



(19) **United States**

(12) **Patent Application Publication**
Henderson et al.

(10) **Pub. No.: US 2003/0042712 A1**

(43) **Pub. Date: Mar. 6, 2003**

(54) **MOUNTING ASSEMBLY FOR INFLATABLE CURTAIN**

(52) **U.S. Cl. 280/728.2; 280/728.1**

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(57) **ABSTRACT**

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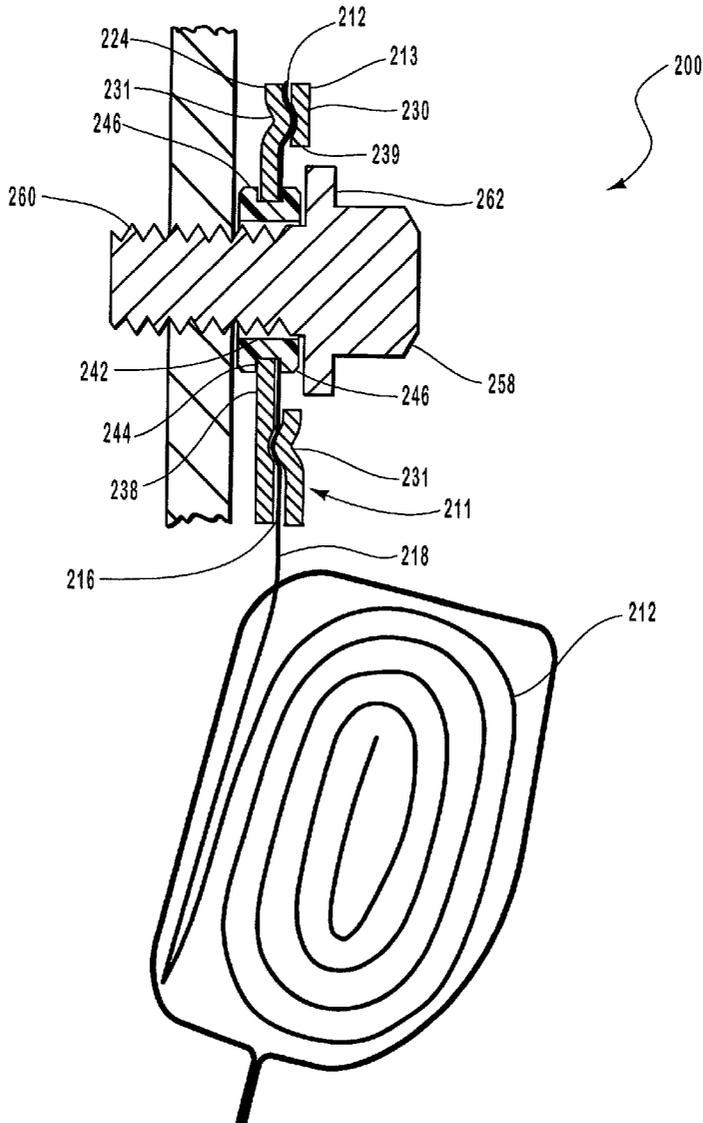
A novel mounting bracket for an inflatable curtain is described. The mounting bracket includes a pair of attachment plates for engaging respective sides of the inflatable curtain. One plate includes an opening through which a fastener may be positioned to secure the bracket and attached inflatable curtain to the interior of a vehicle. A bushing having an inner surface and an outer surface is positioned within the opening in the mounting plate. Flanges extending from an outer surface of the bushing maintain the bushing within the opening. The outer surface of the bushing is smaller than the opening which allows the bushing to rotate freely within the bracket when a fastener is used to secure the mounting bracket to the interior of a vehicle.

