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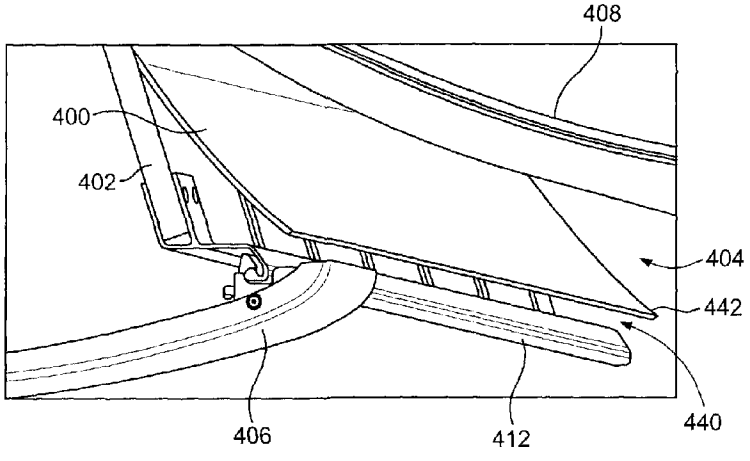

(57) Abrégé/Abstract:
A section divider system configured to separate sections within an internal cabin of a vehicle includes a first rail and a closeout panel securable to a fixed panel within the internal cabin. The closeout panel is configured to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, wherein a clearance space is formed between a portion of the closeout panel and the PSU. The closeout panel is configured to prevent access to an interior of the PSU, by extending into a gap between a first lateral portion of the fixed panel and a second lateral portion of a stowage bin within the internal cabin and is further configured to prevent movement of fingers of an individual past a defined position within the gap. A bracket is secured to the first rail and one or more connecting beams extend from the bracket through the clearance space. A section divider assembly is connected to the one or more connecting beams.

ABSTRACT

A section divider system configured to separate sections within an internal cabin of a vehicle includes a first rail and a closeout panel securable to a fixed panel within the internal cabin. The closeout panel is configured to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, wherein a clearance space is formed between a portion of the closeout panel and the PSU. The closeout panel is configured to prevent access to an interior of the PSU, by extending into a gap between a first lateral portion of the fixed panel and a second lateral portion of a stowage bin within the internal cabin and is further configured to prevent movement of fingers of an individual past a defined position within the gap. A bracket is secured to the first rail and one or more connecting beams extend from the bracket through the clearance space. A section divider assembly is connected to the one or more connecting beams.

SYSTEMS AND METHODS FOR POSITIONING A SECTION DIVIDER ASSEMBLY WITHIN A VEHICLE

FIELD

Embodiments of the present disclosure generally relate to systems and methods for positioning a section divider assembly within a vehicle.

BACKGROUND

Commercial aircraft typically include an interior cabin that may be divided into numerous sections. A cockpit is generally separated from a passenger cabin, which may include a first class section, a business class section, and a coach section. The passenger cabin may also include one or more work areas for flight personnel, such as galleys, which may include food and beverage storage structures. One or more aisles pass through the passenger cabin and connect each of the passenger sections to one or more paths to one or more doors of the aircraft.

Each passenger section may be separated from an adjacent passenger section by a cabin transition area, which may include one or more monuments, such as walls, work stations, or the like. Curtains may be used to separate sections of an aircraft for a variety of reasons, including class separation, privacy, work areas, and the like. For example, a cabin transition area between a business class section and a coach section may include a curtain assembly within an aisle and curtain assemblies above and behind seat backs on either side of the aisle. A curtain moveably connected to a curtain track that spans over any aisle may be selectively opened and closed. When opened, such as during a boarding process, passengers may pass from one section to another section, such as from the business class section to the coach section. During flight, the curtain may be closed to indicate that passengers are not allowed to pass (or at least discouraged from passing) from the coach section into the business class section.

Known class or section dividers include a moveable curtain positioned within an aisle and lateral curtains extending from the aisle to outboard interior walls within a cabin. Such class dividers provide a stark closed appearance. The closed

curtains of the class divider tend to compartmentalize an interior cabin. Further, known class dividers include bulky, pleated curtains that may not be aesthetically pleasing.

Additionally, the class dividers are typically fixed in with respect to a location within the interior cabin. In order to reposition the class dividers, portions of stowage bins and passenger service units are typically removed to expose fasteners. Aircraft technicians, such as mechanics, then remove the fasteners and mounting structures and secure the assemblies at another position. As can be appreciated, the process of repositioning class dividers is time and labor intensive.

A need exists for a class divider that provides a more open look and feel within an interior cabin of an aircraft. Additionally, a need exists for a more aesthetically pleasing class divider. Further, a need exists for a class divider that may be quickly and efficiently repositioned within an interior cabin of an aircraft.

SUMMARY

Certain embodiments of the present disclosure provide a section divider system configured to separate sections within an internal cabin of a vehicle. The section divider system may include a first rail secured to a fixed panel within the internal cabin. A closeout panel may be secured to the fixed panel. The closeout panel may extend between the fixed panel and a passenger service unit (PSU) within the internal cabin. A clearance space may be formed between a portion of the closeout panel and the PSU. The closeout panel is configured to prevent access to an interior of the PSU. A bracket may be secured to the first rail. One or more connecting beams extend from the bracket through the clearance space. A section divider assembly may be connected to the connecting beam(s). In at least one embodiment, the section divider assembly is configured to be moveably adjusted by the bracket being moved in relation to the first rail.

The section divider system may also include a second rail secured to one or both of the fixed panel or another fixed portion of the internal cabin. The section

divider assembly may include a fitting that is secured to the second rail. In at least one embodiment, the fitting may be moveably secured to the second rail.

The closeout panel may extend into a gap between the fixed panel and a portion of a stowage bin within the internal cabin. The closeout panel may be further configured to prevent movement of fingers of an individual past a defined position within the gap.

The section divider assembly may include a header coupled to a barrier extending downwardly from the header. The section divider assembly may be configured to be positioned over one or more seats (such as over a rear portion of a seatback) within a row of the internal cabin. In at least one embodiment, the header is sized and shaped to be outside of a range of motion of (and therefore not interfere) with a pivotal bucket of a stowage bin. The header may include an intermediate peak that connects to the connecting beam(s) of the bracket.

The first rail may include a plurality of regularly-spaced retaining holes. Each of the regularly-spaced retaining holes is configured to receive and retain a position securing member coupled to the bracket in order to secure the section divider assembly in position.

In at least one embodiment, the closeout panel is cantilevered with respect to the fixed panel. The closeout panel may include a panel securing portion including a flat beam that overlies a portion of the fixed panel. A stop protuberance (such as a formed bump, kink, or the like) extends downwardly and away from the flat beam. The stop protuberance is configured to prevent an individual from reaching further into a gap between the fixed panel and a stowage bin. The stop protuberance is configured to be spaced apart from the stowage bin. A covering flap extends downwardly from the stop protuberance. The covering flap is configured to prevent access to the interior of the PSU. The clearance space is formed between a terminal edge of the covering flap and the PSU. The covering flap may extend away from the flat beam at an angle.

In at least one embodiment, the angle may be within the range of **15-75** degrees from horizontal such that the covering flap is at an angle that is between vertical and horizontal. The angle may be sloped some away from being vertical to accommodate a shape of a stowage bin. Also, the angle may not be flat (e.g. parallel with a floor), in order to accommodate space for the PSU. Further, the sloped nature of the covering flap makes it less likely that an individual may try to use the covering flap as a handle. If a passenger does attempt to do so, he/she will be unable to apply as much force thereto, as the sloped surface may not be easy to grip.

In at least one embodiment, the bracket is configured to be slidably moved through or on at least a portion of the first rail. The bracket may include one or more rollers configured to rotatably move on or through at least a portion of the first rail. The bracket further may also include a spring-biased position securing member operatively connected to a pull cord.

The first rail may be an inboard rail. The first rail may be integrally formed with a PSU rail that securely connects the PSU to the fixed panel.

Certain embodiments of the present disclosure provide a shielding assembly configured to be secured to a strongback within an internal cabin of a vehicle. The shielding assembly is configured to extend into a gap between the strongback and a stowage bin. The shielding assembly may include a panel securing portion including a flat beam that overlies a portion of the strongback. A stop protuberance extends downwardly and away from the flat beam. The stop protuberance is configured to prevent an individual from reaching further into the gap between the fixed panel and the stowage bin. The stop protuberance is configured to be spaced apart from the stowage bin so as not to interfere with movement of the stowage bin between closed and open positions. A covering flap extends downwardly from the stop protuberance. The covering flap extends away from the flat beam at an angle. The covering flap is configured to prevent access to an interior of the passenger service unit (PSU). A

clearance space is formed between a terminal edge of the covering flap and the PSU.

Certain embodiments of the present disclosure provide a section divider system configured to separate sections within an internal cabin of a vehicle. The section divider system may include an inboard rail secured to a fixed strongback within the internal cabin. An outboard rail may be secured to one or both of the fixed strongback or another fixed portion of the internal cabin. A closeout panel may be secured to the strongback. The closeout panel extends between the strongback and a passenger service unit (PSU) within the internal cabin. The closeout panel extends into a gap between the strongback and a portion of a stowage bin within the internal cabin. The closeout panel is further configured to prevent movement of fingers of an individual past a defined position within the gap. A clearance space is formed between a portion of the closeout panel and the PSU. The closeout panel is configured to prevent access to an interior of the PSU. A bracket may be secured to the inboard rail. One or more connecting beams extend from the bracket through the clearance space. A section divider assembly may be connected to the connecting beam(s). The section divider assembly may be connected to the outboard rail through at least one fitting. The section divider assembly may be configured to be moveably adjusted in relation to the inboard rail and the outboard rail. The section divider assembly may include a header coupled to a barrier extending downwardly from the header. The section divider assembly is configured to be positioned over one or more seats within a row of the internal cabin. The header may include an intermediate peak that connects to the one or more connecting beams of the bracket.

In one embodiment, there is provided a section divider system configured to separate sections within an internal cabin of a vehicle. The section divider system includes a first rail securable to a fixed panel within the internal cabin; a closeout panel securable to the fixed panel, to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, and such that the closeout panel is positioned to prevent access to an interior of the PSU, and such that the closeout panel extends into a gap between a first lateral portion of the fixed panel and a second lateral portion of a stowage bin within the internal cabin, and wherein the closeout panel includes means for preventing movement of fingers of an individual past a defined position within the gap. The section divider system further includes a bracket secured to the first rail, one or more connecting beams that extend from the bracket to pass through the clearance space, and a section divider assembly connected to the one or more connecting beams.

In another embodiment, there is provided a section divider system configured to separate sections within an internal cabin of a vehicle. The section divider system includes: an inboard rail securable to a fixed strongback within the internal cabin; an outboard rail securable to one or both of the fixed strongback or another fixed portion of the internal cabin; and a closeout panel securable to the strongback, to extend between the strongback and a passenger service unit (PSU) within the internal cabin, such that the closeout panel is positioned to extend into a gap between the strongback and a portion of a stowage bin within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, wherein the closeout panel is positioned to prevent access to an interior of the PSU, and wherein the closeout panel includes means for preventing movement of fingers of an individual past a defined position within the gap. The section divider system further includes: a bracket secured to the inboard rail; one or more connecting beams that extend from the bracket to pass through the clearance space; and a section divider assembly connected to the one or more connecting beams, wherein the section divider assembly is connected to the outboard rail through at least one fitting, wherein the section divider assembly is moveably adjustable in relation to the inboard rail and the outboard rail, wherein the section divider assembly includes a header coupled to

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a barrier extending downwardly from the header, wherein the section divider assembly is positionable over one or more seats within a row of the internal cabin, wherein the header includes an intermediate peak that connects to the one or more connecting beams of the bracket.

In another embodiment, there is provided a section divider system configured to separate sections within an internal cabin of a vehicle. The section divider system includes: a first rail securable to a fixed panel within the internal cabin; a closeout panel securable to the fixed panel, to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, and such that the closeout panel is positioned to prevent access to an interior of the PSU, and such that the closeout panel is cantilevered with respect to the fixed panel, and wherein the closeout panel includes: (a) a panel securing portion including a flat beam to overlie a portion of the fixed panel when the closeout panel is installed; (b) a stop protuberance that extends downwardly and away from the flat beam, wherein the stop protuberance is positioned to prevent an individual from reaching further into a gap between the fixed panel and a stowage bin, and wherein the stop protuberance is positioned to be spaced apart from the stowage bin when the closeout panel is installed, and (c) a covering flap that extends downwardly from the stop protuberance, wherein the covering flap is positioned to prevent access to the interior of the PSU, and the clearance space is formed between a terminal edge of the covering flap and the PSU when the closeout panel is installed. The section divider system further includes: a bracket secured to the first rail; one or more connecting beams that extend from the bracket to pass through the clearance space; and a section divider assembly connected to the one or more connecting beams.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure **1** illustrates a perspective top view of an aircraft, according to an embodiment of the present disclosure.

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Figure **2**A illustrates a top plan view of an internal cabin of an aircraft, according to an embodiment of the present disclosure.

Figure **2**B illustrates a top plan view of an internal cabin of an aircraft, according to an embodiment of the present disclosure.

Figure **3** illustrates a perspective interior view of an internal cabin of an aircraft, according to an embodiment of the present disclosure.

Figure **4** illustrates a rear view of a section divider assembly within an internal cabin, according to an embodiment of the present disclosure.

Figure **5** illustrates a perspective lateral view of a section divider assembly secured to an inboard rail, according to an embodiment of the present disclosure.

Figure **6** illustrates a perspective front view of a section divider assembly secured to an outboard rail, according to an embodiment of the present disclosure.

