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GUARD FOR INFANT'S SEAT

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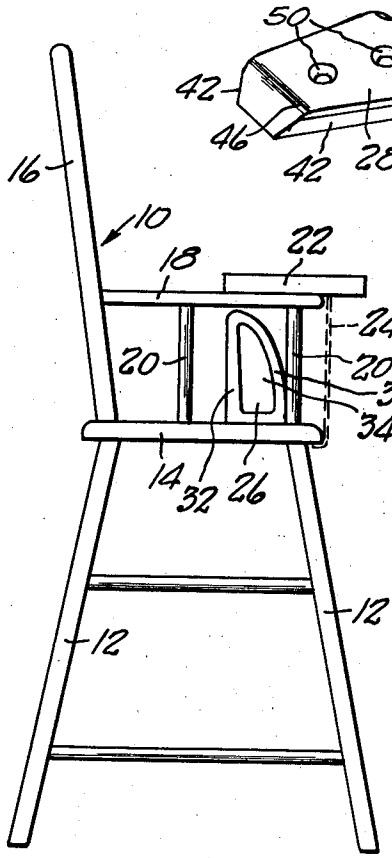


FIG. 1

FIG. 7

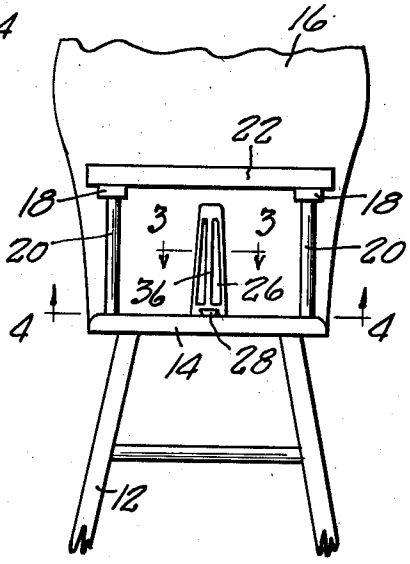


FIG. 2

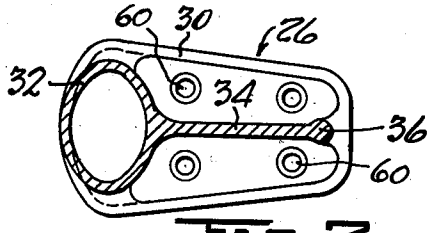


FIG. 3

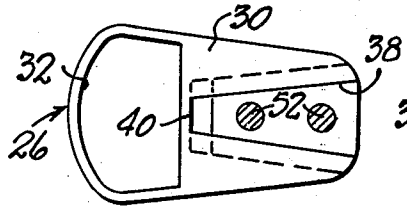


FIG. 4

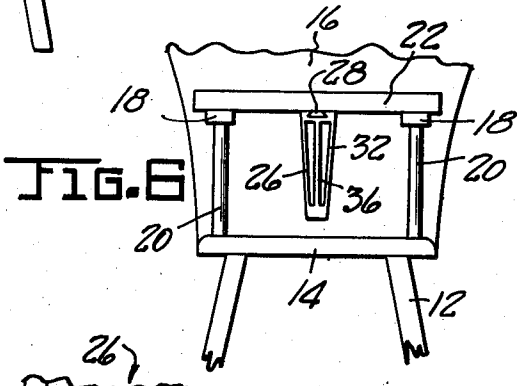


FIG. 6

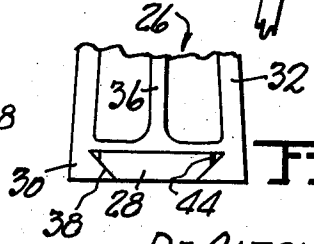


FIG. 5

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GUARD FOR INFANT'S SEAT

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6 Claims. (Cl. 155—189)

This invention relates to a guard for infant's seats and more particularly to a guard for use on high chairs, baby strollers and like items.

Babies and small children frequently move about a great deal while seated in a high chair or stroller, or like article. Thus they frequently slide forwardly in an effort to leave the seat, as by sliding between the seat and a tray anchored thereto in the case of a high chair. High chairs are commonly provided with straps passing between the tray and the front edge of the seat, but these straps are not always effective because their size and location is such that a child can sometimes move his leg therepast so that both legs are positioned between the strap and one side of the chair. Also, the position and relation of the strap, even if it is effective to prevent a child from falling out of the chair, may trap the child in an uncomfortable and cramped painful position between the seat and the tray from which the child cannot extricate himself. Older children also try to stand in a high chair or stroller and, if they succeed in doing so, are in danger of falling completely from the chair and injuring themselves in so doing.

It is the primary object of this invention to provide a device constructed to prevent a child from moving in a seat or chair from proper seated position without, however, injuring the child, restraining normal movements or changes of position while remaining seated, or otherwise introducing any undesirable or hazardous part or characteristic to the chair or seat.

