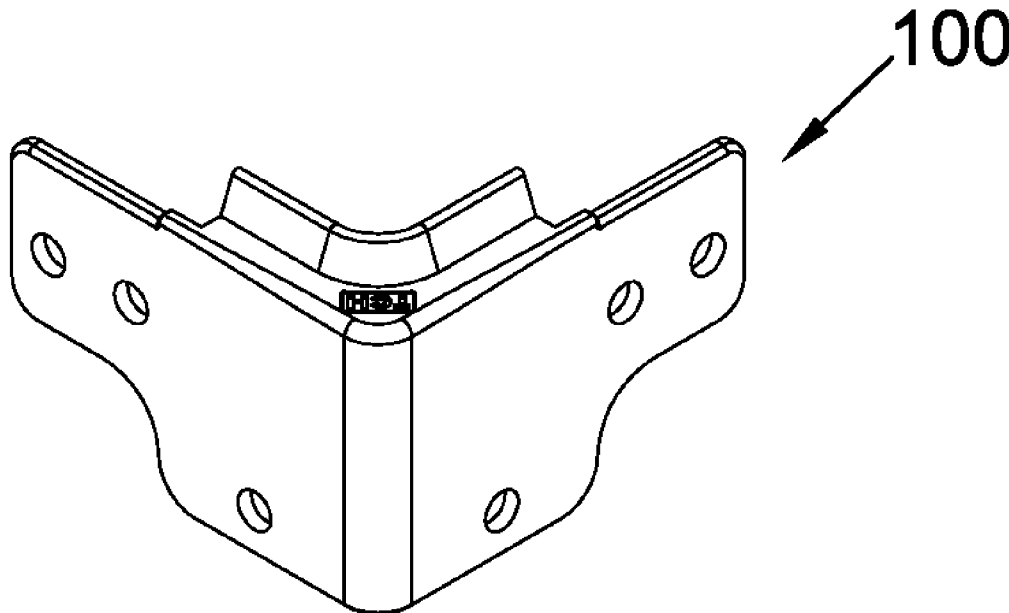




US 20120012596A1

(19) **United States**(12) **Patent Application Publication**
HOLLEBONE et al.(10) **Pub. No.: US 2012/0012596 A1**(43) **Pub. Date: Jan. 19, 2012**(54) **VALANCE CORNER**(52) **U.S. Cl. 220/694**(75) **Inventors:** **Kenneth Hugh HOLLEBONE**,
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(US)(73) **Assignee:** **T.C.H. Sales Inc.**, Toronto (CA)(21) **Appl. No.:** **13/180,861**(22) **Filed:** **Jul. 12, 2011****Related U.S. Application Data**(60) **Provisional application No. 61/365,599, filed on Jul.**
19, 2010.**Publication Classification**(51) **Int. Cl.**
B65D 90/00 (2006.01)(57) **ABSTRACT**

A valance corner including an engagement portion having first, second and third mating surfaces and a sealing edge, wherein the sealing edge includes first and second sealing extensions arranged orthogonal relative to each other and having first and second ends, respectively, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge, respectively. The valance corner further includes a securing portion having first and second securing extensions arranged orthogonal relative to each other, the securing portion fixedly secured to the engagement portion. The first and second securing extensions are arranged parallel to the first and second sealing extensions, respectively.