Figure **7** illustrates a perspective front view of a section divider assembly secured to an inboard rail and an outboard rail within an internal cabin, according to an embodiment of the present disclosure.

Figure **8**A illustrates a perspective bottom view of a closeout panel secured to a fixed panel within a gap between a personal service unit and a stowage bin, according to an embodiment of the present disclosure.

Figure **8**B illustrates an end view of a closeout panel, according to an embodiment of the present disclosure.

Figure **9** illustrates a perspective bottom view of a closeout panel secured to a fixed panel within a gap between a personal service unit and a stowage bin, according to an embodiment of the present disclosure.

Figure **10** illustrates a perspective view of a section divider assembly secured to an inboard rail and an outboard rail, according to an embodiment of the present disclosure.

Figure **11** illustrates a perspective view of a bracket moveably secured to an inboard rail that is secured to a fixed panel, according to an embodiment of the present disclosure.

Figure **12** illustrates an end view of a bracket moveably secured to an inboard rail that is secured to a fixed panel, according to an embodiment of the present disclosure.

Figure **13** illustrates a perspective front view of a section divider assembly secured to an inboard rail, according to an embodiment of the present disclosure.

Figure **14** illustrates a perspective front view of a bracket moveably secured to an inboard rail, according to an embodiment of the present disclosure.

Figure **15** illustrates a perspective, partial cross-sectional view of a bracket secured to an inboard rail, according to an embodiment of the present disclosure.

DETAILED DESCRIPTION

The foregoing summary, as well as the following detailed description of certain embodiments will be better understood when read in conjunction with the appended drawings. As used herein, an element or step recited in the singular and preceded by the word "a" or "an" should be understood as not necessarily excluding the plural of the elements or steps. Further, references to "one embodiment" are not intended to be interpreted as excluding the existence of additional embodiments that also incorporate the recited features. Moreover, unless explicitly stated to the contrary, embodiments "comprising" or "having" an element or a plurality of elements having a particular property may include additional elements not having that property.

Embodiments of the present disclosure may provide an aesthetically-pleasing section divider assembly that may be positioned and repositioned within a vehicle, such as an aircraft. The section divider assembly may include arcuate surfaces that reduce large gaps between the section divider assembly, a passenger service unit, and/or a stowage bin within an internal cabin.

Embodiments of the present disclosure may provide a closeout panel that is configured to be positioned between a passenger service unit and a stowage bin. In general, a gap may exist between a passenger service unit and a stowage bin. The closeout panel covers a portion of the passenger service unit so that an individual may not move a hand therein. In this regard, the closeout panel may protect the passenger service unit, and may provide a tamper-resistance assembly. Further, the closeout panel may be configured to prevent a hand from passing a defined distance into the gap. The closeout panel may also prevent a hand or fingers from being pinched between the passenger service unit and the stowage bin.

Embodiments of the present disclosure may also provide a closeout panel having a terminal end that may provide a clearance area that may allow accessibility to a rail of the passenger service unit. As such, a class or section divider rail may be positioned within the clearance area. The class divider rail may be configured to operatively couple to a class or section divider assembly to secure the section divider assembly in position. The section divider rail may be configured to allow the section divider assembly to translate or otherwise move therethrough or over so that the section divider assembly may be selectively positioned within an internal cabin of a vehicle.

Additionally, the shape and length of the closeout panel may allow for greater capacity for overhead luggage. For example, the closeout panel may be shaped and configured to provide the clearance area, which may allow for non-radial stowage bin profiles.

Embodiments of the present disclosure may provide a section divider assembly that may be quickly and easily moved within an internal cabin of a vehicle. The section divider assembly may be quickly and easily moved among multiple pre-set locations, such as defined by incremental detents, relative to seat locations. As such, a service crew of the vehicle (such as flight attendants) may move the section divider assembly relative to rows within the internal cabin depending on service needs for various routes of the vehicle.

Further, embodiments of the present disclosure may be used with existing passenger service units. As such, there may be no need to replace existing passenger service units (which would otherwise increase costs) to accommodate embodiments of the present disclosure.

Certain embodiments of the present disclosure may provide an interior shielding assembly, such as a closeout panel, that may include a cantilevered shield extending from a strongback of a stowage bin. The shield may span across an open angle portion of a passenger service unit rail to an end of the passenger service rail. The shield may include a protrusion that may have an approximate length of a finger (of an average-sized adult) form the end of the passenger service unit rail. The shield may include a profile that is substantially planar/flat and angled between horizontal and vertical. The shield may be substantially parallel to an adjacent pivot stow bin, but offset from the pivot stow bin by a particular distance in order to allow the stow bin to move freely between open and closed positions. The distance may be, for example, greater than **0.4**", but less than **1.5**". Alternatively, the distance may be less than **0.4**", and greater than **1.5**". The shield may be trimmed in at least some areas to allow access to the space between the shield and the passenger service rail in order to provide access to an adjustable mounting rail located within the space. A minimum distance between the shield and the pivot stow bin may be greater than a distance between an upper portion of the pivot bin and a strongback.

Certain embodiments of the present disclosure may provide a rail system that may include a structural rail positioned between a shield and a passenger service unit rail. The structural rail may attach to a strongback. The structural rail may include adjustable detents for discrete and secure engagement of a class divider assembly. The adjustable detents may correspond to specific locations. For example, for each row of seats, there may be one adjustable detent. The adjustable detent location may correspond to an ideal location for passenger comfort, safety, and space, for example.

Figure **1** illustrates a perspective top view of a vehicle, such as an aircraft **10** (or aircraft assembly), according to an embodiment of the present disclosure. The aircraft **10** may include a propulsion system **12** that may include two turbofan engines **14**, for example. Optionally, the propulsion system **12** may include more engines **14** than shown. The engines **14** are carried by wings **16** of the aircraft **10**. In other embodiments, the engines **14** may be carried by a fuselage **18** and/or an empennage **20**. The empennage **20** may also support horizontal stabilizers **22** and a vertical stabilizer **24**.

The fuselage **18** of the aircraft **10** defines an internal cabin, which may include a cockpit, one or more work sections (for example, galleys, personnel carry-on baggage areas, and the like), one or more passenger sections (for example, first class, business class, and coach sections), and an aft section in which an aft rest area assembly may be positioned. Each of the sections may be separated by a cabin transition area, which may include one or more class divider assemblies, as described below.

Alternatively, instead of an aircraft, embodiments of the present disclosure may be used with various other vehicles, such as automobiles, buses, locomotives and train cars, seacraft, spacecraft, and the like.

Figure **2**A illustrates a top plan view of an internal cabin **30** of an aircraft, according to an embodiment of the present disclosure. The internal cabin **30** may be within a fuselage **32** of the aircraft. For example, one or more fuselage walls may define the internal cabin **30**. The internal cabin **30** includes multiple sections, including a front section **33**, a first class section **34**, a business class section **36**, a front galley station **38**, an expanded economy or coach section **40**, a standard economy of coach section **42**, and an aft section **44**, which may include multiple lavatories and galley stations. It is to be understood that the internal cabin **30** may include more or less sections than shown. For example, the internal cabin **30** may not include a first class section, and may include more or less galley stations than

shown. Each of the sections may be separated by a cabin transition area **46**, which may include class divider assemblies between aisles **48**.

As shown in Figure **2**A, the internal cabin **30** includes two aisles **50** and **52** that lead to the aft section **44**. Optionally, the internal cabin **30** may have less or more aisles than shown. For example, the internal cabin **30** may include a single aisle that extends through the center of the internal cabin **30** that leads to the aft section **44**.

Figure **2**B illustrates a top plan view of an internal cabin **80** of an aircraft, according to an embodiment of the present disclosure. The internal cabin **80** may be within a fuselage **81** of the aircraft. For example, one or more fuselage walls may define the internal cabin **80**. The internal cabin **80** includes multiple sections, including a main cabin **82** having passenger seats **83**, and an aft section **85** behind the main cabin **82**. It is to be understood that the internal cabin **80** may include more or less sections than shown.

The internal cabin **80** may include a single aisle **84** that leads to the aft section **85**. The single aisle **84** may extend through the center of the internal cabin **80** that leads to the aft section **85**. For example, the single aisle **84** may be coaxially aligned with a central longitudinal plane of the internal cabin **80**.

Figure **3** illustrates a perspective interior view of an internal cabin **100** of an aircraft, according to an embodiment of the present disclosure. The internal cabin **100** includes outboard walls **102** connected to a ceiling **104**. Windows **106** may be formed within the outboard walls **102**. A floor **108** supports rows of seats **110**. As shown in Figure **3**, a row **112** may include two seats **110** on either side of an aisle **113**. However, the row **112** may include more or less seats **110** than shown. Additionally, the internal cabin **100** may include more aisles than shown.

Passenger service units (PSUs) **114** are secured between an outboard wall **102** and the ceiling **104** on either side of the aisle **113**. The PSUs **114** extend between a front end and rear end of the internal cabin **100**. For example, a PSU

114 may be positioned over each seat **110** within a row **112**. Each PSU **114** may include a housing **116** that generally contains vents, reading lights, an oxygen bag drop panel, an attendant request button, and other such controls over each seat **110** (or groups of seats) within a row **112**.

Overhead stowage bins **118** are secured to the ceiling **104** and/or the outboard wall **102** above and inboard from the PSU **114** on either side of the aisle. The overhead stowage bins **118** extend between the front and rear end of the internal cabin **100**. Each overhead stowage bin **118** may include a bucket **120** pivotally secured to a strongback (hidden from view in Figure **3**). The overhead stowage bins **118** may be positioned above and inboard from lower surfaces of the PSUs **114**. The overhead stowage bins **118** are configured to be pivoted open in order to accept passenger carry-on luggage, for example.

As used herein, the term "outboard" means a position that is further away from a central longitudinal plane **122** (may also be referred to as buttock line zero) of the internal cabin **100** as compared to another component. The term "inboard" means a position that is closer to the central longitudinal plane **122** of the internal cabin **100** as compared to another component. For example, a lower surface of a PSU **114** may be outboard in relation to a stowage bin **118**.

As shown, a gap **124** extends along a length of the internal cabin **100** between the PSU **114** and the stowage bins **118** on each side of the aisle **113**. The gap **124** allows the buckets **120** of the stowage bins **118** to be pivoted between open and closed positions. A closeout panel may be secured to a strongback and extend into the gap **124**, as described below. The closeout panel covers an opening of the PSU **114**, and protects the internal components from being touched by passengers. Further, the closeout panel is configured to prevent an individual from passing fingers or a hand past a particular point within the gap, such as through a protruding bump that extends toward the stowage bin, but is spaced apart therefrom. The protuberance, such as the protruding bump, is spaced apart from the stowage bin to not interfere with a moveable portion of the stowage bin as it pivots between open

and closed positions. That is, through an entire range of motion of a moveable portion of the stowage bin, no portion of the closeout panel contacts any portion of the stowage bin. The protuberance may be sized and shaped to not contact the stowage bin, but at the same time prevent an individual from reaching into the gap past the protuberance. For example, the separation distance between the protuberance and the stowage bin may be between **0.1**" - **0.3**" during a range of motion of a moveable portion of the stowage bin between open and closed positions. Optionally, the separation distance may be less than **0.1**", but greater than **0**, and greater than **0.3**", but may be less than **0.4**".

A section divider assembly **130** may be positioned within the internal cabin **100** to define different sections therein. For example, the section divider assembly **130** may be positioned over one or more seats **110** within a row **112**. Each section divider assembly **130** may include an attachment header **132** that securely connects to a downwardly-extending barrier **134**. The attachment header **132** may be formed of metal, plastic, or the like. The barrier **134** may be formed of metal, composites, plastic, or the like. For example, the barrier **134** may be formed of a transparent, or semitransparent material. In at least one embodiment, the barrier **134** may be formed of lexan, plexiglass, or the like. Optionally, the barrier may be at least partially formed of a lightweight opaque material, such as fabric, mesh, and/or the like.

Each attachment header **132** securely connects to an inboard rail (hidden from view), such as a PSU rail or a rail connected to the PSU rail, extending within the gap **124**, and an outboard rail (hidden from view), such as a rail that supports ventilation ducts, air conditioning units, and/or the like. Each attachment header **132** may be securely connected to overhead positions at two points, such as at the inboard rail and the outboard rail.

As shown, the internal cabin **100** may also include a moveable curtain **140** extending downwardly from the ceiling **104** within the aisle **113**. Alternatively, the internal cabin **100** may not include the curtain **140**.

Figure **4** illustrates a rear view of a section divider assembly **200** within an internal cabin **202**, according to an embodiment of the present disclosure. The section divider assembly **200** is an example of the section divider assembly **130** shown and described with respect to Figure **3**. While the rear portion of the section divider assembly **200** is shown, a front portion of the section divider mirrors the rear portion. The section divider assembly **200** includes a header **204** that securely retains a barrier **206** extending downwardly from the header **204**.

The header **204** may include a panel **208** (such as a single panel, or aligned panels that define an internal chamber therebetween) that may have a bottom edge **210** connected to an inboard tip **212**, which connects to an upper edge **214**, which, in turn, connects to an outboard end **216**. The curvature of the outboard end **216** may conform to a curvature of the outboard wall **219**. The outboard end **216** may, or may not, abut into the outboard wall **219**. The bottom edge **210** may have straight and curved portions. For example, a portion of the bottom edge **210** may have a slight curvature. The inboard tip **212** may include a semi-circular curvature that connects to the upper edge **214**. As shown, the height of the header **204** proximate to an aisle **217** may be shorter than a height of the header **204** proximate to the outboard wall **219**. The upper edge **214** may include an intermediate peak **220** that extends into a gap **222** between a stowage bin **224** and a PSU **226**. The intermediate peak **220** may connect to a connecting bracket (hidden from view in Figure **4**) that connects to an inboard rail (hidden from view) that may connect to a portion of the PSU **226**. Additionally, an outboard fitting **228** may be secured to the upper edge **214** and/or the outboard end **216**. The outboard fitting **228** is configured to connect to an outboard rail (hidden from view), such as a HVAC rail that is configured to support one or more heating, ventilation, and/or air conditioning components, such as ventilation ducts, air conditioning units, heating units, and/or the like.

