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(71) Applicant: Samsonite IP Holdings S.ÀR.L. 1931 Luxembourg (LU)

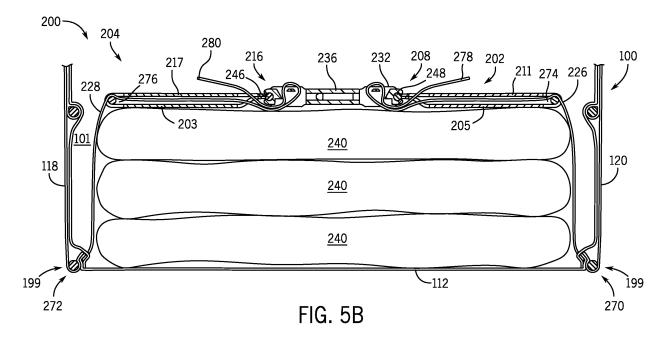
(72) Inventor: MEERSSCHAERT, Reinhard 9820 Merelbeke (BE)

(74) Representative: Lloyd, Robin Kilburn & Strode LLP Lacon London 84 Theobalds Road London WC1X 8NL (GB)

(54) LUGGAGE ARTICLE WITH COMPRESSION DIVIDER SYSTEM

(57) A luggage article 100 with a compression divider is disclosed. The luggage article 100 includes a rear wall 112 and an internal storage volume 101. First and second panels 202, 204, each including an outer edge 212, 220 and an inner edge 208, 216, are positioned over storage volume 101 and are movable relative to wall 112. Panels 202, 204 are positioned side-by-side with inner edges 208, 216 adjacent. Elongated flexible members 222, 224.

226, 228 are secured to body 197 at anchor points 199 closer to rear wall 112 than to panels 202, 204. Elongated members 222, 224, 226, 228 extend over outer edges 212, 220, along widths, to inner edges 208, 216 of panels. Elongated members 222, 224, 226, 228 releasably attach to each other. At least one elongated flexible member 222, 224, 226, 228 is adjustable to change the distance between panels 202, 204 and rear wall 112.



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Description

TECHNICAL FIELD

[0001] The present disclosure relates generally to luggage articles, and more specifically to a luggage article including an adjustable divider system.

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BACKGROUND

[0002] Some luggage cases include interior features to provide various functional characteristics, such as fixed dividers protecting interior contents and/or dividing the main internal storage volume into one or more compartments. Some traditional luggage case configurations have fixed dividers, which may result in undesirable shifting of user contents within the case. Some traditional luggage case configurations with dividers are adjustable to allow a limited compression force to be applied, and typically to a single divider that covers most of the opening to the storage compartment. These single dividers may be inconvenient to use because they may need to be moved out of the user's way when packing, for instance. This effect can damage delicate items, or leave other items loose. The divider systems of some traditional luggage may be difficult to release, often requiring the user to utilize both hands.

[0003] It is therefore desirable to provide an improved luggage article, and more specifically an improved frame structure that addresses one or all of the above-described problems and/or which more generally offers improvements or an alternative to existing arrangements. [0004] Documents that may be related to the present disclosure include EP3351130A1, CN205658510U, EP2904926B1, EP3073853B1, EP2826396B1, EP2230959B1, EP2779858B1, US6591950B1, US20080128231A1, FR2921237A1, US6435324B1, FR2711044A1, EP 0530067A1, and EP0379438B1

SUMMARY

[0005] The present disclosure provides a luggage article with a compression divider system within the interior storage volume of the article. The compression divider system may include at least two panels that have inner and outer edges. When the panels are in a first closed position, the panels may be side by side and may extend substantially over or across the internal storage volume, parallel to, but spaceable from a rear wall of the luggage article. The panels may be semi-rigid, and relatively more compliant, or they may include rigid bodies and be relatively less compliant. When the divider panels are in a second open position, they may allow access to the internal storage volume of the luggage article. There may be at least one elongated flexible member anchored at a position near the rear wall of the luggage article, extending over the outer edge of at least one of the panels, across the width of the panel, to the inner edge of the

panel. The elongated flexible members may be releasably coupled to one another with opposing edges adjacent to one another. The compression divider system may allow for selective compression of a user's belongings within the luggage article.

[0006] According to a first aspect of the present disclosure, there is provided a luggage article including at least one body defined by a plurality of walls including a rear wall and a plurality of side walls that form an internal storage volume. A first panel and a second panel may be positioned within the internal storage volume. Each panel may have an outer edge and an inner edge. The panels may be positionable over the internal storage volume and may be moveable relative to the rear wall. The panels may be positioned side by side with the inner edges of each panel adjacent each other. A first elongated flexible member may be secured to the body at an anchor point positioned closer to the rear wall than the first panel. The first elongated flexible member may extend over the outer edge of the first panel and along a width of the first panel to the inner edge of the first panel. A second elongated flexible member may be secured to the body at an anchor point positioned closer to the rear wall than the second panel. The second elongated flexible member may extend over the outer edge of the second panel and along a width of the second panel to the inner edge of the second panel. The first elongated flexible member may releasably couple to the second elongated flexible member near the adjacent inner edges of the panels. At least one of the first and second elongated flexible members may be adjustable in length to change the distance between at least one of the first and second panels and the rear wall.

[0007] Optionally, the first and second elongated flexible members may be both adjustable in length to change the distance between at least one of the first and second panels and the rear wall.

[0008] Optionally, the luggage article may include a dividing line formed by the adjacent inner edges of the panels. The first and second elongated flexible members may each extend at an angle relative to the dividing line. The dividing line may be formed at least in part by a gap. [0009] Optionally, the first and second elongated flexible members may be substantially orthogonal to the dividing line.

[0010] Optionally, at least one of the first and second panels may be rigid. The outer edge of at least one of the first and second panels may be rigid. At least one panel may include a rigid body.

[0011] Optionally, at least one panel may be formed by a peripheral frame and a flexible field.

[0012] Optionally, the luggage article may include a buckle coupled to one of the first or second elongated flexible members. The buckle may define a length of the respective elongated flexible members between a respective anchor point and the buckle. The buckle may be selectively and adjustably positioned along the length of the respective elongated flexible member. Changing

the length of the respective elongated flexible member may change the distance between the corresponding panel and the rear wall.

[0013] Optionally, the luggage article may include an elongated flexible member whose length may be shortened, thereby reducing the distance between the corresponding panel and the rear wall.

[0014] Optionally, the first internal storage volume may include user contents. Reducing the distance between the corresponding panel and the rear wall may compress the user contents.

[0015] Optionally, the luggage article may include a buckle coupled to the other of the first or second respective elongated flexible member. The buckles may be releasably coupled to one another.

[0016] Optionally, the luggage article may include another buckle selectively and adjustably positioned along the length of the other of the first or second respective elongated flexible members. Changing the length of the other elongated flexible member may change the distance between the corresponding panel and the rear wall.

[0017] Optionally, the luggage article may include the other of the first or second respective elongated flexible members, wherein shortening the length of the respective elongated flexible member may reduce the distance between the corresponding panel and the rear wall.

[0018] Optionally, the first panel and/or the second panel may have a width less than or equal to a depth of the first internal storage volume.

[0019] Optionally, the first panel and/or the second panel may have a width greater than or equal to a depth of the first internal storage volume.

[0020] Optionally, at least one of the first or second panels may be movable to a position confronting with an adjacent side wall of the luggage article.

[0021] Optionally, the luggage article may include at least one buckle rotatably attached to the inner edge of the corresponding panel.

[0022] Optionally, the length of the elongated flexible member may be increased when the first panel is pulled in a direction away from the rear wall.

[0023] Optionally, the luggage article may include another buckle that releases the respective elongated flexible member when the second panel is pulled in a direction away from the rear wall.

[0024] Optionally, the first panel and/or the second panel may define a channel for receiving the respective elongated flexible member.

[0025] Optionally, the first panel may cover up to half of an opening to the main internal storage volume. The second panel may cover up to half of the opening of the main internal storage volume.

[0026] Optionally, the first and second panels may be substantially rectangular.

[0027] Optionally, the anchor point for the first panel and/or the anchor point for the second panel may be positioned on the rear wall, or on the side wall, or at an intersection of the side wall and the rear wall.

[0028] Optionally, the first panel and the second panel may be moveable to a position allowing access to the first internal storage volume.

[0029] Optionally, the luggage article may include least one panel including a handle. Each of the first panel and the second panel may include a handle.

[0030] Optionally, the first panel may be moveable about the outer edge of the first panel. The second panel may be moveable about the outer edge of the second panel.

[0031] Optionally, the first panel and/or the second panel may define a channel for receiving a respective elongated flexible member.

[0032] Optionally, the first panel may have a handle and the second panel may have a handle.

[0033] Optionally, the first panel and/or the second panel may have a width less than or equal to a depth of the first internal storage volume 101.

[0034] Optionally, the first panel may cover up to half of an opening to the main internal storage volume and/or the second panel may cover up to half of the opening.

[0035] Additional embodiments and features are set forth in part in the description that follows, and will become apparent to those skilled in the art upon examination of the specification or may be learned by the practice of the disclosed subject matter. A further understanding of the nature and advantages of the present disclosure may be realized by reference to the remaining portions of the specification and the drawings, which forms a part of this disclosure. One of skill in the art will understand that each of the various aspects and features of the disclosure may advantageously be used separately in some instances, or in combination with other aspects and features of the disclosure in other instances.

BRIEF DESCRIPTION OF THE DRAWINGS

[0036] The description will be more fully understood with reference to the following figures in which components are not drawn to scale, which are presented as various examples of the present disclosure and should not be construed as a complete recitation of the scope of the disclosure, characterized in that:

FIG. 1 is a front isometric view of a luggage article according to some examples of the present disclosure;

FIG. 2 is an isometric view of the luggage article in a closed configuration and showing an adjustable divider system;

FIG. 3A is an isometric view of a luggage article in an open configuration and showing an adjustable divider system with panels in a first open position.

FIG. 3B is a top isometric view of a luggage article in an open configuration and showing an adjustable divider system with panels in a second open position; FIG. 4 is top isometric view of the luggage article and showing an adjustable divider system with panels in

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a partially closed position;

FIG. 5A is top isometric view of the luggage article and showing an adjustable divider system with panels in a first closed position;

FIG. 5B is a cross-sectional view of the adjustable divider system taken along section line 5B-5B of FIG. 5A, showing an adjustable divider system in a first closed position.

