Jan. 23, 1962 M. C. JULIANO 3,018,130

CHAIR ARM SHELF

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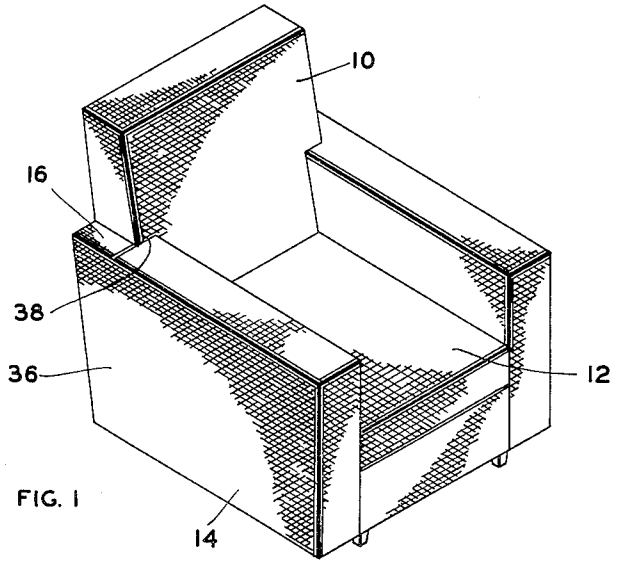

FIG. 1

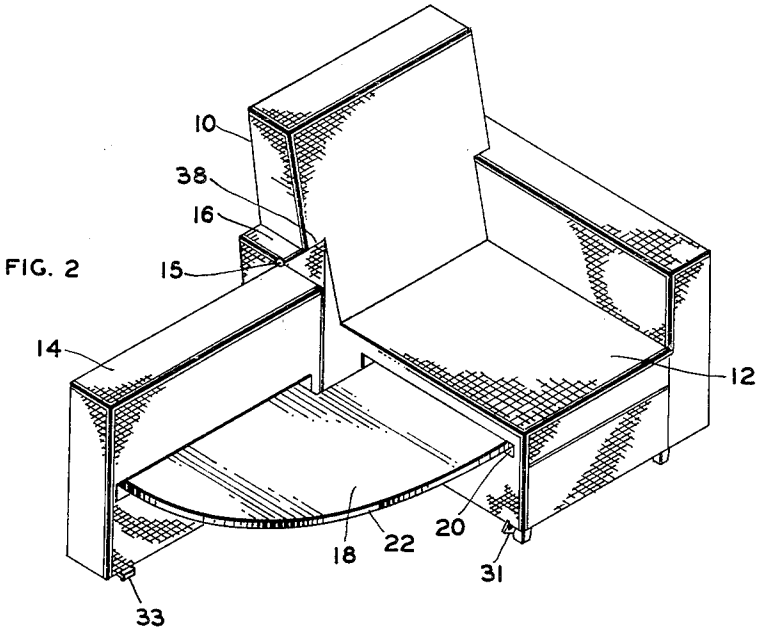

FIG. 2

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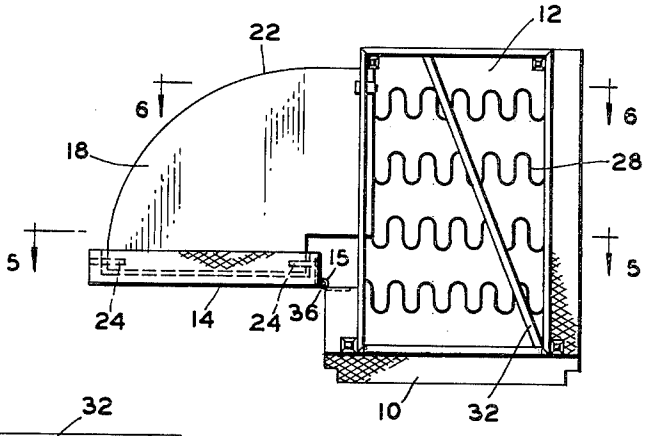