A further object is to provide a device of this character which is readily mounted and removed, which cannot be removed by a child seated on the chair or other article on which the item is used, which is washable and non-corrosive, which has smooth or curved exposed surfaces throughout, which does not require the manipulation of securing means to apply and remove it, and whose anchor means do not interfere with use of the chair or other item when the guard is removed therefrom.

Other objects will be apparent from the following specification.

In the drawing:

Fig. 1 is a side view of a chair having my improved guard mounted thereon;

Fig. 2 is a fragmentary front elevational view of a chair mounting my improved guard;

Fig. 3 is an enlarged horizontal sectional view of the guard taken on line 3—3 of Fig. 2;

Fig. 4 is a view taken on line 4—4 of Fig. 2 and illustrating the anchorage of the base of the device to a support;

Fig. 5 is a fragmentary end view of the device as viewed from the right in Fig. 4;

Fig. 6 is a fragmentary front elevational view of a high chair illustrating a modified mounting of the device thereon; and

Fig. 7 is a perspective view of the anchor member employed to detachably mount the guard upon a support.

Referring to the drawing which illustrates the preferred

embodiment of the invention and its application to a high chair, the numeral 10 designates a conventional child's high chair having legs 12, seat 14, back rest 16, arm rests 18 carried by uprights 20 projecting upwardly from seat 14, and tray 22 mounted upon the front portions of the arm rests and anchored thereto by any suitable means (not shown). A strap 24, as illustrated in broken lines in Fig. 1, may be provided to extend between the tray 22 and the front of the seat 14 at the center thereof for the purpose of preventing a child from sliding downwardly between the seat and the tray to fall out of the chair, said strap normally being positioned between the legs of the child as the child is seated in the chair.

My improved guard 26 is adapted to be mounted upon the chair or other support in a detachable manner by means of a retainer 28 secured to the chair and having a locking engagement with the guard 26.

The guard 26 may be formed from any suitable material, such as wood, metal or plastic material, and I prefer to mold it from a plastic material, such as polystyrene, cellulose acetate, or cellulose acetate butyrate. The guard 26 has a wide and elongated base portion 30 having a flat bottom surface providing for a firm and stable abutment with the surface of the member which carries said guard. A tubular portion 32 extends upwardly from the base 30 at one end thereof, the same converging or merging with the walls of the base 30 in a streamline manner and assuming a substantially oval form in cross-section, as seen in Fig. 3, and tapering progressively toward its upper end. A comparatively thin longitudinal flange or web 34 projects forwardly centrally from the tubular portion 32 in substantially a vertical plane, the same merging with a base 30 in a streamline manner. The flange 34 preferably merges with a rounded enlarged marginal rib 36 at its free edge which extends from the base 30 upwardly and rearwardly, as seen in Fig. 1, to merge with the upper portion of the column 32. The contour is preferably such that all exposed corners and edges of the device are rounded or curved so that there is no edge or surface upon which a child could cut, scratch or otherwise injure himself when coming in contact therewith. The base 30 has a longitudinally tapering dovetail groove 38 formed in its surface for a portion of its length, as best seen in Figs. 4 and 5. The outer end of the dovetail groove at the widest portion thereof is located at the end of the device opposite the upright 32, and the inner end of the dovetail tapered groove preferably terminates at 40 spaced from the hollow upright 32, as best seen in Fig. 4. The side walls of the groove converge downwardly and inwardly, as seen in Fig. 5, so that the opening in the bottom surface of the base 30 is narrower than the maximum width of the groove at its innermost or uppermost portion.

The retainer for anchoring the device 32 is preferably a cast or molded rigid member formed of metal or plastic material. The retainer is of a length preferably shorter than the tapered dovetail groove 38, and its thickness is preferably slightly less than the depth of the groove 38 so as to fit freely slidably therein as seen in Fig. 5. The retainer is longitudinally tapered similarly to the taper of the groove 38, and its side walls are inclined or beveled at 42 similarly to the bevel of the side walls of the dovetail groove 38. At their upper or outer portion, however, the bevel edges are flattened at 44 to limit contact of the sides 42 with the sides of the groove 38 to a portion only of the depth of the groove. At its narrow end the upper leading edge or corner 46, which is exposed when mounted upon a support, is rounded as seen in Fig. 7. The rear side corners 48 at their exposed surface are also preferably rounded as seen in Fig. 7. Two or more apertures 50, which are preferably countersunk at the exposed surface of the device,

receive screws or other securing members **52** for anchoring the retainer to its support. Thus in the case of a high chair, the retainer **28** may be secured to the chair seat **14**, as illustrated in Figs. 1 and 2, or may be secured to the bottom surface of the table tray **22**, as illustrated in Fig. 6.