FIG. 5C is a cross-sectional view of the adjustable divider system taken along section line 5B-5B of FIG. 5A, showing an adjustable divider system in a second closed position.

FIG. 5D is top isometric view of another example of the luggage article and showing an adjustable divider system with panels in a first closed position;

FIG. 5E is a cross-sectional view of the adjustable divider system taken along section line 5E-5E of FIG. 5D, showing an adjustable divider system in a first closed position.

FIG. 5F is a cross-sectional view of the adjustable divider system taken along section line 5E-5E of FIG. 5D, showing an adjustable divider system in a second closed position.

FIG. 6A is a side elevation view of a fastener according to one embodiment.

FIG. 6B is a partial isometric detail view of a clamping means of a fastening means, rotatably coupled to a support member, according to one embodiment.

FIG. 6C is an isometric view of a fastener of an adjustable divider system according to one embodiment.

FIGS. 7A-7C are partial schematic cross-sectional views of an adjustable divider system, based on the cross-sectional view of FIG. 5C, showing an example of an adjustable divider system including panels slidably engaged with elongated flexible members, and rotatably engaged with examples of the clamp of FIGS. 6A-6C.

FIGS. 8A-8H are simplified schematic plan views of examples of other embodiments of divider panels according to the present disclosure.

DETAILED DESCRIPTION

[0037] According to the present disclosure, a luggage article having one or more walls defining a main body, and defining a main internal storage volume having at least one adjustable compression divider for securing the contents positioned in the main internal storage volume is provided fbr. The luggage article may have one or more bodies, such as hard side shells, joined at a dividing line and hingedly coupled together such that when opened, afford access to the main internal storage volume defined by each shell; or the luggage article may alternatively have a single body, such as a soft side case, with one or more doors that when opened, similarly afford access to the main internal storage volume and the adjustable divider system. The adjustable divider system may provide

for adjustably coupling one or more internal dividers within or over one side of the main internal storage volume. The adjustable divider system includes one or more divider panels that, in a first closed position may be arranged side-by-side and together extend substantially over and/or across some or all of the main internal storage volume. The divider panels may be at least partially rigid, but may also be completely rigid. The divider panels are spaceable from, and generally parallel to, the rear wall. Panels may be movable to a second open position to allow access to the main internal storage volume of the luggage article. Divider panels may be releasably connected together with inner edges adjacent one another. The adjacent inner edges form a dividing line (also, split line) between the divider panels. Opposing edges may be spaced from one another forming a gap at the dividing line. Alternatively, the adjacent inner edges may at least partially engage one another, and in other instances may at least partially overlap one another. The adjacent inner edges may also be referred to herein as opposing adjacent edges. At least one elongated flexible member may be fixed to and extend from or near an adjacent rear wall, and also adjustably connect to the at least one divider panel, and be selectively adjustably positioned along the length of the elongated flexible member, so as to selectively change the distance between the panel and the rear wall. The distance between the panel and the rear wall may be reduced, or increased. The elongated flexible member may be adjustably coupled at or near the inner edge of the panel, or may be adjustably coupled elsewhere with the divider panel. The effective length of the elongated flexible member, such as in one example as measured between the anchor point 199 and the inner edge of the respective divider panel, may thus be shortened or lengthened to move the divider panel closer to or further away from, respectively, the rear wall. An elongated flexible member may engage a panel by connecting to the panel. Alternately, an elongated flexible member may engage a panel by passing across a width of the panel to a fastener, such as a buckle. [0038] According to an embodiment of the present disclosure, illustrated in FIGS. 1 and 2, a luggage article 100 includes a housing 102 formed from a plurality of walls defining an internal storage compartment having a main internal storage volume 101 in which to carry a user's belongings 240. In the specific embodiment of FIGS. 1 and 2, the luggage article 100 includes opposing front and rear walls 110, 112 including opposing major faces 111, 113 and a plurality of side walls extending between the front and rear walls 110, 112, such as opposing top and bottom walls 114, 116 and opposing left and right walls side 118, 120 that collectively define the housing 102 having a height H, a width W, and a depth D. Any two adjacent walls may intersect to define an edge of the housing 102. Any three intersecting walls may define a corner of the housing 102.

[0039] The various walls may be configured or arranged to provide a desired size and shape of the housing

102. The walls may be sized and shaped such that the luggage article 100 is taller than it is wide and wider than it is deep, such as that shown in at least FIG. 1. Other sizes and shapes of the housing 102 are contemplated, and the examples shown and described are for illustration purposes only.

[0040] The luggage article 100 illustrated in FIGS. 1-2 is an upright spinner soft side case but may be many types of luggage, including a hard side spinner case, a container, a backpack, rollable backpack, or the like. In an example of a soft side case, the housing 102 may be formed entirely from soft side material supported by a frame structure suitably configured to allow for the adjustable divider system as described herein. The luggage article 100 may include a retractable tow handle 122, a carry handle 123, and/or one or more support members 124. The carry handle 123 may be positioned on a side wall of the luggage article 100. As shown in FIG. 1, the carry handle 123 is positioned on the right side wall 120; however, it is contemplated that the carry handle 123 may be positioned on other side walls and that there may be more than one carry handle 123 on the luggage article 100. The carry handle 123 may be integrated with the retractable tow handle 122.

[0041] The one or more support members 124 may support the luggage article 100 against a support surface (e.g., against the ground). The support members 124 may be a foot, a fixed wheel assembly, a spinner wheel assembly (as shown in FIGS. 1-5A), or any combination thereof. Support members 124 may be connected to any suitable portion of the luggage article 100. In this example, the luggage article 100 includes four spinner wheel assemblies 124.

[0042] As shown, the luggage article 100 includes a plurality of doors to provide access to one or more compartments of the luggage article 100. The plurality of doors may include a main door 138, and one or more front access doors 115. The main door 138 may provide access to a main internal storage volume 101 (shown in FIG. 2), while the first and second front access doors 115 may provide access to a secondary storage compartment. The main door 138 may seal an opening to the main internal storage volume 101 when in a closed position. The main door 138 may be secured to the luggage article 100 by a main access opening mechanism 130, such as, for example, a zipper. When in the closed position, the main door 138 may cover the entirety of or substantially all of the front wall 110 and may also cover a portion of the top wall 114. As shown in FIG. 2, the main door 138 may have a hinge 141 on one side that is coupled to the luggage article 100. For example, in the depicted embodiment, the hinge 141 extends along the left side wall 118.

[0043] FIG 2. depicts an isometric view of a luggage article 100 in an open configuration, showing an adjustable divider system 200 according to one embodiment. The luggage article has a body 197. The body 197 defines a main internal storage volume 101 and two shells or

bodies 105, 107, each with a storage volume that is a portion of the main internal storage volume 101. As shown, at least one body 197 has a peripheral rim 198 defining an opening to the main internal storage volume 101 of the body 197. The adjustable divider system 200 is positioned over a storage volume of a body 105, 107, spaced away from major face 111 or major face 113, and positioned on top of the personal belongings 240 positioned in the main internal storage volume 101 within the peripheral rim 198. FIG. 2 shows divider panels 202 and 204 in a first closed position side-by-side and covering the opening to the main internal storage volume 101. Panels 202, 204 may have a main body with a peripheral frame around the edges, and a fabric central field. Panels 202, 204 may be structural across a width thereof. Panels 202, 204 may extend substantially over and/or across the main internal storage volume 101, and be generally parallel to, but spaceable from, rear wall 112. Panels 202, 204 may be positionable over the main internal storage volume 101. One example of this may be where either or both of the panels 202, 204 extend generally in a plane forming at least a partial cover over the main internal storage volume 101. Panels 202, 204 may be positionable adjacent to the main internal storage volume 101 such that the main internal storage volume may be accessed. One example of this may be where either or both of the panels 202, 204 extend generally at an angle to body 197 and at least partially uncover the main internal storage volume 101. FIGS. 3A, 3B depict a top isometric view of the luggage article in an open configuration and showing an adjustable divider system 200 with panels in a first open position, and a second open position, according to one embodiment. Divider panels 202, 204 may have a width less than or equal to the depth of corresponding left and right side walls 118, 120. As shown in FIG. 3B, this allows the panels to be stowed in a position allowing loading and unloading of the luggage article 100, and when not in use. In this stowed position, in one example, the panel 202 is positioned within the storage volume 101 adjacent to the wall 120, and in one example may be at least partially engaging the wall 120. Edge 212 may be on or near the rear wall 112, and may preferably be near main assembly seam 270 formed between rear wall 112 and the side wall 120, and edge 208 extending along and closely spaced to the top edge 196 of wall 120. In this position, the panel 202 is stacked, confronting with wall 120, and is out of the way during packing, and if desired, may be easily pulled away from that position and placed on top of the packed articles 240 as shown in FIG. 4, and ready for use. Panel 204 may or may not be stowed in the same position during packing, and also may or may not be moved from the stowed position to a position resting on top of the packed articles ready for use. Alternately, divider panel 202 and/or 204 may have a width greater than or equal to the depth of corresponding left and right side walls 118, 120, thereby enabling the use of panels 202, 204 as packing guides to guide users on the amount of personal belongings 240 that may fit within luggage

article 100. In this stowed position, in one example, the panel 202 is positioned within the storage volume 101 adjacent to the wall 120, and in one example, may be at least partially engaging the wall 120. Edge 212 may be on or near the rear wall 112, and may preferably be near main assembly seam 270, and edge 208 extending along and above the top edge 196 of wall 120.