FIG. 3

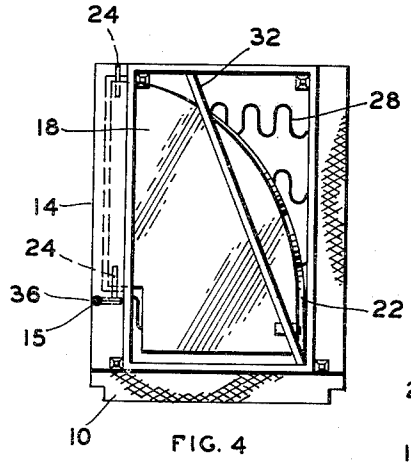

FIG. 4

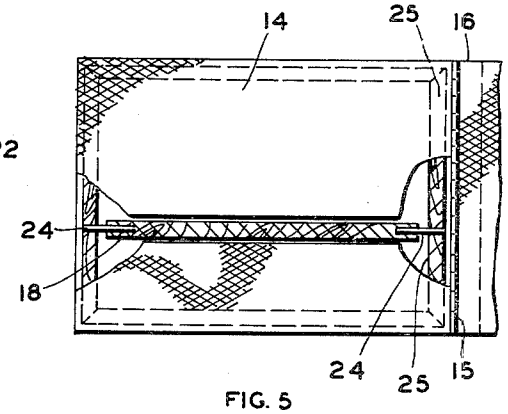

FIG. 5

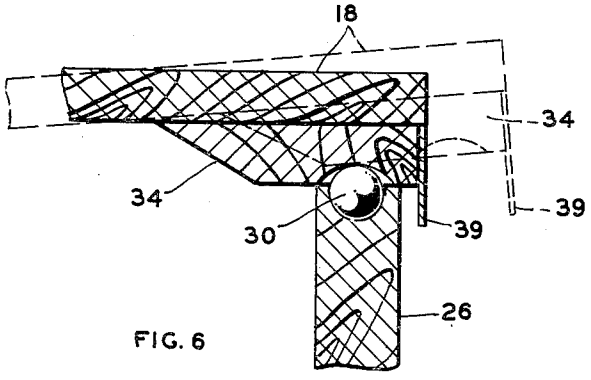

FIG. 6

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CHAIR ARM SHELF

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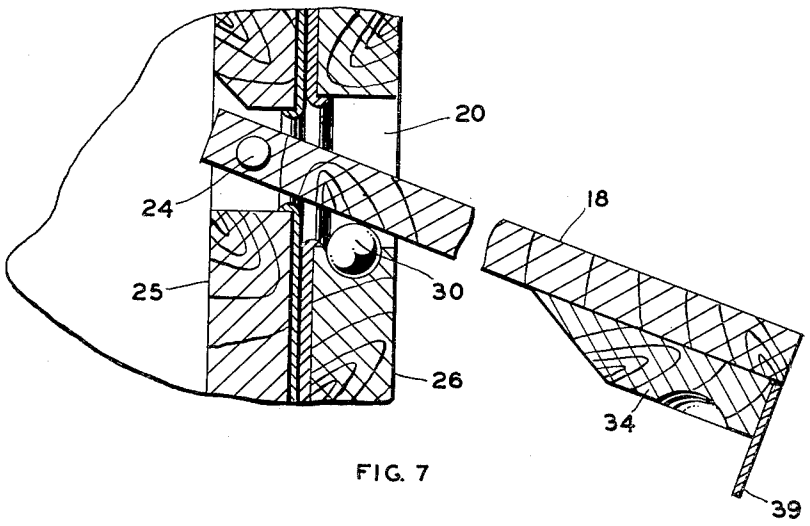

