 30 and spaced forwardly from the upper ends of the slots 33 and the tray bears thereagainst and is partially supported and positioned thereby. Another cross bar 36 serves to secure together the

lower ends of the frame portions 28. The cross bar 30 is preferably secured to the lower face of the frame cleat 15 at 37 and the lower ends of portions 28 of the frame are preferably secured to the chair cleat 17 at 38. The inner end of the tray 24 is provided with aligned outwardly projecting pins 39 at each side thereof slidably fitting within the guide slots 33 of the frame. Where the frame of the construction of Fig. 8 is employed, the same is so proportioned that the lower cross bar 35 is positioned forwardly from the upper end of the guide slot 33 to occupy the position shown for cleat 16 in Fig. 4, while in the construction illustrated in Figs. 3 and 4 said cross bar 35 is entirely eliminated from the frame.

The frame and the tray are so related and proportioned, as best illustrated in Fig. 4, that when the tray is in fully retracted position, pins 39 at the inner end thereof will rest at the lower ends of the slots 33 of the guide frame. Also, it will be seen that, by this construction, when the tray is shifted within the opening formed at the outer side of the arm rest, the pins 39 will ride upwardly in the slot 33 to the forward end thereof within the curve portion 32 of the guide frame. When the pins 39 reach the upper forward end of the slot 30, the tray 24 will be horizontally positioned and will project from the outer side of the arm rest to fully expose the recessed portion 25 thereof.

In the construction illustrated in Fig. 4, the tray is supported in horizontal extended position by engagement of the pins 39 with the upper ends of slots 33, and by engagement of the lower face of the tray with cleat 16 positioned forwardly from said guide slots at the lower edge of the tray-receiving opening in the arm rest. When a frame of the construction illustrated in Fig. 8 is employed, the frame cross piece 30 must be positioned adjacent the outer side of the arm rest in order to accommodate tilting of the tray in the opening of the arm rest incident to shifting thereof, as will be obvious.

It will be obvious from the above that the tray construction may be operated very simply and easily by merely sliding the tray outwardly through the opening in the hollow arm rest to extended position projecting horizontally therefrom for supporting dishes, glasses, and cutlery used for service when entertaining informally. When the tray is in retracted position, the trim piece 26 at the outer edge thereof is so positioned as to lie in full alignment with trim members 23 in the chair, and, hence, serves effectively to conceal the existence of the tray and to avoid detracting from the ornamental appearance of the furniture.

The tray is also adapted for application to pieces of furniture wherein the arm rests 13 are provided at their centers with elongated trim members 40, as best illustrated in Fig. 5. In this embodiment of the invention, the upholstered arm rest is preferably formed with an upper frame member 41 and a lower frame member 42, each carried by the other frame members (not shown) of the chair. The frame member 41 is preferably provided with an elongated central opening 43 adjacent the forward end thereof. Suitable backing sheets 44 are secured to the frame members 41—42 and are covered by upholstering cloth 45 extending from the lower end of the chair up to and over the outer sides of the upper face of the upper frame member 41. Padding 46 is interposed between the backing sheets 44 and upholstering cloth 45 and be-

tween the upholstering cloth and the upper face of frame member 41. The trim member 40 is of a width to extend between the inner edges of the opposite upholstered top portions 47 of the arm rest.

For an arm rest of this construction, I employ a guide frame as illustrated in Fig. 9 and comprising an upper cross bar 48, a lower cross bar 49, and vertical guide bars 50. Complementary bars 51 are formed integrally with guide bars 50 to extend in laterally outwardly upwardly curved relation from one side of each of said guide bars 50. An elongated slot 52 is formed in the center of each guide bar 50 and terminates in a curved portion 53 extending adjacent the outer ends of the ears 51. I secure the frame illustrated in Fig. 9 to the lower face of frame member 41 adjacent outer side thereof by suitable securing means extending through openings 54 in the frame. The lower cross bar 49 is secured to the outer side of the upper face of the frame member 42 by securing means passed through the frame openings 55.

In this embodiment of the invention, a tray 56 of a length substantially equal to the length of the tray-receiving opening 43 in the arm is used and of a width greater than the width of the arm rest. The tray has a trim member 57 at its outer edge of a size, configuration, and contour complementary to and the same as the trim members 40, and is of a length corresponding to the spacing between the adjacent ends of trim member 40 on opposite sides of the opening 43. At each side of the inner end of the tray I provide a pair of angularly projecting arms 58 each of which carries an outwardly projecting pin 59 extending into the slot 52—52 in the adjacent guide bars 50 of the frame.

As illustrated in Fig. 6, the tray assumes a substantially vertical position when retracted. In this position, the inner edge of the trim member 57 bears upon the upper face of the frame member 41 and serves to hold the tray. Also, in this position, the pins 59 engage in the lower ends of the guide slots 52. A simple upward movement of the tray 56, which may be accomplished by grasping the trim 57 thereof, serves to withdraw the tray from within the arm rest. When the pins 59 reach the curved portion 53 of the guide slots, the tray 56 will be outwardly pivoted as accommodated by the bent form of the arms 58 of the tray as they pass through opening 43, whereby the tray will assume a horizontal position supported by the outer upholstered portion 47 of the arm rest when the pins 59 reach the upper ends of the guide slots.

I claim:

1. A frame unit for guiding a slidable tray within a hollow arm rest of a chair, comprising a pair of complementary parallel elongated bars each having an elongated slot therein including a lower straight vertical slot portion and upper curved slot portion, reinforcing bars extending perpendicularly outwardly from said slotted bars and secured to the opposite end portions thereof, and rigid cross bars interconnecting the ends of said reinforcing bars, said reinforcing bars and one cross bar having apertures therein to receive securing means for mounting said frame unit within said arm rest.

2. A frame unit as defined in claim 1, and a cross bar interconnecting the upper ends of said slotted bars and positioned forwardly of and below the end of the curved upper portions of said slots.

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