The header **204** is shown having arcuate surfaces and shapes. Alternatively, the header **204** may include various other shapes and sizes than shown.

The barrier **206** may include a panel **230** (such as a single panel, or aligned panels that define an internal chamber therebetween) that may include a straight bottom edge **232** that connects to an inboard end **234** that inwardly curves (that is, inwardly curves away from the aisle **217**) and connects to an upper edge **236** that is retained by the header **204**. For example, the header **204** may include a slot that receives and retains the upper edge **236**. Fasteners, adhesives, and the like may be used to secure the barrier **206** to the header **204**. The upper edge **236** connects to an outboard end **238**, which may be proximate to the outboard wall **219**. The curvature of the outboard end **238** may conform to a curvature of the outboard wall **219**. The outboard end **238** may, or may not, abut into the outboard wall **219**.

The section divider assembly **200** may have various other shapes and sizes than shown. Further, the section divider assembly **200** may be longer or more compact than shown.

The inboard tip **212** and upper edge **214** of the header **204** may downwardly recede away from the stowage bin **224**. The upper edge **214** may be downwardly angled to accommodate pivotal movement of a bucket of the stowage bin **224**. All portions of the header **204** (and the barrier **206**) may be outside a range of motion of moving portions of the stowage bin, so as not to interfere with movement of the stowage bin between open and closed positions. For example, as the bucket is downwardly pivoted into an open position, the upper edge **214** and the inboard tip **212** are sized and shaped so as not to interfere with movement of the bucket. In this manner, the upper edge **214** and the inboard tip **212** may be positioned below a lower limit of a range of motion of the bucket of the stowage bin **224**.

Figure **5** illustrates a perspective lateral view of a section divider assembly **200** secured to an inboard rail **300**, according to an embodiment of the present disclosure. For the sake of clarity, a stowage bin bucket is not showed in Figure **5**. The inboard rail **300** may be secured to a fixed panel **302**, such as a strongback of the stowage bin. The inboard rail **300** may be formed of a metal, such as aluminum, and may include a main body **304** having a lower lip **306** connected to a recessed

beam **308**, which may in turn connect to an upper ledge **310**. The inboard rail **300** may extend over an entire length, or a substantial length, of an internal cabin. Optionally, segments of inboard rail **300** may be secured to the fixed panel **302**. The inboard rail **300** may be secured to the fixed panel **302** through one or more fasteners, adhesives, and/or the like.

As shown, the lower lip **306** includes a plurality of regularly, incrementally spaced fastener through holes **312** over its length. Each fastener through hole **312** is an example of a retaining hole that is configured to receive a portion of a position securing member (such as a fastener, pin, stud, post, or the like) coupled to a bracket. The fastener through holes **312** are configured to receive fasteners **314**, such as screws, bolts, or the like, that are configured to secure the section divider assembly **200** to the inboard rail **300** and/or the fixed panel **302**. For example, a connecting beam **320** may extend upwardly from the intermediate peak **220**, and conform to a curvature of an inboard edge **322** of a PSU **324**. The beam **320** may connect to a bracket **326** that retains the fasteners **314**. The bracket **326** may secure to the inboard rail **300** through the fasteners **314**. In order to position the section divider assembly **200** at a desired position, the fasteners **314** may be removed, and the bracket **326** may be slid to a desired position over a portion of the length of the inboard rail **300**. The fasteners **314** may then be aligned with desired fastener through holes **312**, and may be tightened therethrough to secure the section divider assembly **200** at a desired position. As such, the section divider assembly **200** may be moveably positioned between desired positions, and secured in place through the fasteners **314**.

Figure **6** illustrates a perspective front view of the section divider assembly **200** secured to an outboard rail **330**, according to an embodiment of the present disclosure. The outboard rail **330** may be a longitudinal rail that extends over the length of the internal cabin. For example, the outboard rail **330** may be securely connected to a portion of a ceiling or outboard wall of the cabin. The outboard rail **330** may be a ventilation rail that is configured to secure HVAC components, such as ducts, air conditioning units, heating units, and/or the like in position.

The outboard fitting **228** may be a clip, detent, or the like that is configured to be removably connected to the outboard rail **330**. For example, the outboard fitting **228** may be configured to snapably, latchably, or otherwise removably secure to a portion of the outboard fitting **228**. In at least one embodiment, the outboard fitting **228** may include resilient spring members (for example, spring arms, tabs, or the like) that are configured to deflect inwardly as the outboard fitting **228** is urged into a channel of the outboard rail **330**, and flex outwardly into an at-rest position as they move past ledges, ridges, or the like of the outboard rail **330**, thereby securely catching on the ledges, ridges, or the like. Alternatively, the outboard fitting **228** may be configured to securely connect to the outboard rail **330** through one or more fasteners, similar to the bracket **326** connecting to the inboard rail **304** (shown in Figure **5**). In at least one other embodiment, the outboard fitting **228** may be slidably retained within a track of the outboard rail **330**.

Referring to Figures **5** and **6**, in order to secure the section divider assembly **200** within an internal cabin, the bracket **326** is moved to a desired position. As the bracket **326** moves, the section divider assembly moves in response thereto. During such movement, the outboard fitting **228** may slide through a portion of the outboard rail **330**. Optionally, the outboard fitting **228** may be removed from the outboard rail **330**, and secured therein after the bracket **326** is moved to the desired position. In such an embodiment, the outboard fitting **228** may then be secured to a corresponding position of the outboard rail **330**, such as through one or more fasteners, a snapping connection, a latching connection, and/or the like.

Figure **7** illustrates a perspective front view of a section divider assembly **360** secured to an inboard rail **362** and an outboard rail **364** within an internal cabin **366**, according to an embodiment of the present disclosure. For the sake of clarity, portions of a stowage bin **368** and a PSU **370** (such as outer panels) are not shown in order to show the inboard rail **362** and the outboard rail **364**. As shown, an intermediate peak **372** of a header **374** connects to a bracket **376**, which is moveably secured to the inboard rail **362**. The inboard rail **362** may be secured to a portion of the PSU **370**, a strongback, and/or the like. An outboard fitting **380** is

moveably secured to the outboard rail **364**. For example, the outboard fitting **380** may be secured to the outboard rail **364** through one or more fasteners. In at least one other embodiment, the outboard fitting **380** may include a spring-biased detent that is slidably secured within an internal track of the outboard rail **364**.

Figure **8**A illustrates a perspective bottom view of a closeout panel **400** secured to a fixed panel **402** within a gap **404** between a PSU **406** and a stowage bin **408**, according to an embodiment of the present disclosure. The closeout panel **400** is an example of a shielding member that may extend through a length, or a portion of the length, of an internal cabin. The closeout panel **400** shields internal portions of the PSU **406** from being touched by passengers.

The fixed panel **402** may be a strongback that is fixed in position with respect to an internal cabin. The stowage bin **408** includes a bucket **410** that is pivotally secured to the strongback. A PSU rail **412** secures to a lower edge of the fixed panel **402** and securely connects the PSU **406** to the fixed panel **402**.

Figure **8**B illustrates an end view of the closeout panel **400**. Referring to Figures **8**A and **8**B, the closeout panel **400** may be a cantilevered shielding structure extending from the fixed panel **402**. The closeout panel **400** may include a panel securing portion **414** having a flat beam **416** that overlies a portion of the fixed panel **402**. The flat beam **416** may be securely fixed to the fixed panel **402** through one or more fasteners **418**. An upstanding stop protuberance **420** extends downwardly and away from the flat beam **416**. The upstanding stop protuberance **420** extends away from the fixed panel **416** and includes a raised bump, ridge, lip, or the like that extends further into the gap **404** toward the bucket **410**. A covering flap **422** extends downwardly from the upstanding stop protuberance **420** and may cover a space **424** between an inboard edge **426** of the PSU **406** and the fixed panel **416**. As such, the covering flap **422** provides a barrier that prevents access to an interior of the PSU **406**. As described below, a terminal portion **423** of the covering flap **422** may be removed in order to accommodate a bracket that connects to a portion of section divider assembly.

The closeout panel **400** may span across an open angle portion θ of the PSU rail **412** to an inboard edge **426**. An open angle portion θ may extend from a portion of the PSU rail **412** connected to the fixed panel **402** to an angled plane that extends from an outer surface of the inboard edge **426**.

The stop protuberance **420** may provide a protrusion that extends into the gap **404**. As shown, the covering flap **422** may include a profile that is substantially flat and angled, and may be substantially parallel to an inboard outer surface of the bucket **410**, but may be offset from the bucket **410** by a distance. The distance may be, for example, greater than **0.4**", but less than **1.5**". Alternatively, the distance may be less than **0.4**", and greater than **1.5**". A distal portion **430** of the covering flap **422** may be trimmed in at least some areas to allow access to the space **424** in order to provide access to an adjustable mounting rail located therein. A minimum distance between the covering flap **422** and the bucket **410** may be greater than a distance between an upper portion of the bucket **410** and the fixed panel **402**.

The covering flap **422** prevents an individual from grasping or otherwise touching internal portions of the PSU **406**. Further, the stop protuberance **420** provides a barrier that prevents an individual from reaching further into the gap **404** above the stop protuberance **420**. The stop protuberance **420** may be spaced apart from the bucket **410** in order to provide the bucket **410** the ability to freely pivot between open and closed positions. However, the space between stop protuberance **420** and the bucket **410** is too small to allow a finger to pass therethrough. For example, in a closed position, the space between the stop protuberance **420** and the bucket **410** may be less than **0.25**", while in the open position, the space may also be less than **0.25**". Alternatively, the distance of the space between the stop protuberance **420** and the bucket **410** may be greater or lesser than **0.25**". The stop protuberance **420** prevents an individual from reaching into the gap **404** past the stop protuberance **420**. As such, the stop protuberance **420** protects an individual from having his/her fingers pinched between the bucket **410** and the fixed panel **402**.

As noted, the closeout panel **400** substantially covers an opening of the PSU **406**, and protects the internal components of the PSU **406** from being touched by passengers. Further, the closeout panel **400** is configured to prevent an individual from passing fingers or a hand past the stop protuberance **420** within the gap **404**. The stop protuberance **420** is spaced apart from the bucket **410** so as not to interfere with the bucket **410** as it pivots between open and closed positions. That is, through an entire range of motion of the bucket **410**, no portion of the closeout panel **400** contacts any portion of the bucket **410**. The stop protuberance **420** may be sized and shaped to not contact the bucket **410**, but at the same time prevent an individual from reaching into the gap **404** past the stop protuberance **420**. For example, the separation distance between the stop protuberance **420** and the bucket **410** may be between **0.1**" - **0.3**" during a range of motion of the bucket **410** between open and closed positions. Optionally, the separation distance may be less than **0.1**", but greater than **0**, and greater than **0.3**", but may be less than **0.5**".

Figure **9** illustrates a perspective bottom view of a closeout panel **400** secured to the fixed panel **402** within the gap **404** between the PSU **406** and the stowage bin **408**, according to an embodiment of the present disclosure. The closeout panel **400** is the same as the closeout panel **400** shown and described with respect to Figure **8**, except that a terminal portion of covering flap **422** is removed to provide a clearance space **440** between a terminal edge **442** of the covering flap **422** and the inboard edge **426** of the PSU **406**. The clearance space **440** is formed to allow a connecting member, such as bracket or connecting beam thereof, to pass in order to secure a section divider assembly to an inboard rail, which may be connected to the PSU rail **412**, or integrally formed with the PSU rail **412**. Referring to Figures **8** and **9**, only a portion of the PSU **406** is shown in order to show details of the PSU rail **412**, the clearance space **440**, and the like.

Figure **10** illustrates a perspective view of a section divider assembly **500** secured to an inboard rail **502** and an outboard rail **504**, according to an embodiment of the present disclosure. The section divider assembly **500** is similar

to any of those described above, and includes a header **506** connected to a bracket **507**. The inboard rail **502** may be a separate rail secured over a PSU rail **508** that secures a PSU **510** to a fixed panel **512**, such as a strongback. Alternatively, the inboard rail **502** may be integrally molded and formed with the PSU rail **510**.

The inboard rail **502** may include a lower lip **520** having a plurality of longitudinally aligned fastener through holes **522** formed at increments. An internal recessed channel **524** is formed through the inboard rail **502**.

The bracket **507** includes a rail-engaging main body **530** connected to a connecting beam **532** that is secured to an intermediate peak **534** of the header **506**. The main body **530** includes a lip channel **540** that receives the lower lip **520**. An upper end **550** of the main body **530** may be received within a reciprocal passage **552** formed in an upper portion of the inboard rail **507**. The main body **530** may also include one or more fastener passages **560**.

In order to move the section divider assembly **500** to a desired position, the main body **530** of the bracket **507** is slid through a portion of the length of the inboard rail **502**. In response, a fitting connected to an outboard portion of the header **506** may slide through a portion of the outboard rail **504**. After the section divider assembly **500** is located at a desired position in which the fastener passages **560** align with one or more fastener through holes **522** of the inboard rail **502**, fasteners, such as screws or bolts, are tightened through the aligned fastener passages **560** and the fastener through holes **522** to secure the section divider assembly **500** in position.