FIG. 7

FIG. 8

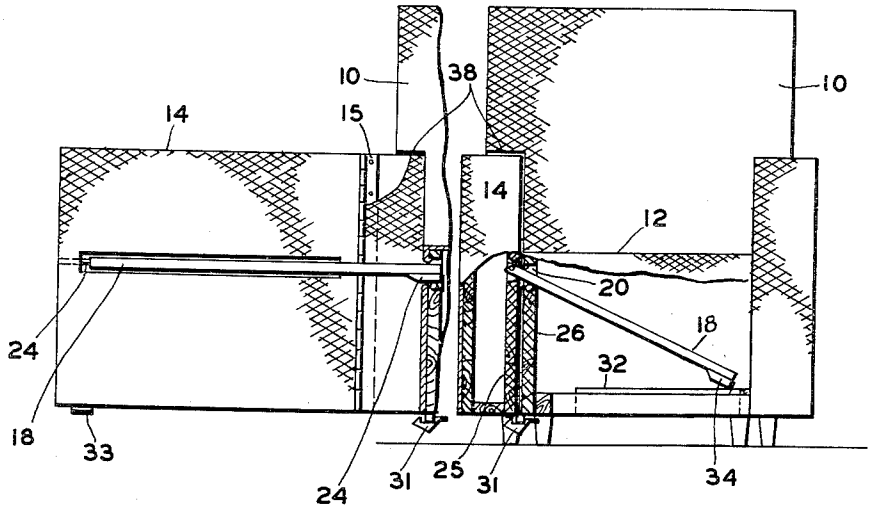

FIG. 9

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3,018,130
CHAIR ARM SHELF

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Filed Mar. 28, 1960, Ser. No. 18,154
4 Claims. (Cl. 297—144)

This invention relates to chair arm shelves, and more particularly to the collapsible or disappearing type, for supporting articles in a convenient position for access from an arm rest of a chair, sofa or the like.

Folding trays or tables heretofore provided have required a trap door to be opened to expose the tray, and another motion to bring the tray out through the door and into the desired position. It is therefore the main object of the present invention to expose a shelf and simultaneously move it into the desired position, all in one motion.

Another object is to provide means actuated by movement of the arm rest about a vertical axis for exposing the shelf. Still another object is to avoid the cracks or seams around the edges of such trap doors, and to provide a continuous unbroken outer surface for the side or arm rest fo the chair containing the shelf.

According to the present invention, a side panel or arm rest is pivoted to the frame of the chair or sofa on a vertical axis near the back to swing away from the seat, and a shelf is secured or pivoted to the inside of the panel on a horizontal axis to swing into horizontal position between the panel and the seat. The chair is preferably provided with means actuated by swinging the panel about its vertical axis for swinging the shelf into horizontal position. The horizontal axis is below the level of the seat, so that the seat may slide through a slot in the adjacent side of the frame and under the seat as the panel is returned about the vertical axis toward the seat.

In the drawings:

FIGURE 1 is a perspective view of a chair, showing the side panel in closed position;

FIGURE 2 is a similar view showing the open position;

FIGURE 3 is an inverted or bottom plan view of the chair shown in FIGURE 2;

FIGURE 4 is a similar view of the position shown in FIGURE 1;

FIGURE 5 is a section taken along the line 5—5 of FIGURE 3;

FIGURE 6 is an enlarged section taken along the line 6—6 of FIGURE 3;

FIGURE 7 is a similar view in closed position;

FIGURE 8 is a front elevation in open position with parts broken away; and

FIGURE 9 is a similar view in the closed position.

The chair shown is an upholstered armchair having a rigid frame of conventional wooden construction, and provided with a back 10 and a seat 12. Pivoted to the chair frame is a side panel 14, the top of which forms an arm rest. The panel 14 swings away from the seat 12 about the vertical axis of a hinge 15 near the back 10. The frame comprises a portion 16 aligned with the panel 14 in closed position, and the hinge 15 is between the outer edges of the aligned portions.

Secured to the inside of the panel 14 is a shelf 18, which in the open position lies between the panel and the seat 12. The frame of the chair has a slot 20 in the side thereof toward the panel 14. The shelf 18 is preferably in the general shape of a substantially right angled sector having a vertex at the hinge 15. Hence, the shelf has an arcuate or polygonal outer edge 22 so that when the panel 14 is swung about the hinge 15 and returned to the closed position shown in FIGURE 1, the free end of the shelf slides through the slot 20 and on under the seat 12.

The radius of curvature of the edge 22 may decrease toward the free end to insure clearance from the front

end of the slot 20, and the final portion of the edge 22 may be straight and tangential, to form its own stop against the panel 14 swinging too far open.

As shown in FIGURE 7, the shelf 18 is preferably pivoted to the inside of the panel 14 by pivot pins 24 mounted in frame strips 25 inside the panel. The bottom of the slot 20 is preferably formed by the top of a bar 26 below the axis of the pins 24, so that as the shelf slides through the slot, the free end thereof swings down below the seat 12 to clear the springs 28 in or under the seat.