(21) **Appl. No.: 09/942,244**

(22) **Filed: Aug. 29, 2001**

Publication Classification

(51) **Int. Cl.⁷ B60R 21/16**



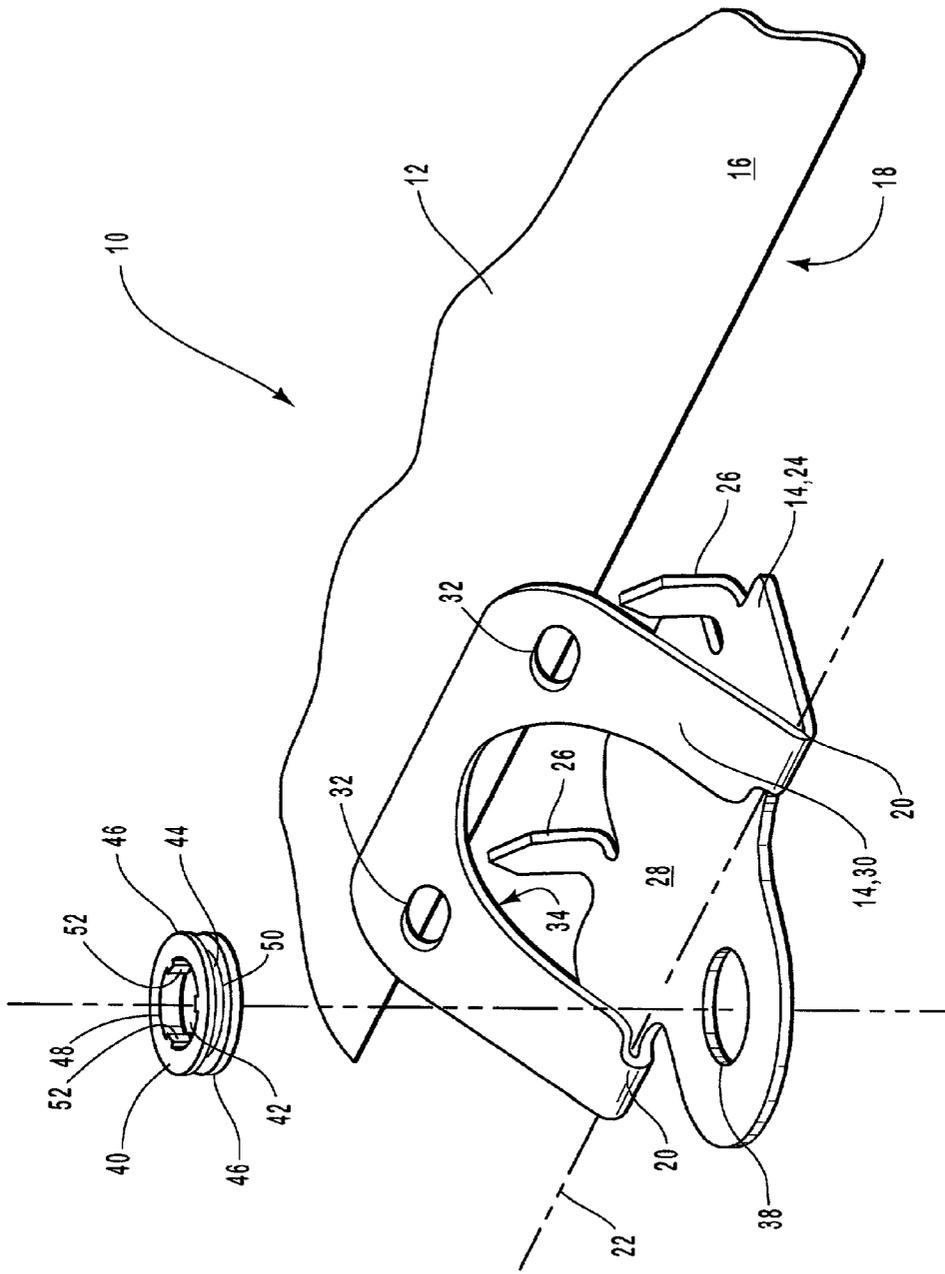


FIG. 1

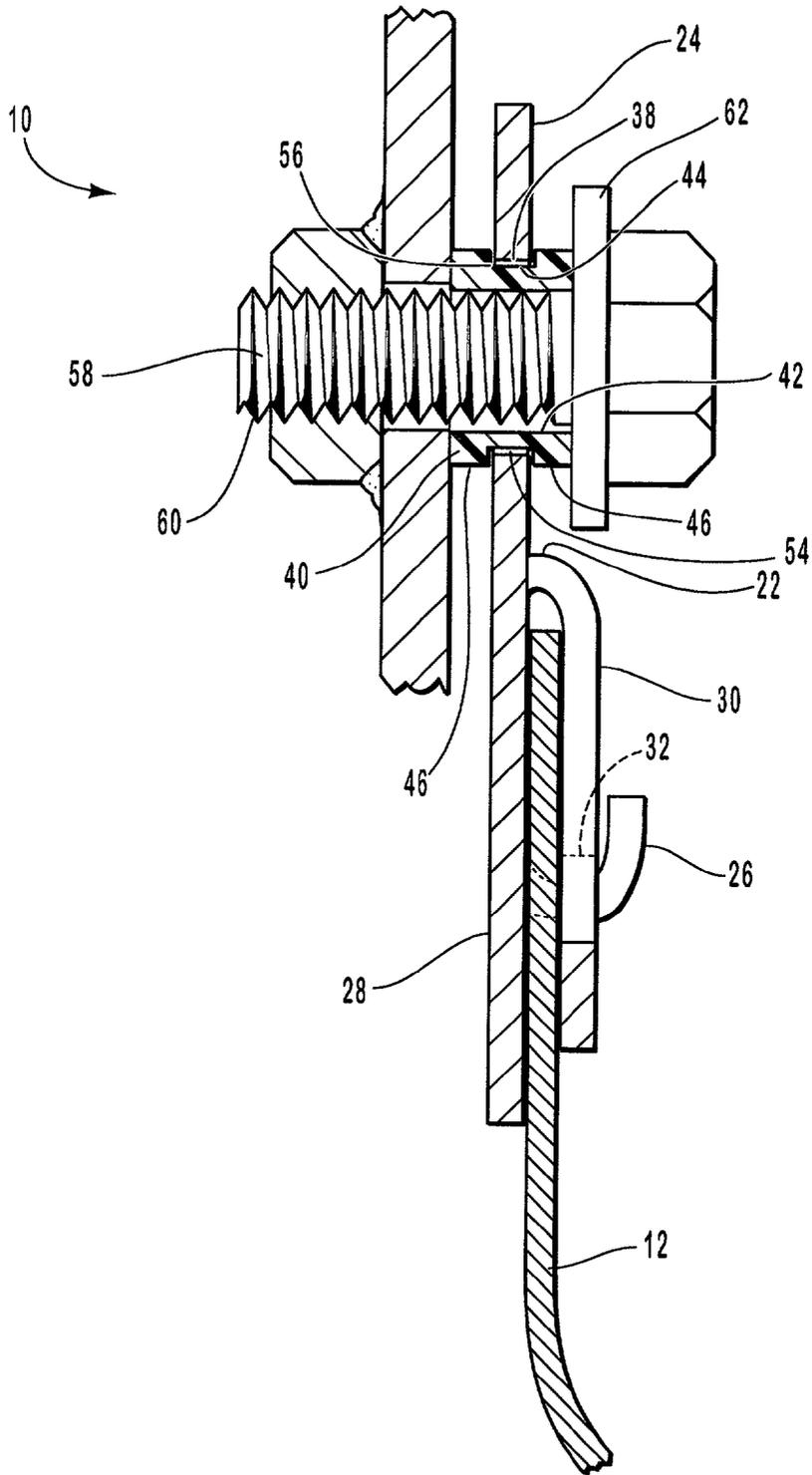


FIG. 2

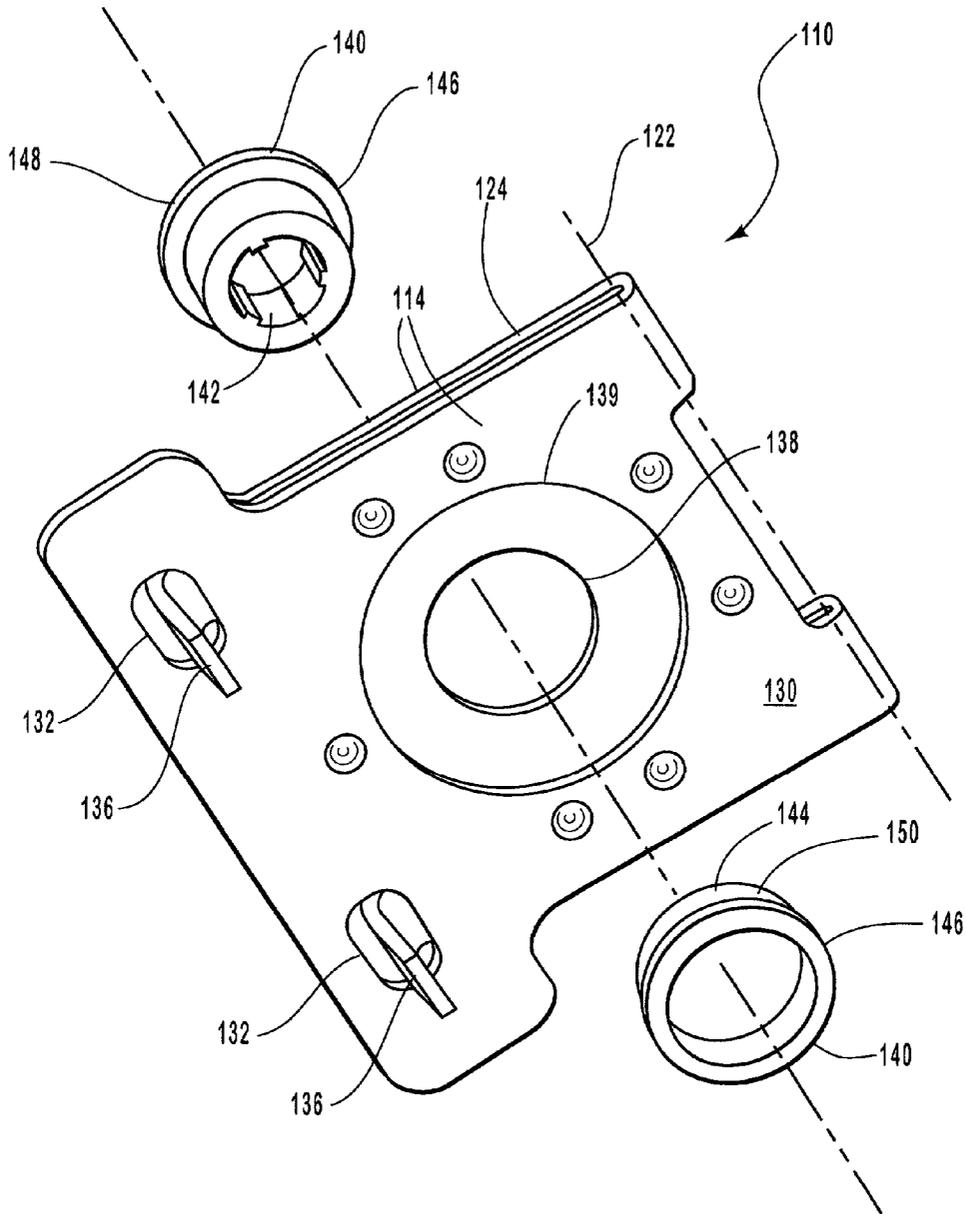


FIG. 3

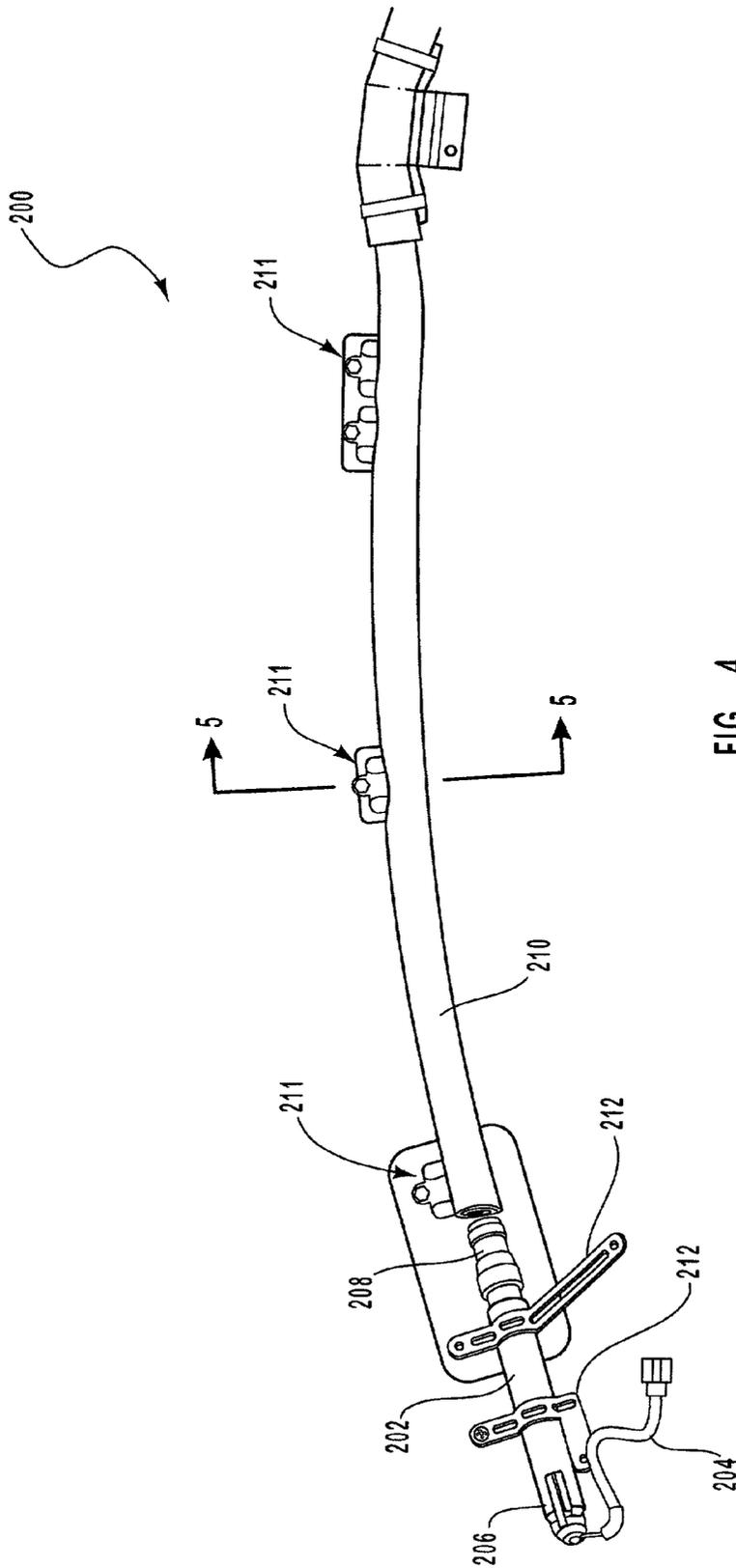


FIG. 4

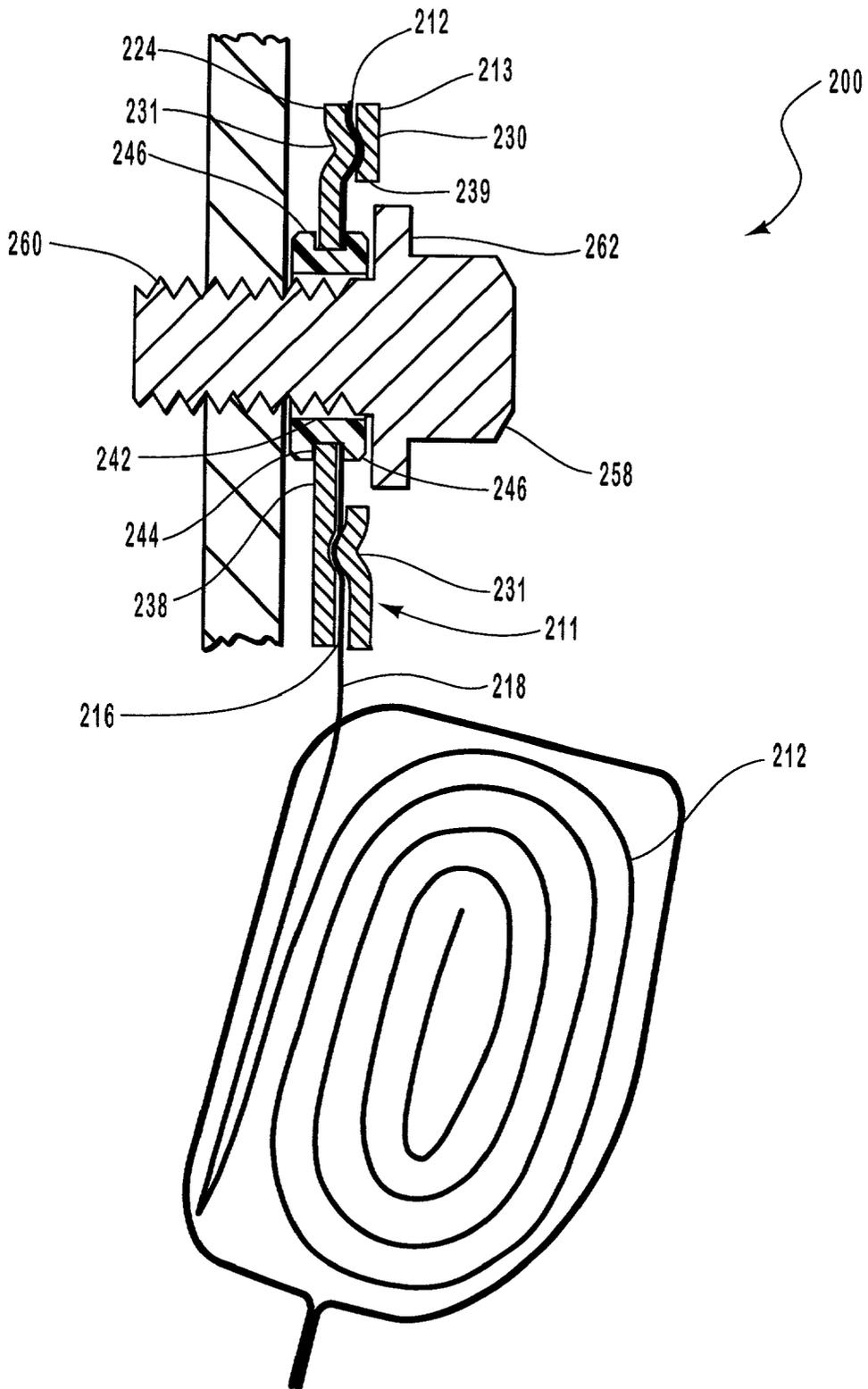


FIG. 5

MOUNTING ASSEMBLY FOR INFLATABLE CURTAIN

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a system for mounting an inflatable curtain within a vehicle. More specifically, the present invention relates to a freely rotating mounting assembly for attaching an inflatable curtain to the interior side frame of a vehicle.

[0003] 2. Technical Background

[0004] Inflatable safety restraint devices, or airbags, are mandatory on most new vehicles. Airbags are typically installed as part of a system with an airbag module in the steering wheel on the driver's side of car and in the dashboard on the passenger side of a car. In the event of an accident, a sensor within the vehicle measures abnormal deceleration and triggers the ignition of an explosive charge contained within an inflator. Expanding gases from the charge travel