Figure **11** illustrates a perspective view of a bracket **600** moveably secured to an inboard rail **602** that is secured to a fixed panel **604**, according to an embodiment of the present disclosure. The bracket **600** may be connected to a section divider assembly, such as any of those described in the present application. As shown, the fixed panel **604** may be a strongback within an internal cabin. The inboard rail **602** may include a PSU rail **606** connected to a divider adjustment rail **608**. The PSU rail

606 and the divider adjustment rail **608** may be integrally molded and formed as a single piece, such as a unitary formed piece of aluminum.

The bracket **600** may include main body **610** similar to as described above. The main body **610** may include a support panel **612**, from which a connecting beam **614** extends. An end of the connecting beam **614** may secure to an intermediate peak of a header of a section divider assembly (not shown in Figure **11**).

One or more bearings **620** may secure to the support panel **612**. Each bearing **620** may rotatably retain a roller including a hub **622** having a wheel **624** that is rotatably secured within a channel **626** of the divider adjustment rail **608**. The wheel **624** may be retained within the channel **626** through opposed ledges **628**. A position securing member **630** (such as a pin, post, stud, fastener, or the like) is retained within a central sleeve **632** of the bracket **600**. In the secured position, the position securing member **630** extends out of the sleeve **632** into a retaining hole **660** (such as a through hole) of the divider adjustment rail **608**. The engagement between the position securing member **630** and the retaining hole **660** prevents the bracket **600** (and therefore the section divider assembly) from translating or otherwise moving in relation to the inboard rail **602** in the directions of arrows **670**, which are parallel to a longitudinal axis **672** of the channel **626**.

In order to readjust the bracket **600** (and therefore the section divider assembly), the position securing member **630** is pulled away from the channel **626** toward an inboard direction in the direction of arrow **680** so that the pin securing member **630** disengages from the retaining hole **660**. For example, a wire, pull cord, or string may be secured to an end of the position securing member **630** so that it may be pulled in a disengaging direction. After the position securing member **630** is removed from the retaining hole **660**, the bracket **600** (and therefore the section divider assembly) may be moved with respect to the inboard rail **602**, such as by the wheels **624** rotating within the channel **626**, to a desired position.

Figure **12** illustrates an end view of a bracket **700** moveably secured to an inboard rail **702** that is secured to a fixed panel **704**, according to an embodiment of

the present disclosure. As shown, the inboard rail **702** may be a divider adjustment rail **706** that is fastened to a separate and distinct PSU rail **708**. Optionally, the divider adjustment rail **706** and the PSU rail **708** may be integrally formed and molded as a single piece.

The embodiment shown in Figure **12** is similar to the embodiment shown in Figure **11**. Wheels **710** are rotatably retained within a channel **712** of the inboard rail **702**. As shown, the bracket **710** includes a connecting beam **714** that passes through a clearance space **716** between a covering flap **718** of a closeout panel **720** and the PSU rail **708**. A closeout panel as shown in Figure **12** may be used with any of the embodiments of the present disclosure. A retaining pin **722** may be used to secure the bracket **700**, and therefore the section divider assembly **730**, in position. For example, the retaining pin **722** may be a position securing member that passes through a portion of the bracket **700** (for example, holes formed therethrough) and a covering panel **740** (for example, holes formed therethrough) extending from the inboard rail **702** between a terminal edge **750** of a PSU **752** and the covering flap **718**.

Figure **13** illustrates a perspective front view of a section divider assembly **800** secured to an inboard rail **802**, according to an embodiment of the present disclosure. The section divider assembly **800** is similar to any of those described in the present application, and includes a header **804** connected to a barrier **806**. As shown, a bracket **808** may connect to internal portions within the header **804**. For example, the bracket **808** may include connecting arms **812** and **814** that secure to reciprocal structures within the header **804**, such as through fasteners, snap fits, interference fits, latches, and/or the like. Any of the section divider assemblies described in the present application may be secured to brackets in a manner as shown and described with respect to Figure **13**.

Further, as shown in Figure **13**, an outboard fitting **820** may include a deflectable attachment head **822** that is configured to be received and retained within a channel of an outboard rail. Once positioned within the channel of the

outboard rail, the attachment head **822** may be slid therethrough in response to movement of the bracket **808** with respect to the inboard rail **802**.

Figure **14** illustrates a perspective front view of a bracket **900** moveably secured to an inboard rail **902**, according to an embodiment of the present disclosure. The inboard rail **902** may be or otherwise include a divider adjustment rail **904** connected to a PSU rail **906**. The inboard rail **902** and the PSU rail **906** may be separate and distinct components, or may optionally be integrally formed and molded as an integral piece.

The bracket **900** shown in Figure **14** may be used with any of the embodiments of the present disclosure. The bracket **900** may include a main body **908** that overlays a flat portion **911** of the inboard rail **902**. One or more wheels **910** may be rotatably secured within the main body **908** and may engage the flat portion **911**. Further, channel engagement members **920**, such as wheels, sliding blocks, or the like, may be rotatably or slidably retained within a channel **930** of the inboard rail **902**. As shown, a connecting beam **940** that secures to a header **950** of a section divider assembly **952** may extend through a clearance space between a covering flap **960** of a closeout panel **962** and a terminal edge **970** of a PSU **972**.

Figure **15** illustrates a perspective, partial cross-sectional view of the bracket **900** secured to the inboard rail **902**, according to an embodiment of the present disclosure. A position securing member **980** may be secured within a channel **982** of the bracket **900**. The position securing member **980** may be spring-biased within the bracket **900** to an outwardly extending position through a coiled spring **984**. An internal end of the position securing member **980** may be secured to a cord **990** that may extend through the bracket **900**, and through a portion of the header **950**. For example, the cord **990** may pass over a pulley **992** within the intermediate peak **994** of the header **950**, and extend out of the header **950**. An opposite end of the cord **990** may include a grippable handle that may be grasped and pulled.

In operation, an individual, such as a flight attendant, may pull on the handle of the cord **990**, thereby overcoming the biasing force of the coiled spring **984**, and

removing the position securing member **980** from a retaining hole formed in the inboard rail **902**. The attendant may then slide the section divider assembly **952** in relation to the inboard rail **902** (through slidable engagement of the bracket **900**) to a desired location. When the section divider assembly **952** is positioned at a desired location, the cord **990** is released, and the spring **984** biases the position securing member **980** back to an outwardly extended position in which it is received and retained by a retaining hole within the inboard rail **902**.

Referring to Figures **1-15**, embodiments of the present disclosure may provide section divider assemblies that are configured to provide a more open look and feel within an interior cabin of an aircraft. Additionally, embodiments of the present disclosure may provide section divider assemblies that are aesthetically pleasing. Also, embodiments of the present disclosure may provide systems and methods for quickly and efficiently positioning a section divider assembly within an interior cabin of an aircraft.

As described above, the inboard and outboard rails and the section divider assemblies may form section divider systems configured for use within an internal cabin of a vehicle, such an aircraft. For example, the section divider system may include a section divider assembly, such as any of those described in the present application, which may be secured to one or both of an inboard or outboard rail, which may be secured to fixed structures within the internal cabin. A closeout panel may be secured to a fixed structure and positioned within a gap between a stowage bin and a PSU. A clearance space may be provided between a terminal edge of the closeout panel and a portion of the PSU in order to allow a bracket secured to the section divider assembly to pass therethrough and connect to an inboard rail, for example.

While various spatial and directional terms, such as top, bottom, lower, mid, lateral, horizontal, vertical, front and the like may be used to describe embodiments of the present disclosure, it is understood that such terms are merely used with respect to the orientations shown in the drawings. The orientations may be inverted,

rotated, or otherwise changed, such that an upper portion is a lower portion, and vice versa, horizontal becomes vertical, and the like.

As used herein, a structure, limitation, or element that is "configured to" perform a task or operation is particularly structurally formed, constructed, or adapted in a manner corresponding to the task or operation. For purposes of clarity and the avoidance of doubt, an object that is merely capable of being modified to perform the task or operation is not "configured to" perform the task or operation as used herein.

It is to be understood that the above description is intended to be illustrative, and not restrictive. For example, the above-described embodiments (and/or aspects thereof) may be used in combination with each other. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the various embodiments of the disclosure without departing from their scope. While the dimensions and types of materials described herein are intended to define the parameters of the various embodiments of the disclosure, the embodiments are by no means limiting and are exemplary embodiments. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description. The scope of the various embodiments of the disclosure should, therefore, be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled. In the appended claims, the terms "including" and "in which" are used as the plain-English equivalents of the respective terms "comprising" and "wherein." Moreover, the terms "first," "second," and "third," etc. are used merely as labels, and are not intended to impose numerical requirements on their objects.

This written description uses examples to disclose the various embodiments of the disclosure, including the best mode, and also to enable any person skilled in the art to practice the various embodiments of the disclosure, including making and using any devices or systems and performing any incorporated methods. The patentable scope of the various embodiments of the disclosure is defined by the

claims, and may include other examples that occur to those skilled in the art. Such other examples are intended to be within the scope of the claims if the examples have structural elements that do not differ from the literal language of the claims, or if the examples include equivalent structural elements with insubstantial differences from the literal language of the claims.

EMBODIMENTS IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE AS FOLLOWS:

1. A section divider system configured to separate sections within an internal cabin of a vehicle, the section divider system comprising:

a first rail securable to a fixed panel within the internal cabin;

a closeout panel securable to the fixed panel, to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, and such that the closeout panel is positioned to prevent access to an interior of the PSU, and such that the closeout panel extends into a gap between a first lateral portion of the fixed panel and a second lateral portion of a stowage bin within the internal cabin, and wherein the closeout panel includes means for preventing movement of fingers of an individual past a defined position within the gap;

a bracket secured to the first rail;

one or more connecting beams that extend from the bracket to pass through the clearance space; and

a section divider assembly connected to the one or more connecting beams.

2. The section divider system of claim **1**, wherein the section divider assembly is moveably adjusted by moving the bracket in relation to the first rail.

3. The section divider system of claim **1**, further comprising a second rail secured to one or both of the fixed panel or another fixed portion of the internal cabin, wherein the section divider assembly comprises a fitting that is secured to the second rail.

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4. The section divider system of claim **3**, wherein the fitting is moveably secured to the second rail.

5. The section divider system of claim **1**, wherein the section divider assembly includes a header coupled to a barrier including a rigid panel extending downwardly from the header, wherein the section divider assembly is configured to be positioned over one or more seats within a row of the internal cabin.

6. The section divider system of claim **5**, wherein the header is sized and shaped to be outside of a range of motion a pivotal bucket of the stowage bin.

7. The section divider system of claim **5**, wherein the header comprises an intermediate peak that connects to the one or more connecting beams of the bracket.

8. The section divider system of claim **1**, wherein the first rail comprises a plurality of regularly-spaced retaining holes, wherein each of the regularly-spaced retaining holes is configured to receive and retain a position securing member coupled to the bracket in order to secure the section divider assembly in position.

9. The section divider system of claim **1**, wherein the closeout panel is cantilevered with respect to the fixed panel, and wherein the means for preventing movement of fingers comprises:

a panel securing portion on the closeout panel including a flat beam to overlie a portion of the fixed panel;

a stop protuberance on the closeout panel that extends downwardly and away from the flat beam, wherein the stop protuberance is positioned to prevent an individual from reaching further into a gap

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between the fixed panel and a stowage bin, wherein the stop protuberance is spaced apart from the stowage bin; and

a covering flap on the closeout panel that extends downwardly from the stop protuberance, wherein the covering flap is positioned to prevent access to the interior of the PSU, wherein the clearance space is formed between a terminal edge of the covering flap and the PSU.

10. The section divider system of claim **9**, wherein the covering flap extends away from the flat beam at an angle.

11. The section divider system of claim **1**, wherein the bracket is slidably movable through or on at least a portion of the first rail.

12. The section divider system of claim **1**, wherein the bracket comprises one or more rollers configured to rotatably move on or through at least a portion of the first rail.

13. The section divider system of claim **1**, wherein the bracket further comprises a spring-biased position securing member operatively connected to a pull cord.

14. The section divider system of claim **1**, wherein the first rail is an inboard rail.

15. The section divider system of claim **1**, wherein the first rail is integrally formed with a PSU rail that securely connects the PSU to the fixed panel.

16. A section divider system configured to separate sections within an internal cabin of a vehicle, the section divider system comprising:

an inboard rail securable to a fixed strongback within the internal cabin;

an outboard rail securable to one or both of the fixed strongback or another fixed portion of the internal cabin;

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a closeout panel securable to the strongback, to extend between the strongback and a passenger service unit (PSU) within the internal cabin, such that the closeout panel is positioned to extend into a gap between the strongback and a portion of a stowage bin within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, wherein the closeout panel is positioned to prevent access to an interior of the PSU, and wherein the closeout panel includes means for preventing movement of fingers of an individual past a defined position within the gap;

a bracket secured to the inboard rail;

one or more connecting beams that extend from the bracket to pass through the clearance space; and

a section divider assembly connected to the one or more connecting beams, wherein the section divider assembly is connected to the outboard rail through at least one fitting, wherein the section divider assembly is moveably adjustable in relation to the inboard rail and the outboard rail, wherein the section divider assembly includes a header coupled to a barrier extending downwardly from the header, wherein the section divider assembly is positionable over one or more seats within a row of the internal cabin, wherein the header comprises an intermediate peak that connects to the one or more connecting beams of the bracket.

17. The section divider system of claim **16**, wherein one or both of the inboard rail and the outboard rail comprises a plurality of regularly-spaced retaining holes, wherein each of the regularly-spaced retaining holes is configured to receive and retain a position securing member coupled to the header in order to secure the section divider assembly in position.

