United States Patent [19]

Suttles

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[54] **AMUSEMENT RIDE SEAT AND SAFETY GUARD**

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[73] Assignee: **Eli Bridge Company,** Jacksonville, Ill.

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[52] **U.S. Cl.** **297/384,** 272/38, 297/184

[51] **Int. Cl.** **B60r 21/10**

[58] **Field of Search** ..... 297/184, 391, 188, 396, 297/397, 399, 400, 401, 402, 416, 443, 444, 440, 384; 248/118; 272/38, 28 R, 28 S, 29, 34, 35, 36, 37, 41, 42, 48; 43/1

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[57] **ABSTRACT**

This invention relates to a safety guard which is mounted on the upper surface of the seat back and side frames on a ferris wheel seat structure to prevent the long hair of persons riding therein from becoming entangled in the adjacent moving structure.

4 Claims, 8 Drawing Figures

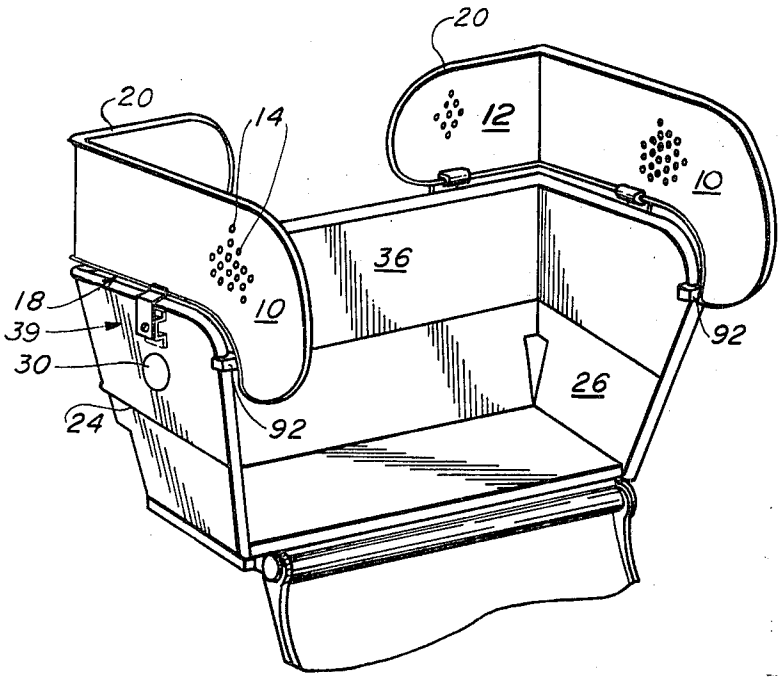


FIG-1

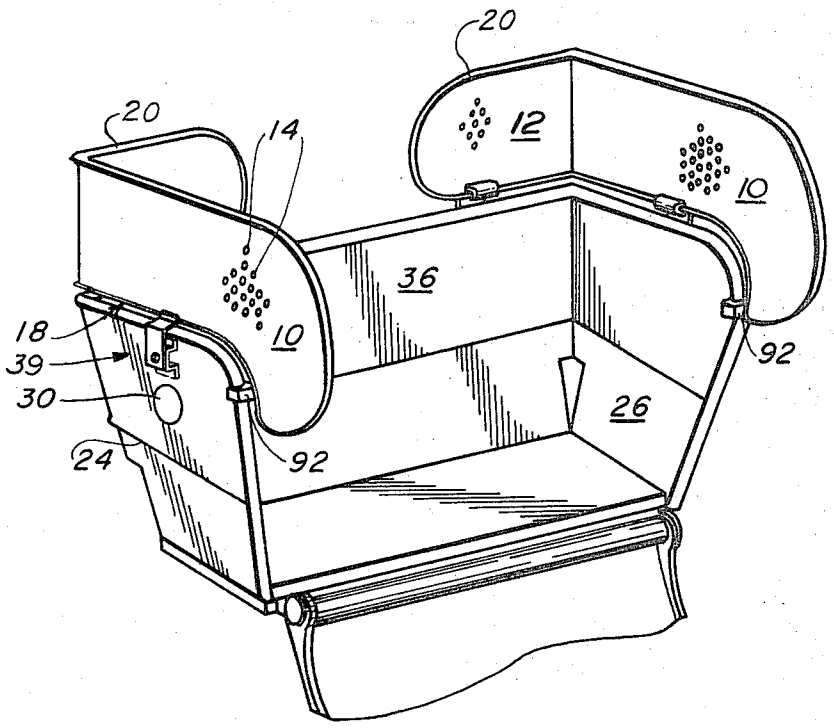

20
20
14
12
10
36
18
39
30
10
92
26
24
92

FIG-2

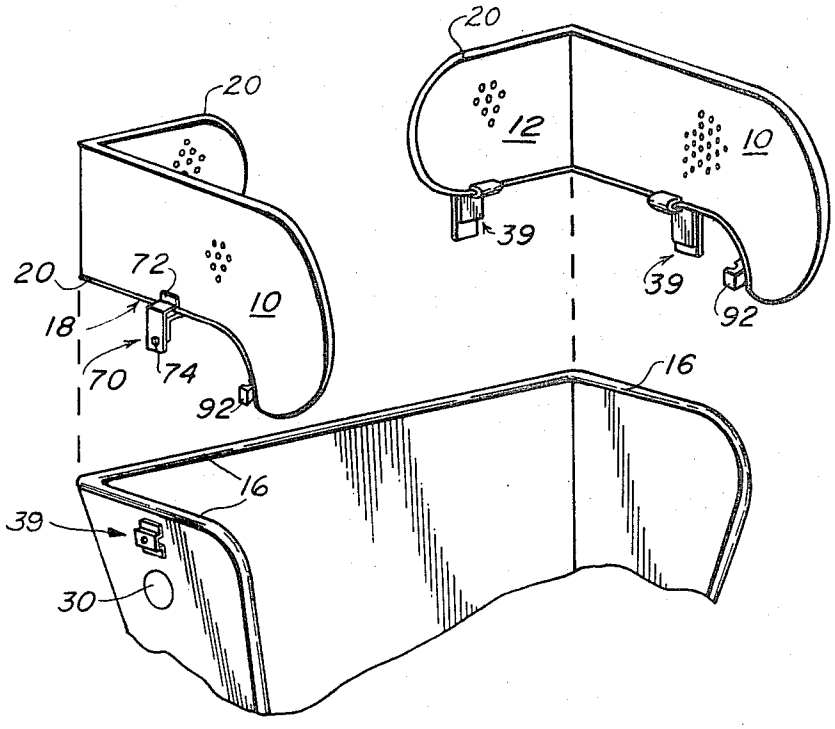

20
20
12
10
39
39
92
20
72
18
10
70
74
92
16
16
39
30

Fig. 3

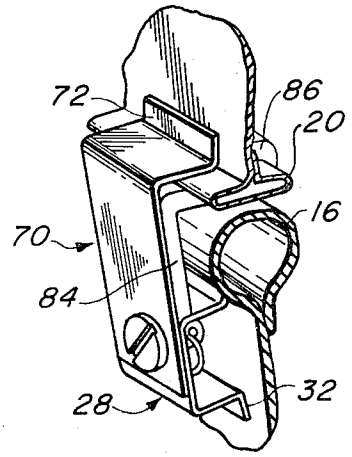


Fig. 4

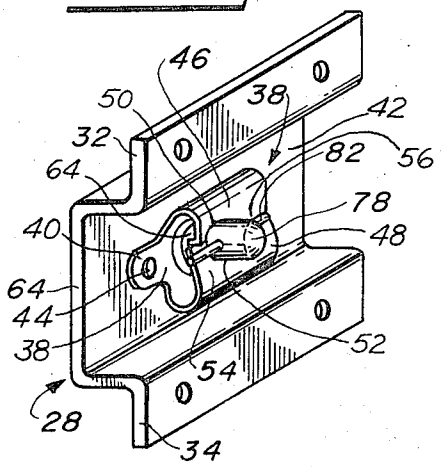


Fig. 6

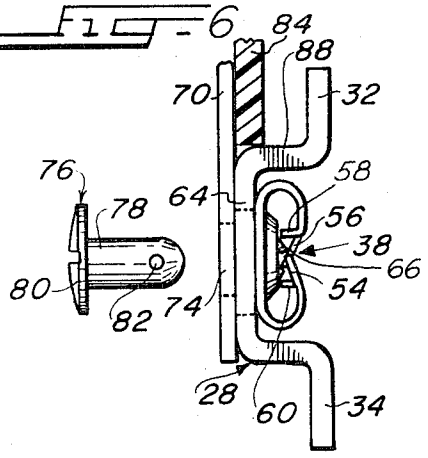


Fig. 7

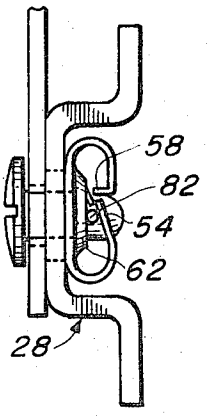
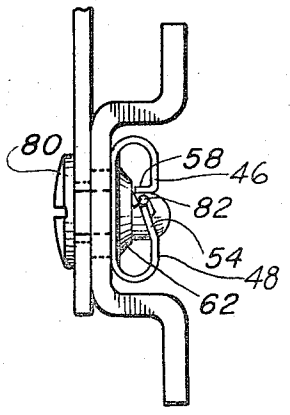


