March 10, 1953 E. M. MADSEN 2,630,856

HIGH CHAIR WITH SAFETY RESTRAINING POST

Filed April 5, 1951

Fig. 1

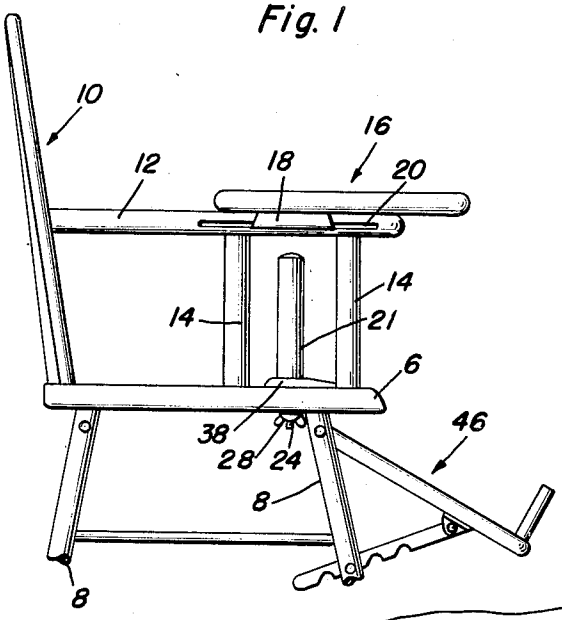


Fig. 4

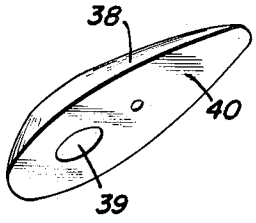


Fig. 3

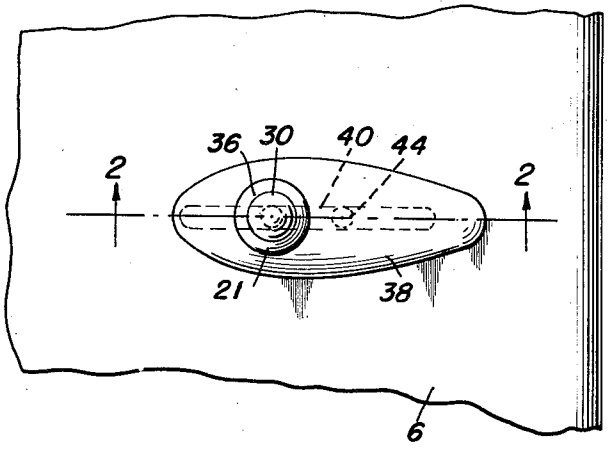
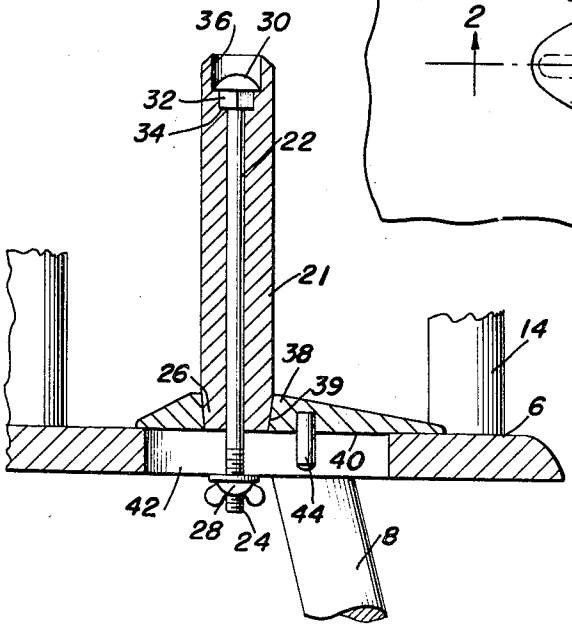


Fig. 2



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HIGH CHAIR WITH SAFETY RESTRAINING POST

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4 Claims. (Cl. 155—189)

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The present invention relates to certain new and useful improvements in high chair constructions and has reference in particular to a safety restraining post which is mounted on the central region of the forward edge portion of the seat in a manner to underlie the customary tray and, in which position, it functions as a guard and prevents the occupant from leaving the chair by way of the space existing between the tray and seat.

As the preceding statement implies, perpendicular restraining posts have been used by others. As a matter of fact, the art to which the invention relates shows that many and varied styles and forms of safeguarding posts have been offered for adoption and use.

Considering the fact that these prior art restraining posts have not come into widespread use is indicative, if not persuasive, that they have failed to measure up to all of the requirements of the trade. Therefore, it is an object of the instant invention to structurally, functionally and otherwise improve upon prior art high chair restraining posts and, in so doing, to provide an improved high chair in which manufacturers, retailers and users will find their respective requirements and needs fully met, contained and effectually available.

Briefly summarized, the preferred embodiment of the invention has to do with the combination of a leg-supported backrest equipped seat, said seat having armrests and said armrests being provided with a detachably and slidably mounted tray. The improvement has to do with a simple and practical post, said post being adjustably mounted on the central forward edge portion of the seat. The post underlies the tray and the tray and post are individually and collectively adjustable in respect to the seat and armrests.

Novelty is also predicated upon a high chair seat with an adjustably mounted restraining post thereon whether or not in combination with the armrests and adjustable tray carried by the armrests.