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18. The section divider system of claim **16**, wherein the closeout panel is cantilevered with respect to the strongback, and wherein the means for preventing movement of fingers comprises:

a panel securing portion on the closeout panel including a flat beam that overlies a portion of the strongback;

a stop protuberance on the closeout panel that extends downwardly and away from the flat beam, wherein the stop protuberance is positioned to prevent an individual from reaching further into the gap between the strongback and the stowage bin, wherein the stop protuberance is spaced apart from the stowage bin; and

a covering flap on the closeout panel that extends downwardly from the stop protuberance, wherein the covering flap is positioned to prevent access to the interior of the PSU, wherein the clearance space is formed between a terminal edge of the covering flap and the PSU, wherein the covering flap extends away from the flat beam at an angle.

19. A section divider system configured to separate sections within an internal cabin of a vehicle, the section divider system comprising:

a first rail securable to a fixed panel within the internal cabin;

a closeout panel securable to the fixed panel, to extend between the fixed panel and a passenger service unit (PSU) within the internal cabin, such that a clearance space is formed between a portion of the closeout panel and the PSU, and such that the closeout panel is positioned to prevent access to an interior of the PSU, and such that the closeout panel is cantilevered with respect to the fixed panel, and wherein the closeout panel comprises:

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(a) a panel securing portion including a flat beam to overlie a portion of the fixed panel when the closeout panel is installed;

(b) a stop protuberance that extends downwardly and away from the flat beam, wherein the stop protuberance is positioned to prevent an individual from reaching further into a gap between the fixed panel and a stowage bin, and wherein the stop protuberance is positioned to be spaced apart from the stowage bin when the closeout panel is installed; and

(c) a covering flap that extends downwardly from the stop protuberance, wherein the covering flap is positioned to prevent access to the interior of the PSU, and the clearance space is formed between a terminal edge of the covering flap and the PSU when the closeout panel is installed;

a bracket secured to the first rail;

one or more connecting beams that extend from the bracket to pass through the clearance space; and

a section divider assembly connected to the one or more connecting beams.

20. The section divider system of claim **19**, wherein the covering flap extends away from the flat beam at an angle.

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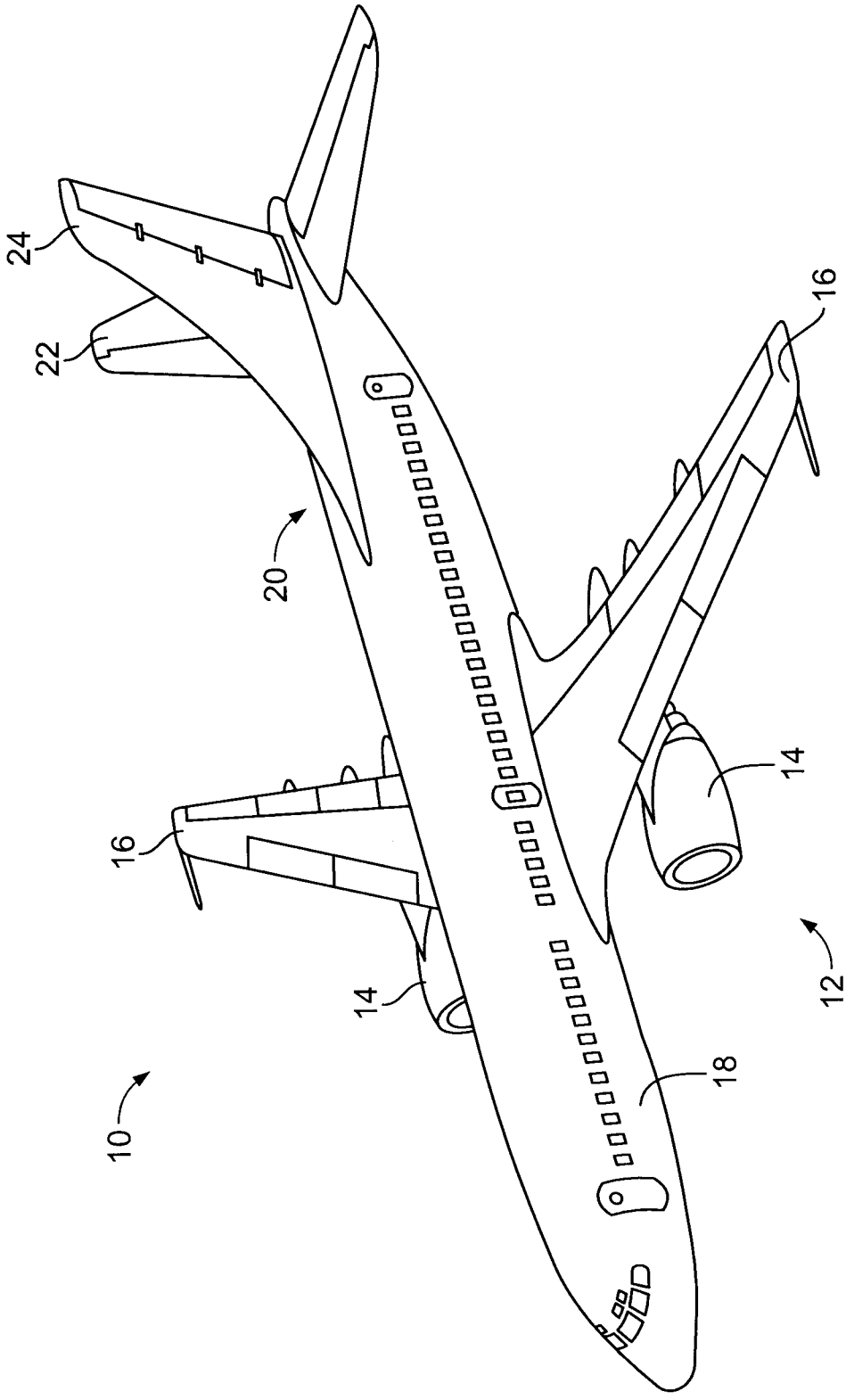

FIG. 1

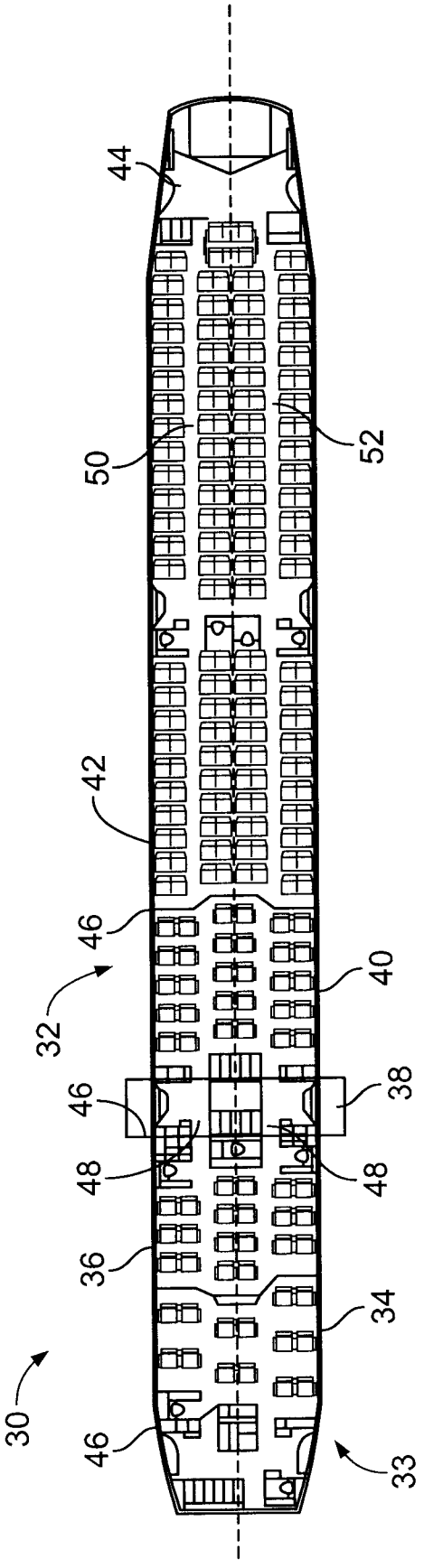

FIG. 2A

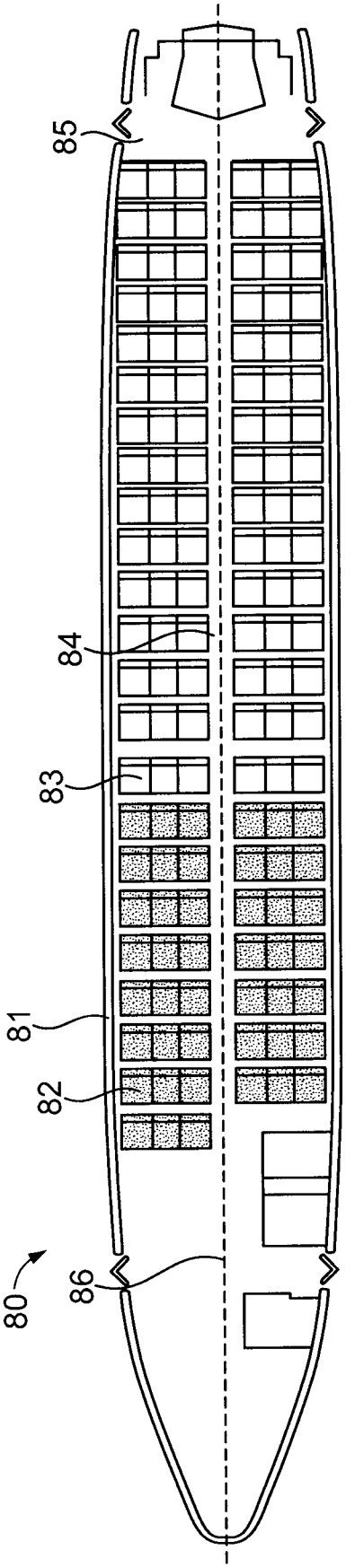

FIG. 2B

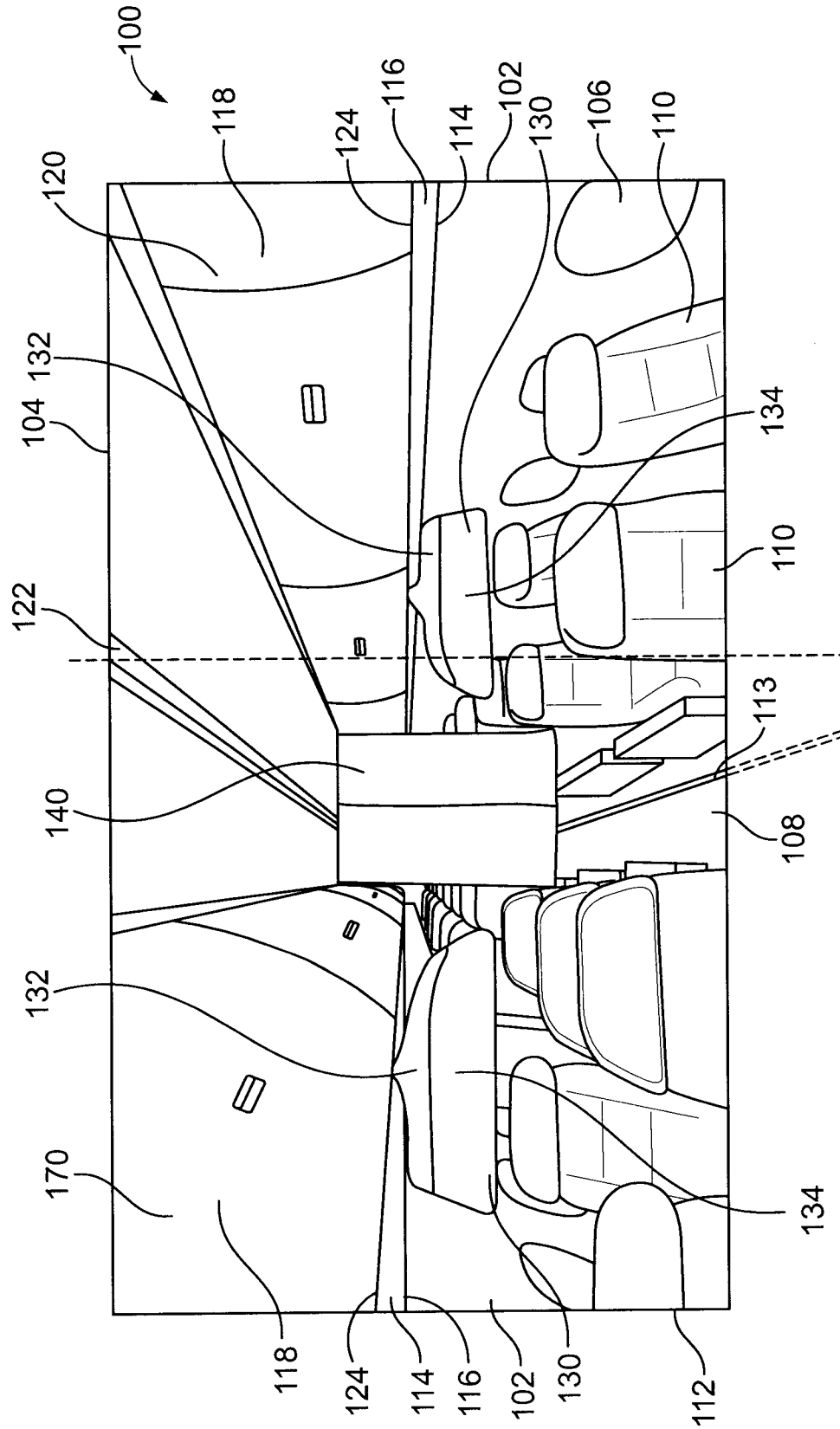
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FIG. 3

