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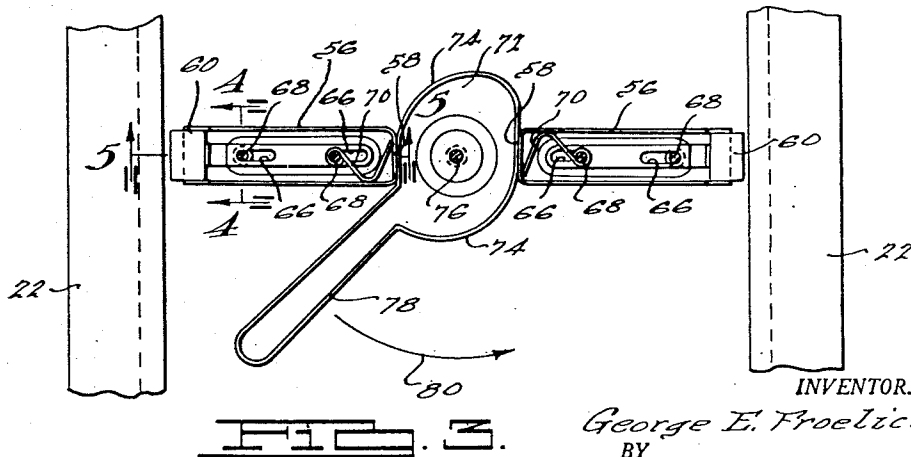
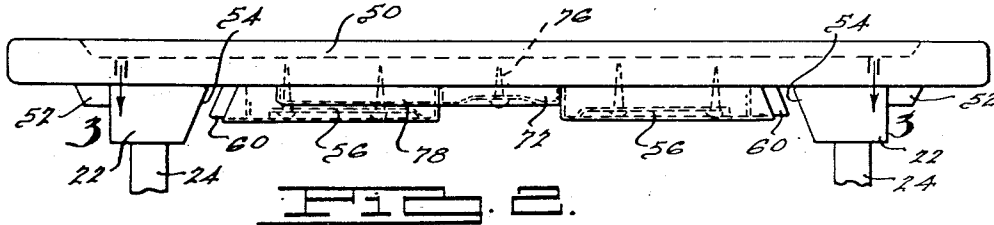
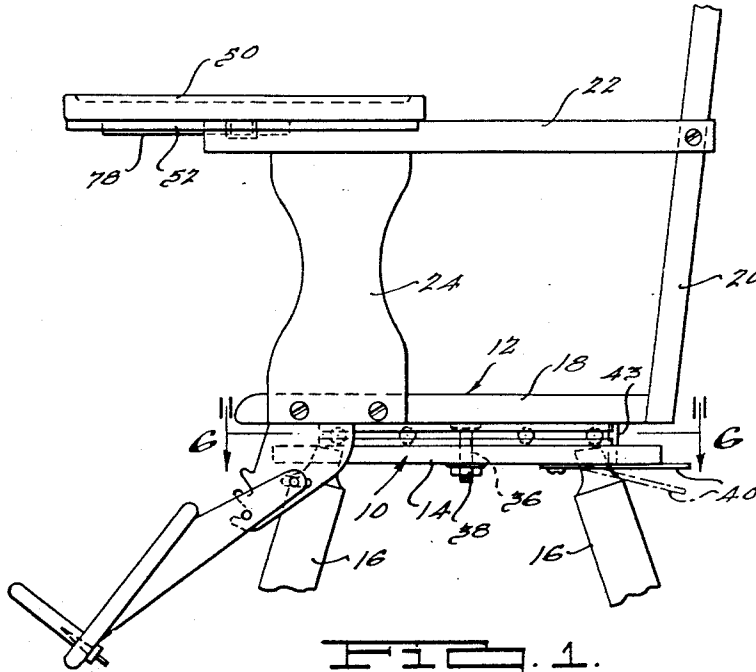
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2,483,633

HIGH CHAIR

Filed Sept. 13, 1945

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

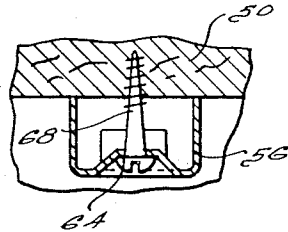


FIG. 4.

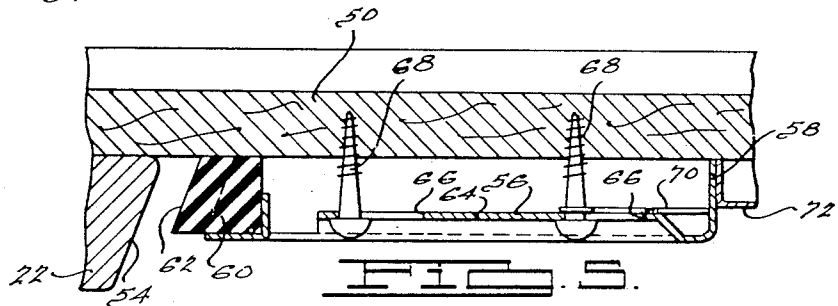


FIG. 5.