[0044] Divider panels 202, 204 may have a main body that is substantially planar or flat, and may also be relatively thin. The main body may be flexible, semi-rigid, or rigid. The main body of panels 202, 204 may have one or more opposing edges, and one or more adjacent edges that together form a periphery of the main body. The adjacent edges may be joined by curves or other transitions. For example as shown in FIGS. 2 and 3B, edges 206, 208, 210, and 212 of panel 202; and edges 214, 216, 218, and 220 of panel 204; respectively; may respectively form four edges of a substantially rectangular shape. Panels 202 and 204 may also be any substantially polygonal shape, for example, a square, rectangle, trapezoid, or triangle. The substantially polygonal shape may be regular, equilateral, or irregular. Alternately, panels 202 and 204 may be of an irregular, amorphous shape best describes by a curve, rather than a number of discrete sides. Main body 197 of panels 202 and 204 may have one or more layers, 205, 211; and 203, 216; respectively (shown in FIG. 5B). Layers 205, 211, 203, and 217 may form one or more channels 274, 276 adapted to receive one or more elongated flexible members.

[0045] Elongated flexible members may be anchored to luggage article 100 at one or more anchor points 199 on bodies 105 or 107. Anchor points 199 may be low on a side wall such as left and right side walls 118, 120, on a major face of a rear wall such as wall 112, or at a joint between walls. For example, anchor points 199 may be a seam or intersection between rear wall 112 and any adjacent wall, a bracket, hook, loop, or other suitable fastener. Elongated flexible members 226 and 228 may be attached at an anchor point 199 to a rigid member of the luggage article 100. By way of example, anchor points 199 may be defined by the elongated flexible member being secured to a bead or piping 254 and 256, at main assembly seams 270 and 272, respectively formed by sewing, staples, rivets, screws, adhesives, or other suitable methods. Additionally, the elongated flexible members may be looped around or otherwise secured to frame members of the luggage article. In this way, a distance from panels 202 and 204 relative to rear wall 112 may be adjusted to accommodate personal belongings 240 of varying sizes and shapes. Main assembly seams 270 and 272 may contain fasteners, stitching, or the like to attach bead or piping 354 and 256, bead coverings, walls 120 and 112, liners, and elongated flexible members 226, 228

[0046] Either or both of panels 202, 204 may include edges defined by a frame structure, with a flexible field therebetween. The frame structure and flexible field forms a semi-rigid panel being somewhat more flexible

to handle torsion or bending under forces of luggage article 100 when closed, and may be less likely to damage contents 240. Alternatively, either or both of panels 202, 204 may be formed from a rigid body of structural material that is somewhat less flexible or compliant, and able to spread compression forces more evenly over a user's belongings 240. Edges of the panels 202, 204 may be formed from a wire frame sewn in to an edge bead, 248, 246. Edges of panels 202, 204 may also be defined of pultruded members inside a hem formed to receive the same. Edges of panels 202, 204 are rigid or structural, allowing elongated flexible members 222, 224, 226, and 228 to pass over and above panels 202 and 204, thereby allowing elongated flexible members to pull substantially evenly across panels 202, and 204. An elongated flexible member 222, 224, 226, and 228 may engage a panel 202 or 204 by connecting to the panel 202, 204. An elongated flexible member 222, 224, 226, 228 may engage a panel 202 or 204 by connecting to the panel 202, 204 body. An elongated flexible member 222, 224, 226, 228 may engage a panel 202 or 204 by connecting to the panel edge, such as edges 206, 208, 210, 212, 214, 216, 218, or 220. An elongated flexible member 222, 224, 226, 228 may engage a panel 202 or 204 by slidably connecting to the panel 202, 204. An elongated flexible member 222, 224, 226, 228 may engage a panel 202 or 204 by adjustably connecting to the panel 202, 204.

[0047] The bead or piping 246, 248 may be of any suitable material, such as wire, composites of glass, carbon or other fibers and resins, thermoplastics (e.g. polypropylene) or thermosets. Bead or piping 246, 248 may be at the edge of panels 202, 204. Bead or piping 246, 248 may also be spaced inward from edges of panels 202, 204. Alternately, panels 202, 204 may be formed of a solid material that is structural without a bead or piping 246, 248, and including a rigid structure at its edge for an elongated flexible member to extend over.

[0048] As shown in FIGS. 3B and 5B, panels 202 and 204 may have one or more elongated flexible members 222, 226 or 224, 228 respectively, adjustably connected thereto. Without limitation, elongated flexible members 222, 226 or 224, 228 may be straps, cords, ropes, belts, bands, harnesses or ties. Elongated flexible members may be made of any suitable material for example, metal, leather, wire, plant or synthetic fibers, glass or carbon filaments, or composites of these. For simplicity only and without limitation, elongated flexible members may be referred to as strap or straps herein.

[0049] FIG. 4 is top isometric view of the luggage article and showing an adjustable divider system 200 with panels in a partially closed position. For example, the view of FIG. 4 shows the adjustable divider system 200 according to one embodiment, after the luggage article is loaded with user belongings 240, and is in the process of being closed. FIG. 5A is top isometric view of the luggage article and showing an adjustable divider system 200 with panels in a first closed position resting on top of the contents, and being secured together in the closed

position by the user.

[0050] As shown in FIG. 5B, panels 202, 204 extend substantially over and across the opening of the main internal storage volume 101. Fastener portions 230, 232 of panel 202 releasably connect with corresponding respective fastener portions 234, 236 of panel 204. A fastener portion may be, for example, any suitable cinch, buckle, clasp, clamp, aperture, post, catch, hook and loop, or other fastener. These examples may be combined to form suitable fasteners. For example, one fastener portion may be a buckle with an opening, such as a circular aperture extending through a thickness of the buckle, where the buckle engages one panel, Alternately, a fastener portion may be a buckle with an opening, such as a circular aperture extending through a thickness of the buckle, where the buckle slidably engages an elongated flexible member. A corresponding fastener portion engaged with the other panel may be a post hook, or catch that can engage with the aperture of a buckle, to secure the panels together. For simplicity and without limitation, fastener will be referred to as buckle/s hereafter. Fasteners may be male and female types, with one type on one divider panel, corresponding to the other type on the other divider panel. Buckles 230, 232 may be rotatably attached to bead or piping 246. Buckles 234, 236 may be rotatably attached to bead or piping 248. Panels 202 and 204 may have opposing edges adjacent one another when buckles 230 and 234 and/or buckles 232 and 236, are connected together in a second closed position, regardless of whether buckles 230, 234 and/or buckles 232, 236 are attached to their respective panels. The elongated flexible members 222, 224, 226, 228 may extend across the respective first or second panels 202, 204 in a direction from the inner edge 208, 216 to the outer edge 212, 220. Alternately, the elongated flexible members 222, 224, 226, 228 may extend across the respective first or second panels 202, 204 in a direction from the outer edge 212, 220 to the inner edge 208, 216. The elongated flexible members 222, 224, 226, 228 may extends across the dividing line 219 between the first panel and second panels 202, 204. Each of the elongated flexible members 222, 226, 224, and 228 may extend in a direction not parallel to, such as perpendicularly to, or at another angle to, the line of separation, or dividing line 219, between the adjacent edges 208, and 216 of panels 202, and 204, respectively (see FIG. 2). Dividing line 219 may extend generally along the long dimension of luggage article 100, or across a short dimension of luggage article 100, or non-orthogonally along luggage article 100. Adjacent edges 208, 216 may be spaced from one another forming a gap 221 at the dividing line 219. Elongated flexible members extend in a direction that intersects the dividing line 219 at an angle from 1 degree to 90 degrees, as shown for example, in FIG 8I. In one example, one elongated flexible member on panel 202 or panel 204 may extend in a direction less than 90 degrees from the dividing line 219 between the panels 202, 204. Alternately, an elongated flexible member 222, 226, 224,

228 may engage a panel 202, 204 by passing across a width of the panel to a fastener 230, 232.

[0051] As shown in FIGS. 2, 3B and, 5B, according to one embodiment, elongated flexible members 222, 226 may be fixed to, and extend from a rear wall such as, for example rear wall 112. Elongated flexible members 222, 226 may further be fixed to wall 112 at the main assembly seam 270. Elongated flexible members 222, 226 may extend from rear wall 112 over the outer rigid edge 212, across layer 211, over rigid edge 208, of panel 202 toward opposing panel 204. Elongated flexible members 222, 226 may releasably couple or secure to opposing elongated flexible members 224, 228, respectively, thereby allowing compressive forces to be applied to panels 202 and 204 and thus to user's belongings 240. Elongated flexible members 222, 226 may be adjustably connected with a fastener to panel 202. The adjustable connection of elongated flexible members 222 and 226 to panel 202, may allow for panel 202 to be adjustable in position relative to rear wall 112. Elongated flexible members 222 and 226 may also extend over and above panel 202, connecting, by way of buckles or other fastening means, to opposing elongated flexible members 224, 228, respectively without connecting to panel 202.

[0052] By way of further example, elongated flexible members 222, 226 may be selectively adjustably attached, such as in one example slidably attached, to one or more buckles, such as 230, 232. Buckles 230, 232 may be configured to releasably attach to corresponding buckles similarly positioned on the other divider panel, 204. Buckles 230 and 232 may be configured also to rotatably attach to an edge of corresponding panel 202. In one example, buckles 230 and 232 may rotatably attach to a bead 248. In other examples, buckles 230 and 232 may attach to a pultrusion, a rod sewn into panel 202, the edge of a structural panel, or other suitable structural feature of panel 204. Buckles 230 and 232 may also attach to structural features that are spaced away from the edge of panel 202. The rotatable attachment of buckles 230, 232 to panel 202; allows a user to selectively compress different sections of the divider system 200 toward the rear wall 112.

[0053] As shown in FIGS. 2, 3B and 5A, Panels 202, 204 may have one or more handles 242, 244 to facilitate loosening and positioning of the panels to a second open position to allow access to the main internal storage volume 101. Panel 202 may be moveable about an outer edge 212, opposite from the adjacent inner edge 208 by which panels connect to one another. As panel 202 moves about outer edge 212, elongated flexible members 222 and 226 may slide relative to panel 202, and panel 202 may move relative to opposing rear wall 112. When moving to an open position, panel 202, may move about outer edge 212, with inner edge 208 moving toward wall 120. When moving to a closed position, inner edge 208 of panel 202 may be positioned adjacent to a corresponding inner edge 216 of panel 204 which moves in a fashion similar to panel 202. As shown in FIG. 3A, users

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of the luggage system may position either or both of the panels 202, 204 in an open stowed position, which in one example is adjacent to or engaging the near, parallel adjacent side walls 120, 118 to keep the panels 202, 204 generally out of the user's way in order to load or unload belongings 240 from the luggage article 100. For example, the panels 202 and 204 may be positioned parallel to the respective side wall 120, 118.