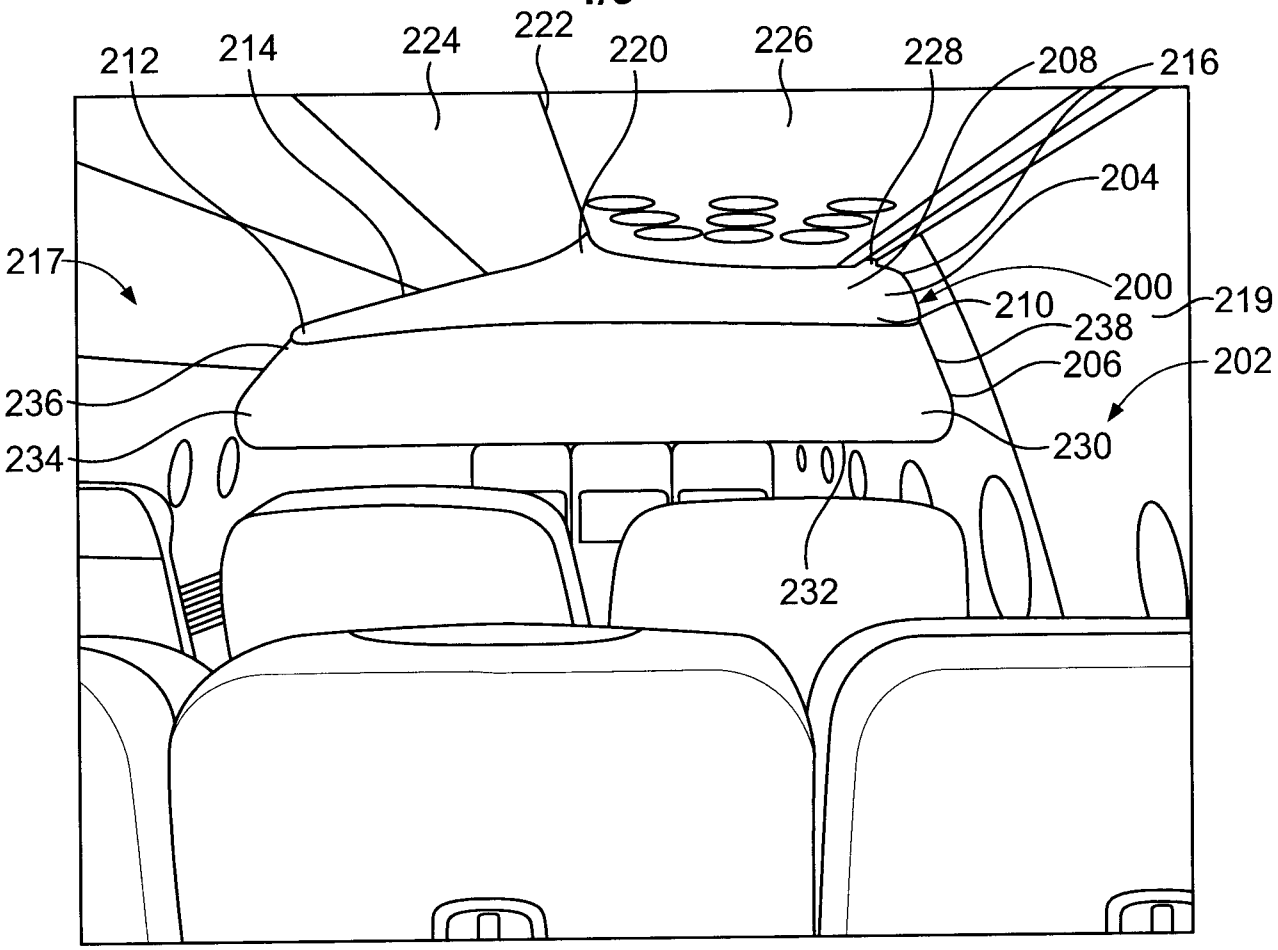
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FIG. 4

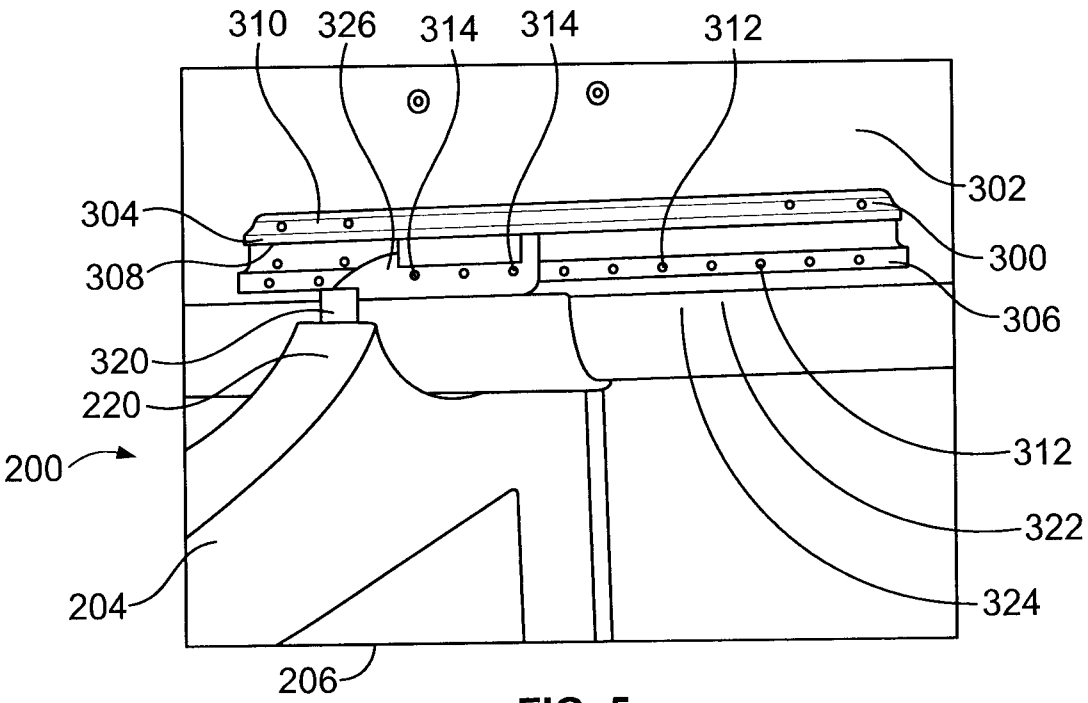
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FIG. 5