Fig. 8



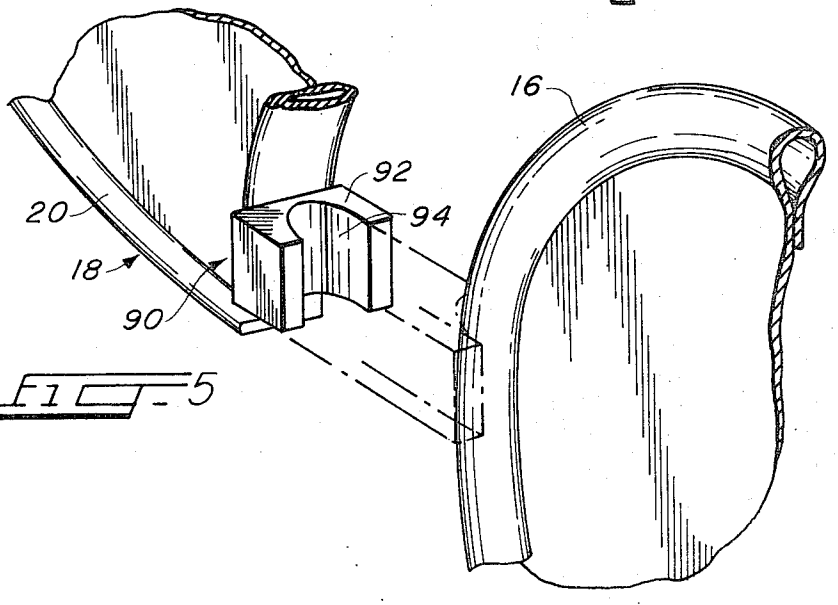


Fig. 5

AMUSEMENT RIDE SEAT AND SAFETY GUARD

BACKGROUND OF THE INVENTION

In amusement rides such as ferris wheels, the seats for holding passengers normally are pivoted to the ride structures and the seats are rotated thereon as the ride operates. The seat structure has a back and a pair of side walls which extend upwardly from the seat proper to about shoulder height of a normal person, thus the neck and head of a person sitting therein will extend above the upper edges of the back and side walls. Women and girls today wear their hair very long and flowing. As the ride is rapidly rotating, and/or if it is windy, their hair flies in every direction. If the hair becomes entangled in the rotating mechanism outside of the seat when the ride is in operation, serious accidents can develop and have developed on ferris wheels; hence the present invention was conceived to alleviate this problem.

SUMMARY OF THE INVENTION

To provide a guard positioned on the upper edges of the sides and back of an amusement ride and extending upwardly therefrom to retain the long hair and the arms of a person within the seat structure; to provide a device of this character which can readily be secured to and removed from the seat structure by the ride operator only; to provide a device of this character which is lightweight and the walls having an all over pattern of perforations to reduce wind resistance.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of the invention mounted on the ferris wheel seat;

FIG. **2** is an exploded perspective view;

FIG. **3** is a perspective view of the clamping or fastening device to the seat structure;

FIG. **4** is a rear perspective view of the female portion of the latching member with the male member engaged therein;

FIG. **5** is an exploded view with parts in section;

FIGS. **6**, **7** and **8** are end elevations illustrating the locking of the fast release lock in sequence.

DETAILED DESCRIPTION OF THE DRAWINGS

The guard as shown in FIG. **1** comprises a side wall **10** and a back wall **12** preferably constructed of sheet metal having an all over series of perforations **14** therein. The lower edges **18** have lateral horizontally extending flanges **20** (see FIG. **3**) whereby to seat on the upper cylindrical or bulbous edges **16** of one of the side and back walls of a seat structure.

Each seat structure **22** of an amusement ride has a pair of these guards thereon but since each guard is a mirror image of the other, only one numeral is applied to the identical parts. One guard is positioned on the upper edges of the right side of the seat structure **22** and the other on the left side, as shown in FIG. **1**. The back walls **12**, when in position, cover about two-thirds of the area above the back wall.

