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(54) **SAFETY BELT SYSTEM**

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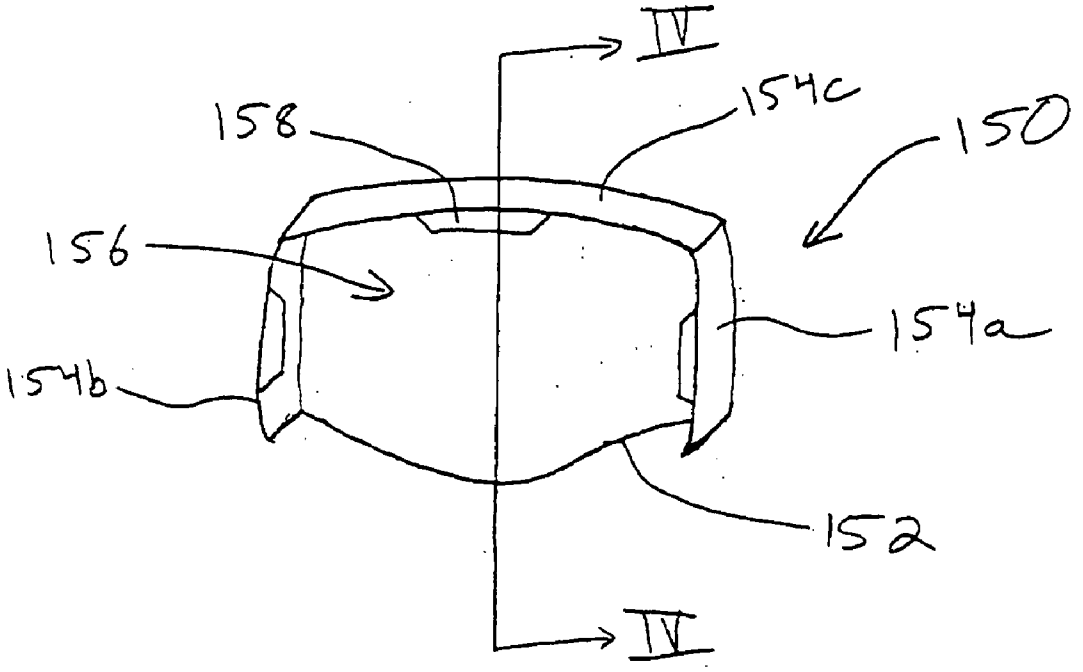
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(57) **ABSTRACT**

A cover for covering a seat belt fastening component is disclosed. The cover includes a first surface adapted to cover a portion of the seat belt fastening component. The cover can be selectively secured to and removed from the seat belt fastening component. The covers may be easily installed and removed, allowing a user to select a color or shape to achieve the desired aesthetic appearance.