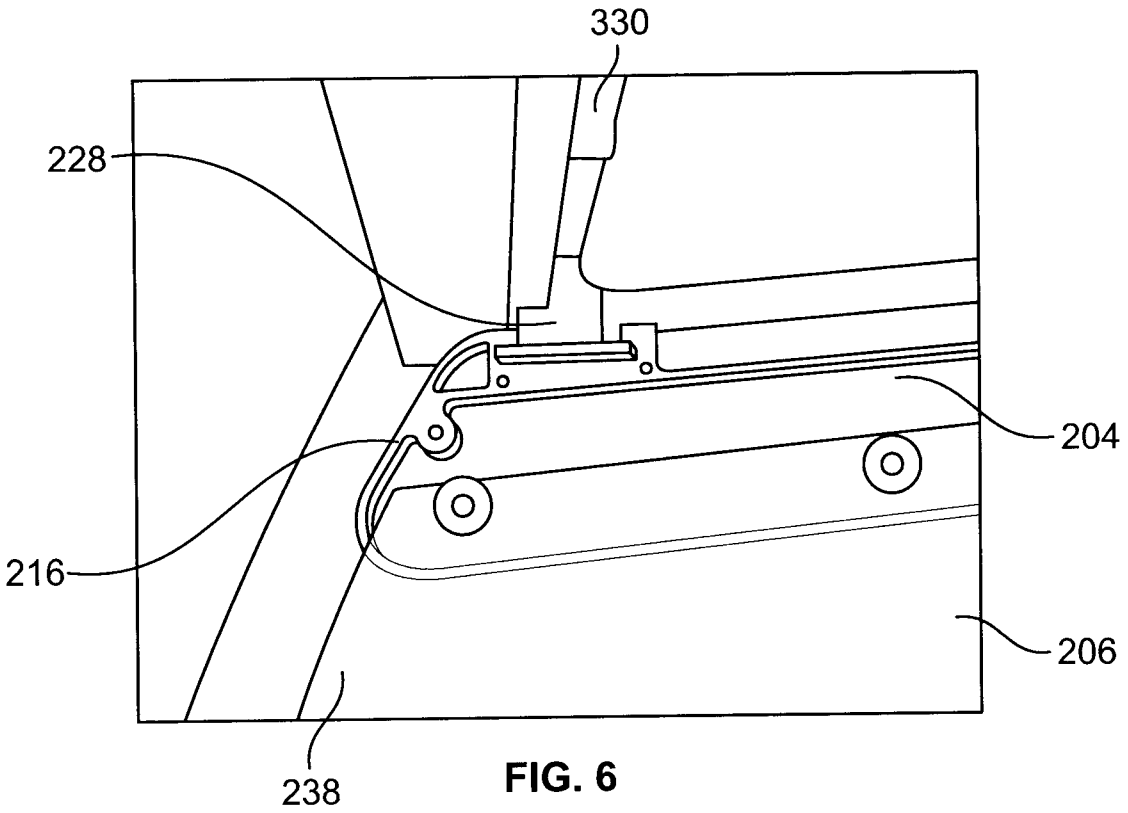

FIG. 6

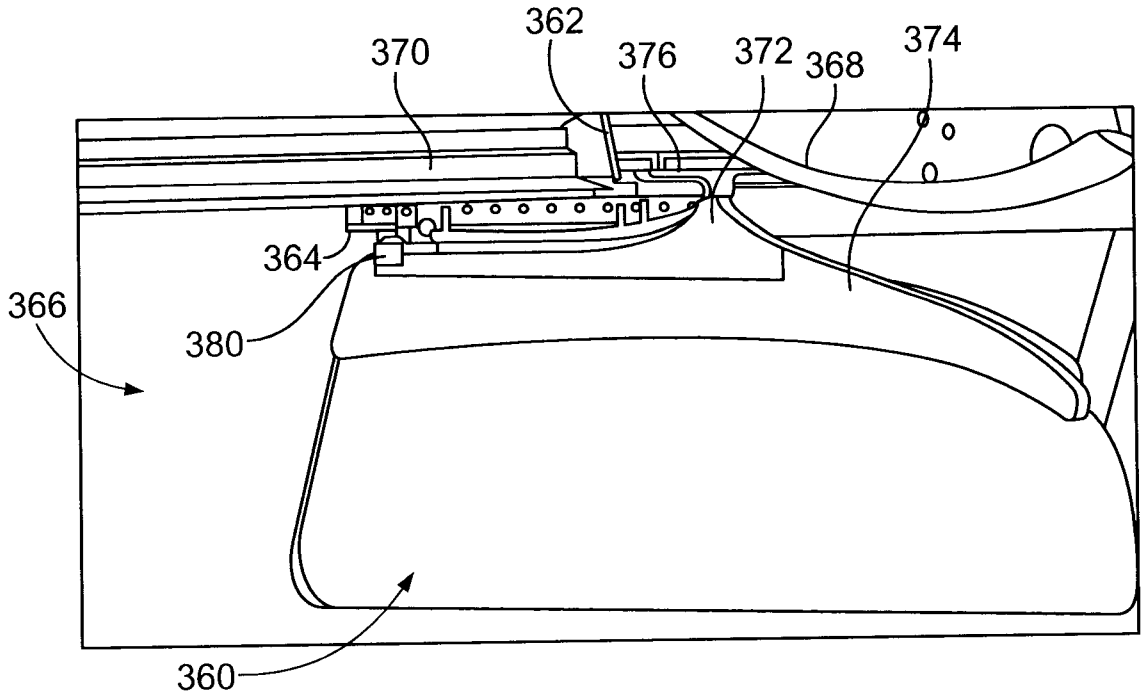

FIG. 7

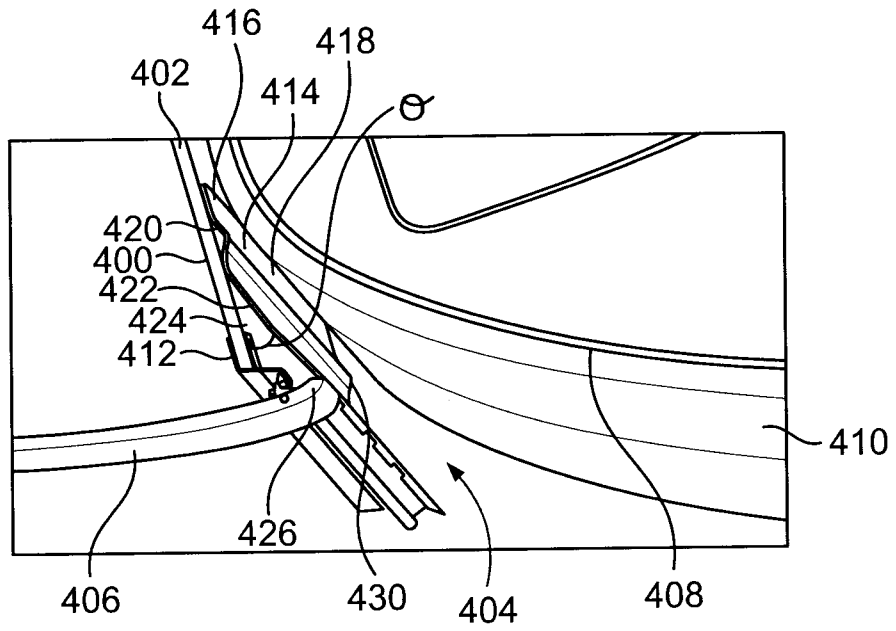

FIG. 8A

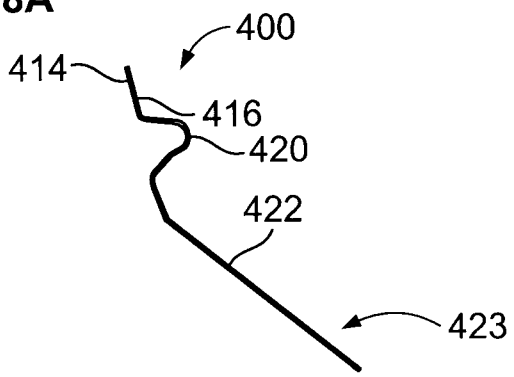

FIG. 8B

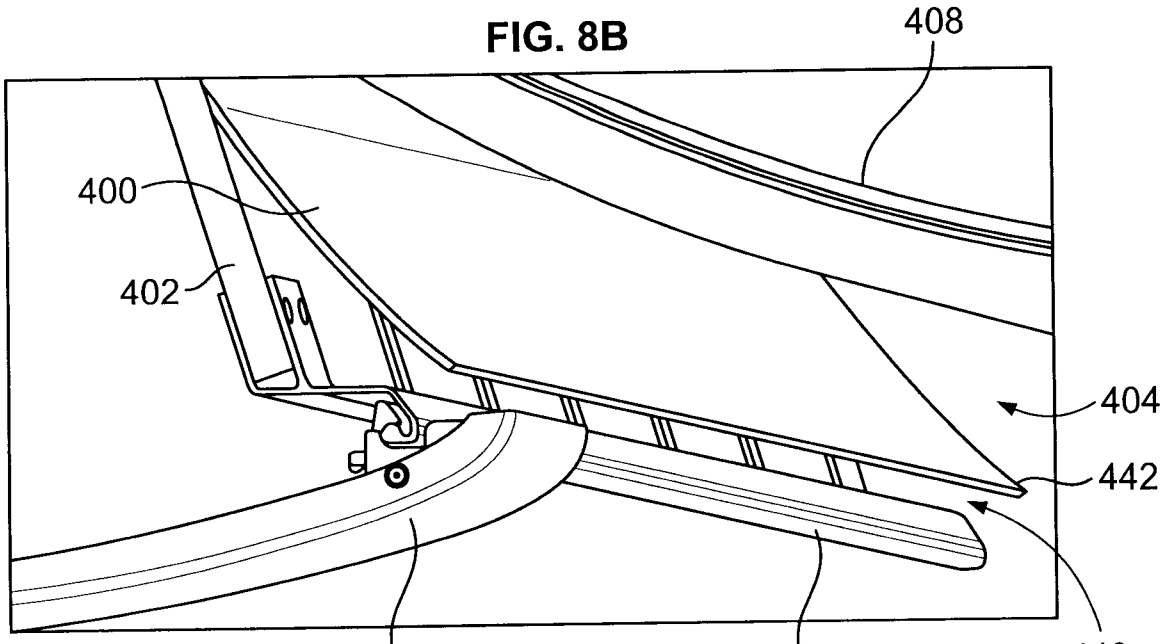

FIG. 9

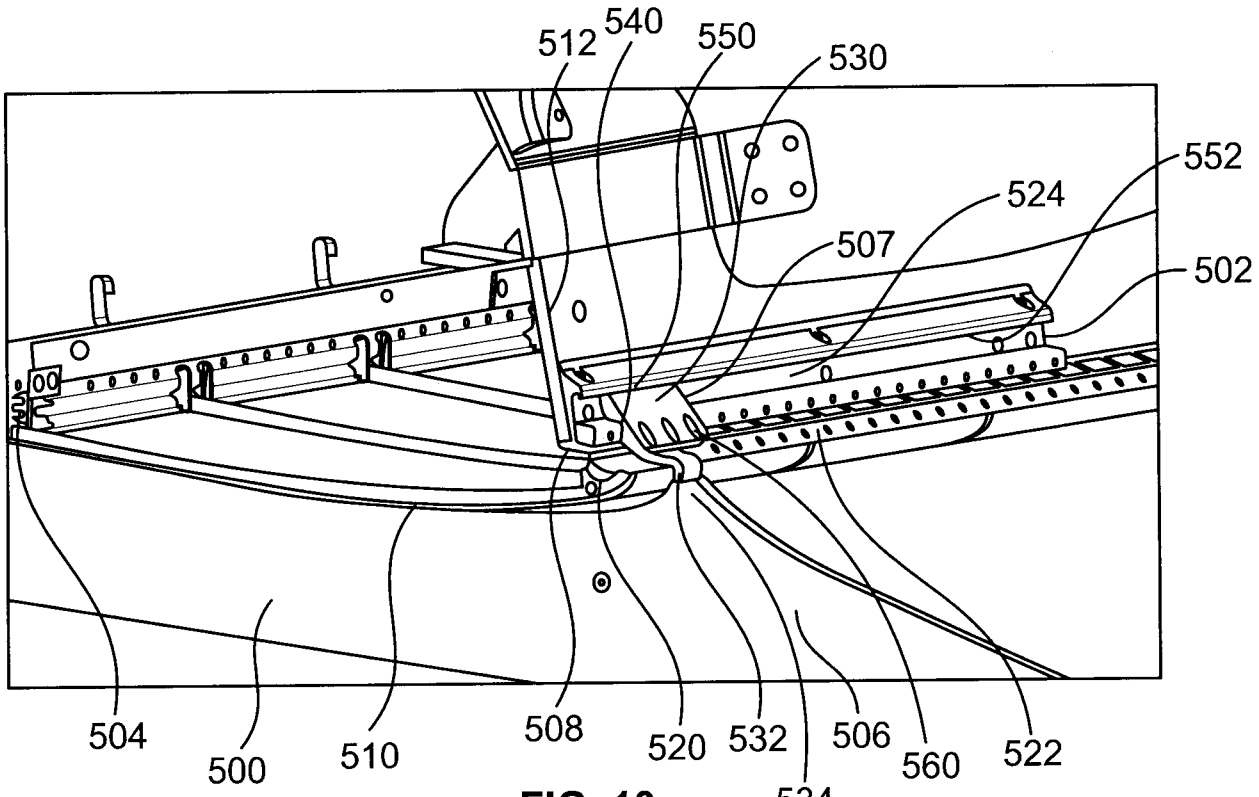
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FIG. 10

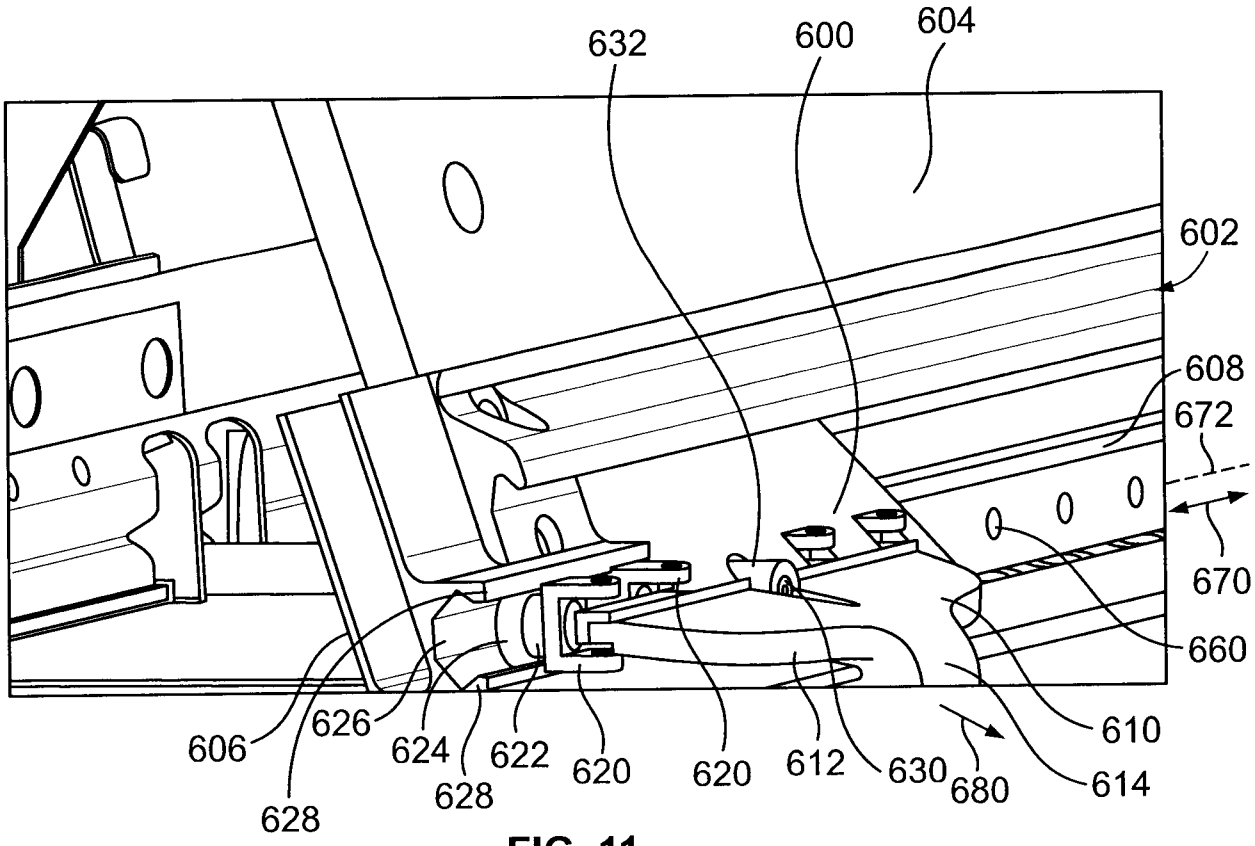
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FIG. 11

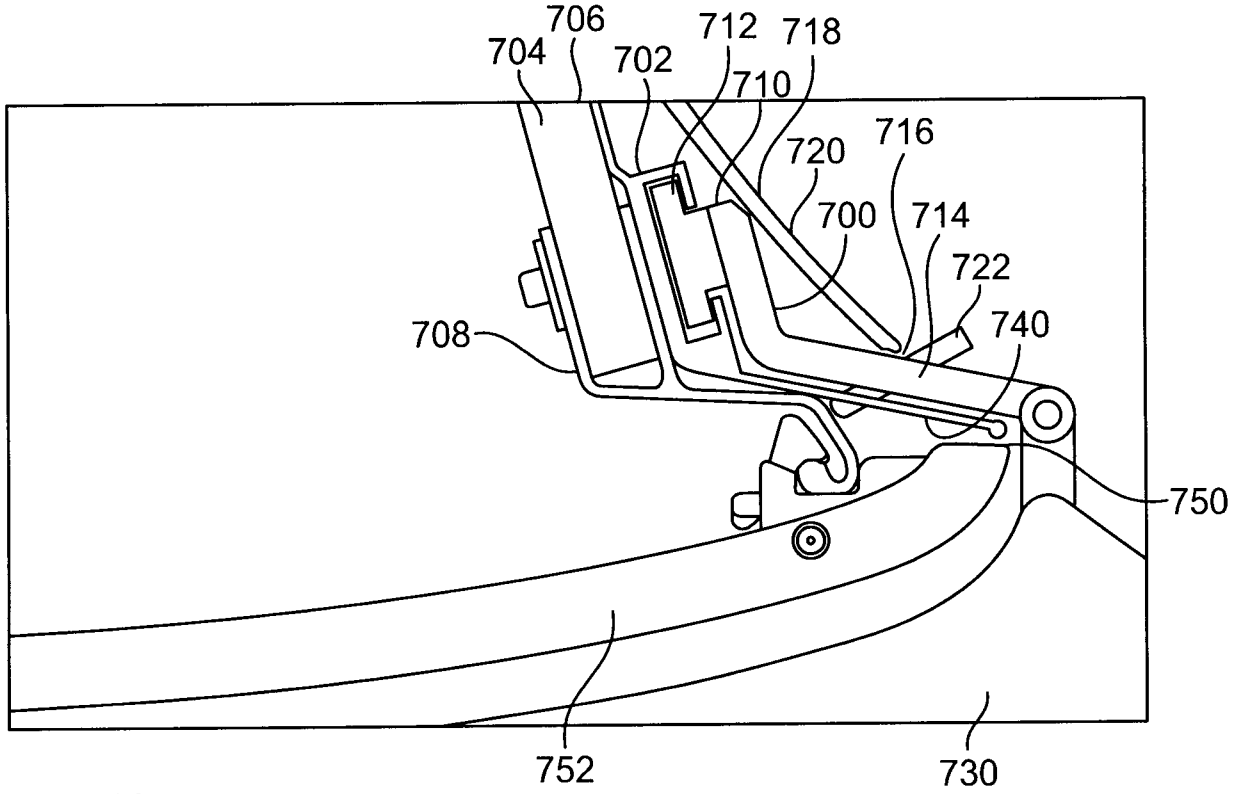
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FIG. 12