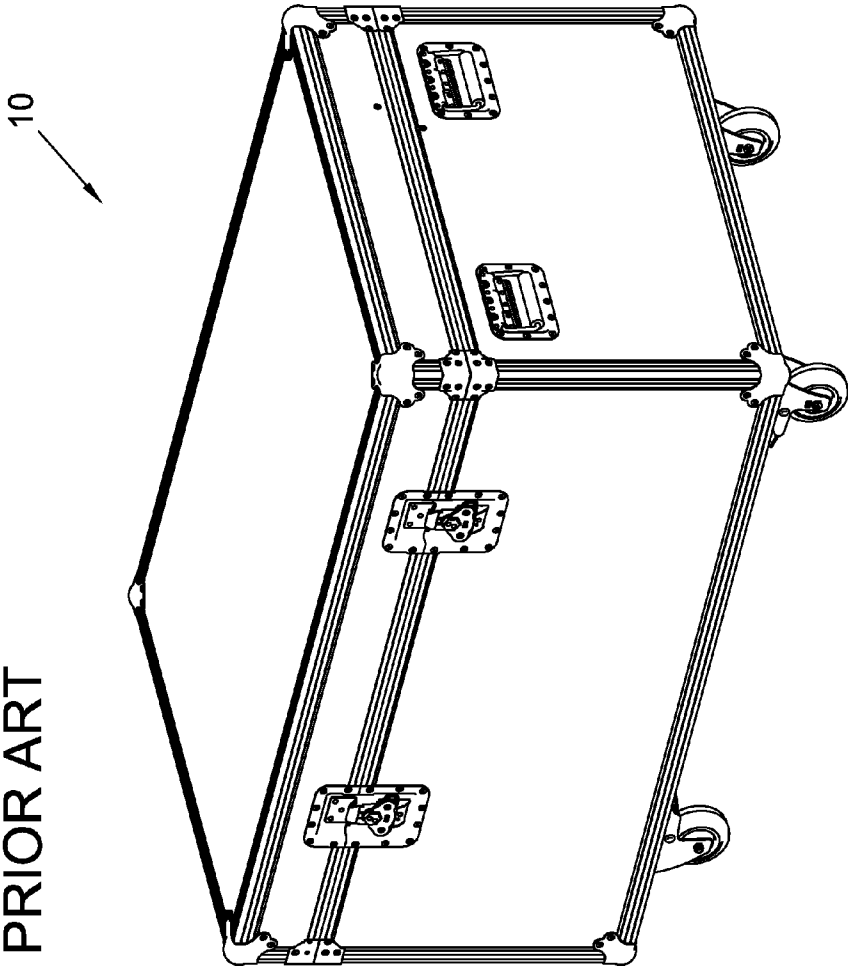


Fig. 1a

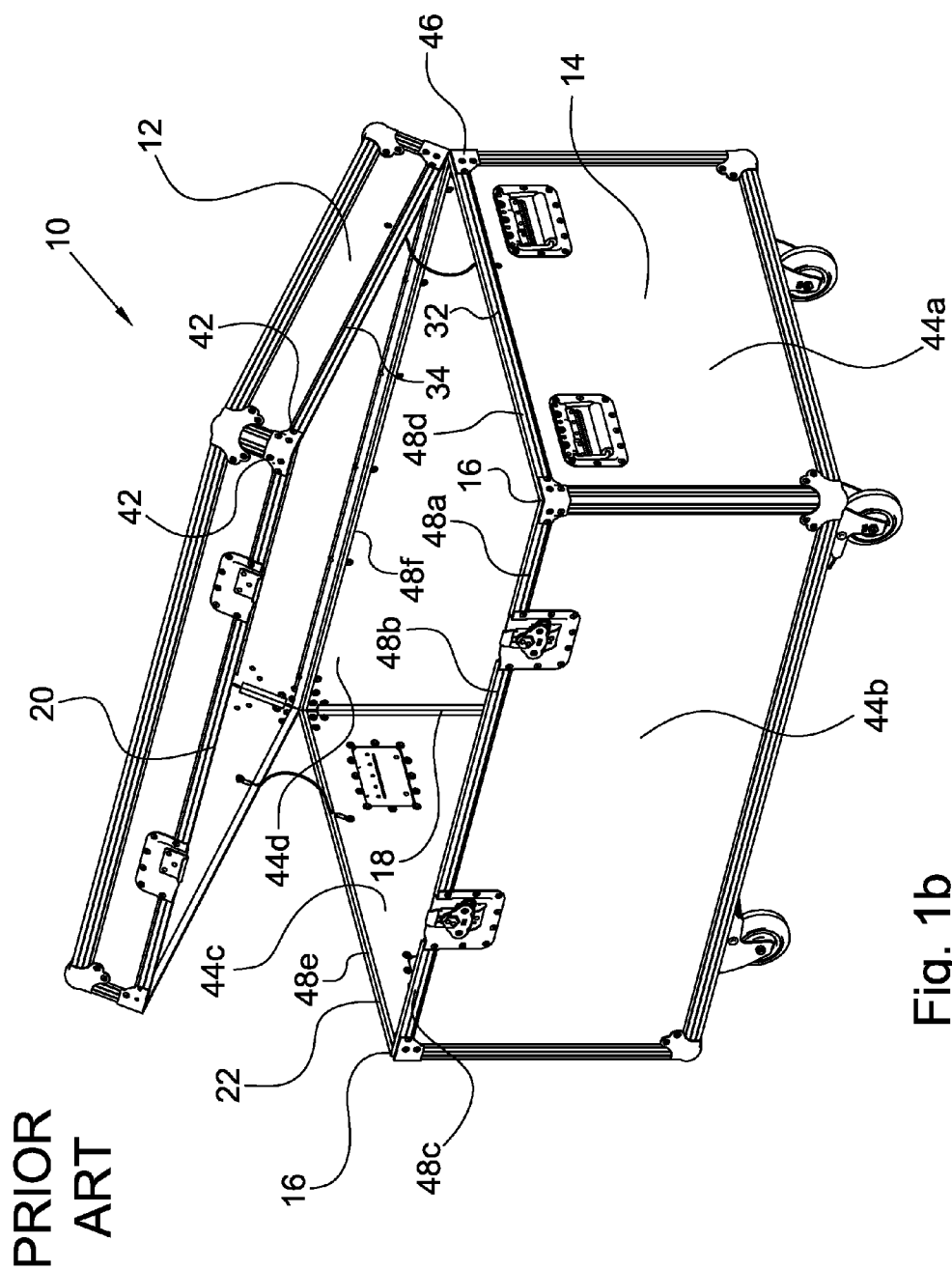
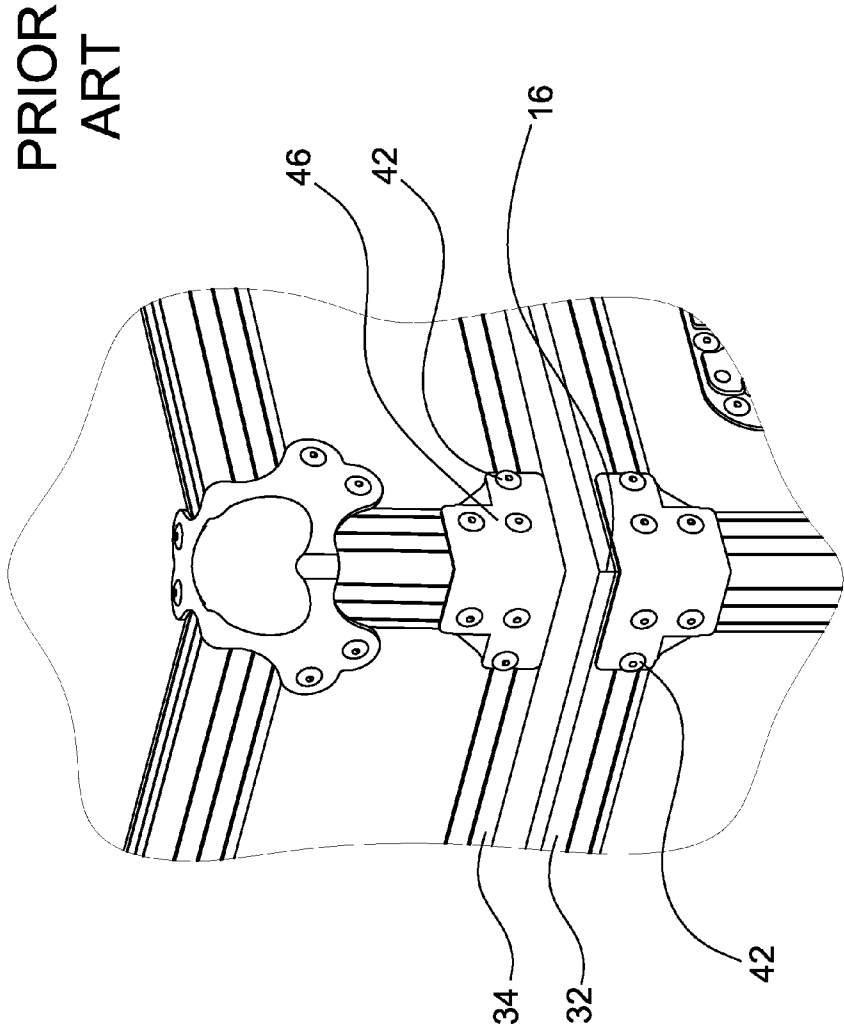