[0054] Handles 244, and 242, respectively, may be fixedly attached to panels 202 and 204 and may be used to move the positions of panels 202 and 204 to any open or closed position. Panels 202, 204 may be positionable to an open position without using the handles.

[0055] FIG. 5B is a cross-sectional view of the adjustable divider system 200 taken along section line 5B-5B of FIG. 5A, showing an adjustable divider system 200 in a first closed position, according to one embodiment, in a loose or untensioned state. Main internal storage volume 101 is shown containing one or more of a user's belongings 240 stacked to an initial height within the luggage article 100. Divider panels 202 and 204 are situated on top of user belongings 240; elongated flexible members 226 and 228 extend over and along the width of each panel 202, 204 from the inner edge 208, 216 of each panel 202, 204 over the outer edge 212, 220 and down to an anchor point 199. Panels 202 and 204 are releasably secured to each other by buckles 232 and 236. Buckles 232 and 236 are releasably connected together such that opposing edges 208 and 216 of panels 202 and 204 are adjacent to one another. Divider panels 202, 204 are adjustably connected to rear wall by the elongated flexible members 226 and 228, respectively. Elongated flexible members may pass slidably along the dividers to allow for adjustment and movement relative to rear wall 112. Layers 205 and 211 of panel 202 may form a channel 274 through which elongated flexible member 226 may adjustably move in a direction substantially along a first dimension of elongated flexible member 226. Layers 203 and 217 may form a channel 276 through which elongated flexible member 226 may slidably move in a direction substantially along a first dimension of elongated flexible member 226, along the width of a panel. Channel 276 may be operable to allow elongated flexible member 226 to be removed from the panel 202. Alternately, elongated flexible members may pass over the top of layers 203 and 217, without passing through a

[0056] With continued reference to FIG. 5B, elongated flexible member 226 may be slidably attached to buckle 232, such that when free end 278 of elongated flexible member 226 is pulled in a direction away from buckle 232, elongated flexible member 226 is put under tension, causing panel 202 to compress belongings 240. Tension in elongated flexible member 226 is adjusted separately from tension in corresponding elongated flexible member 228. Forces resulting from tension in elongated flexible members 226 and 228 are shared between bead or piping 248, and 246, and opposing elongated flexible mem-

bers. Thus, compression of belongings 240 by panels 202 and 204 are adjusted separately from one another. As shown in FIGS. 3 and 5B, with two panels 202 and 204, each having two elongated flexible members, 222, 224, 226, and 228, the user is afforded four compression zones that may be adjusted to varying levels of compression. Compression zones substantially correspond to the sections of panels 202 and 204 over which elongated flexible members 222, 226, 224 and 228 run. In this way, a user may selectively compress the contents of the luggage article 100 toward rear wall 112, applying more or less compression, as needed by the nature of the contents. It can be appreciated by one skilled in the art that compression beneath different parts of panels 202 and 204 may be achieved by the use of additional buckles and elongated flexible members.

[0057] FIG. 5C shows a similar view to FIG. 5B, but with elongated flexible members 226 and 228 in a tensioned position. Beneath panel 204 are shown soft user belongings 240, such as clothes. These belongings 240 are in a compressed state. Beneath panel 202 is shown a user belonging 241 that may be hard, stiff, or rigid, and is compressed to a lesser degree than belongings 240. The tensioned state of elongated flexible members 226 and 228 may be achieved by connecting the respective male and female buckles, 232 and 236, respectively, and then pulling on the free ends 278, 280 of the of elongated flexible members 226 and 228 at the buckles 232 and 236. As elongated flexible members 226 and 228 are pulled through buckles 232 and 236 and routed over the outer edge 212, their length relative to the rear wall 112 decreases or shortens, thereby reducing the distance between the panel and the corresponding major face, and thereby reducing the effective volume of the main internal storage compartment, thus compressing the personal belongings 240, to secure them against movement. Buckles 232 and 236 may be rotatably attached to bead or seam 248, 246, respectively, allowing for different levels of tension in the elongated flexible members 226 and 228, and causing panels 204 and 204 to move toward anchor points 199 to a greater or lesser degree according to the tension applied, thereby compressing belongings 240 to varying degrees. Generally, rigid edges of panels spread compressive forces from elongated flexible members. More than one elongated flexible member may be attached to a panel, thereby allowing more granular compression of different sections of a divider panel, or enabling more even distribution of compressive loads on the user's belongings 240.

[0058] Panels 202, 204 may each be rigid or semi-rigid, which would concentrate compressive forces near the elongated flexible members, or panels may be rigid, which would allow for more even distribution of compressive forces on a user's belongings 240. Rigidity of panels 202, 204 may be different from one another. Rigidity may be different within regions of a panel while maintaining rigid edges of the panels 202, 204.

[0059] FIG. 5D is a top isometric view of the luggage

article and showing another example of the adjustable divider system 200 with the panels 202, 204 in a first closed position resting on top of the contents, and being secured together in the closed position.

[0060] One or more fasteners 230, 232, 234, 236 may connect to panels 202 and 204, respectively. In one example, the fasteners 230, 232, 234, 236 may be buckles. The fasteners 230, 232, 234, 236 may be fixedly attached to the panels 202, 204 at or near one or more edges 212, 220, 206, 218, 208, 216, 210, 214 of the panels. Alternately, the fasteners 230, 232, 234, 236 may be fixedly attached to the body of the panels 202, 204, for example at layers 211, 217. The fasteners 230, 232, 234, 236 may connect to the panels 202, 204 directly, or via a length of an elongated flexible member, or other suitable intermediary member. The fasteners 230, 232, 234, 236 may connect to the panels 202, 204 rotatably, rigidly, slidably, or flexibly.

[0061] One or more of the elongated flexible members may connect to the panels 202, 204 at the outer edges 212, 220; top edges 206, 218; inner edges 208, 216; lower edges 210, 214 (shown in FIG. 2). Alternately, one or more of the elongated flexible members 222, 224, 228, 226 may connect to the panels 202, 204 anywhere within the body of the panels 202, 204. For example, one or more of the elongated flexible members 222, 224, 228, 226 may connect to the panels 202, 204 on one or more of layers 211, 217.

[0062] The connection of one or more of the elongated flexible members 222, 224, 228, 226 to the panels 202, 204 (either at the edges, 212, 220, 206, 218, 208, 216, 210, 214 or on the layers 211, 217) may be fixed, or it may be adjustable. For example, one or more of the elongated flexible members 222, 224, 228, 226 may selectively adjustably attach, such as in one example by slidably connecting, to one or more of the panels 202, 204. Alternately, one or more of the elongated flexible members 222, 224, 228, 226 may fixedly connect to one or more of the panels 202, 204 such as with stitching, adhesives, or other suitable methods. Alternately, one or more of the elongated flexible members 222, 224, 228, 226 may be integrally formed with the layers 211, 217, respectively. For example, the elongated flexible members 222 and 226 be formed from the same piece of fabric as layer 211.

[0063] As shown with reference to both FIG. 5D and FIG. 5E, an adjustable connection of elongated flexible members 222, 226 to panel 202 or elongated flexible members 224, 228 to panel 204, may allow for panels 202, 204 to be adjustable in position relative to the rear wall 112. For example, the elongated flexible members 222, 224, 228, 226 may slidably connect to one or more grasping members 286, 282, 288, 284, respectively. In various examples, the grasping members 286, 282, 288, and/or 284 may be cinches, buckles, clasps, clamps, or the like. One or more of the elongated flexible members 222, 224, 228, 226 may slidably connect to one or more of the grasping members 286, 282, 288, 284, to lengthen

or shorten a length of the elongated flexible members 222, 224, 228, 226 between the one or more grasping members 286, 282, 288, 284 and the one or more anchor points 199, thereby adjusting a distance between one of the panels 202, 204 from the rear wall 112. One or more of the elongated flexible members 222, 224, 228, 226 may impart a tension force across a dimension of one or more of the panels 202, 204, respectively. For example, the elongated flexible member 224 and the grasping member 282 may cooperate with elongated flexible member 222 and the grasping member 286, and the buckles 230, 234 to impart a tension force across the width of the panel 204 in the layer 217, and across the width of the panel 202 in the layer 211.

[0064] FIG. 5F shows a similar view to FIG. 5E and 5C, but with elongated flexible members 226 and 228 in a tensioned position. Beneath panel 204 are shown soft user belongings 240, such as clothes. These belongings 240 may be in a highly compressed state in order to achieve a desired packing density of the luggage article 100, e.g., belongings 240 may be compressed to fit more items in the luggage article 100. Alternately, the belongings 240 may be compressed to prevent them from moving relative to one another or to the interior of the luggage article 100 during transit, to prevent damage to the belongings 240. Beneath panel 202 is a rigid object, such as a box, to show how the panels 202, 204 may be moved toward the rear panel to compress contents having different structural characteristics.

[0065] Now, with reference to FIG. 6A, an example of a fastener is described. FIG. 6A is a side elevation view of a fastener portion according to one embodiment. In this example, the fastener portion is a buckle 300, which in this example may have a first body 301 and a second body 303. First body 301 and second body 303 may be adapted to be releasably coupled to one another. First body 301 may have a first releasable portion 310. Second body 303 may have a corresponding second releasable portion 325. First releasable portion 310 and second releasable portion 325 may be releasably coupled. Buckle 300 may have one or more releasing actuators 314, 315, that when actuated, cause first releasable portion 310 and second releasable portion 325 to release from one another. Releasing actuators 314 and 315 may be adapted to be received in receiving features 316 and 318.

[0066] FIGS. 6A, 6B show a first releasable portion 310 may have a clasping feature 302 and an opposing clasping feature 304, thereby defining a recess 306, together defining a clamping means 308. Recess 306 may be adapted to rotatably couple with a rigid or semi-rigid bead or piping, such as for example, bead or piping 248. Features 302 and 304 may be of any suitable shape to enable clamp 308 to at least rotatably couple to structures to which it is clamped or secured. For example, with a bead or piping 248, pultrusion, or other rigid edge of a panel 202. Similarly, second releasable portion 325 may have a feature 320 and an opposing feature 322, thereby defining a recess 324, and together defining a clamp 312.

