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ROTARY TRAY ATTACHMENT FOR FOLDING CHAIRS

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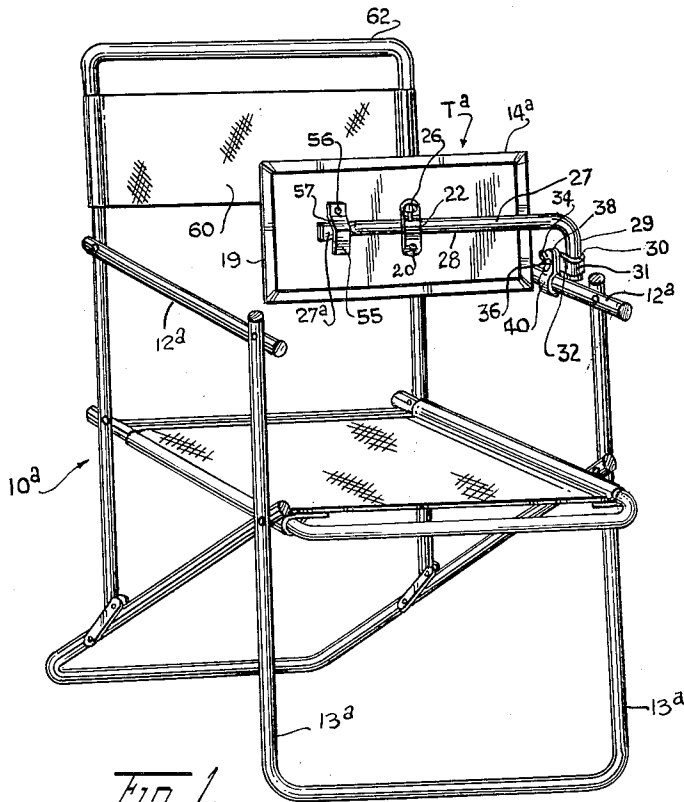


Fig. 1.

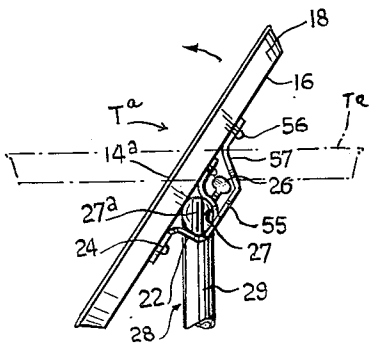


Fig. 3.

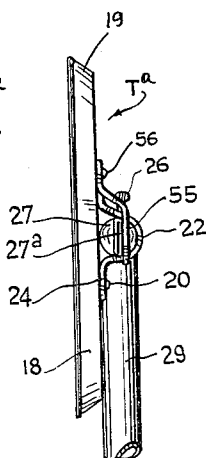


Fig. 4.

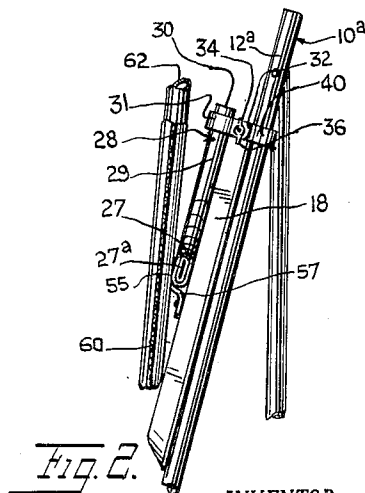


Fig. 2.

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**ROTARY TRAY ATTACHMENT FOR FOLDING
CHAIRS**

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This invention concerns a tray provided with a multiple joint especially adapted for attachment to a bed, chair or other support to serve as a food tray, book or music stand, or the like.

According to the invention, the tray may be angularly adjusted on a bent tube held in various positions by clamps oriented on different mutually perpendicular axes.

It is therefore a principal object to provide a tray with a multiple jointed support.

It is a still further object to provide a tray with a multiple jointed support, the support being provided with spring means for holding the tray in a vertical position when not in use so that when the tray is mounted on a collapsible chair, for example, the tray does not interfere with collapsing of the chair.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a perspective view of a tray embodying the invention mounted on a collapsible chair, the tray being shown in inoperative position.

FIG. 2 is a side elevational view of a portion of the chair and tray of FIG. 1, shown in a collapsed condition.

FIGS. 3 and 4 are side elevational views showing the tray of FIG. 2 in different inoperative positions, and in FIG. 3 in operative position in dot-dash lines.