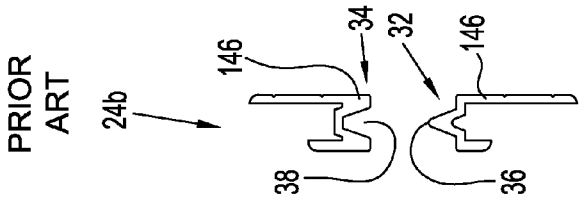
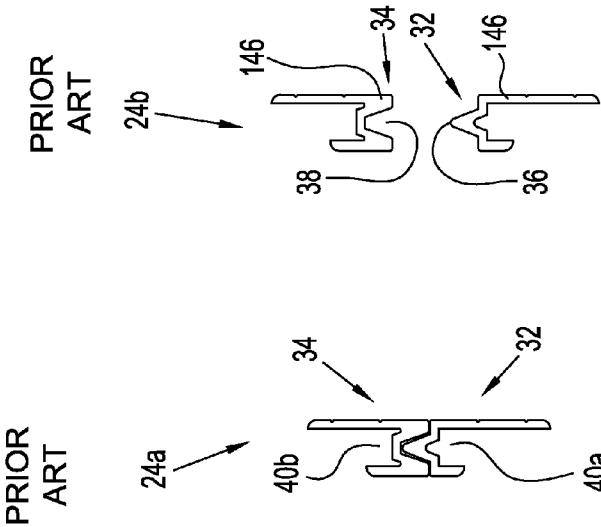
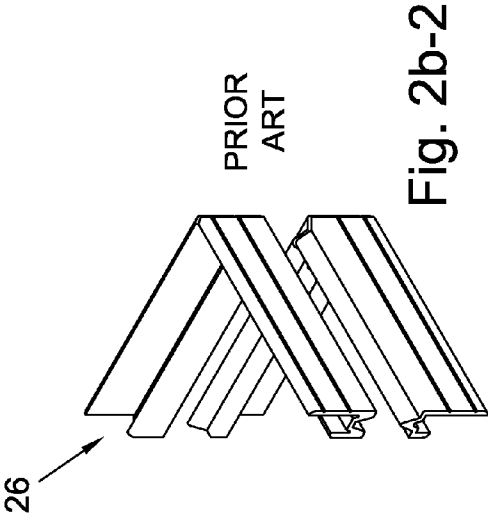
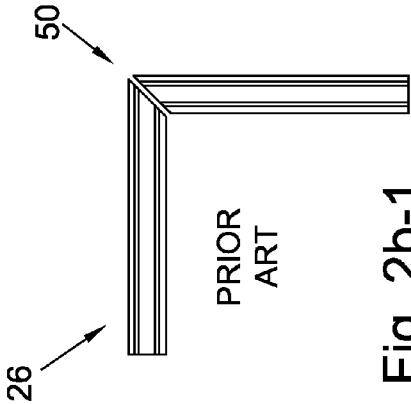