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Features 320 and 322 may be of any suitable shape to rotatably couple with a bead or piping. Recess 324 may be adapted to rotatably couple with a rigid or semi-rigid bead or piping, such as for example, bead or piping 246 (shown in FIGS. 5A-5B)

[0067] FIG. 6B is an isometric view of a buckle 300 of the adjustable divider system 200 according to one embodiment. Releasable portions 310 and 325 may have a guide bars 330 and 342 configured to guide an elongated flexible member or elongated flexible member as shown for example in FIGS. 5B-5C. Guide bars 330 and 342 may be configured to guide an elongated flexible member radially outward with respect to a rotation axis of clamping means 308 and 312, thereby allowing an elongated flexible member to move to a released position when buckle 300 is lifted. Releasable portions 310 and 325 may further have one or more receiving orifices 332, 352; and/or 344, 354 adapted to receive an elongated flexible member. Releasable portion 310 and 325 may have a friction member 334, 348 adapted to apply gripping friction against a flexible elongated member when releasable portion 310 or 325 is in a first tensioned position. Friction member 334, 348 may be adapted to release gripping friction against a flexible elongated member when releasable portion 310 is in a second, released position. Friction member 334, 348 may have one or more prominences or teeth 336, 346 that aid and enhance the ability of the friction members 334, 348 to apply gripping friction to a flexible elongated member.

[0068] FIG. 6C shows one example of a partial isometric detail view of a clamping means 308 of a fastener 300, rotatably coupled to a bead or piping 248, according to one embodiment. As shown in the figure, first releasable portion 310 is coupled by way of a C-shaped clamping means 308 fit over piping or bead 248. Alternately, a Cshaped clamping means 308 may fit over a pultrusion where the flexible field or fabric is cut away for such purposes. First releasable portion 310 is free to rotate about a longitudinal axis 307 of the attached section of bead 248, but will not release from bead 248 in a transverse direction relative to the cross section of the bead. In this way, first releasable portion 310 may carry the part or all of the forces generated when elongated flexible member 226 (shown in FIGS. 3, 5B, and 5C) is tightened, without affecting the tension on corresponding elongated flexible member 228, thereby allowing a user to selectively compress different sections of divider panels relative to each other.. In other examples, clamping 308 may be placed at different locations on first releasable portion 310. For example, as shown in FIG. 6A, clamping means 308 may be placed at the bottom of first releasable portion 310 at position 317. Clamping means 312 may be placed at the bottom of the second releasable portion 325 at position 311. Alternately, according to other examples, fastener 300 may be attached to other edges of panels 202, 204, for instance at edge 212, and 220. In other examples, still, fastener 300 may not attach to panels 202, 204. While the clamp 312 is shown herein as a C-clamp to

allow a snap fit and rotational movement relative to the object it is clamped too, clamp 312 may alternatively include other structures, such as a plastic strap that is attached fixedly at one end to the panel divider and at its other end to the fastener. The plastic strap allows the fastener to move relative to the divider, and to change orientation relative to the elongated flexible member.

[0069] FIGS. 7A-7C are partial schematic cross-sectional views of an adjustable divider system 200, based on the cross-sectional view of FIG. 5C, showing an example of an adjustable divider system 200 including panels slidably engaged with elongated flexible members, and rotatably engaged with examples of the clamp of FIGS. 6A-6C in the process of being loosened. FIG. 7A shows panels 202 and 204 in a closed, tensioned position, such as may be configured when a luggage article 100 contains personal belongings 240 (as shown in FIG. 5C). As described previously, first releasable portion 310 and second releasable portion 325 of buckle 300 may be configured with clamp means 308 and 312, respectively rotatably attached to beads 248 and 246, respectively. As is shown by directional arrows in FIGS. 7B, 7C, when a user pulls one or more panels 202 and 204 in a direction away from a rear wall 112 of the luggage article 100, for example by way of handles 244 and/or 242 (shown in FIG. 5A), the rotational motion of clamp means 308 and 312 with respect to beads 248 and 246 causes friction member 334 and 348 to move to a released position with respect to elongated flexible members 226 and 228, thereby allowing the length of one or more respective elongated flexible members to increase. As shown by FIGS. 7B and 7C, as panels 202 and 204 move away from a rear wall 112 (shown in FIGS. 5B, 5C), free ends 278 and 280 of elongated flexible members 226 and 228 move toward buckle 300, thereby lengthening a tensioned section of the elongated flexible members, and decompressing personal belongings 240. This process does not require more than one hand and may be accomplished by singlehandedly, thereby increasing ease of use of the adjustable divider system 200.

[0070] FIGS. 8A-8H are simplified schematic plan views of examples of other embodiments of divider panels according to the present disclosure. The embodiments shown have elongated flexible members, extended to anchor points 199, and extending laterally over an outer edge of a panel to an inner edge of a panel, and connecting to opposing elongated flexible members over opposing panels. Panels 202, 204 may be oriented at any angle with respect to the height or width directions of the luggage article 100. For example, Panels 202, 204 may be oriented at a orthogonal angle relative to the height and/or width dimensions of the luggage article 100. Panels 202 and 204 may be congruent or they may be of differing shapes and sizes from one another. Panels may cover different amounts of the main internal storage volume 101. FIGS. 8A-8C, 8E show embodiments of a luggage divider in which the opposing adjacent edges of the panels are oriented with a height direction of a lug-

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gage article 100. For example, in FIG. 8A, panels may cover most or substantially all of the open area of the main internal storage volume 101, with one panel covering half of the opening to the main internal storage volume 101, and one panel covering the other half. Alternately, as shown in another embodiment in FIG. 8B, panels may cover a smaller amount of the open area. As shown in FIG. 8C, panels may be made with shapes that are nonrectangular. As shown in FIG. 8D, panels may be oriented at a non-orthogonal angle relative to the height and/or width dimensions of the luggage article 100, and may not cover portions of the open area at all. As shown in FIG. 8E, panels may be of differing shapes, with one larger than the other. FIGS. 8F-8H show embodiments of a luggage divider in which the opposing adjacent edges of the panels are oriented with a width direction of a luggage article 100.

[0071] The luggage article 100 may be formed from a variety of materials and means. For example, the housing 102, among others, may be formed from a thermoplastic material (self-reinforced or fiber reinforced), ABS, polycarbonate, polypropylene, polystyrene, PVC, polyamide, and/or PTFE, among others. In some examples, portions of the luggage article 100 may be extruded from aluminum or other similar metal. In addition, the housing 102 may be formed from fiber reinforced epoxy, resin, or other similar material. The luggage article 100 may be formed or molded in any suitable manner, such as by plug molding, blow molding, injection molding, extrusion, casting, or the like. As noted above, the luggage article 100 may be formed from soft side material and/or hard side material. Exemplary materials are noted above.

[0072] All relative and directional references (including: upper, lower, upward, downward, left, right, leftward, rightward, top, bottom, side, above, below, front, middle, back, vertical, horizontal, and so forth) are given by way of example to aid the reader's understanding of the particular examples described herein. They should not be read to be requirements or limitations, particularly as to the position, orientation, or use unless specifically set forth in the claims. Connection references (e.g., attached, coupled, connected, joined, and the like) are to be construed broadly and may include intermediate members between a connection of elements and relative movement between elements. As such, connection references do not necessarily infer that two elements are directly connected and in fixed relation to each other, unless specifically set forth in the claims.

[0073] Those skilled in the art will appreciate that the presently disclosed examples teach by way of example and not by limitation. Therefore, the matter contained in the above description or shown in the accompanying drawings should be interpreted as illustrative and not in a limiting sense. The following claims are intended to cover all generic and specific features described herein, as well as all statements of the scope of the present method and system, which, as a matter of language, might be said to fall there between.

Claims

1. A luggage article 100 comprising:

at least one body 197 defined by a plurality of walls 110, 112, 114, 116 including a rear wall 112 and a plurality of side walls 118, 120 together forming a first internal storage volume 101; a first panel 202 and a second panel 204, each panel 202, 204 including an outer edge 212, 220 and an inner edge 208, 216 the first and second panels 202, 204 positionable over the first internal storage volume 101 and being movable relative to the rear wall 112, the first and second panels 202, 204 side by side with the inner edges 208, 216 of each panel 202, 204 adjacent each other, and a dividing line 219 formed between the adjacent inner edges 208, 216;

the first panel and second panels 202, 204 releasably secured together;

a first elongated flexible member 222, 224, 226, 228 secured to the at least one body 197 at an anchor point 199 positioned closer to the rear wall 112 than the first panel 202, 204, wherein the first elongated flexible member 222, 224, 226, 228 engages the first panel 202, 204;

a second elongated flexible member 222, 224, 226, 228 secured to the at least one body 197 at another anchor point 199 positioned closer to the rear wall 112 than the second panel 202, 204, wherein the second elongated flexible member 222, 224, 226, 228 engages the second panel 202, 204;

at least one of the first and second elongated flexible members 222, 224, 226, 228 is adjustable in length to change a distance between the respective at least one of the first and second panels 202, 204 and the rear wall 112;

at least one of the first and second elongated flexible members 222, 224, 226, 228 extends at least partially across the respective first or second panels 202, 204 in a direction from the respective outer edge 212, 220, 216 to the respective inner edge 208.

The luggage article 100 according to claim 1, wherein:

the first elongated flexible member 222, 224, 226, 228 engages the first panel by extending over the outer edge 212, 220 of the first panel 202, 204 and along a width of the first panel 202, 204 to the inner edge 208, 216 of the first panel 202, 204;

the second elongated flexible member 222, 224, 226, 228 engages the second panel by extending over the outer edge 212, 220 of the second panel 202, 204 and along a width of the second

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panel 202, 204 to the inner edge 208, 216 of the second panel 202, 204;

at least one of the first and second elongated flexible members 222, 224, 226, 228 extends in a direction across the dividing line 219 between the first panel and second panels 202, 204; and the first elongated flexible member 222, 224, 226, 228 is configured to releasably couple to the second elongated flexible member 222, 224, 226, 228 near the adjacent inner edges 208, 216.