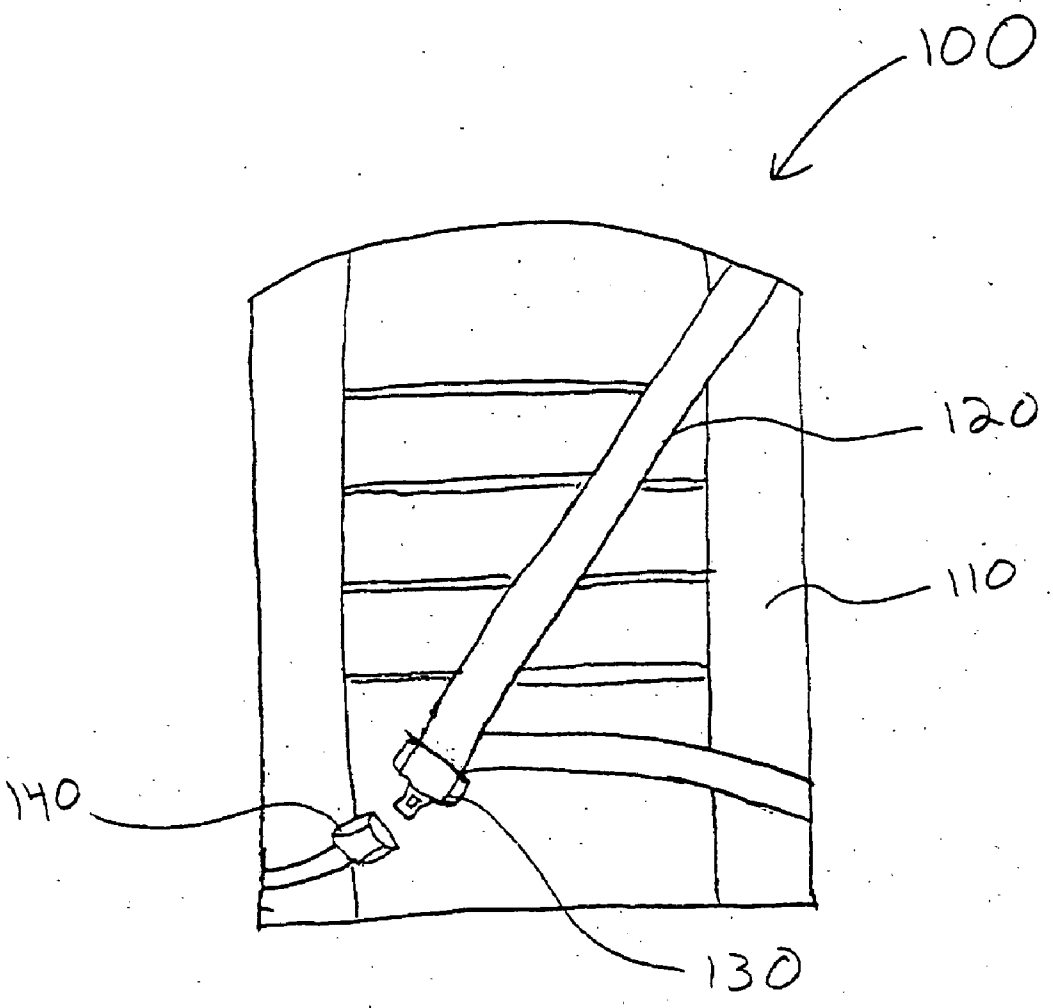


Fig. 1

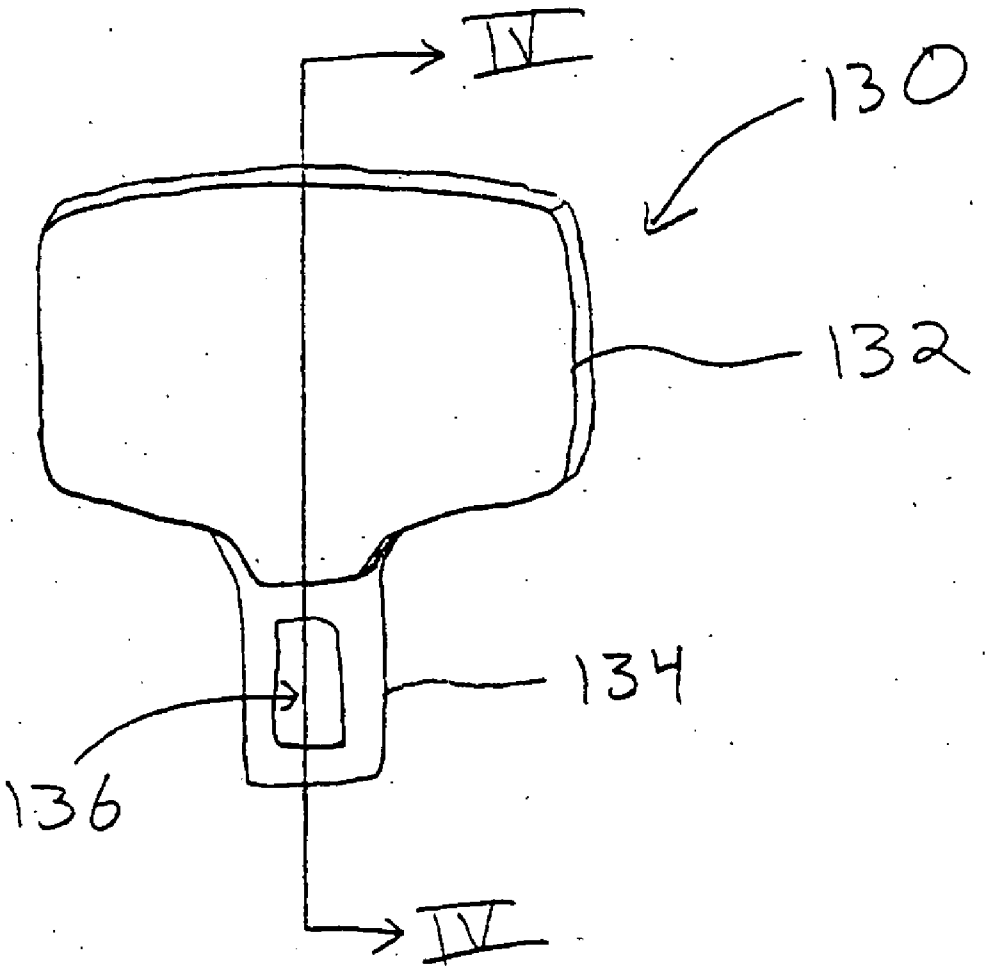


Fig. 2

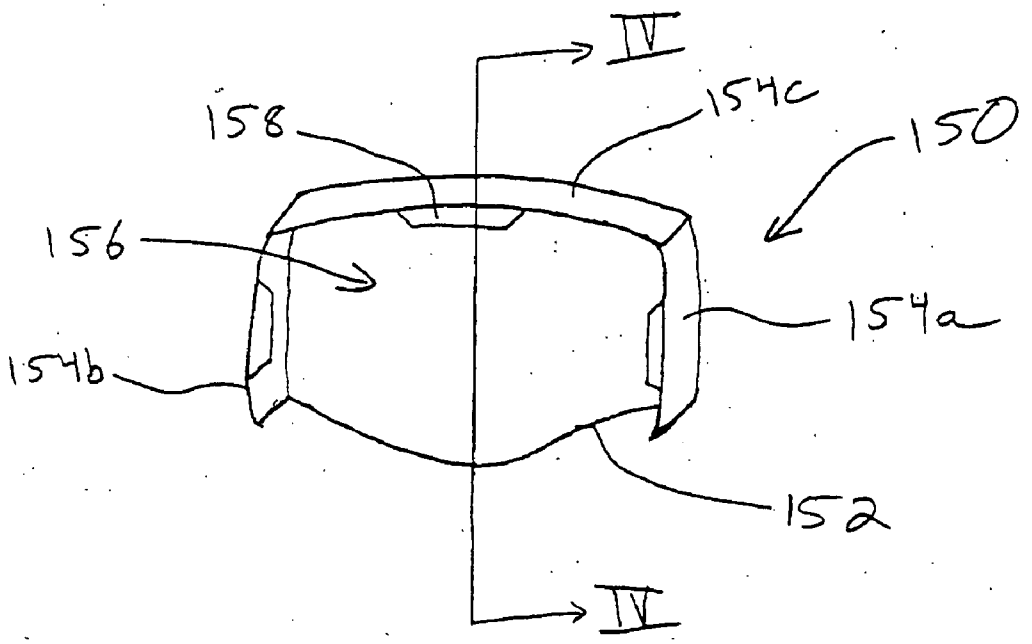

IV
158
154c
150
156
154a
154b
152
IV

Fig. 3

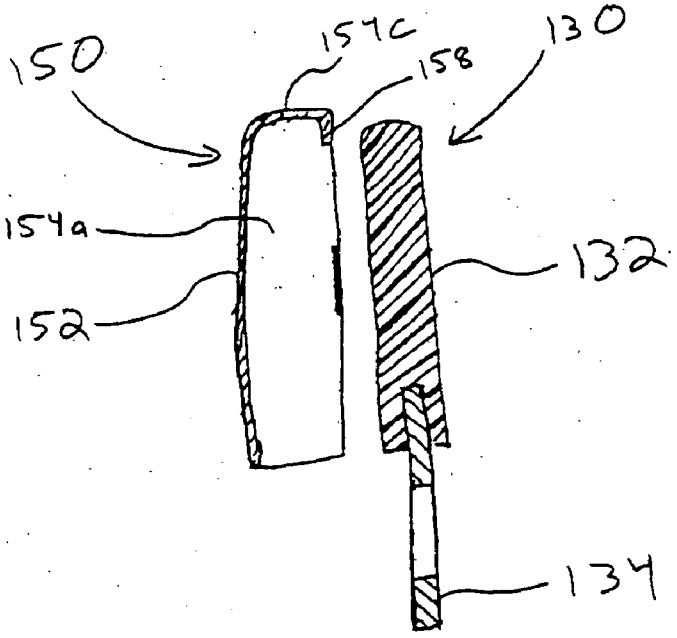

150
154c
158
130
154a
132
152
134

Fig. 4

SAFETY BELT SYSTEM

BACKGROUND

[0001] This application claims the benefit of Provisional Application No. 60/526,079, filed Dec. 2, 2003.

[0002] The present invention relates generally to the field of safety restraint systems. In particular, the invention relates to covers for seat belt buckles and other components of a seat belt system.

[0003] Presently, the appearance of safety belt restraint systems is not customized for the vehicle in which the system is installed. Thus, there remains a need for a safety belt restraint system that can be easily and economically modified to match the vehicle in which the system is installed.

SUMMARY OF THE INVENTION

[0004] According to one embodiment of the present invention a belt fastener arrangement is provided. The arrangement comprises a cover plate adapted to be selectively engaged with and removed from a belt fastener component.

[0005] The cover plate may include at least one surface to cover at least a portion of the belt fastener component, and means for securing the cover plate to the belt fastener component. The means for securing may include at least two projections adapted to engage opposing sides of the belt fastener component.

[0006] The belt fastener component may be a seat belt latch. Alternatively, the belt fastener component may be a seat belt buckle.