The retainer **28** is mounted upon the desired support therefor at desired position determined by the nature of the article upon which it is mounted and the size and physical characteristics of the child who is to use the seat. The guard **26** is then readily applied to and removed from the seat by, respectively, interlocking or releasing wedged engagement of the guard with the retainer **28** at the dovetail groove **38** of the guard. The retainer will be so positioned that the guard can be applied only by a movement forwardly of the seat and can be removed only by a rearward movement. In other words, the device can only be removed by a movement in the direction of the child seated upon the device, so that accidental movement or manipulation of the device by the child will be difficult so as to render unlikely the removal of the device since such movement is stopped by the body of the child.

Among the important considerations of the device is the longitudinal elongation thereof, as at the flange or web **34**. This dimension is great enough to prevent the child from maneuvering to pull his foot between the guard and the arm rest supports **20**. Thus the device prevents the child from assuming a standing position. The rearmost location of the tubular portion **32** is advantageous because its transverse dimension can be of a size greater than can be easily grasped by the hand of the child, so that maneuvering or manipulation thereof will be reduced during use, and injury to the child is unlikely.

The location of the device upon the chair or on the support can be changed from time to time as the child grows, just as provisions are commonly made in high chairs to vary the location of the tray **22** and the spacing thereof from the back rest **16**. In the present instance such adjustment is accommodate by merely removing the anchor member **28** from the support and re-securing the same at a new location dependent upon the desired position of the guard. The anchor member is comparatively small and its presence upon the chair, at times when the guard **26** is not being used, is not detrimental to use of the chair and is not likely to injure the child when seated upon the device. Thus the rounded contour at **46** and **48**, the shallow dimension of the retainer, and the blunting of the dovetail surfaces at **44**, all reduce the likelihood that a child would be injured thereby or that garments would be severed or torn thereby.

The construction of the attachment means as shown, although advantageous, is not essential, and any other attachment means found suitable may be employed. Thus, the base **30** may have apertures **60** formed therein to receive securing screws for direct anchorage of the device to the seat or other article with which the device is used.

While the preferred embodiment of the invention has been illustrated and described, it will be understood that changes in the construction may be made within the scope of the appended claims without departing from the spirit of the invention.

I claim:

1. The combination with an article providing a seat for an infant and characterized by interconnected back rest and sides, and side connecting means spaced above and cooperating with said seat to define a leg opening, of a guard, and a retainer carried by one of said leg-opening-defining parts and detachably mounting said guard, said guard comprising a rigid member extending across the major part of said leg opening and slotted for wedged fit on said retainer, said guard having smooth and rounded exposed corners and edges, said guard being shiftable rearwardly of said seat from said wedged position to detach the same from said retainer.

2. The combination defined in claim 1, wherein said retainer is a shallow body with beveled and rounded corners and edges, whereby it does not interfere with or present a hazard during use of the article when said guard is detached therefrom, said guard comprising a base having a comparatively large area and having a cut-out providing an elongated tapered dovetail-lock-defining portion, a tubular portion projecting substantially perpendicularly therefrom and a flange projecting from said base and tubular portion and substantially parallel to the direction of movement of said guard relative to said retainer.

3. The combination defined in claim 1, wherein said retainer is a shallow body with beveled and rounded corners and edges, whereby it does not interfere with or present a hazard during use of the article when said guard is detached therefrom, said guard comprising a base having a comparatively large area and having a cut-out providing an elongated tapered dovetail-lock-defining portion, a tubular portion projecting substantially perpendicularly therefrom and a flange projecting from said base and tubular portion and having enlarged marginal edge portions of part-circular cross-sectional shape.

4. A guard adapted for use on an article providing an infant's seat and having a leg-receiving opening, comprising a retainer member adapted to be secured to said article at said opening and including an elongated longitudinally tapering and transversely beveled sides, and a rigid guard member having a base and having a cut-out providing an elongated tapered dovetail groove, a part of said guard member extending perpendicularly to said base and being elongated parallel to said groove and having smooth surfaces and curved corners and edges at all exposed parts thereof.

5. A guard adapted for use on an article providing an infant's seat and having a leg-receiving opening, comprising a retainer member adapted to be secured to said article at said opening and including elongated longitudinally tapering and transversely beveled sides, and a rigid guard member having a base and having a cut-out providing an elongated tapered dovetail groove, said guard member having an elongated portion of curved cross-sectional shape projecting from said base and a flange portion projecting at one end thereof from said base and at one side thereof from said elongated portion, all exposed corners and edges of said guard being smooth and curved.

6. The combination with an article providing a seat for an infant and including interconnected seat, back rest and side members, and side connecting means spaced above said seat to define a leg opening, of a guard positioned substantially upright and centrally in said leg opening to divide said leg opening, and means for securing said guard to said article, said guard having smooth surfaces and curved corners and edges at all exposed parts thereof and being transversely elongated in a direction substantially perpendicular to both said seat and said back rest, the rear upright marginal portion of said guard being enlarged and adapted to be spaced from said back a distance slightly greater than the thickness of the body of the infant at the abdominal region.

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