through conduits and fill the airbags, which immediately inflate in front of the driver and passenger to protect them from harmful impact with the interior of the car. Airbag systems have also been developed in response to the need for similar protection from lateral impacts between a passenger and the side of a vehicle's interior. This might occur when another vehicle collides with the side of the car, or in a rollover situation where the side of car is repeatedly impacting the ground.

[0005] Side impact airbag systems are designed to prevent the head of a vehicle occupant from emerging through the window opening or from colliding with the reaction surface at the side of the vehicle. Side impact airbags have a smaller area in which to deploy and must be configured to inflate efficiently and in the right direction. There is also less space in which to install side impact airbags. Side inflatable airbag curtains are typically attached to the roof rail of a car behind the head liner. The roof rail is the metal portion of the car frame which extends along the side of the car at the junction of the side doors and the roof. The head liner is an interior component which covers the roof rail at the door seal.

[0006] Side airbag modules typically include an inflatable curtain folded into a predetermined configuration and then placed in a covering, wrap, or housing. Most side airbag modules include an attachment means for securing the airbag module to the roof rail. When the airbag curtain is in a folded state, the airbag module is long, narrow, and flexible. The problem with most side impact air modules is that their long and narrow configuration makes them awkward and cumbersome to install. The folded airbag must be positioned next to the roof rail or other frame member to which it will be attached. Often times the installer needs both hands to align the somewhat flimsy folded airbag and module with the curved or twisted roof rail. This makes it extremely difficult if not impossible for the installer to operate the tool used to mount the airbag curtain to the vehicle. Sometimes this problem is overcome by using separate positioning equipment such as sophisticated mounting jigs, or using multiple people to hold the inflatable curtain in place during installation. Unfortunately, the use of additional equipment, tools, or human resources drives up the cost of installation.

