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2,833,344

VEHICLE SAFETY RESTRAINT

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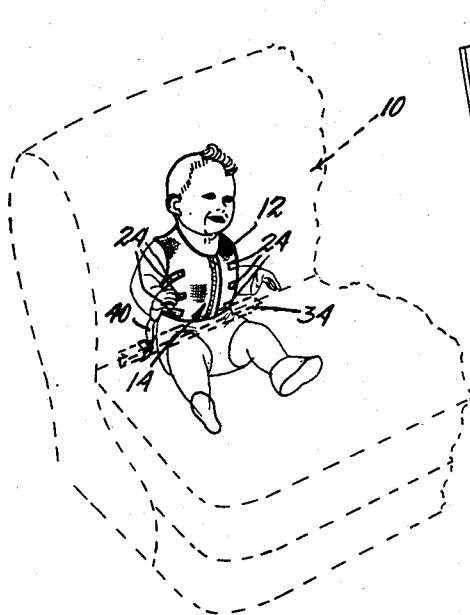


FIG-1

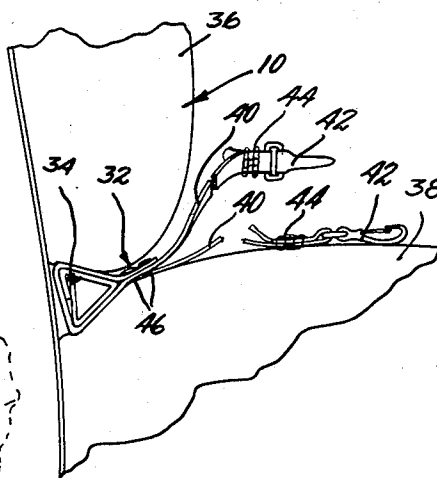


FIG-2

FIG.3.

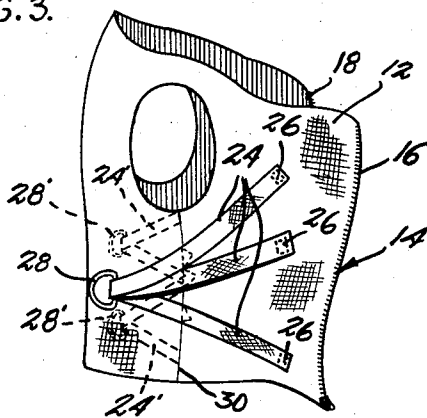
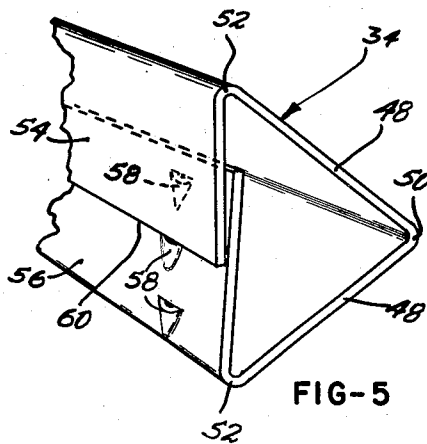


FIG-5

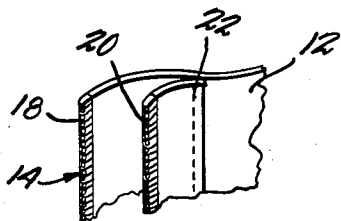


FIG-4

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1

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VEHICLE SAFETY RESTRAINT

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2 Claims. (Cl. 155—189)

This invention is a safety restraint for child occupants 15 of vehicles.

The principal object of the invention lies in providing means for restraining the forward movement of a child off of the seat of a vehicle in the event deceleration of the vehicle is rapid. This is accomplished by providing a vest-like garment which is adjustable in size to fit the trunks of children of different sizes, and having eyes or rings for releasably securing the garment to anchoring means fixed relative to the seat of the vehicle and including straps and catches.

Another object of the invention lies in the provision of novel means for adjusting the size of a garment.

Still a further object of the invention lies in the provision of a vest-like garment having pressure distributing webs secured to the front portions thereof.

These and other important objects of the invention will become apparent during a reading of the accompanying specification taken in conjunction with the drawing, wherein like numerals are employed to designate like parts.

In the drawings:

Figure 1 is a perspective view showing a child wearing the safety restraint constituting the subject matter of this invention and with a vehicle seat shown in broken lines;

Figure 2 is a vertical elevation of a seat showing the anchoring means and accompanying straps and catches forming a part of the safety restraint;

Figure 3 is a perspective view of a vest-like garment constituting a portion of the safety restraint;

Figure 4 is an enlarged fragmentary perspective view showing the adjustable fastening means of the garment; and

Figure 5 is a fragmentary enlarged perspective view of the end of the tubular member 34.