On ferris wheel seat structures where this invention is aptly employed, the outer side of each seat side wall **24–26** is provided with a bearing **30** into which a shaft is journaled whereby the seat structure **22** is rotatable thereabout. The shafts are journaled between the ferris wheel structural elements. This is not shown in the drawings as it forms no part of the present invention and is well known in the art.

The side walls and back walls of each of the hair guards and the seat structure are provided with a pair of quick release mechanisms **39**; see FIGS. **2** and **3**. These quick release devices are purchased on the open market and form no part of the present invention. Each quick release mechanism has a portion thereof mounted to the car structure and another portion mounted on the hair guard. The portion or part mounted on the seat structure comprises a U-shaped bracket **28** having laterally extending flanges **32–34** which are anchored respectively to the outer face of the side walls **24–26** and back wall **36**, such as by welding, bolting, etc. There are four of these brackets **28**, one on each side wall and two spaced apart on the rear wall. The latching plate or bracket **38** comprises a preformed member starting with a flat spring steel plate having laterally extending lugs **40** which are welded, riveted or otherwise anchored to the rear wall **42** of the bracket **28** as at **44**. The transversely extending end members **46–48** are bent back upwardly and inwardly toward each other as shown in FIG. **4**. Semicircular openings **50, 52** are formed in the free ends of members **46–48** to form an aperture. Opposed ends of free ends are tapered downwardly as at **54–56** while the other ends **50–52** terminate in a right angle as at **58–60**. The plate **38** has a collar **62** struck upwardly and when in position, it forms an opening aligned with the opening **64**. The leg **38** is also provided with an aperture **40**. The upper edge of the collar **62** is provided with a pair of tangs **66** (only one of which is visible in the drawing).

The part of the quick release mechanism mounted on the hair guard each comprises an L-shaped plate **70** provided with a flange **72** which is welded or otherwise anchored to the lower part of the hair guard side and end walls (**10–12**), as shown in FIG. **2**, so as to extend outwardly and downwardly of the flange **20** and outwardly of the edges **16**. As is seen in FIG. **3**, the length of the long leg of plate **70** extends almost to the lower end of bracket **28** when positioned thereon. This leg of plate **70** is also provided with an aperture **74** aligned with the aperture **64** whereby to receive the headed pin **76** (see especially FIG. **7**). The shank portion **78** is integrally secured to the head **80** and has an integrally formed pair of transverse cross arms **82** adjacent its free end. The length of the arms **82** is less than the diameter of the apertures **74-64** for ready insertion therethrough and by pressuring the head **80** inwardly against the spring latch members **54–56** and turning the head **80** clockwise, the arms will move under the members **54–56** and draw the head tightly against the outer face of member **70**.

To prevent metal-to-metal contact of the hair guards and upper edges **16** of the seat structure and also to protect the finish of the seat structure, a flexible pad **84**, preferably of polyurethane, made in L-shaped form as shown in FIG. **3**, is slipped over the inner face of flange **20** and the bottom side of flange **20**. The pad is formed with an inturned portion **86** to hook around the inner portion of flange **20**. The lower free edge of the pad **84** abuts against the upper horizontal leg **88**. Also, to protect the front end **90** of the guard and prevent excess lateral motion thereof, as well as the finish on the member **16**, a preformed flexible pad **92**, preferably of polyurethane, is secured adjacent the lower end of the

front of the hair guard. See FIGS. **1, 2** and **5.** The pad is formed with a cutout **94** to seat against the member **16.**

Although but one specific embodiment of this invention is herein shown and described, it will be understood that details of the construction shown may be altered or omitted without departing from the spirit of the invention as defined by the following claims.

I claim:

1. The combination of an amusement ride seat and safety guard comprising:

a. an amusement ride seat having opposed side walls and a rear wall in combination with a pair of safety guards, each guard comprising,

b. a side and rear wall,

1. the side wall positioned on and extending the full length of the side wall of the seat and extending partially forwardly thereof and curved downwardly, the rear wall of the safety guard positioned on and extending partially across the rear

wall of the seat, said guard walls extending upwardly from the respective upper edge of said side and rear walls of said seat,

c. and quick-fastening and release means to secure said guard to said seat.

2. The device according to claim **1** wherein the side and rear walls of said safety guard are provided with inwardly and outwardly extending flanges on the peripheries thereof.

3. The device of claim **1** wherein the inner edge of the downwardly curved portion of said safety guard is provided with a preformed cushioning pad for frictionally securing the same to the upper forward edge of the side wall of the seat to prevent lateral motion of said guard with respect to said side wall of said seat.

4. The device of claim **3** wherein the safety guard walls are perforated in an all over design to cut down wind resistance.

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