[0007] Another problem with installing inflatable airbag curtains with existing mounting brackets is that the torque of the installation tools transfers to the mounting bracket and the airbag curtain causing it to twist and crimp which can negatively affect the folded configuration of the airbag curtain. Furthermore, an additional installer may be necessary to hold the airbag curtain to keep it from rotating while another installer secures the airbag curtain to the vehicle.

[0008] One attempt to solve these current problems is to configure the mounting brackets with hooks that can be placed into a special slot in the vehicle body. The hooks hold the inflatable curtain in place while installers bolt or otherwise secure that assembly to the vehicle. The hooks also help to keep the mounting brackets from rotating. However, these hooks suffer many disadvantages. The hooks require special notches in the vehicle to receive the hooks of the mounting bracket. Additionally, the hooks do not prevent the torque from transferring to the mounting bracket. Thus, the torque of the connection can transfer to the hooks making them susceptible to bending or twisting. This unwanted deformation can call into question the integrity of the mount. Further, the torque of the installation tool can cause the hook to disengage the slot. Still further, the use of mounting brackets with hooks involves multiple installation steps. The inflatable curtain must be hooked to the vehicle which requires alignment of the hooks within notches in the vehicle before the inflatable curtain can be secured to the vehicle. This drives up installation time and costs.

[0009] Another disadvantage of known airbag curtain mounting systems is that the attachment points for the airbag curtain are susceptible to slight rotations, even with the hooks. When these points of attachment are cinched tight with a slight rotation, the deployment of the airbag can be negatively affected. Specifically, the pressure or force caused by the inflating airbag may not be evenly distributed over all the points of attachment. Thus, the airbag may be susceptible to tearing at the point of attachment bearing an unequal amount of force.

[0010] Accordingly, it would be an advancement in the art to provide a mounting bracket for an inflatable curtain which allows the installer to secure the inflatable curtain to the interior of a vehicle without the need for extra tools, equipment, or human resources. It would also be an advancement to provide such an airbag curtain module that did not require the extra installation time of aligning the mounting bracket within a notch in the vehicle. It would further be an advancement to provide such a mounting bracket for an inflatable curtain that did not transfer the torque of the installation tool to the inflatable curtain. It would be yet another advancement to provide such a mounting bracket for an inflatable curtain that would evenly distribute the deployment forces caused by the inflating inflatable curtain. It would be yet another advancement to provide such a mounting bracket for an inflatable curtain that was less expensive and easier to install.

[0011] Such a mounting bracket for an airbag curtain is disclosed and claimed herein.

BRIEF SUMMARY OF THE INVENTION

[0012] The apparatus of the present invention has been developed in response to the present state of the art, and in particular, in response to the problems and needs in the art

that have not yet been fully solved by currently available airbag curtain mounting brackets. Thus, it is an overall objective of the present invention to provide a freely rotatable mounting bracket.

[0013] To achieve the foregoing advancements, and in accordance with the invention as embodied and broadly described herein in the preferred embodiment, a mounting bracket for an inflatable curtain that allows free rotation of a fastener within the bracket is provided. The bracket includes an attachment plate for engaging the inflatable curtain. The attachment plate defines an opening in which a bushing is placed. A fastener may be positioned within the bushing to attach the mounting bracket and attached inflatable curtain to the interior of a vehicle.

[0014] In one embodiment, a pair of attachment plates are configured to engage respective opposing surfaces of the inflatable curtain. Each plate defines an opening. The openings are substantially aligned with each other to permit the positioning of a fastener through the aligned openings. A first attachment plate includes at least one, and in one embodiment, multiple locking tabs extending from an attachment surface of the first attachment plate. A second attachment plate is configured with receiving orifices for receiving the corresponding locking tabs. With the locking tabs positioned within the receiving orifices, the inflatable curtain is captured by the mounting bracket. Each attachment plate has a first edge at which the attachment plates are connected to each other. In one embodiment, the attachment plates are integral with each other and folded such that the attachment plates are adjacent to each other with the respective openings in each plate substantially aligned.

[0015] A bushing is in rotatable communication with the attachment plate adjacent the opening. The bushing may include an inner surface and an outer surface. Where the mounting bracket includes a pair of mounting plates, the bushing is positioned within the aligned openings of the attachment plates. The outer surface of the bushing comprises a diameter smaller than the opening of the attachment plate. Thus, the bushing may rotate freely within one or more attachment plates of the mounting bracket. Consequently, when a fastener such as a screw or bolt is positioned within the bushing to secure the mounting bracket and attached inflatable curtain to the interior of a vehicle, the torque applied to the fastener during installation does not transfer to the bracket or curtain. The bushing may also include flanges which help maintain the bushing within the attachment plate opening.

[0016] The bushing may be deformable to facilitate the positioning of the bushing within the attachment plate. In one embodiment, the bushing includes one or more protrusions positioned at the inner surface of the bushing. The protrusions facilitate the frictional engagement of a fastener with the bushing. Thus, the mounting bracket is easily and efficiently installed.

[0017] These and other features and advantages of the present invention will become more fully apparent from the following description and appended claims, or may be learned by the practice of the invention as set forth herein-after.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] In order that the manner in which the above-recited and other advantages of the invention are obtained will be

readily understood, a more particular description of the invention briefly described above will be rendered by reference to specific embodiments thereof which are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the invention and are not therefore to be considered to be limiting of its scope, the invention will be described and explained with additional specificity and detail through the use of the accompanying drawings in which:

[0019] FIG. 1 is an exploded perspective view of a mounting bracket according to the present invention;

[0020] FIG. 2 is a side cross section view of the mounting bracket of FIG. 1;

[0021] FIG. 3 is an alternative embodiment of a mounting bracket with a two-piece bushing;

[0022] FIG. 4 is a side plane view of a mounting bracket shown with an inflatable airbag system; and

[0023] FIG. 5 is a side cutaway view of the airbag system of FIG. 4.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0024] The preferred embodiments of the present invention will be best understood by reference to the drawings, wherein like parts are designated by like numerals throughout. It will be readily understood that the components of the present invention, as generally described and illustrated in the figures herein, could be arranged and designed in a wide variety of different configurations. Thus, the following more detailed description of the embodiments of the apparatus, system, and method of the present invention, as represented in FIGS. 1 through 5, is not intended to limit the scope of the invention, as claimed, but is merely representative of presently preferred embodiments of the invention.