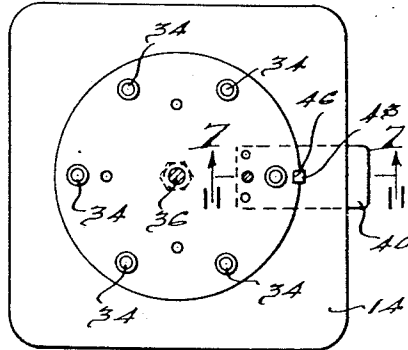


FIG. 6.

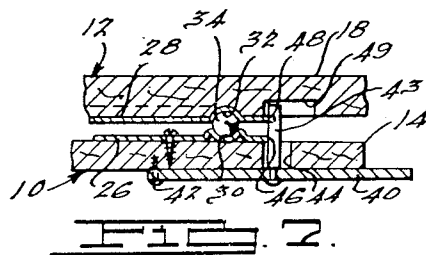


FIG. 7.

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HIGH CHAIR

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2 Claims. (Cl. 155—127)

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The present invention relates to improvements in children's high chairs.

One of the primary objects of the present invention is to provide improvements in the manner in which trays are adjustably mounted on the arms of high chairs and gripped in adjusted position thereon.

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 the upper part of a child's high chair embodying features of the present invention;

Fig. 2 is a partial front elevational view thereof;

Fig. 3 is a cross-sectional view taken substantially along the line 3—3 of Fig. 2;

Fig. 4 is a cross-sectional view taken substantially along the line 4—4 of Fig. 3;

Fig. 5 is a cross-sectional view taken substantially along the line 5—5 of Fig. 3;

Fig. 6 is a plan view taken substantially along the line 6—6 of Fig. 1; and

Fig. 7 is a cross-sectional view taken substantially along the line 7—7 of Fig. 6.

Referring to the drawings, a high chair embodying features of the present invention is illustrated which comprises a base portion generally indicated at 10 and a relatively rotatable and separable chair portion generally indicated at 12. The base portion 10 comprises a substantially horizontal supporting member 14 having four legs 16 which are fixed in the corners of member 14 and diverge outwardly so as to provide a rigid base which cannot be tipped over easily. The legs may be connected by the usual interconnecting bracing members.

The chair portion 12 comprises a seat 18, a back 20 and a pair of horizontal arms 22. The rear ends of the arms 22 are connected to the back 20 by means of screws, or the like, and are connected to the sides of the seat 18 adjacent the forward ends thereof by means of upstanding sides 24. The support 14 and seat 18 are pivotally interconnected and are rotatably mounted with respect to each other. A disk-like sheet metal stamping 26 is fixed to the upper surface of support 14, and a similar disk-like sheet metal stamping 28 is fixed to the under-surface of seat 12. The members 26 and 28 provide ball bearing races, the member 26 being formed with a plu-

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ality of semi-spherical recesses 30 and the member 28 being formed with an overlying annular channel 32 which form cages or seats for ball bearings 34. A pivot bolt 36 has the head thereof received within a recess on the underside of seat 18, in the center thereof, and the shank of the bolt passes through central openings in members 28, 26 and support 14. The member 28 serves to hold the bolt in its recess in seat 18. A nut 38 is threaded over the depending end of the bolt to hold the chair portions 10 and 12 in their assembled relation.

From the above it will be seen that the ball bearings 34 provide a mounting for the seat 12 to permit easy, relative rotation thereof with respect to the base 10. The chair portion 12 may thus be rotated to permit turning thereof so that the infant may be placed in or taken out of the high chair at one convenient position and then easily turned to another position.

In order to keep the chair portion 12 from turning from its normal, forward position, a spring latch is provided which includes a spring plate 40 having the inner end thereof fixed to the undersurface of member 14 by means of screws 42 with the outer end thereof projecting beyond the back edge of support 40 so that it is conveniently accessible to the mother but is in an out-of-the-way position and cannot be reached by the infant. An upstanding, square latching pin 43 is fixed to the plate 40 intermediate the ends thereof which extends upwardly through an elongated opening 44 formed in the member 14. When in the latching position shown in Fig. 7, the pin 43 is received within the aligned notches 46 and 48 formed in members 26 and 28, respectively. The pin projects upwardly beyond notch 48 to within a recess 49 in the seat 18. Thus, by depressing the member 40 about its fixing means 42, the pin is moved out of engagement with slot 48 so that the chair portion 12 is free to be rotated. When moved back to its normal forward position the pin 42 will snap back into notch 48 to hold the chair in such position.