Fig. 1b





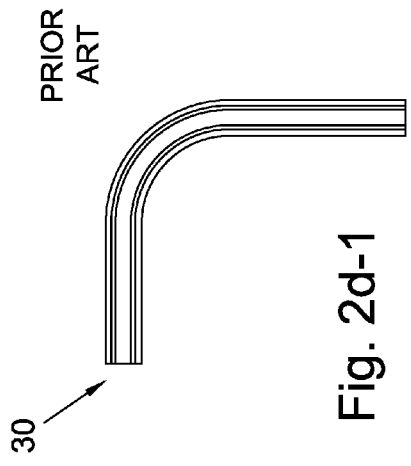


Fig. 2d-1

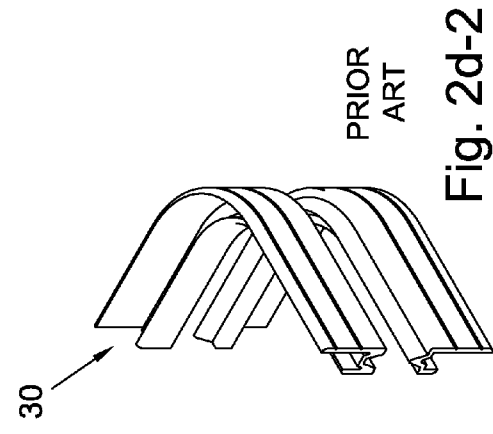


Fig. 2d-2

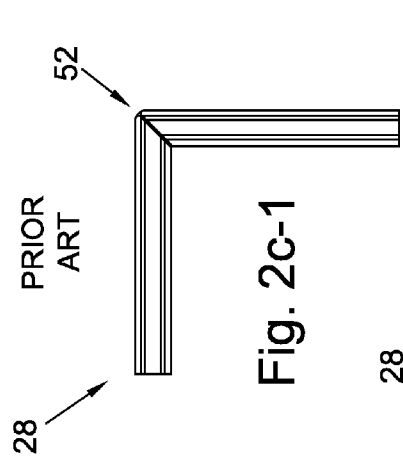


Fig. 2c-1

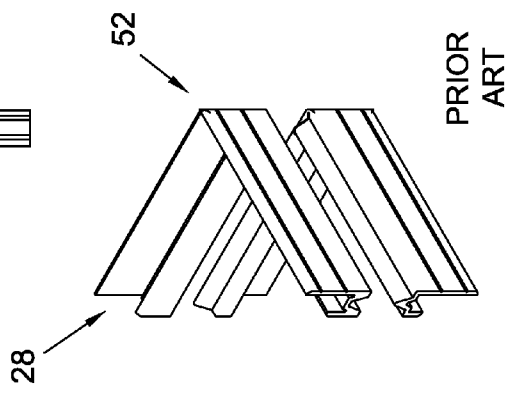


Fig. 2c-2

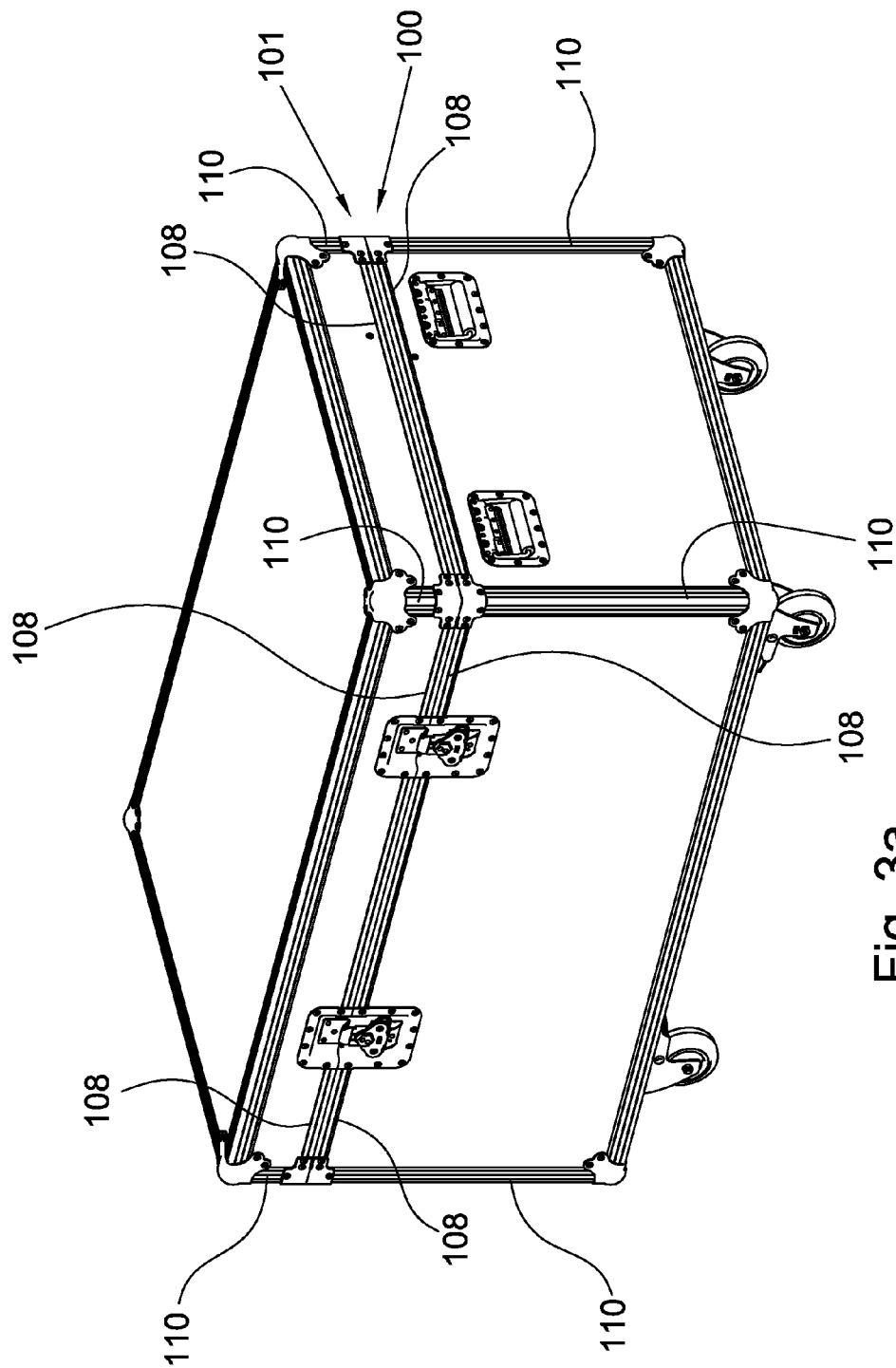


Fig. 3a