[0025] With particular reference to FIG. 1, a mounting bracket is generally designated at 10. The mounting bracket 10 is particularly well-suited for engaging an inflatable curtain 12 to facilitate securing the curtain 12 to the interior of a vehicle. The mounting bracket 10, includes at least one attachment plate 14. In one embodiment, a pair of attachment plates 14 are configured for engaging respective opposing surfaces 16, 18 of the inflatable curtain 12. Each attachment plate 14 may include a first edge 20. In the embodiment illustrated in FIG. 1, the first edges 20 of the attachment plates 14 are integral with each other. In this configuration, the attachment plates 14 are formed from a unitary piece, folded at a single fold line 22. In alternative embodiments, separate attachment plates 14 may be attached to each other in various ways, including, but not limited to welding, bonding, bolting, riveting, and the like.

[0026] A first attachment plate 24 may include one or more locking tabs 26 extending from an attachment surface 28 of the first attachment plate 24. A second attachment plate 30 may include one or more receiving orifices 32 configured within an attachment surface 34 of the second attachment plate 30. Each receiving orifice 32 is configured to receive a corresponding locking tab 26. The inflatable curtain 12 may also be configured with openings (not shown) through which the locking tabs 26 may be positioned. The locking tabs 26, when positioned within the receiving orifices 32,

may be bent over to secure the inflatable curtain **12** within the mounting bracket **10**. It will be appreciated by those of skill in the art that the attachment plates **14** may be configured to capture the inflatable curtain **12**. The inflatable curtain **12** may also be secured to the mounting bracket **10** in a variety of ways, including, but not limited to latching, crimping, bonding, and the like. As will be discussed in greater detail below, the attachment plates **14** may include a variety of spaced indentations to facilitate the clamping of the attachment plates **14** onto the inflatable curtain **12** (see **FIG. 5**).

[0027] At least one of the attachment plates **14** includes an opening **38** configured to receive a bushing **40**. The bushing **40** may include an inner surface **42** and an outer surface **44**. As will be discussed in greater detail below, the inner surface **42** of the bushing **40** loosely engages the opening **38** to allow free rotation of the bushing **40** within the mounting bracket **10**. In the illustrated embodiment, the opening **38** is configured within the first attachment plate **24**. The bushing **40** may include a flange **46**, which extends radially from the outer surface **44** of the bushing **40**. In one embodiment, a pair of flanges **46** extend radially outward from the outer surface **44** of the bushing **40** at a first end **48** and a second end **50** of the bushing **40**. The flanges **46** help to retain the bushing **40** within the opening **38** in the first attachment plate **24**. The bushing **40** may include one or more protrusions **52** which extend from the inner surface **42** of the bushing. In one embodiment, three protrusions **52** are spaced about the inner surface **42**, extending from the first end **48** of the bushing **40** to the second end **50** of the bushing **40**. The protrusions **52** provide a raised surface which may frictionally engage a fastener (**FIG. 2**) to help retain the fastener within the bushing **40**.

[0028] Referring now to **FIG. 2**, a cross section of the mounting bracket **10**, according to the teachings of the present invention is shown. The bushing **40** is in rotatable communication with the first attachment plate **24** adjacent the opening **38**. The diameter of the outer surface **44** of the bushing **40** is less than the diameter of the opening **38**. Accordingly, an annular gap **54** exists between the bushing **40** and the first attachment plate **24**. Thus, any torque applied to the bushing **40** during installation of the curtain **12** into a vehicle, will not transfer to the remainder of the bracket **10**.

[0029] The outer surface **44**, together with the flanges **46** form an annular channel **56** in which the first attachment plate **24** is seated. The diameter of each flange **46** is slightly greater than the diameter of the opening **38** which allows the bushing **40** to be retained within the first attachment plate **24**. In one embodiment, the bushing **40** is made of plastic and is deformable. In this configuration, the bushing **40** can be press fit into the opening **38** of the first attachment plate **24**.

[0030] The bushing **40** is configured to receive a fastener **58**. The fastener **58** may be configured with threads **60** to facilitate attachment of the fastener **58** to the interior of a vehicle. The fastener **58** includes a head **62** which is larger than the diameter of the inner surface **42** of the bushing **40**. This allows the fastener **58** to retain the mounting bracket **10** in close proximity to the interior of the vehicle. In one embodiment, the fastener **58** is affixed or attached to the inner surface **42** of the bushing **40**. This can be accomplished by press fitting, swage fitting, or other frictional coupling, or

by bonding, welding or the like. In one embodiment, the fastener **58** and bushing **40** may be molded into one integral piece. It will be appreciated by those of skill in the art that a variety of fasteners **58** may be used to practice the teachings of this invention, including, but not limited to, bolts, screws, rivets, pins, and the like.

[0031] The bracket **10** may be made of sheet metal and should be of a thickness that provides strength, yet is bendable to allow the second attachment plate **30** to be folded over at the fold line **22** into a position opposite the first attachment plate **24**. The metal should also allow the locking tabs **26** to be folded over to capture the second attachment plate **30** after extending through a corresponding orifice **32**. In one alternative embodiment, the locking tab **26** of one locking plate **14** may extend through, or engage, a notch in an opposing locking plate **14**. The sheet metal allows the bracket **10** to be stamped out in one piece and then folded into the proper configuration, thus saving manufacturing costs.

[0032] Referring now to **FIG. 3**, an alternative embodiment of the bracket of the present invention is illustrated as **110**. The bracket **110** includes a pair of attachment plates **114** configured to engage opposing surfaces of an inflatable curtain (not shown). The attachment plates **114** are connected to each other to form a unitary piece folded at a single fold line **122**.

[0033] As with the embodiment described above, a first attachment plate **124** may include one or more locking tabs **126** which may extend through corresponding receiving orifices **132** configured within the second attachment plate **130**. The locking tabs **126**, when positioned within the receiving orifices **132** or notches (not shown), may be bent to secure an inflatable curtain within the mounting bracket **110**. It will be appreciated by those of skill in the art that the attachment plates **114** may be configured to capture the inflatable curtain in a variety of ways, including, but not limited to latching, crimping, bonding, and the like.