[0007] According to another embodiment of the present invention, the cover plate is colored to substantially match an interior of the vehicle. In alternate embodiments, the cover plate is colored to substantially match an exterior of a vehicle having the belt fastener component.

[0008] According to yet another embodiment of the present invention, a belt fastener arrangement is provided that includes a belt buckle, a belt latch adapted to securely engage the buckle, and a cover plate adapted to be selectively engaged with and removed from at least one of the belt buckle and the belt latch.

[0009] The cover plate may include at least one surface to cover at least a portion of at least one of the belt buckle and the belt latch and means for securing the cover plate to the belt fastener component. The means for securing may include at least two projections adapted to engage opposing sides of the belt fastener component.

[0010] Still a further embodiment of the present invention includes a cover for covering a seat belt fastening component. The cover includes a first surface adapted to cover at least a portion of the seat belt fastening component and wherein the first surface is removably secured to the seat belt fastening component.

[0011] The cover may include at least a pair of opposing side walls extending from a perimeter of the first surface and projections extending inwardly from an end of each of the opposing side walls. The projections may be adapted to engage the belt fastening component on a side opposite the portion covered by the first surface.

[0012] It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and are not restrictive of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] These and other features, aspects and advantages of the present invention will become apparent from the following description, appended claims, and the accompanying exemplary embodiments shown in the drawings, which are briefly described below.

[0014] **FIG. 1** is a pictorial illustration of a seat belt arrangement according to an embodiment of the invention;

[0015] **FIG. 2** is a perspective view of a seat belt latch according to an embodiment of the invention;

[0016] **FIG. 3** is a perspective view of a cover according to an embodiment of the invention; and

[0017] **FIG. 4** is a cross-sectional view along IV-IV of the components shown in **FIGS. 2 and 3**.

DESCRIPTION

[0018] **FIG. 1** illustrates a seat belt arrangement **100** according to an embodiment of the invention. The seat belt arrangement **100** may be employed in a vehicle, such as a passenger car. The arrangement **100** includes a seat belt **120** for securing an occupant seated in a seat **110**, such as a driver's seat or a passenger seat of a vehicle. The illustrated seat belt includes a shoulder belt. Other embodiments may include only a lap belt. The seat belt **120** is a conventional seat belt and is well known to those skilled in the art.

[0019] The seat belt is secured by fastener components, a belt latch **130** and a corresponding belt buckle **140**. Such fastener components **130**, **140** are well known in the art. A fastener component will be described in further detail below with reference to **FIG. 2**.