Other objects and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the accompanying sheet of drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a fragmentary side elevational view of a high chair constructed in accordance with the principles of the present invention;

Figure 2 is an enlarged fragmentary detail section, with parts in elevation, of the essential post and its features, the section being on the line 2—2 of Figure 3;

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Figure 3 is a top plan view of the structural adaptations seen in Figure 2; and

Figure 4 is a perspective view of the specially constructed base forming collar carried by the lower end of the post.

Referring now to the drawings and to the over-all combination shown in Figure 1, the high chair seat is denoted by the numeral 6 and this is provided with customary supporting legs 8. There is also the usual backrest 10 and horizontal armrests 12 mounted on uprights 14 interposed between the seat and armrests. The customary adjustable and detachable food tray is denoted by the numeral 16. This is shown provided with cleats 18 adjustably keyed in the keyways 20 provided therefor in the armrests 12. Insofar as the invention is concerned it is only necessary that the tray be adjustable on the armrests in a plane which is parallel with the seat.

In accordance with the present invention the restraining post 21 is of wood or other equivalent material and is some five or six inches in height. It has a central bore extending therethrough to accommodate an assembling and retaining bolt 22. The lower end of the bolt is screw-threaded at 24 and extends through and beyond the tapered lower end portion 26 of the post where a wing-nut 28 is provided. The upper end of the bolt 22 has a convex head 30 and a complemental polygonal portion 32 which is seated in a correspondingly shaped counterbore or recess 34 in the post 21 provided therefor. The head portion is in the circular larger counterbore 36. An adapter collar, also functioning as a base, is provided and this is denoted by the numeral 33. It is of elongated approximately semiellipsoidal configuration. It is also provided with a flat bottom surface 40 which has firm sliding contact with the corresponding flat surface of the seat 6. The seat, in turn, is provided with an elongated slot 42 which constitutes a keyway and serves to accommodate a small dowel pin 44 which is fitted into a socket in the adapter collar or base. The dowel constitutes a key and the slot a keyway and, therefore, the key rides back and forth in the keyway. Also, the lower screw-threaded nut-equipped end of the bolt operates in this keyway. On the other hand, the base block or collar completely covers and closes the slot to prevent pinching or other injuries. Not only is the slot completely shielded over by the block but the upper and marginal surfaces of the

block are suitably convex or otherwise nicely shaped to present a smooth contour and to minimize likelihood of injury from this source.

It is to be noticed that the post is such that it has its upper end terminating in spaced relation beneath the central overlying portion of the slidable tray. The tray is adjustable and the post is adjustable and both are adjustable in relation to the seat and backrest, making it possible to arrange these cooperating parts to accommodate different-sized infants.

It will be obvious that with the post properly applied and adjusted on a high chair it will occupy a position somewhat in alignment with the crotch of the infant-occupant. Therefore, the infant will find it quite impossible to slip himself through the space existing between the seat and overlying tray. Nor will it be possible for him to turn over, so to speak, and crawl out inasmuch as the post will prevent him from crossing his legs and assuming this climb-out position.

If desired, the high chair may be provided with any suitable adjustable footrest means 46 forming, of course, no part of the invention.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in the shape, size, materials and arrangement of parts may be resorted to in actual practice without departing from the spirit and scope of the invention, as claimed.

Having described the invention, what is claimed as new is:

1. In combination, a high chair embodying a seat having an upstanding rigidly mounted backrest and an elongated slot, a restraining post, a bolt and nut carried by said post, the nut-equipped end of said bolt being detachably and adjustably connected with said seat through the medium of said slot, and collar means attached to the lower end portion of said post and resting slidably against said seat and normally covering said slot, said restraining post being adjustable by way of said bolt and slot toward and from said backrest.

2. In combination with a high chair embodying a seat having an upstanding rigidly mounted backrest, said seat having an elongated slot disposed inwardly of the marginal edges of the seat adjacent the forward edge and at right angles to the backrest, a restraining post, an elongated collar attached to the lower end portion of said post and resting slidably against said seat and normally completely covering said slot, said collar being of dimensions greater than the dimensions of said slot, said post having a central vertical bore opening through its ends, a headed bolt mounted in said bore, the free end of the bolt passing through said slot and having a nut threadedly mounted thereon with the nut normally in clamping engagement with the bottom surface of said seat, and a dowel pin eccentric of said bolt carried by said collar and depending below said collar into said slot so as to prevent sidewise movement of said collar, said post being adjustable by way of said bolt and nut toward or from said backrest.

3. The structure specified in claim 2, wherein said post is provided on its upper end with a counterbore in alignment with said bore, said bore having a polygonal recess in alignment with said counterbore, the headed portion of said bolt being disposed with the confines of said counterbore and said recess.

4. For use with a flat surfaced seat having an upstanding rigidly mounted backrest and an elongated slot at right angles to the backrest, an attachment comprising an elongated collar constituting an adapter base, said collar having a flat bottom adapted to rest against the adjacent flat surface on the seat, said collar being provided at one end with a hole, a post having a tapered end portion fitted in said hole, a bolt extending centrally through said post and through and beyond said collar, said bolt being provided on its free end with an assembling and clamping nut, and a dowel pin eccentric to said bolt carried by said base and depending below said flat bottom to prevent sidewise movement of the collar relative to the slot.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
310,180	Brundage	Jan. 6, 1885
930,074	Jaspersen	Aug. 3, 1909
1,182,670	Fountain	May 9, 1916
1,561,264	Mayer	Nov. 10, 1925
1,902,367	Johnson	Mar. 21, 1933
2,447,239	Edens	Aug. 17, 1948
2,455,168	Gilmore	Nov. 30, 1948
2,535,212	Johnson	Dec. 26, 1950