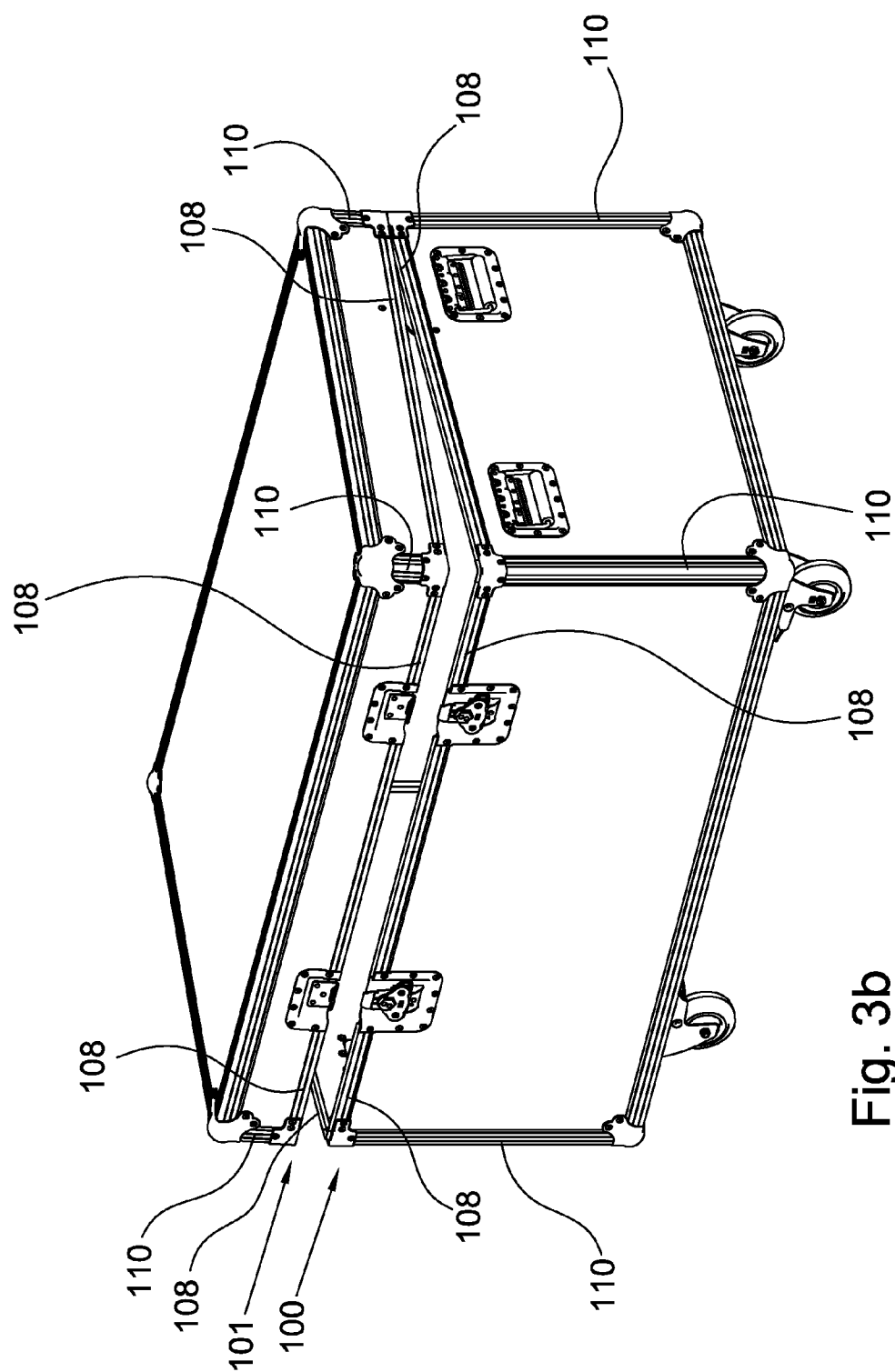


Fig. 3b

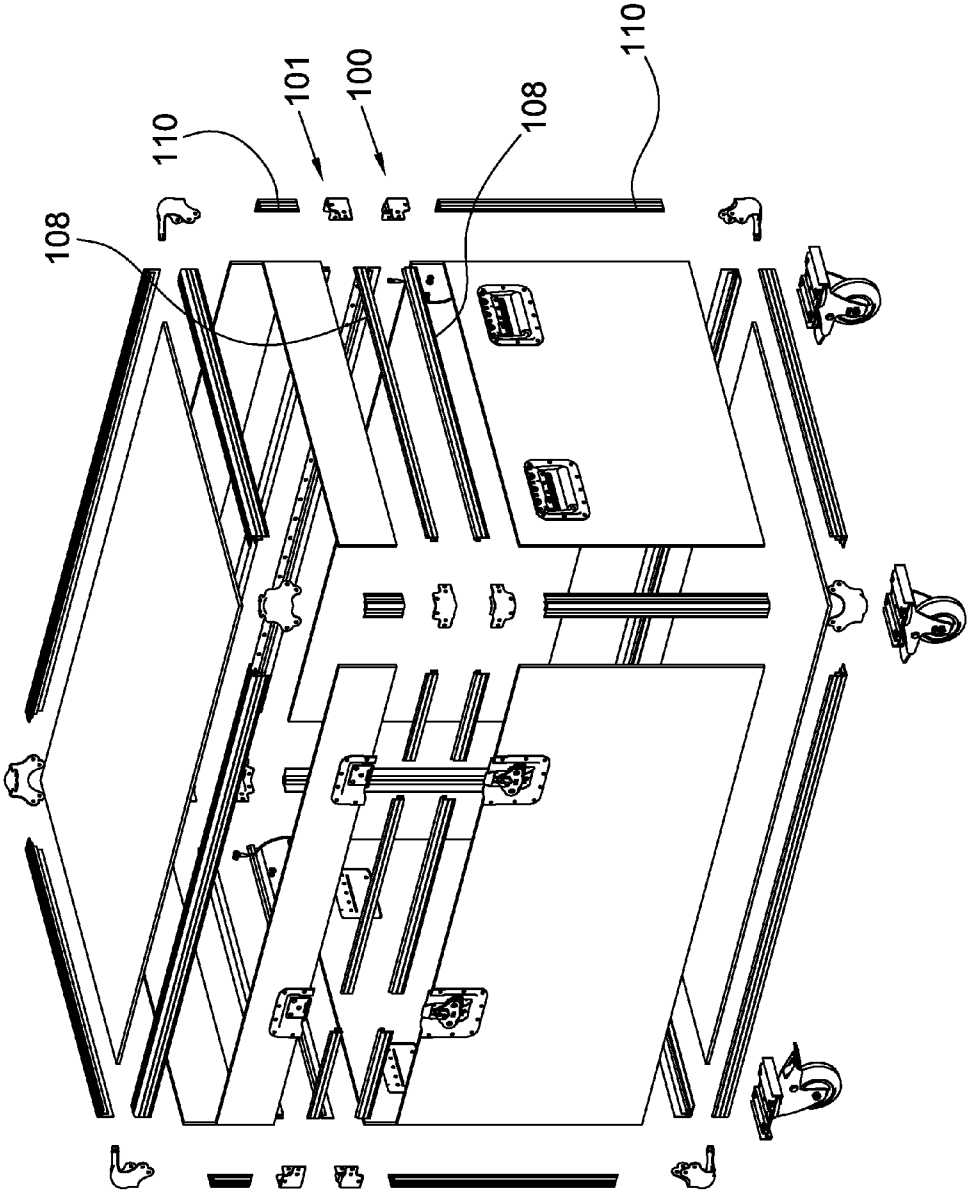


Fig. 3c

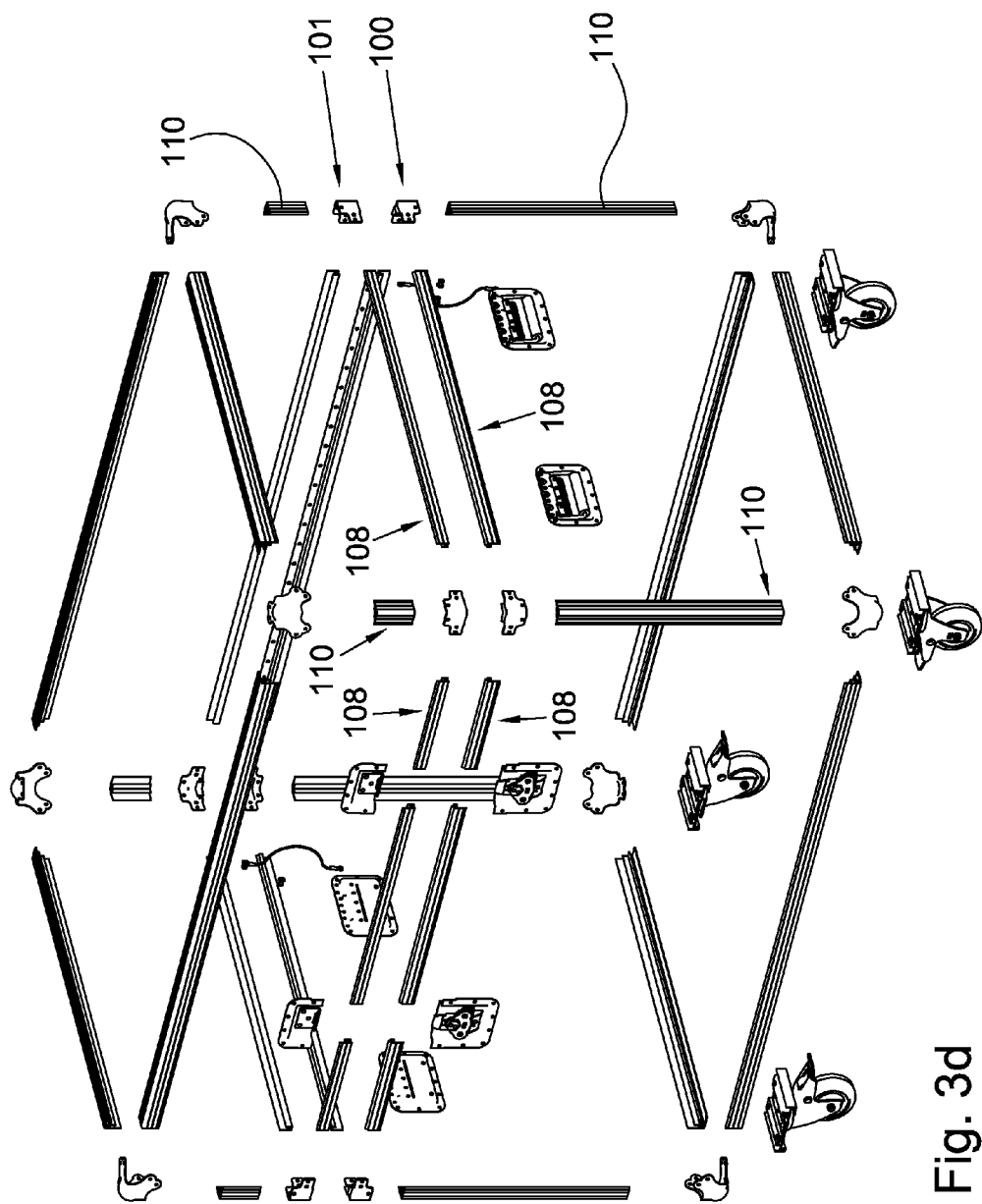


Fig. 3d

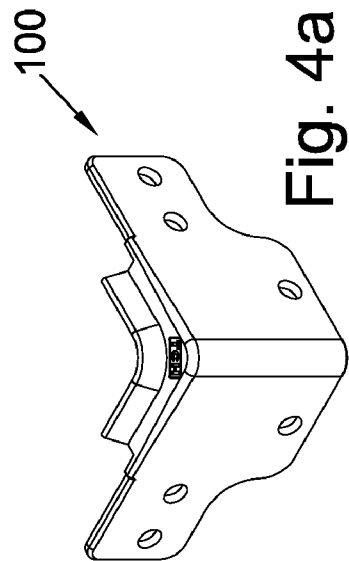


Fig. 4a

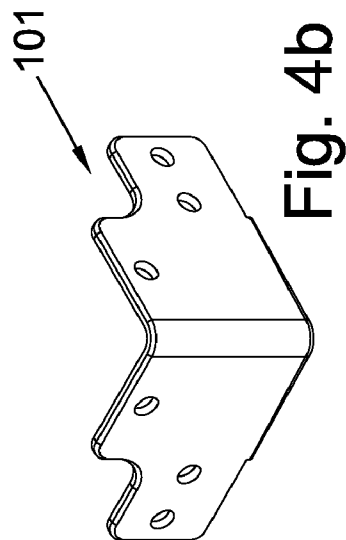


Fig. 4b