[0020] In an embodiment of the invention, the color of the fastener components **130**, **140** is selected to achieve a desired aesthetic result. The color may be matched to, or selected according to, the color of the interior of the vehicle such as the seat **110**. For example, if the interior of the vehicle, including the seat **110**, is red, the belt latch **130** and the belt buckle **140** may also be red. Alternatively, the latch **130** may be made blue, while the buckle **140** is made white. In other embodiments, the color of the fastener components **130**, **140** is selected to correspond to the color of the exterior of the vehicle.

[0021] According to another embodiment the shape of the fastener components **130**, **140** may be selected to correspond to the vehicle in which the restraint system is installed. For example, the fastener components **130**, **140** may have a shape corresponding to the logo of the vehicle in order to emphasize and strengthen the brand of the vehicle.

[0022] **FIG. 2** illustrates one fastener component, the latch **130**, in greater detail. The latch **130** includes a handle portion **132** and a latching portion **134**. The handle portion **132** may be made of a hard plastic through injection molding, for example, and is adapted to be grasped easily by a human hand to allow engaging of the latch **130** to the buckle **140** (**FIG. 1**).

[0023] The latching portion **134** is the portion of the latch **130** which physically engages the buckle **140** when the seat belt **110** is to be secured. The latching portion **134** is, therefore, preferably made of a strong metal, such as stainless steel. A latching hole **136** is provided on the latching portion **134** to allow engagement with the buckle. Such configurations are well known to those in the art.

[0024] When the latch **130** is engaged to the buckle **140** to secure the seat belt **110**, only the handle portion **132** of the latch **130** may be visible. The latching portion **134** may be completely inserted into the buckle **140**. In this regard, it is the color of the handle portion **132** of the latch **130** that is selected to achieve the desired aesthetic result.

[0025] **FIG. 3** illustrates a removable cover **150** according to an embodiment of the invention to facilitate achieving the desired aesthetic result. The cover **150** is adapted to be easily, but securely, engaged to and removed from the latch **130**. This allows a user to select differing colors to achieve differing desired results. For example, for certain occasions, the user may desire the belt latch **130** to match the interior of the vehicle, while on other occasions, the latch **130** is desired to match the exterior of the vehicle. On still other occasions, the latch **130** may be desired to provide an eccentric look, such as a glittery appearance. Thus, according to an embodiment of the invention, a removable cover may be provided to allow the user to easily alter the appearance of the latch **130**. Similar covers are contemplated for other fastener components, such as the buckle **140** (**FIG. 1**), as well.

[0026] Also, as described above, the shape of the cover **150** may be altered as necessary to correspond to the shape desired by the vehicle manufacturer. For example, the cover **150** may have the same general shape as the manufacturer's general or specific logos or trademarks assigned to the particular vehicle in which the system is installed. Alternatively, the cover may bear a logo intended to identify the manufacturer or supplier of the safety belt system.

[0027] Referring again to **FIG. 2**, the cover **150** includes a cover plate **152** adapted to cover at least a portion of the latch **130**. The cover plate **152** may be configured to cover as much of the latch **130** as possible without interfering with the engagement of the latch **130** with the buckle **140**. In this regard, the size of the cover plate **152** is substantially similar to the size of the handle portion **132** of the latch **130**.

[0028] A series of walls **154***a*, **154***b*, **154***c* extend from the perimeter of the cover plate **152**. The walls **154***a*, **154***b*, **154***c* may be sized to cover the sides of the latch **130**. Again, the walls **154***a*, **154***b*, **154***c* should not interfere with the engagement of the latch **130** to the buckle **140**. The cover plate **152** and the walls **154***a*, **154***b*, **154***c* combine to form a cavity **156** to accommodate the latch **130** therein.

[0029] In order to secure the cover **150** to the latch **130**, projections **158** are provided to extend inward from the ends of the walls **154***a*, **154***b*, **154***c*. In the illustrated embodiment, a projection **158** is provided to extend from each of the three walls **154***a*, **154***b*, **154***c*. In other embodiments, projections **158** may extend only from two opposing side walls, such as walls **154***a* and **154***b*. The projections **158** are adapted to engage a surface of the latch **130** opposite the surface covered by the cover plate **152**.