The bar 26 has a ball bearing 30 near the front end thereof to support the moving shelf. The lowered free end of the shelf 18 is supported by a frame member 32 at the lowermost point in its travel. The panel 14 may be retained in closed position by suitable means, such as a latch 31, preferably on the bottom of the frame near the front, cooperating with a catch 33 registering therewith on the bottom of the panel 14.

When the panel 14 is swung out to open position to bring out and expose the shelf 18, a cam 32 on the bottom of the free end of the shelf rides up over the ball bearing 30, raising the shelf from tilted to horizontal position.

Th chair is provided with a covering of flexible upholstery material 36, continuous over the outer sides of the panel 14 and the aligned frame portion 16, to flex as the panel is swung out and leave no seam when the panel 14 is returned into alignment with the frame portion 16. Also, the parting between the frame portion 16 and the panel 14 is preferably aligned with the front surface of the back 10, and the back 10 is preferably provided with a lateral overhang 38 covering the parting line. Hence, when the panel 14 is in the closed position shown in FIGURE 1, there is substantially no trace of the shelf or its mechanism visible from the exterior.

What is claimed is:

1. A chair or the like having a back and a seat and comprising a frame, a side panel having a top forming an arm rest, said frame having a portion at one side of said back and aligned with the arm rest of said side panel in closed position, a hinge secured to the outer edges of said aligned frame portion and said side panel away from said back to pivot said panel on a vertical axis near said back to swing away from said seat, a shelf pivoted to the inside of said panel on a horizontal axis, said shelf in the closed position having a substantially quadrant portion housed below said seat and a substantially rectangular rearward extension lying at one side of said frame portion, and means actuated by swinging said panel about said vertical axis for swinging said shelf about said horizontal axis into horizontal position with said rearward extension bridging the gap between said hinge and said seat.

2. A chair or the like having a back and a seat and comprising a frame, a side panel having a top forming an arm rest and a bottom portion extending down below said seat coextensive with said frame and pivoted to said frame below said seat on a vertical axis near said back to swing away from said seat, and a shelf pivoted on a horizontal axis to the inside of said panel spaced above the bottom thereof and having a substantially arcuate outer edge, springs under said seat, said frame having a slot in the side thereof toward said panel receiving the free end of said shelf, said slot being of a depth sufficiently greater than the thickness of said shelf to permit the free end of said shelf to slide therethrough and swing down under said seat and clear said springs as said panel is returned about said axis toward said seat.

3. A chair or the like having a back and a seat and comprising a frame, said seat being of the spring upholstered type whereby the bottom of the seat sags with the weight of the occupant, a side panel pivoted to said frame on a vertical axis near said back to swing away from said

seat, a shelf secured to the inside of said panel below the level of said seat, said frame having a slot in the side thereof toward said panel receiving the free end of said shelf, said slot being sufficiently deeper than the thickness of said shelf to permit the free end of said shelf to pass over the bottom of said slot and to swing down clear of the sagging of the bottom of said seat as said panel is returned about said axis toward said seat, an anti-friction supporting bearing in the bottom of said slot near the front of said seat, and a cam on the bottom of said shelf engaging said bearing after the shelf has cleared the sagging of the bottom of the seat to raise said shelf to horizontal position as the panel is swung away from said seat.

4. A chair or the like having a back and a seat and comprising a frame, a side panel having a top forming an arm rest and a bottom extending down below said seat to the bottom of said frame, said frame having a portion at one side of said back and aligned with both the arm rest and bottom of said side panel in closed position, said side panel being pivoted to said aligned portion of said frame on a vertical axis near said back to swing away from said seat, a shelf pivoted inside said panel on a horizontal axis

and having a substantially arcuate outer edge, springs under said seat, said frame having a slot in the side thereof toward said panel of greater depth than the thickness of said shelf receiving the free end of said shelf to slide therethrough under said seat and clear said springs as said panel is swung about said axis toward said seat, and a covering of flexible upholstery material over the inner side of said panel having a horizontal slot therein to receive said shelf, and continuous over adjacent portions of the outer sides of said panel and frame portion to flex as the panel is swung out and leave no seam when the panel is returned into alignment with said frame portion.

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