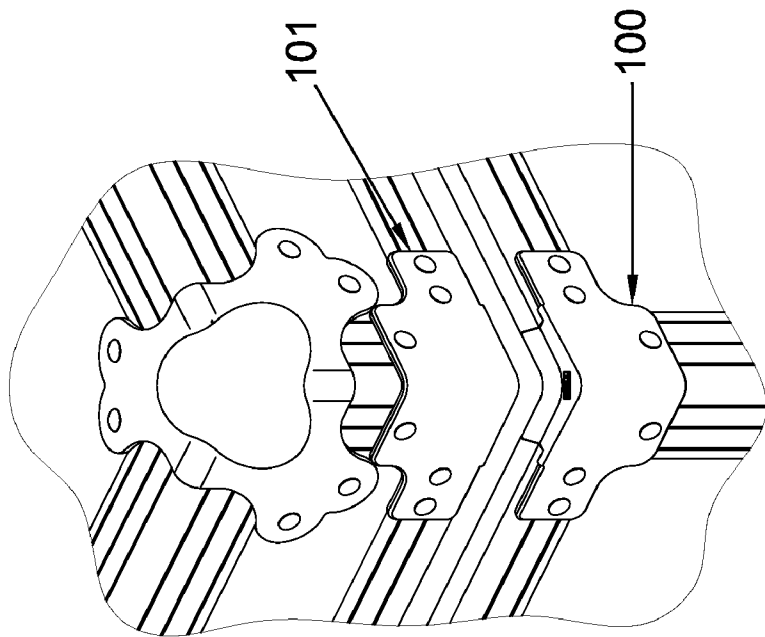
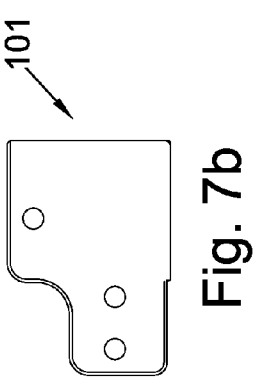
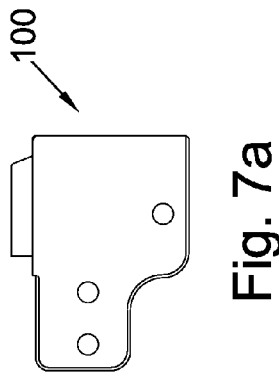
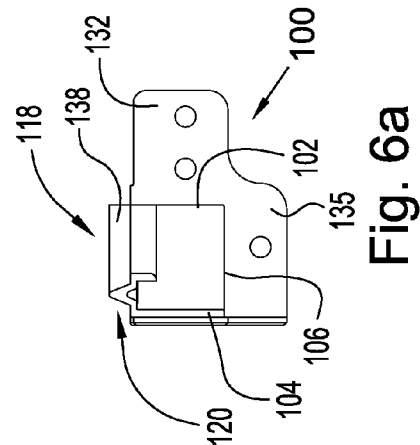
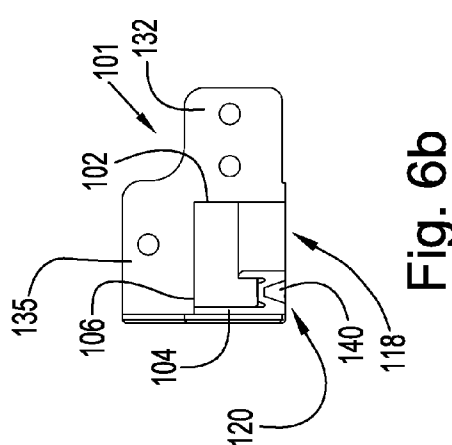
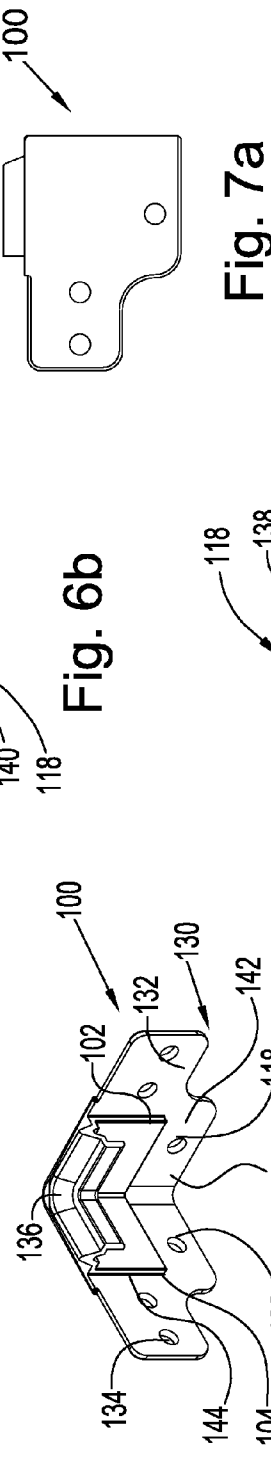
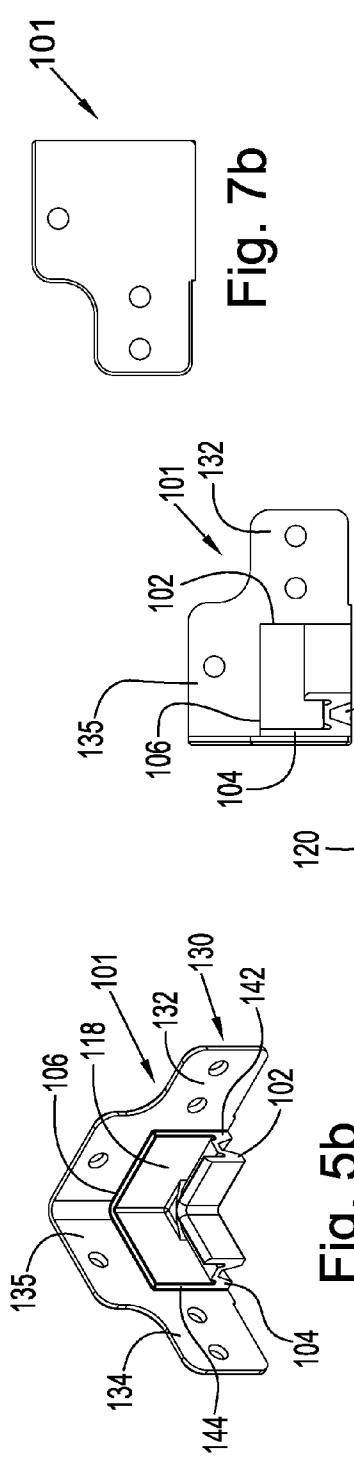