[0034] The first and second locking plates **124**, **130** each define a respective opening **138**, **139**. The openings **138**, **139** may be substantially aligned to facilitate receiving a fastener (not shown) through the aligned openings **138**, **139**. At least one of the openings **138**, **139** may be configured to receive a bushing **140**. In one embodiment, the openings **138**, **139** may be substantially the same size to allow the bushing **140** to engage both openings **138**, **139**.

[0035] The bushing may include an inner surface **142**, an outer surface **144**, and a pair of flanges **146**, which extend radially from the outer surface **144** of the bushing **140**. In the illustrated embodiment, the bushing **140** is a snap having a male member **148** and a female member **150**. The male member **148** snaps within the female member **150** about the opening **138** and is retained there by the flanges **146** which are positioned on opposite sides of the opening **138** in the first attachment plate **124**. It will be appreciated that in this embodiment, the bushing **140** need not be deformable to be press fit into position within the opening **138**.

[0036] The outer surface **144** of the coupled bushing **140** is configured on the female member **150**. The diameter of the outer surface **144** is smaller than the diameter of the opening **138** which allows the bushing **140** to freely rotate with the attachment plate **124**. In another embodiment, the male

member **148** may be freely rotatable within the female member **150**. In this embodiment, the female member **150** may engage or be attached to one or more attachment plates **124**, **130** while still allowing free rotation of a fastener positioned adjacent the inner surface **142** which is configured on the male member **148** of the snap. In both of these embodiments, torque from a fastener is prevented from transferring to the bracket **110**.

[0037] As in the embodiment discussed above, the male member **148** may include one or more protrusions (not shown) which extend from the inner surface to facilitate the attachment of a fastener to the bushing **140**.

[0038] It will be appreciated by those of skill in the art that various snap configurations may be used to allow free rotation of a fastener within the bracket **110** while the fastener cinches the bracket **110** and the accompanying inflatable curtain onto an interior surface of a vehicle. Additionally the bushing **140** may include a first piece rotatably engaged to a second piece without the two pieces snapping together. For example, an annular or ring ball bearing system may be used to allow a first piece to freely rotate relative to a second piece. In this embodiment, free rotation of a fastener relative to the bracket **110** may be accomplished because the bushing **140** freely rotates within the bracket **110**. Free rotation may also be achieved because of the rotational relationship of the multiple bushing pieces which allows one piece to be attached to the bracket **110** and another piece to be attached to a fastener.

[0039] Referring now to **FIG. 4** an inflatable curtain or airbag device **200** is shown. The device includes an inflator **202** with an initiator device **204**, such as a lead wire, attached at a first end **206** of the inflator **202**. A second end **208** of the inflator **202** is in communication with an inflatable curtain **212** in a folded state. Brackets **212** may secure the inflator **202** to the interior of a vehicle. Mounting brackets **211** of the kind discussed previously may secure the inflatable curtain **212** to the interior of a vehicle. The mounting brackets **211** allow the inflatable curtain **212** to be secured to the vehicle by a fastener positioned within the brackets **211** while significantly reducing any torque exerted on the fastener during installation to be transferred to the brackets **211** or inflatable curtain **212**.

[0040] Referring now to **FIG. 5**, the airbag device **200** may include an inflatable curtain **212** having a first edge **213** and opposing surfaces **216** and **218**. A pair of attachment plates **224** and **230** are configured to engage the opposing surfaces **216** and **218** of the inflatable curtain **212**. In the illustrated embodiment, the attachment plates **224**, **230** are configured with indentations **231** to facilitate the capture of the inflatable curtain **212** between the plates **224**, **230**.

[0041] The first and second locking plates **224**, **230** each define a respective opening **238**, **239** that may be substantially aligned to facilitate receiving a fastener **258**. The inflatable curtain may also include an orifice which is aligned with the openings **238**, **239** to receive the fastener **258** therethrough. At least one of the openings **238**, **239** may be configured to receive a bushing **240**. The bushing **240** may have an inner surface **242** and an outer surface **244**. The bushing **240** is configured to be positioned within the opening **238** and in rotatable communication with at least one of the attachment plates **224**, **230**. As discussed in conjunction with the embodiments described above, the

bushing **240** may include one or more flanges **246** extending radially from the outer surface **244** of the bushing **240** to facilitate retention of the bushing **240** within the opening **238** in the attachment plate.

[0042] The bushing **240** may be configured to receive the fastener **258**. The fastener **258** may be configured with threads **260** to facilitate attachment of the inflatable curtain device **200** to the interior of a vehicle. The fastener **258** includes a head **262** which is larger than the diameter of the inner surface **242** of the bushing **240**. This allows the fastener **258** to retain mounting bracket **211** in close proximity to the interior of the vehicle.

[0043] As discussed above, various embodiments of the attachment plates **224**, **230**, bushing **240**, and fastener **258** may be utilized in various combinations in connection with the inflatable curtain to form a novel inflatable curtain or airbag device.

[0044] The present invention may be embodied in other specific forms without departing from its structures, methods, or other essential characteristics as broadly described herein and claimed hereinafter. The described embodiments are to be considered in all respects only as illustrative, and not restrictive. The scope of the invention is, therefore, indicated by the appended claims, rather than by the foregoing description. All changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed and desired to be secured by United States Letters Patent is:

1. A mounting bracket for an inflatable curtain, comprising:

an attachment plate for engaging the inflatable curtain, the attachment plate defining an opening; and

a bushing having an inner surface and an outer surface, the bushing in rotatable communication with the attachment plate adjacent the opening, the bushing configured to receive a fastener.

2. The mounting bracket of claim 1, wherein the outer surface of the bushing comprises a diameter smaller than the opening of the attachment plate.

3. The mounting bracket of claim 1, wherein the bushing is deformable to facilitate positioning of the bushing within the opening.

4. The mounting bracket of claim 1, wherein the bushing comprises a protrusion positioned at the inner surface to facilitate engagement of a fastener with the bushing.

5. The mounting bracket of claim 1, wherein the bushing further comprises a flange extending radially from the outer surface of the bushing to facilitate retention of the bushing within the opening in the attachment plate.