- 3. The luggage article 100 according to claim 1 or 2, wherein both first and second elongated flexible members 222, 224, 226, 228 are adjustable in length to change the distance between at least one of the first and second panels 202, 204 and the rear wall 112.
- 4. The luggage article 100 according to any of the preceding claims, wherein: the first elongated flexible member 222, 224, 226, 228 and the second elongated flexible member 222, 224, 226, 228 each extend at an angle relative to the dividing line 219.
- 5. The luggage article 100 according to any of the preceding claims, wherein:

the outer edge 212, 220 of at least one of the first and second panels 202, 204 is rigid; or at least one panel 202, 204 is formed by a peripheral frame and a flexible field; or at least one of the panels 202, 204 is comprised of a rigid body.

6. The luggage article 100 according to any of the preceding claims, wherein:

a first fastener portion 230, 232, 234, 236, 300 is attached to one of the first or second panels 202, 204;

a second fastener portion 230, 232, 234, 236, 300 is attached to the other of the first or second panels 202, 240; and

the first and second fastener portions 230, 232, 234, 236, 300 are configured to releasably couple together.

7. The luggage article 100 according to claim 6, wherein one of the first or second fastener portions 230, 232, 234, 236, 300 is coupled to one of the first or second elongated flexible members 222, 224, 226, 228 and defines a length of the respective elongated flexible member 222, 224, 226, 228 between the respective anchor point 199 and the respective first or second fastener portions 230, 232, 234, 236, 300.

The luggage article 100 according to claim 7, wherein.

the first or second fastener portions 230, 232, 234, 236, 300 is selectively adjustably positionable along the length of the respective elongated flexible member 222, 224, 226, 228; and wherein changing the length of the respective elongated flexible member 222, 224, 226, 228 changes the distance between the corresponding panel 202, 204 and the rear wall 112.

The luggage article 100 according to claim 8, wherein:

the first internal storage volume 101 is configured to include user contents 240; and wherein reducing the distance between the corresponding panel 202, 204 and the rear wall 112 reduces the first internal storage volume 101 to compress any user contents 240.

- **10.** The luggage article 100 according to any one of claims 6-9, wherein the first or second fastener portions 230, 232, 234, 236, 300 attaches to the inner edge 208, 216 of the corresponding panel 202, 204.
- 11. The luggage article 100 according to any of the claims above, wherein: the anchor point 199 for the first panel 202, 204 and/or the anchor point 199 for second panel 202, 204 is/are positioned on the rear wall 112, or on the side wall 118, 120, or at an intersection of side wall 118, 120 and rear wall 112.
- **12.** The luggage article 100 according to claim 1, wherein:

the first elongated flexible member 222, 224, 226, 228 engages the first panel 202, 204 by selectively adjustably attaching to the first panel 202, 204;

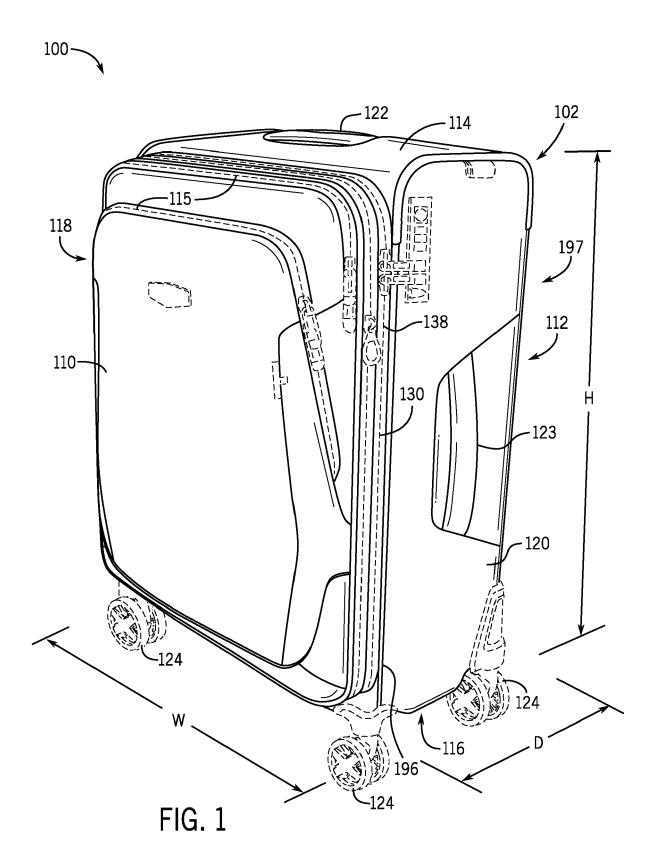
the second elongated flexible member 222, 224, 226, 228 engages the second panel by selectively adjustably attaching to the second panel 202, 204; and

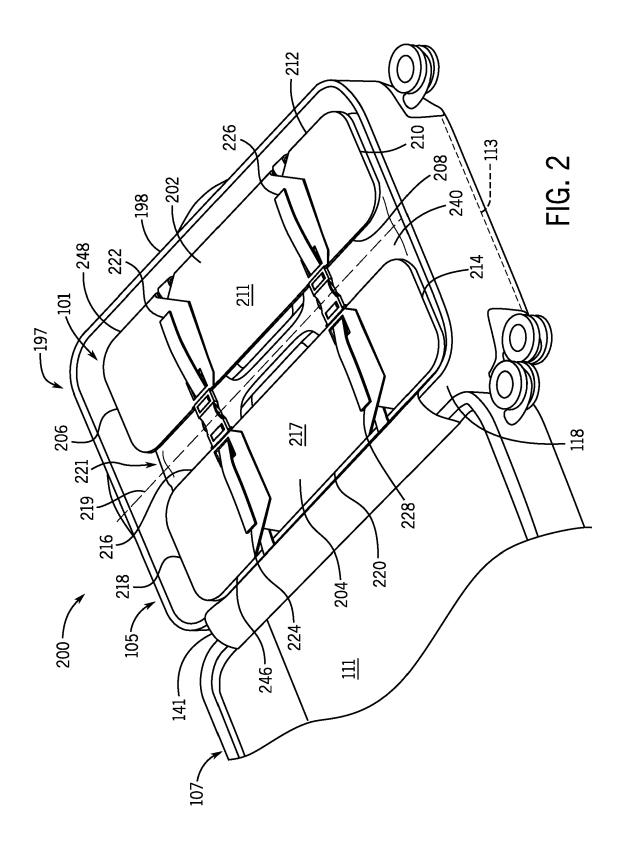
the first and second panels 202, 204 are releasably coupled near the adjacent inner edges 208, 216.

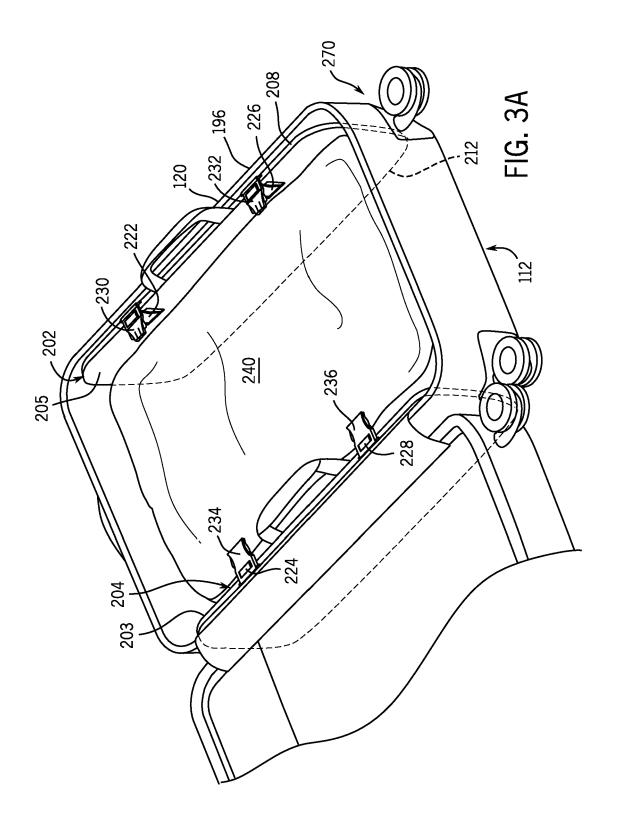
- **13.** The luggage article 100 according to claim 1, wherein the first and second panels 202, 204 are releasably coupled near the adjacent inner edges 208, 216.
- 14. The luggage article 100 according to any of the preceding claims, wherein the first elongated flexible member 222, 224, 226, 228 is attached to the first panel 202, or the second elongated flexible member

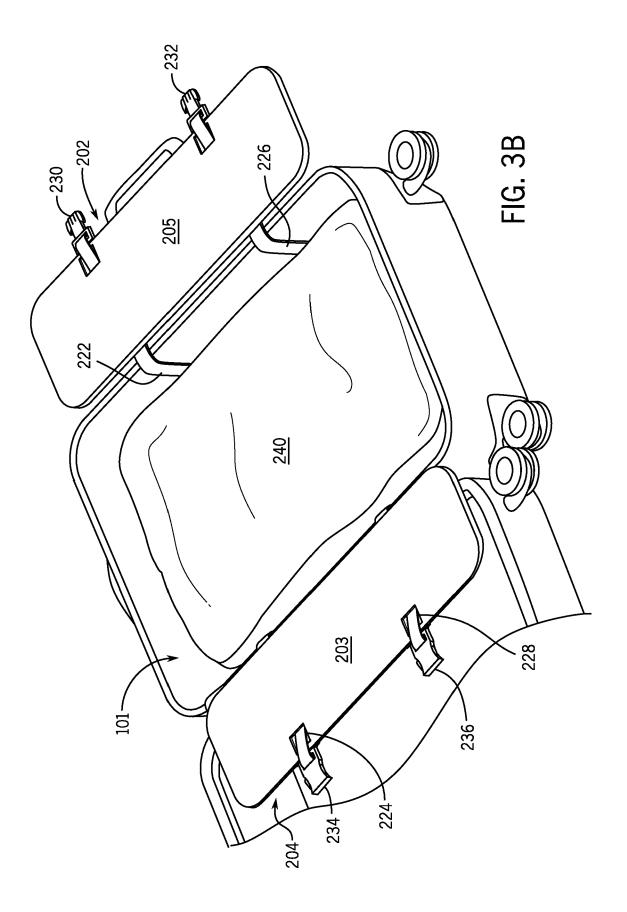
222, 224, 226, 228 is attached to the second panel 202.