Fig. 3e



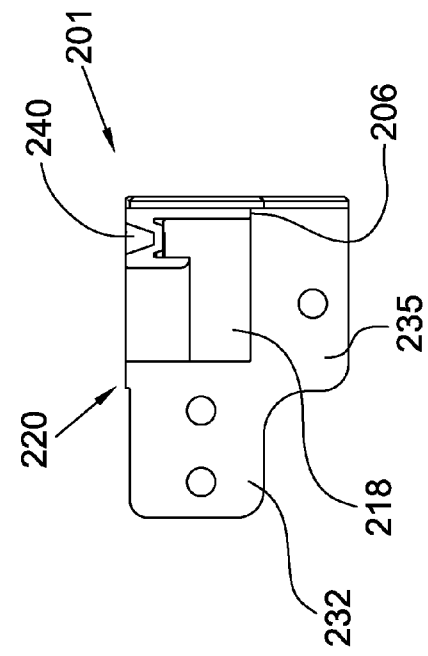


Fig. 11a

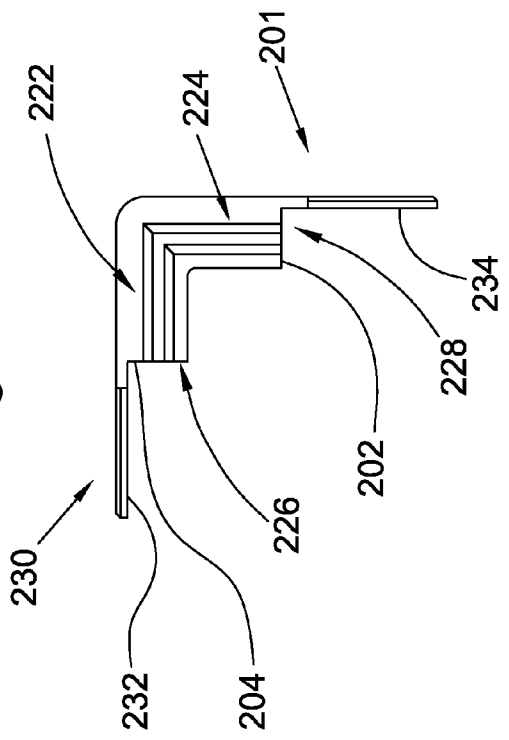


Fig. 11b

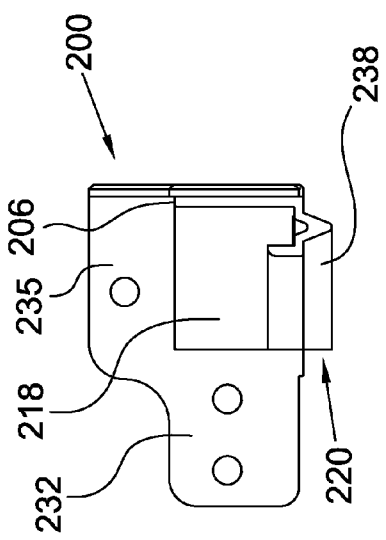


Fig. 12a

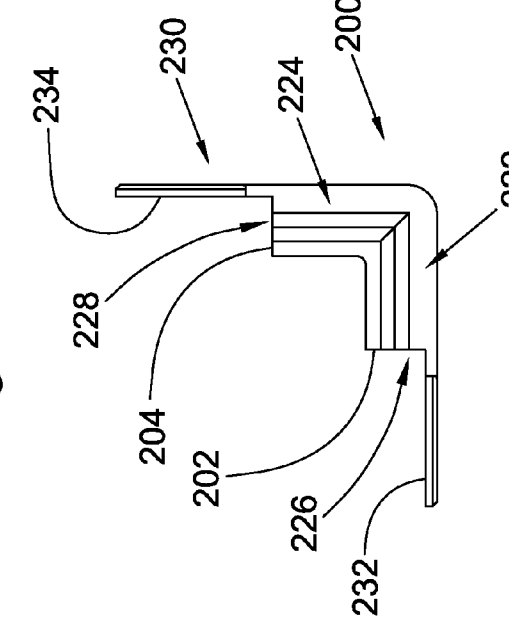


Fig. 12b

VALANCE CORNER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This patent application claims the benefit under 35 U.S.C. §119(e) of U.S. Provisional Patent Application No. 61/365,599, filed Jul. 19, 2010, which application is incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The invention broadly relates to protective cases, more specifically to valances for protective cases, and even more particularly to valance corners for protective cases.

BACKGROUND OF THE INVENTION

[0003] Protective custom fabricated cases and/or containers are used to transport equipment from one location to another, e.g., case **10**. Equipment is transported and stored in the case, and subsequently removed from the case for use. Such cases are known by several names, e.g., road cases, flight cases, hard-shell cases, ATA cases (Air Transport Association specification 300 Cat 1: Specification for Packaging of Airline Supplies), musical instrument cases and reusable shipping containers. These types of cases are used for goods and equipment that are transported many times, for example to concerts, stages, trade show, sporting events.

[0004] These cases are typically constructed having two or more sections, and include a minimum of lid shell **12** and base shell **14** to contain the case's contents. Trade-offs between case mass and structural integrity are often made based on the price point of the case. A preferred protective case is lightweight to minimize shipping cost and structurally sound to protect the contents contained therein.

[0005] The exterior portions of protective cases are generally formed by two types of construction, molded resin or fabricated panels. It should be appreciated that case **10** shown in FIGS. **1a-1c** is a fabricated panel case. In either type of construction, inherent structural weakness areas exist at the joints **16** and/or joining faces **18**. Furthermore, any type of protective case has one or more peripheral rims **20** and **22** where the lid and base shells matingly engage. It is well known in the art to use a valance or channel to strengthen these peripheral rims.

[0006] These valances, e.g., valances **24a**, **24b**, **26**, **28** and **30**, are formed as integral parts of the structure of a protective case. Such valances are generally manufactured from aluminum extrusions or plastic extrusions as two distinct and separate components. The two components include a male component and a female component, e.g., male component **32** and female component **34**. The male component has tongue protrusion **36**, while the female component has recessed groove **38**. The male and female component profiles unite to form a set. When coupled together, they formed a general H-shaped member in a cross-sectional view, as shown in the left portion of FIGS. **2a-1** and **2a-2**. In view of the foregoing, it should be appreciated that when a case is closed, the tongue portion is held in place by the groove portion. The valance provides resistance from lateral impacts to the lid and base shells thereby preventing lateral shifting between the shells. Additionally, the tongue and groove profiles minimize moisture and dust from entering the case.

[0007] The peripheral rim of each shell is inserted into the space between the vertical portions of the H-shaped member

of the valance extrusions, i.e., spaces **40a** and **40b**, and is then secured to the extrusions by various means such as mechanical fasteners, adhesives, etc., e.g., rivets **42**. As a matter of convention, the female component is typically attached to the lid of the protective case and the male component is attached to the base.

[0008] Molded cases only require a valance extrusion that is joined to the peripheral rim of the top and bottom portions of the case. Generally, molded cases have large radius edges at the corners of the peripheral rim. The valance extrusions are bent around tooling jigs to match the radius of the case corners and attached to the peripheral rim, e.g., valance extrusions **30**. Molded cases are restricted to the size of tooling used and cannot be adjusted to the size of the equipment inside. Thus, many molds are needed to accommodate the wide variety of equipment stored inside, which molds are often expensive to fabricate.

[0009] Fabricated cases can be more readily sized to match the contents the case is intended to contain, while only using a minimum amount of material. Most fabricated cases are rectilinear, forming a box shape. Fabricated cases require more labor and skill to produce than molded cases but do not require the high cost of tooling to form the shapes needed for a molded case.

[0010] Fabricated cases are made by joining panels, e.g., panels **44a**, **44b**, **44c**, **44d** and a bottom panel (not shown) together and reinforcing the edges and joints with ninety degree angle shaped extrusions along the exterior edges and valance extrusions to strengthen the case. The inherent problems with a fabricated case are joining the various panels together to produce a robust enclosure, while minimizing the weight by using the least amount of structure.

[0011] Generally the panels are made from laminated sheets, e.g., a plywood substrate with a protective plastic sheet or various composite materials bonded together. As these types of cases are often rectilinear in space, the joints in such fabricated cases are perpendicular to each other. After the valance is installed on the peripheral rim of a shell, a right-angle brace or clamp, e.g., brace **46**, usually made of metal, is secured over top of the valance at each corner of the peripheral rim with mechanical fasteners, e.g., rivets **42**. The brace strengthens the peripheral rim and prevents the valance from separating while covering the sharp ninety degree edge and seams.

[0012] To make the valance fit the case, linear lengths of extrusion are mitered at each corner of the case, e.g., extrusions, **48a**, **48b**, **48c**, **48d**, **48e** and **48f**. A length of extrusion is cut for each panel around the peripheral rim. Miter cuts **50** at each end of the valance extrusion must be made one at a time typically at a forty-five degree angle. On a standard box style case, sixteen miter cuts are required to make a valance. Such miter cutting is a time consuming process.

[0013] Some case builders have developed or use special tools to speed this process. A vertical cutting saw with two blades cuts a perpendicular V-shaped notch in the extrusion. This cut removes material behind the exterior wall of the extrusion, while leaving the exterior wall intact. The valance extrusion is then folded at these cuts to create the shape of the peripheral rim of the case, i.e., the valance forms a ninety degree angle between the portions of the valance on opposite sides of the cut. This is shown in valance extrusions **28** at corner **52**. This specialized vertical cutting saw is a large expense compared to conventional cutting equipment that many fabricators can not economically purchase or justify.

Even with the specialized vertical cutting saw, miter cuts in the valance are made one at a time, or in other words, are excessively time consuming.

[0014] Some manufacturers have developed systems of unique corners and linear members to try and solve this problem. These products require specialized extrusions and machinery to be utilized. For example, a German company, Adam Hall, has a case system called Easycase. It is a component system of plastic corners and specialized aluminum extrusions used to fabricate a case. The corners include projections that insert into a special cavity in each extrusion. Both the corners and extrusions work together but can not be used with conventional case building parts, and thus cases manufactured using this system are more expensive than cases formed from more standard components. During fabrication, special machinery is needed to permanently attach the corners to the extrusions. Moreover, these plastic corner systems do not meet ATA 300 Cat 1 specifications for flight shipping, and therefore have limited application.