[0030] In other embodiments, the cover **150** may not include the walls **154***a*, **154***b*, **154***c*. Rather, projections may extend from the perimeter of the cover plate **152** and may be adapted to engage sides of the belt latch **130**.

[0031] **FIG. 4** illustrates the installation of the cover **150** on the latch **130**. **FIG. 4** illustrates cross-sectional views taken along IV-IV of each of the cover **150** and the latch **130**. As noted above, the cavity **156** formed by the cover plate **152** and the side walls **154***a*, **154***b*, **154***c* is sufficiently sized to accommodate the handle portion **132** of the latch **130**. The projections **158** are adapted to engage the side of the handle portion **132** opposite the side covered by the cover plate **152**.

[0032] The cover **150** is preferably made of a plastic which allows some resilient bending or flexing of the walls **154***a*, **154***b*, **154***c*. In this regard, the walls may be flexed to allow the projections **158** to pass around the handle portion **132** of the latch **130**. By so flexing the walls, the cover **150** may be mounted onto the latch **130**. Similarly, the walls may be flexed allow the projections **158** to clear the latch when removing the cover **150**.

[0033] The above description has described a cover for a particular fastener component, namely, a seat belt latch **130**. It is understood that similar covers are contemplated for other fastener components, such as a seat belt buckle, within the scope of this invention.

[0034] Thus, the color, shape or other appearance of the seat belt fastener components may be easily altered to achieve the desired aesthetic appearance.

[0035] While the present invention has been described by way of example and in terms of preferred embodiments, it is understood that the invention is not limited thereto. The scope of the appended claims should be interpreted to encompass all such modifications, similar arrangements and procedures.

What is claimed is:

1. A belt fastener arrangement, comprising:

a cover plate adapted to be selectively engaged with and removed from a belt fastener component.

2. The arrangement of claim 1, wherein the cover plate includes a surface to cover at least a portion of the belt fastener component; and a mechanism for securing the cover plate to the belt fastener component.

3. The arrangement of claim 2, wherein the cover plate includes at least two projections adapted to engage opposing sides of the belt fastener component.

4. The arrangement of claim 1, wherein the belt fastener component is a seat belt latch.

5. The arrangement of claim 1, wherein the belt fastener component is a seat belt buckle.

6. The arrangement of claim 1, wherein the cover plate is colored to substantially match an interior of the vehicle.

7. The arrangement of claim 1, wherein the cover plate is colored to substantially match an exterior of a vehicle having the belt fastener component.

8. The arrangement of claim 1, wherein the cover plate is substantially the same shape as a logo or mark identifying the vehicle or vehicle manufacturer.

9. A belt fastener arrangement, comprising:

a belt buckle;

a belt latch adapted to securely engage the buckle; and

a cover plate adapted to be selectively engaged with and removed from at least one of the belt buckle and the belt latch.

10. The arrangement of claim 9, wherein the cover plate includes a surface to cover at least a portion of at least one of the belt buckle and the belt latch; and a mechanism for securing the cover plate to the at least one of the belt buckle and the belt latch.

11. The arrangement of claim 10, wherein the cover plate includes at least two projections adapted to engage opposing sides of the at least one of the belt buckle and the belt latch.

12. The arrangement of claim 9, wherein the cover plate is colored to substantially match an interior of the vehicle.

13. The arrangement of claim 9, wherein the cover plate is colored to substantially match an exterior of a vehicle having the at least one of the belt buckle and the belt latch.

14. A cover for covering a seat belt fastening component, comprising:

a first surface adapted to cover a portion of the seat belt fastening component; and a means for selectively securing and removing the first surface to the seat belt fastening component

15. The cover of claim 14, wherein the means for selectively securing and removing comprises:

at least a pair of opposing side walls extending from a perimeter of the first surface; and

a plurality of projections extending inwardly from an end of each of the opposing side walls, the projections being adapted to engage the belt fastening component on a side opposite the portion covered by the first surface.

16. The cover of claim 14, wherein the belt fastening component is a seat belt latch.

17. The cover of claim 14, wherein the belt fastening component is a seat belt buckle.

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