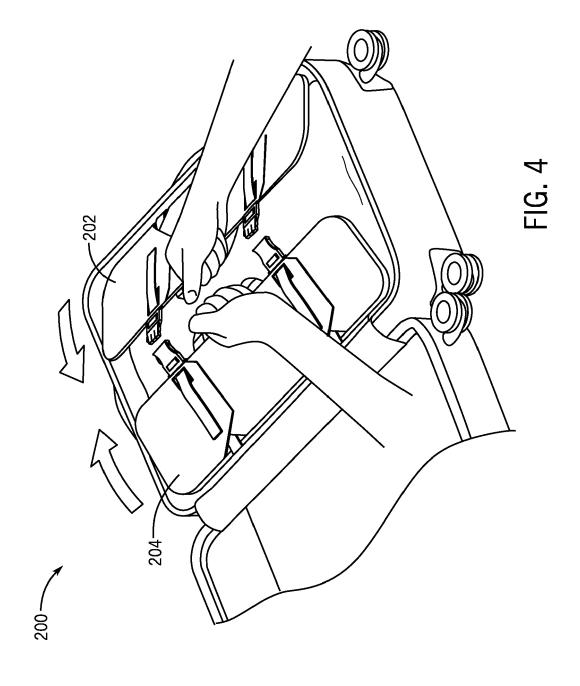
15. The luggage article 100 according claim 14, wherein the first elongated flexible member 222, 224, 226, 228 is attached to the first panel 202 at the inner edge 208, or the second elongated flexible member 222, 224, 226, 228 is attached to the second panel 204 at the inner edge 216.