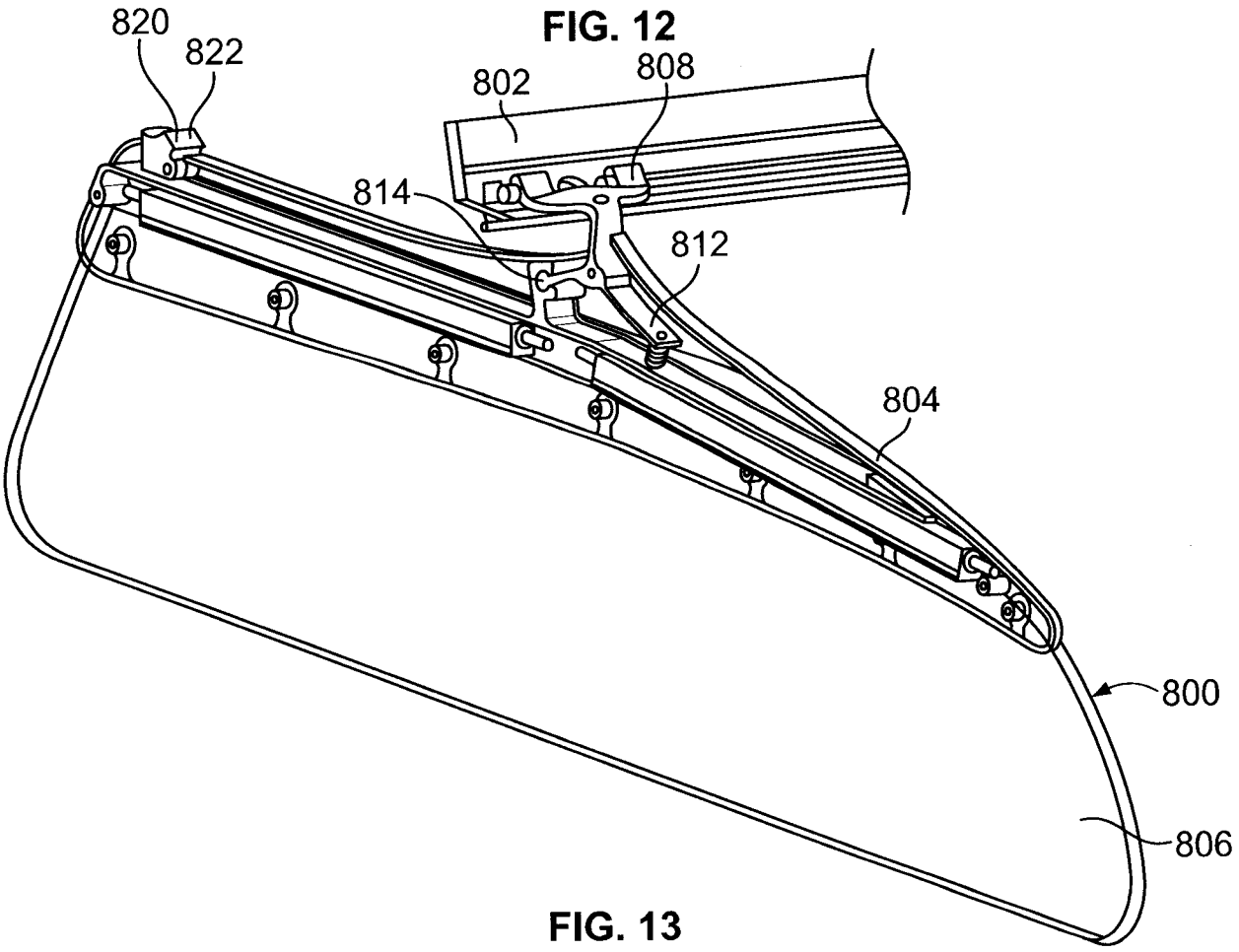
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FIG. 13

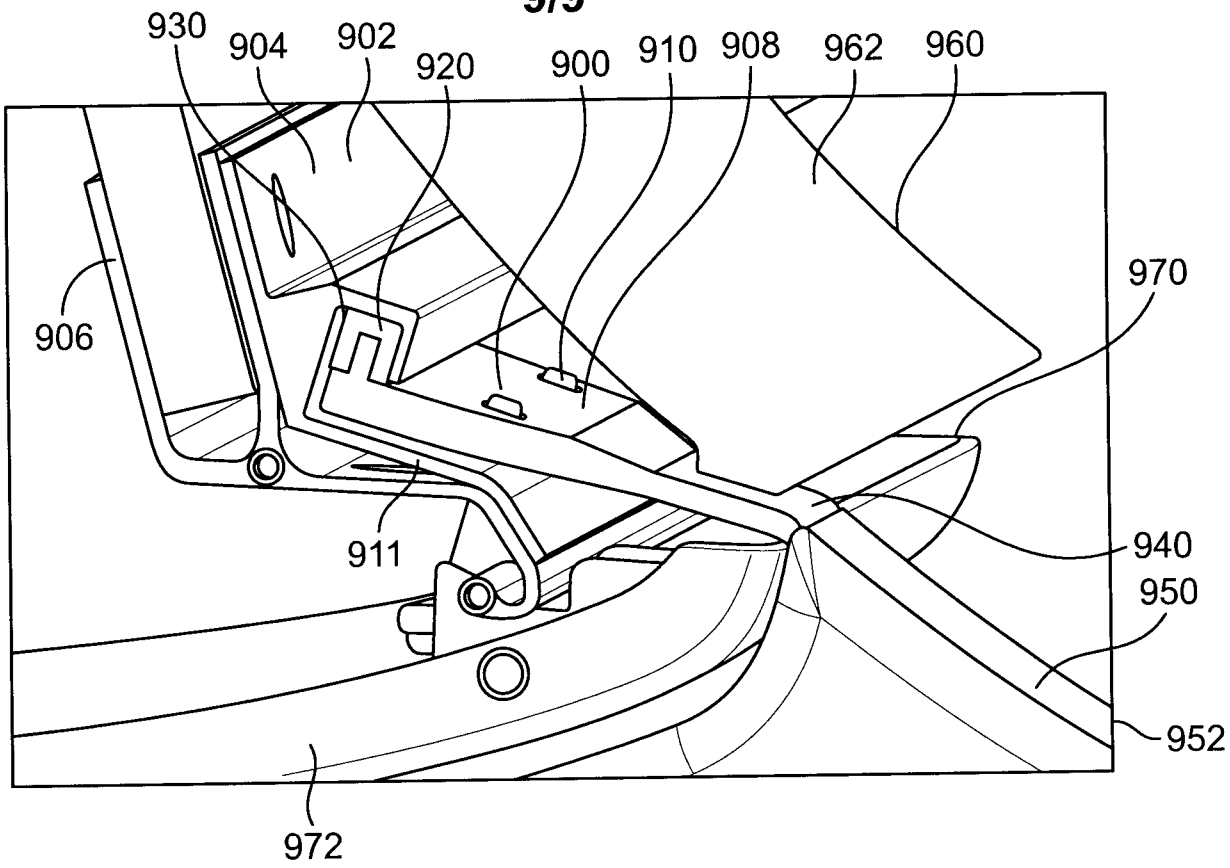
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FIG. 14

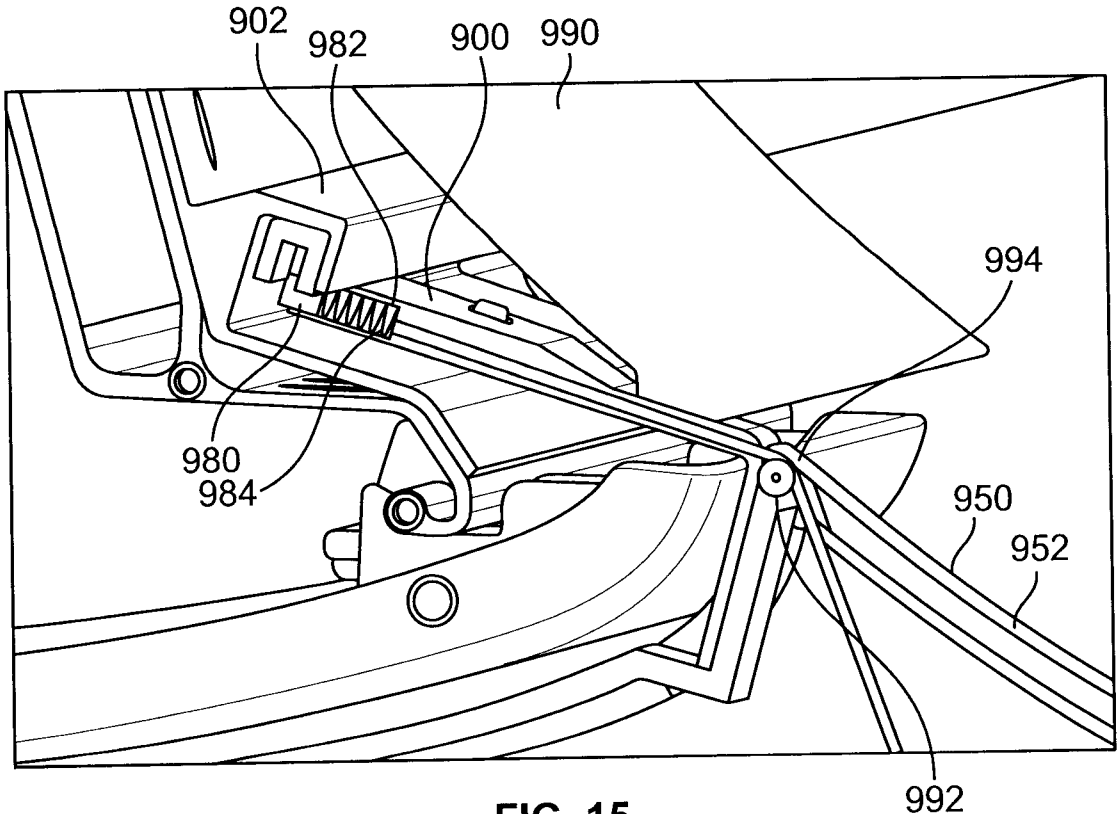
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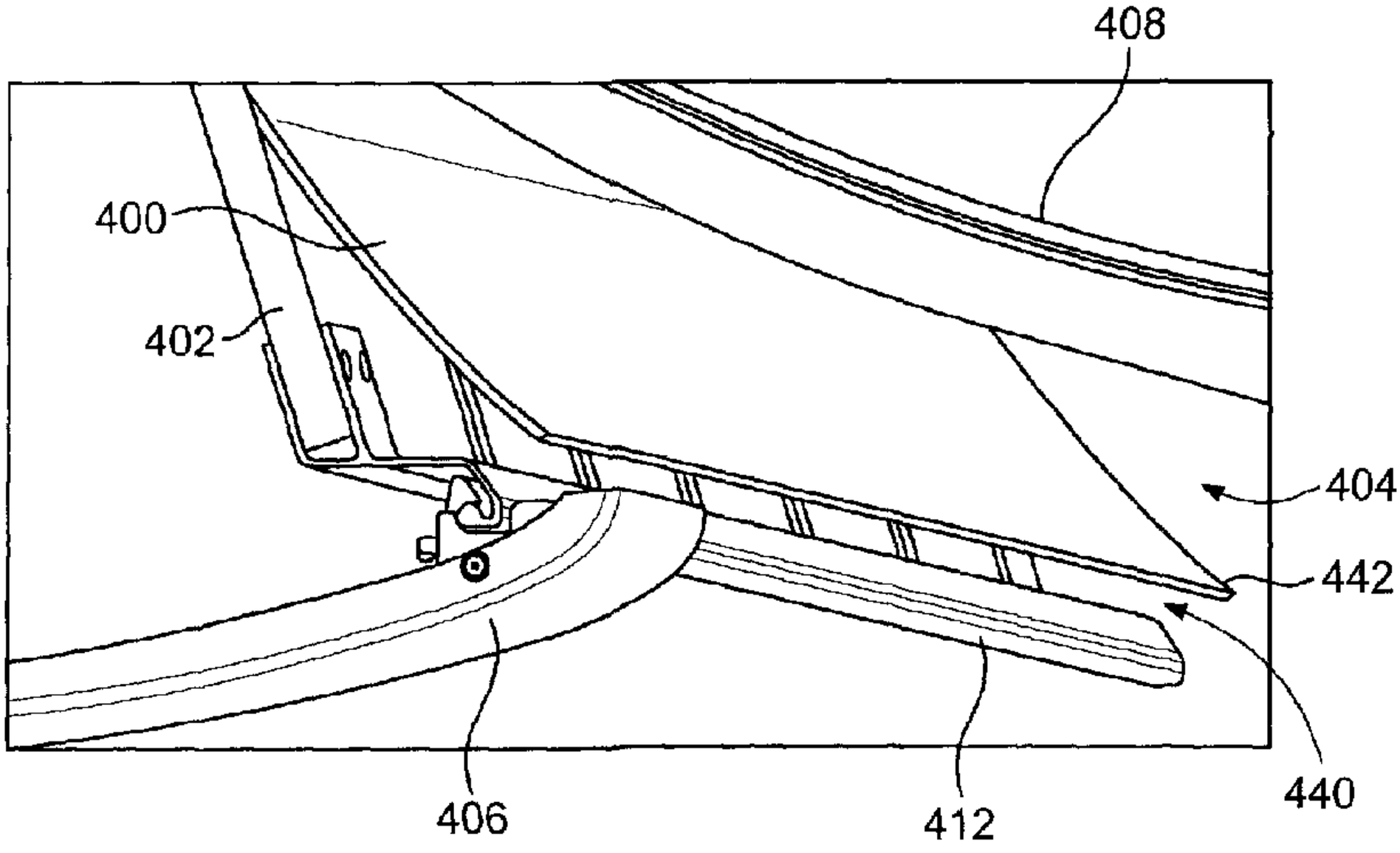
FIG. 15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