In FIG. 1 there is shown a conventional type of collapsible and folding chair 10^a having tubular arms 12^a and tubular legs 13^a. A tray T^a embodying the invention is shown adjustably attached to one of the arms. This tray, as clearly shown in FIGS. 1-4, includes a rectangular shallow metal pan 14^a having a flat bottom or base 16 and integrally formed side and end flanges 18 and 19, respectively, extending around the perimeter of the base and upstanding therefrom. Secured to the underside of the base 16 by rivets 20 is a U-shaped strap 22 shown in FIG. 4, having laterally extending perforated ears 24 engaged by the rivets. A thumb setscrew 26 is threaded in the strap. The screw adjustably holds one arm 27 of an L-shaped tubular bracket 28. This bracket permits the pan to be rotatably adjusted on a horizontal axis. FIG. 3 shows the pan in horizontal operative position in dot-dash lines and FIG. 1 shows the pan in vertical inoperative position. Thumb setscrew 26 grips arm 27 and prevents rotation of the pan in either direction. The bracket 28 has another arm 29 removably and adjustably inserted in a clamp 30. This clamp has an annular or ring-like body 31 with radially extending fingers 32 adjustably gripped by a wing nut 34 threaded on a screw 36 passing through registering apertures in the fingers 32. The arm 27 is rotatable in a horizontal plane on arm 29 as a vertical axis of rotation. The screw 36 also passes through apertures in leg portions 38 of two arcuate clamp members 40. When the nut 34 is tightened, the clamp members securely grip the arm 12^a or other support to which they may be attached. The planes of the legs 38 are parallel to those of fingers 32 so that the clamp 30 is adjustably positioned on screw 36 in a vertical plane including the axis

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of arm 29. The tray thus has three mutual perpendicular axes of adjustment, namely the axes of arms 27 and 29 and screw 36.

The legs 38 of the clamp members 40 are disposed above the arm 12^a, with screw 36 horizontal. The axis of screw 36 is parallel to arm 27 which is shown in FIG. 3 supporting the pan 14^a in an inclined position to serve as a bookrest or bookstand for conveniently holding a book (not shown) therein. Arm 27 has an extension 27^a which is flattened and is shown engaged by a flexible free end 55 of a leaf spring 57. The spring is secured by rivet 56 to the base of the pan. When thumb setscrew 26 is loosened, the spring 55 causes the pan to turn on arm 27 so that the base of the pan is disposed parallel to the vertical plane of the flattened arm extension 27^a.

FIG. 3 shows the spring 57 flexed under tension as the pan is held in an inclined position to a vertical plane by engagement of thumb screw 26 with arm 27. When the screw is loosened, the pan assumes the vertical position shown in FIG. 4.

Arm 27 is slidable in the strap 22 when screw 26 is loosened so that the flattened extension 27^a can be disengaged from the spring 57.

FIG. 2 shows portions of the chair 10^a in a closed or folded position. The bracket 28 has been rotated on the screw 36 to place fingers 32 and lugs 38 in alignment. This causes arm 29 to assume a downwardly inclined position. Screw 26 has been loosened so that the base of the pan is flat against arm 29. This position of the pan is assumed with respect to arm 29 because of the pressure of spring finger 55 on the arm extension 27^a. Thus, when the chair is collapsed as shown, the pan nests in a space defined by rear seat panel 60 of the chair. The panel 60 is supported on a tubular frame back 62 as clearly shown in FIGS. 3 and 4.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

A tray for use with a chair or the like, comprising a rectangular pan having a flat bottom, a strap secured to the underside of the pan, an L-shaped tubular bracket having one arm rotatably engaged in said strap, a thumb screw on said strap for securing the arm in a fixed position therein, a clamp, said clamp having a head slidably and rotatably receiving the other arm of said bracket, said clamp being provided with screw means for securing said other arm therein, clamp members engaged by said screw means and adapted to engage a tubular support perpendicular to said other arm, whereby the pan is adjustably supported on three mutually perpendicular axes defined by the arms of said bracket and said screw means, said one arm being a cylindrical element, said element having an integral flattened end extension, and spring means on the underside of the bottom of the pan engageable with said end extension for biasing the pan to a position wherein the bottom of the pan abuts said other arm, said one arm being longitudinally slidable in said strap to disengage said flattened end extension from said spring means, said spring means being a leaf spring having one end secured by a rivet to the pan, and with a free end pressing against said flattened end extension of said one arm.

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