This swiveling and latching action provides a convenient way of turning the chair top when the chair is disposed at a table so that the baby can be conveniently placed in the chair or taken from the chair without having to pick up and turn the entire chair. Furthermore, the two sections 10 and 12 may be readily separated for packing.

An adjustable tray 50 is slidably supported on the top surface of arms 22 and is guided thereon by means of guide rails 52 which are fixed to

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the undersurface of tray 50 with the inside edges thereof slidably engaging the outside edges of arms 22.

In order to adjustably fix or grip the tray 50 to the arms 22 at any of its positions thereon, a gripping means is provided which is fixed to the undersurface of the tray 50 between arms 22. The inside edges of arms 22 are upwardly and inwardly tapered therealong as shown at 54. The gripping means includes a pair of oppositely directed plungers 56 which are in the form of sheet metal stampings having the inner ends thereof closed, as indicated at 58, and having the outer ends thereof shaped to fixedly receive therein rubber gripping members 60. The rubber gripping members 60 are formed with downward and outward tapers 62 which are complementary to the tapers 54 so that when the members 60 are moved against the adjacent tapered surfaces of arms 22 the tray is gripped in place.

The plungers 56 are formed with recessed bottom portions 64 which are formed with a pair of aligned and spaced longitudinally extending slots 66 therethrough. Each plunger 56 is slidably mounted to the undersurface of tray 50 by means of screws 68 which are passed through the slots 66 and received in the undersurface of the tray 50. The heads of the screws overlie the side edges of slots 66 so that the plungers 56 are slidably mounted to the undersurface of the tray 50.

A spring 70 has one end thereof bent about and fixed to the inner screw 68 of each plunger; and the spring is bent with the free end thereof abutting against the inside surface of closed end 58 so that each plunger is resiliently urged to its innermost position. A cam 72 is disposed within the space between the closed end 58 of plunger 56 and is formed with opposite cam surfaces 74 which are adapted to bear against the adjacent closed ends of plungers 56. The cam 72 is pivotally mounted to the undersurface of the tray 50 by means of a pivot screw 76. The cam 72 may be formed of a sheet metal stamping and has an operating handle portion 78 which extends toward the front of the tray 50.

By turning the handle 78 in the direction of arrow 80 (Fig. 3), it will be seen that the plungers 56 are urged outwardly so that the gripping members 60 engage the adjacent surfaces of arms 22 to grip the tray in its adjusted position. By moving the handle 78 in the opposite direction the plungers 56 are returned to their original position by springs 70 so that the tray 50 is released and is free to be moved on the arms.

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 high chair construction comprising a seat having a back and side arms, a tray slidably disposed on said arms, and releasable gripping

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means for releasably securing said tray in position with respect to said side arms, said last-named means including oppositely directed plungers, said plungers being channel shaped with the inner ends thereof closed, resilient gripping members mounted within the outer ends of said plungers, means slidably mounting said plungers on the under side of said tray for linear movement, the inner ends of said plungers being spaced from each other, a cam having an operating lever integral therewith pivotally connected to the under side of said tray in said space with the periphery of said cam contactable with the adjacent closed ends of said plungers for projecting said plungers together with the gripping members outwardly to grip the adjacent inside surfaces of said arms, and resilient means between said plungers and said cam to hold said closed ends in contact with the periphery of said cam.

2. A high chair construction comprising a seat having a back and side arms, a tray slidably disposed on said arms, guide bars fixed to the under surface of said tray and engaging the adjacent outside surfaces of said arms, the inside surfaces of said arms being formed with upwardly directed tapers, and releasable gripping means for releasably securing said tray in position with respect to said side arms, said last-named means including oppositely directed plungers, said plungers being channel shaped with the inner ends thereof closed, resilient gripping members mounted within the outer ends of said plungers with the outer ends of said gripping members formed with tapers complementary to the tapers on said arms, means slidably mounting said plungers on the under side of the tray for linear movement, the inner ends of said plungers being spaced from each other, a cam having an operating lever integral therewith pivotally connected to the under side of said tray in said space, with the periphery of said cam contactable with the adjacent closed ends of said plungers for projecting said plungers together with the gripping members outwardly to grip the adjacent inside surfaces of said arms, and resilient means between said plungers and said cam to hold said closed ends in contact with the periphery of said cam.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
822,562	Tucker	June 5, 1906
1,020,454	Seidenbecker	Mar. 19, 1912
1,983,138	Lehman	Dec. 4, 1934

FOREIGN PATENTS

Number	Country	Date
171,264	Great Britain	Nov. 17, 1921