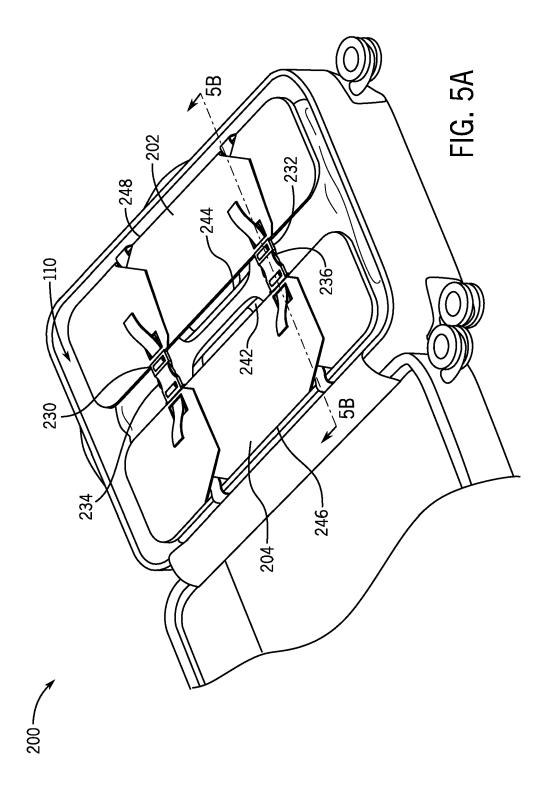


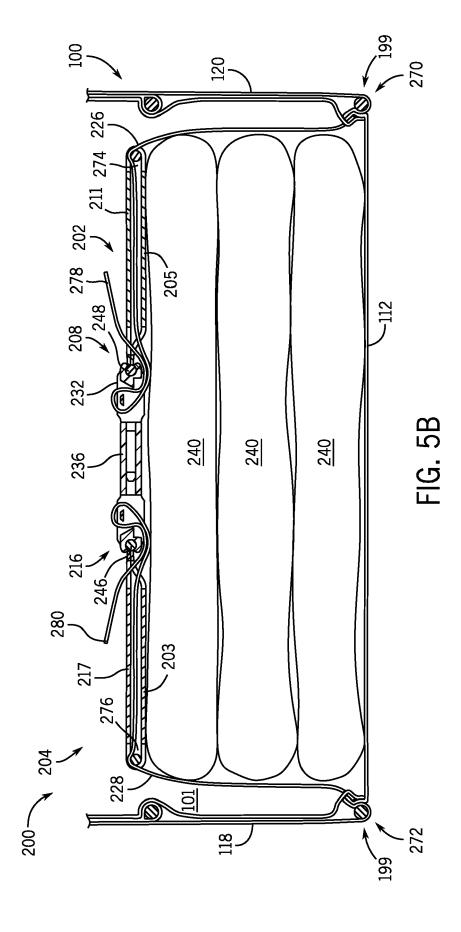


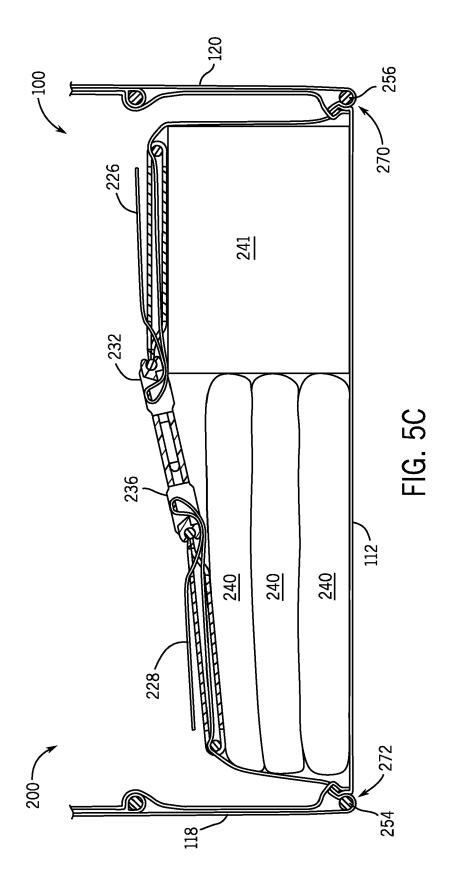


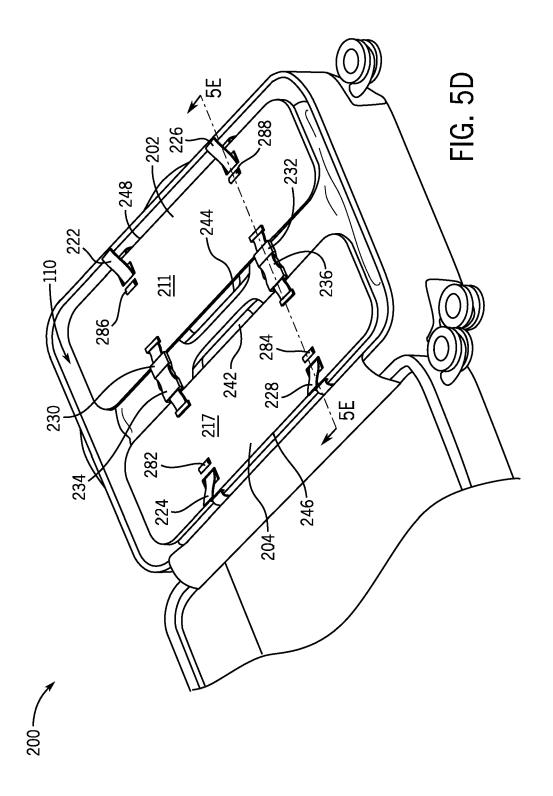


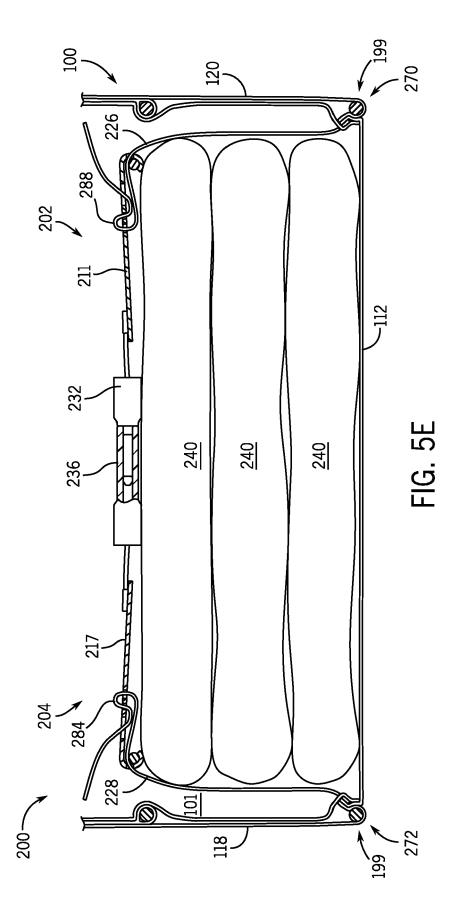


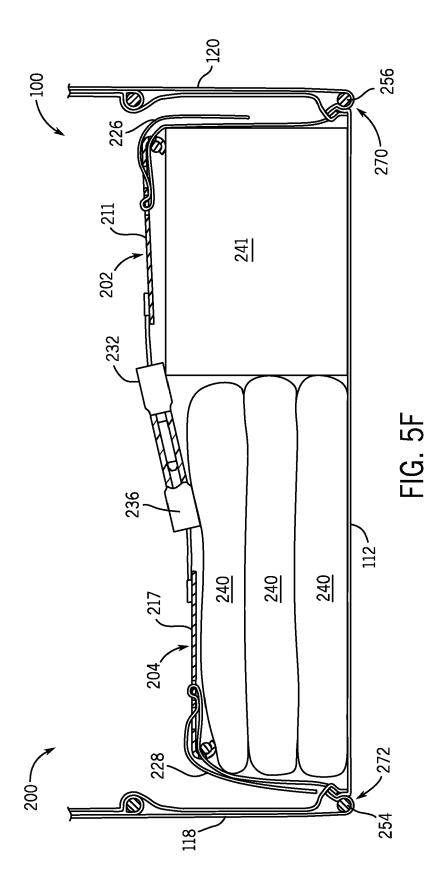


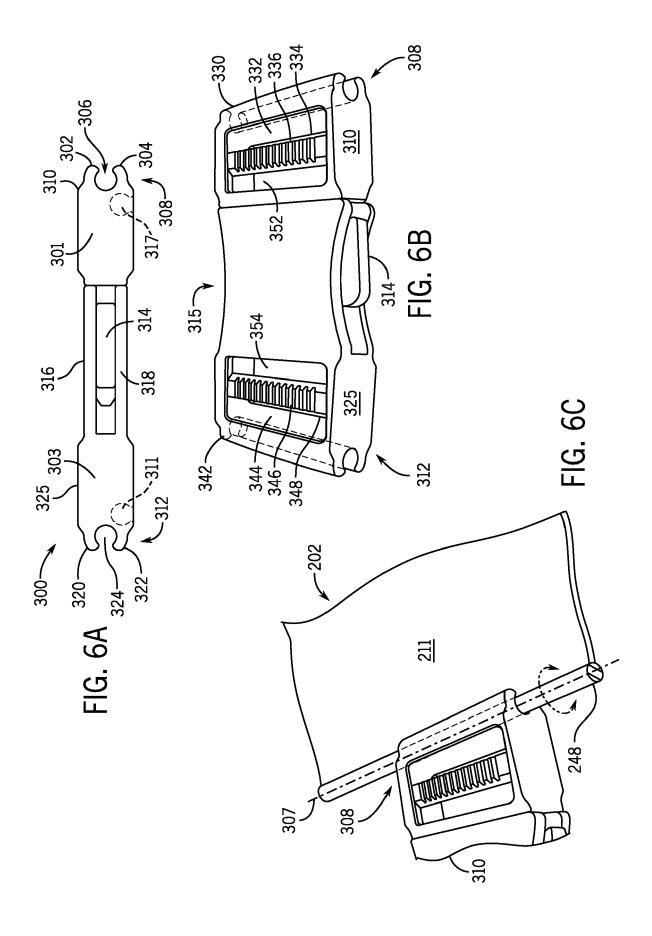


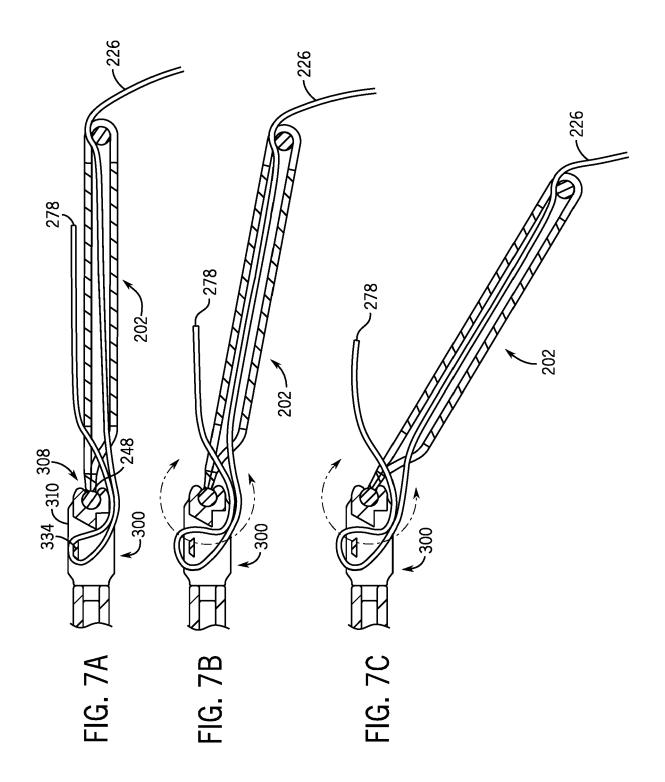


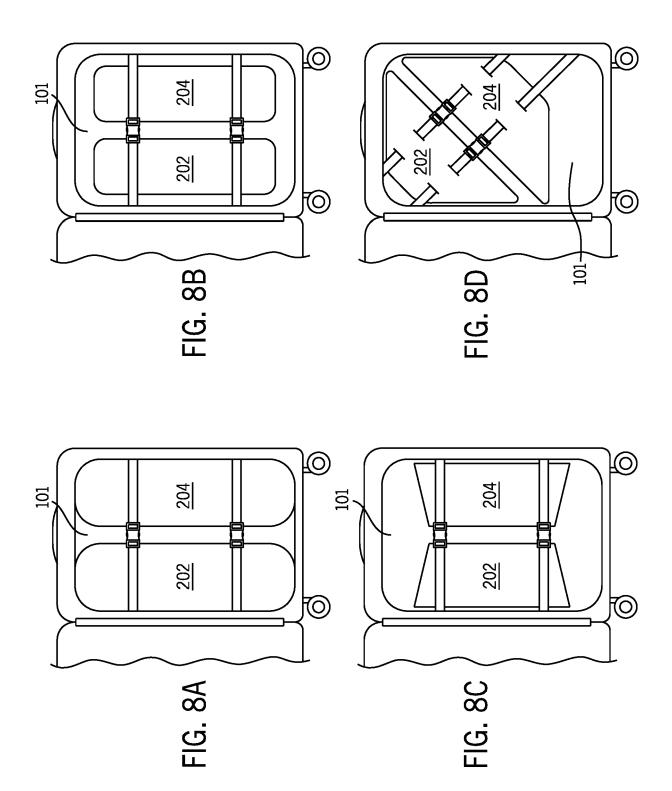


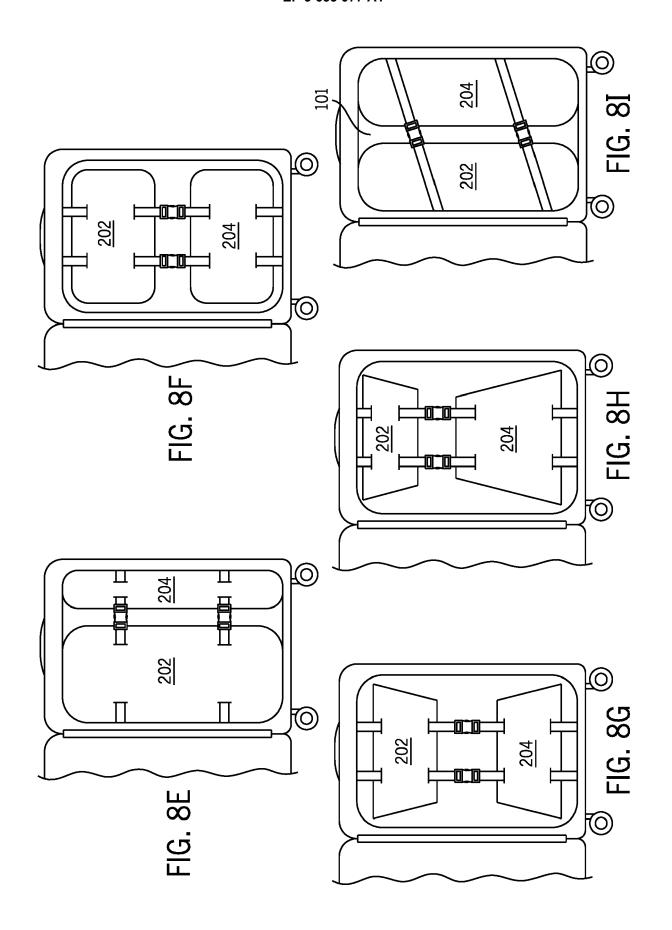














Category

EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT

Citation of document with indication, where appropriate,

of relevant passages

Application Number

EP 19 16 7244

CLASSIFICATION OF THE APPLICATION (IPC)

Relevant

to claim

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	Place of search
04C01)	The Hague
82 (P	CATEGORY OF CITED DOCUMENTS
EPO FORM 1503 03.82 (P04C01)	X : particularly relevant if taken alone Y : particularly relevant if combined with ano document of the same category A : technological background O : non-written disclosure P : intermediate document

- Particularly relevant if taken alone
 P: particularly relevant if combined with another document of the same category
 A: technological background
 O: non-written disclosure
 P: intermediate document

——	or relevant pass	-9	12 3141111	· '
X,D	US 6 435 324 B1 (HC [US]) 20 August 200 * abstract; figures	02 (2002-08-20)	1,3-6, 10-15	INV. A45C5/03 A45C13/02
A	16 May 2014 (2014-0	 D1 (RIMOWA GMBH [DE]) D5-16) - [0043]; figures 4,5	1	A45C13/03
A	JP S54 136107 U (-) 21 September 1979 (* figure 2 *	(1979-09-21)	1	
A	US 2009/236195 A1 (24 September 2009 (* abstract; figures		1	
				TECHNICAL FIELDS SEARCHED (IPC)
				A45C
	The present search report has	been drawn up for all claims		
	Place of search	Date of completion of the search	1	Examiner
	The Hague	25 September 20	19 Lon	go dit Operti, T
X : parl Y : parl doc	ATEGORY OF CITED DOCUMENTS ticularly relevant if taken alone ticularly relevant if combined with anot ument of the same category nnological background	L : document cited	ocument, but publis ate I in the application	shed on, or

& : member of the same patent family, corresponding document

EP 3 653 077 A1

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 19 16 7244

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

25-09-2019

10	Patent document cited in search report		Publication date		Patent family member(s)	Publication date
	US 6435324	В1	20-08-2002	NONE		
15	DE 202013001420	U1	16-05-2014	NONE		
	JP S54136107	U	21-09-1979	NONE		
	US 2009236195	A1	24-09-2009	NONE		
20						
25						
30						
35						
40						
45						
50						
55	FORM P0459					

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

EP 3 653 077 A1

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 3351130 A1 [0004]
- CN 205658510 U **[0004]**
- EP 2904926 B1 **[0004]**
- EP 3073853 B1 [0004]
- EP 2826396 B1 [0004]
- EP 2230959 B1 **[0004]**
- EP 2779858 B1 **[0004]**

- US 6591950 B1 [0004]
- US 20080128231 A1 [0004]
- FR 2921237 A1 [0004]
- US 6435324 B1 [0004]
- FR 2711044 A1 **[0004]**
- EP 0530067 A1 [0004]
- EP 0379438 B1 [0004]