Referring now more particularly to the drawing, I disclose a child or infant as sitting upon the seat cushion 38 of the vehicle seat 10 and wearing the vest-like garment 12 which forms a part of the restraint. It will be seen that the garment 12 is sleeveless and covers the shoulders, chest, and torso downwardly to include the waist, and therefore the approximate weight center of the child's body is covered. The garment is adjustable to the trunk size of children of different sizes and may be employed to restrain the movements of an infant from the seat in the event the vehicle is stopped suddenly.

The adjustability is accomplished by means of an adjustable fastening means 14, which is here shown to be one of the slide fastener type having one series of elements 16 on one edge of the front opened vest and another series of elements 18 on the opposed edge. To provide adjustability, a third series of elements 20 adapted to cooperate with the series of elements 16 is stitched at 22 to the garment 12 spaced from the series of elements 18. Therefore the slide fastener may be operated with either the series of elements 16 and 18 cooperating as shown in Figure 1, or with the elements 16 and 20 cooperating for a smaller sized child.

2

Pressure distributing webs 24 are stitched or otherwise secured at 26 (Figure 3) on the front portions of the garment 12 and at points spaced from each other. From the sides, each web 24 has plural members which converge to a single point where they secure an anchor ring 28, thus providing one anchor ring at each side of the garment toward the back thereof.

It may be found desirable when employed to restrain an infant to secure two rings as 28', shown in broken line of Figure 3, so that an infant may lie on its side and still be restrained from sliding off of the seat 10. These rings 28' may be secured by webs 24' which may extend to the front and secure at the points 26 or be secured in the side seam 30 of the garment 12.

Anchoring means 32 are employed to restrain movement of the child off of the seat, and this means comprises an elongated tubular member 34, here shown to be triangular in shape but which also may be round or square or any other shape desired. The member 34 is adapted to be forced between the back rest 36 and the seat cushion 38 of the seat 10, and by frictional engagement therein hold the straps 40—40 against movement beyond a certain point toward the front edge of the seat. These straps may be resilient to assist in cushioning the deceleration of the child in severe instances, although it is not necessary that they be such to practice the invention.

Snap type fasteners 42—42 are carried by the free ends of the straps 40 and the straps are supplied with buckles 44—44 which provide for adjustability of the length thereof. The ends of the straps opposed to the fasteners 42 are disposed in encircling relation to the member 34 and are riveted at 46 and secured against accidental removal from the member 34.

It will thus be seen that when the vehicle is caused to decelerate rapidly and an infant or child would normally fall from the seat thereof, the safety restraint will prevent its being carried forward and thus prevent injury and bruising of the child.

Preferably the tubular member 34 is formed of resilient material bent triangular in shape and having converging front walls 48—48 terminating in an angular bend 50 which urges the walls 48—48 toward a straight position wherein the walls 48—48 are disposed in a common plane. At their rearward ends, the walls 48—48 are bent at 52 to form rear walls 54 and 56. The wall 56 is seen to be provided with a plurality of external pressed bosses 58 and the wall 54 is disposed at an acute angle with relationship to its wall 48 so that the lower edge 60 thereof will cooperate with the bosses 58 to prevent collapsing of the tubular member 34 by flexing at the bend 50.

To facilitate insertion of the tubular member 34 between the backrest 36 and the seat cushion 38, the wall 56 is depressed, increasing the bend 52 and the tubular member is collapsed as far as the wall 56 will permit. The tubular member is then inserted between the seat cushion 38 and the back rest 36 and released, and the tension at bend 50 will cause the walls 54 and 56 to spread. The cooperation of the bosses 58 and the edge 60 then will secure the member 34 against collapsing, therefore preventing its accidental removal from between the back rest 36 and the seat cushion 38.

Having thus described my invention, I claim:

1. A safety restraint for a child occupant of vehicles comprising a vest-like garment; adjustable fastening means for releasably securing the garment successively about the trunks of children of different sizes; pressure distributing webs secured to said garment at the front thereof and at vertically spaced locations relative to the trunk of a child; the webs at each side converging to and carrying an anchor ring; straps having catches at their free ends releasably secured to said rings; and means at the opposed

ends of said straps adapted to frictionally secure the straps relative to a vehicle seat.

2. In a safety restraint for child occupants of vehicles having a garment for releasably securing a child and straps carried thereby, a tubular anchor member carried by the free ends of said straps and comprising a hollow collapsible resilient tube having a normal bias to expand circumferentially, and manually releasable locking means integral with the tube for limiting circumferential collapsing movement of said tube, whereby the tube may be manually collapsed for insertion between a seat and cooperating back and automatically will expand and lock in the expanded position against subsequent collapsing movement.

References Cited in the file of this patent

UNITED STATES PATENTS

1,369,456	Meredith	Feb. 22, 1921
1,529,165	Carroll	Mar. 10, 1925
2,007,075	Clements	July 2, 1935
2,448,076	Bradley	Aug. 31, 1948
2,498,471	Williams	Feb. 21, 1950
2,589,916	Wyner	Mar. 18, 1952
2,758,769	Nunn et al.	Aug. 14, 1956

FOREIGN PATENTS

140,013	Sweden	Apr. 21, 1953
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