6. The mounting bracket of claim 1, wherein the bushing comprises a first piece rotatably engaged to a second piece.

7. The mounting bracket of claim 6, wherein the first piece is attached to the attachment plate.

8. The mounting bracket of claim 6, wherein the second piece is attached to a fastener.

9. The mounting bracket of claim 1, wherein the bushing comprises a snap having a male member and a female member.

10. The mounting bracket of claim 9, wherein the female member rotatably engages the attachment plate at the opening.

11. The mounting bracket of claim 9, wherein the male member comprises a protrusion positioned to facilitate engagement of a fastener with the bushing.

12. The mounting bracket of claim 1, further comprising a pair of attachment plates, each plate configured to engage a respective opposing surface of an inflatable curtain.

13. The mounting bracket of claim 12, wherein a first plate defines an opening, the opening of each plate being substantially aligned with each other to permit the positioning of a fastener within each opening.

14. The mounting bracket of claim 12, wherein the bushing is positioned within at least one attachment plate.

15. The mounting bracket of claim 12, wherein a first attachment plate comprises a locking tab extending from an attachment surface of the first attachment plate.

16. The mounting bracket of claim 15, wherein a second attachment plate comprises a receiving orifice configured within the second attachment plate for receiving the locking tab.

17. The mounting bracket of claim 15, wherein a second attachment plate comprises a receiving notch configured within the second attachment plate for receiving the locking tab.

18. The mounting bracket of claim 12, wherein the attachment plates each comprise a first edge, the first edge of each attachment plate being connected to each other.

19. The mounting bracket of claim 18, wherein the first edge of each attachment plate is integral with each other.

20. The mounting bracket of claim 1, further comprising a fastener attached to the inner surface of the bushing.

21. The mounting bracket of claim 20, wherein the fastener comprises a head which is larger than the diameter of the inner surface of the bushing.

22. A mounting bracket for an inflatable curtain, comprising:

a pair of attachment plates for engaging the inflatable curtain, each plate configured to engage a respective opposing surface of an inflatable curtain, at least one plate defining an opening, to permit the positioning of a fastener within the opening; and

a bushing having an inner surface and an outer surface, the bushing in rotatable communication with at least one attachment plate adjacent the bushing configured to receive a fastener, the bushing comprising a flange extending radially from the outer surface of the bushing to facilitate retention of the bushing within the opening in the attachment plate.

23. The mounting bracket of claim 22, wherein the outer surface of the bushing comprises a diameter smaller than the opening of the attachment plate.

24. The mounting bracket of claim 23, wherein the bushing is deformable to facilitate positioning of the bushing within the opening.

25. The mounting bracket of claim 24, wherein the bushing comprises a protrusion positioned at the inner surface to facilitate engagement of a fastener with the bushing.

26. The mounting bracket of claim 25, wherein a first attachment plate comprises a locking tab extending from an attachment surface of the first attachment plate.

27. The mounting bracket of claim 26, wherein a second attachment plate comprises a receiving orifice configured within the second attachment plate for receiving the locking tab.

28. The mounting bracket of claim 26, wherein a second attachment plate comprises a notch configured within the second attachment plate for receiving the locking tab.

29. The mounting bracket of claim 27, further comprising a fastener attached to the inner surface of the bushing.

30. The mounting bracket of claim 29, wherein the fastener comprises a head which is larger than the diameter of the inner surface of the bushing.

31. The mounting bracket of claim 22, wherein the bushing comprises a first piece rotatably engaged to a second piece.

32. The mounting bracket of claim 31, wherein the first piece is attached to the attachment plate.

33. The mounting bracket of claim 32, further comprising a fastener attached to the second piece.

34. The mounting bracket of claim 33, wherein a first attachment plate comprises a locking tab extending from an attachment surface of the first attachment plate.

35. The mounting bracket of claim 34, wherein a second attachment plate comprises a receiving orifice configured within an attachment surface of the second attachment plate for receiving the locking tab.

36. The mounting bracket of claim 33, wherein the fastener comprises a head which is larger than the diameter of the inner surface of the bushing.

37. The mounting bracket of claim 22, wherein the bushing comprises a snap having a male member and a female member.

38. The mounting bracket of claim 37, wherein the female member rotatably engages the attachment plate at the opening.

39. The mounting bracket of claim 38, wherein the male member comprises a protrusion positioned to facilitate engagement of a fastener with the bushing.

40. The mounting bracket of claim 39, wherein a first attachment plate comprises a locking tab extending from an attachment surface of the first attachment plate.

41. The mounting bracket of claim 40, wherein a second attachment plate comprises a receiving orifice configured within an attachment surface of the second attachment plate for receiving the locking tab.

42. The mounting bracket of claim 41, further comprising a fastener attached to the inner surface of the bushing.

43. The mounting bracket of claim 42, wherein the fastener comprises a head which is larger than the diameter of the inner surface of the bushing.

44. The mounting bracket of claim 22, wherein the attachment plates each comprise a first edge, the first edge of each attachment plate being connected to each other.

45. The mounting bracket of claim 44, wherein the first edge of each attachment plate is integral with each other.

46. A mounting bracket for an inflatable curtain, comprising:

a first and second attachment plate, each configured to engage a respective opposing surface of an inflatable curtain, each plate further defining an opening, the opening of each plate being substantially aligned with each other to permit the positioning of a fastener within

- each opening, the pair of attachment plates being attached to each other at a first edge of each attachment plate; and
- a deformable bushing having an inner surface and an outer surface, the outer surface of the bushing comprising a diameter smaller than the opening of the attachment plate, the bushing being in rotatable communication with the attachment plate adjacent the opening;
 - a locking tab extending from an attachment surface of the first attachment plate; and
 - a receiving orifice configured within an attachment surface of the second attachment plate for receiving the locking tab.
- 47.** An airbag device, comprising:
- an inflatable curtain having a first edge and opposing surfaces;
 - a first and second attachment plate configured to engage a respective opposing surface of the inflatable curtain, at least one attachment plate defining an opening to facilitate receiving a fastener; and
 - a bushing having an inner surface and an outer surface, the bushing being positioned within the opening and in rotatable communication with at least one attachment plate, the bushing comprising a flange extending radially from the outer surface of the bushing to facilitate retention of the bushing within the opening in the attachment plate.
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