[0015] As can be derived from the variety of devices and methods directed at forming valances for a protective case, many means have been contemplated to accomplish the desired end, i.e., cost effective and easy to fabricate valance corners. Heretofore, tradeoffs between cost and performance were required. Thus, there is a long-felt need for a valance corner that is easy to manufacture which incorporates standard protective case components.

BRIEF SUMMARY OF THE INVENTION

[0016] It has been found that it is advantageous to provide an invention that is a valance corner with an integral tongue and groove that eliminates the need for specialized machinery and accuracy in fabricating a mitered corner while using currently available components and tools.

[0017] The present invention valance corner increases the speed with which fabricated cases can be built, is designed to work with currently available extrusion valances, and does not require any additional tools or equipment for a case builder. The present invention valance corner further provides the strength and rigidity needed to support the ninety degree corner of a case.

[0018] The present invention valance corner saves a case builder time during the fabrication a case and eliminates the need for specialized equipment and skill.

[0019] The present invention broadly comprises a valance corner including an engagement portion having first, second and third mating surfaces and a sealing edge, wherein the sealing edge includes first and second sealing extensions arranged orthogonal relative to each other and having first and second ends, respectively, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge, respectively. The valance corner further includes a securing portion having first and second securing extensions arranged orthogonal relative to each other, the securing portion fixedly secured to the engagement portion. The first and second securing extensions are arranged parallel to the first and second sealing extensions, respectively.

[0020] The present invention also broadly comprises a valance corner consisting essentially of an engagement portion having first, second and third mating surfaces and a sealing edge, wherein the sealing edge includes first and second sealing extensions arranged orthogonal relative to each other

and having first and second ends, respectively, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge, respectively. The valance corner further consists essentially of a securing portion having first and second extensions arranged orthogonal relative to each other, the securing portion fixedly secured to the engagement portion. The first and second extensions are arranged parallel to the first and second sealing extensions, respectively.

[0021] These and other objects and advantages of the present invention will be readily appreciable from the following description of preferred embodiments of the invention and from the accompanying drawings and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The nature and mode of operation of the present invention will now be more fully described in the following detailed description of the invention taken with the accompanying drawing figures, in which:

[0023] FIG. 1a is a perspective view of a prior art road case in a closed arrangement; FIG. 1b is a perspective view of the prior art road case shown in FIG. 1a in an open arrangement;

[0024] FIG. 1c is an enlarged perspective view of a corner portion of the prior art road case shown in Figure 1a in an open arrangement;

[0025] FIG. 2a-1 is a cross sectional view of prior art male and female valance extensions shown in a closed arrangement;

[0026] FIG. 2a-2 is a cross sectional view of prior art male and female valance extensions shown in an open arrangement;

[0027] FIG. 2b-1 is a top plan view of a prior art valance corner formed from two valance extrusions each having a standard miter cut;

[0028] FIG. 2b-2 is a perspective view of a prior art valance corner formed from two valance extrusions each having a standard miter cut;

[0029] FIG. 2c-1 is a top plan view of a prior art valance corner formed from a single valance extrusion having a special miter cut;

[0030] FIG. 2c-2 is a perspective view of a prior art valance corner formed from a single valance extrusion having a special miter cut;

[0031] FIG. 2d-1 is a top plan view of a prior art valance corner formed from a single valance extrusion having a radius corner;

[0032] FIG. 2d-2 is a perspective view of a prior art valance corner formed from a single valance extrusion having a radius corner;

[0033] FIG. 3a is a perspective view of a road case in a closed position including the present invention valance corners;

[0034] FIG. 3b is a perspective view of the road case shown in FIG. 3a in an open position;

[0035] FIG. 3c is an exploded perspective view of the road case shown in FIG. 3a;

[0036] FIG. 3d is an exploded perspective view of the road case shown in FIG. 3a shown without panels;

[0037] FIG. 3e is an enlarged perspective view of a corner portion of the road case shown in FIG. 3a in an open arrangement

[0038] FIG. 4a is a front perspective view of an embodiment of the present invention male valance corner;

[0039] FIG. 4*b* is a front perspective view of an embodiment of the present invention female valance corner;

[0040] FIG. 5*a* is a back perspective view of the embodiment of the present invention male valance corner shown in FIG. 4*a*;

[0041] FIG. 5*b* is a back perspective view of the embodiment of the present invention female valance corner shown in FIG. 4*b*;

[0042] FIG. 6*a* is a side elevational view of the embodiment of the present invention male valance corner shown in FIG. 4*a*;

[0043] FIG. 6*b* is a side elevational view of the embodiment of the present invention female valance corner shown in FIG. 4*b*;

[0044] FIG. 7*a* is another side elevational view of the embodiment of the present invention male valance corner shown in FIG. 4*a*;

[0045] FIG. 7*b* is another side elevational view of the embodiment of the present invention female valance corner shown in FIG. 4*b*;

[0046] FIG. 8 is a bottom plan view of the embodiment of the present invention female valance corner shown in FIG. 4*b*;

[0047] FIG. 9 is a top plan view of the embodiment of the present invention male valance corner shown in FIG. 4*a*;

[0048] FIG. 10 is a front exploded perspective view of an embodiment of the present invention male and female valance corners;

[0049] FIG. 11*a* is a side elevational view of another embodiment of the present invention male valance corner;

[0050] FIG. 11*b* is a bottom plan view of the embodiment of the present invention male valance corner shown in FIG. 11*a*;

[0051] FIG. 12*a* is a side elevational view of another embodiment of the present invention female valance corner; and,

[0052] FIG. 12*b* is a top plan view of the embodiment of the present invention female valance corner shown in FIG. 12*a*.

DETAILED DESCRIPTION OF THE INVENTION

[0053] At the outset, it should be appreciated that like drawing numbers on different drawing views identify identical, or functionally similar, structural elements of the invention. While the present invention is described with respect to what is presently considered to be the preferred aspects, it is to be understood that the invention as claimed is not limited to the disclosed aspects.

[0054] Furthermore, it is understood that this invention is not limited to the particular methodology, materials and modifications described and as such may, of course, vary. It is also understood that the terminology used herein is for the purpose of describing particular aspects only, and is not intended to limit the scope of the present invention, which is limited only by the appended claims.

[0055] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood to one of ordinary skill in the art to which this invention belongs. Although any methods, devices or materials similar or equivalent to those described herein can be used in the practice or testing of the invention, the preferred methods, devices, and materials are now described.

[0056] The present invention valance corner, e.g., valance corners 100 and 101, is used in place of a conventional brace and mitered angle cuts. Each valance corner includes three mating faces, i.e., mating faces 102, 104, and 106, where two

faces are arranged to contact the valance extrusions, e.g., mating faces 102 and 104 contact valance extrusions 108, and the remaining face is arranged to contact an L-shaped extrusion, e.g., mating face 106 contacts L-shaped extrusion 110, which L-shaped extrusion is orthogonally positioned relative to the valance extrusions. The two valance mating faces 102 and 104 contact each valance extrusion in a horizontal plane. The profile of the corner at these two valance faces has the same corresponding profile for the valance, i.e., either tongue or groove profile 112 and 114, respectively. The valance profile is translated through the valance corner to the adjoining extrusion. In other words, the valance profile is substantially continuous from one valance extrusion 108, through the present invention valance corner, and continuing on to the subsequent valance extrusion 108. The valance corner is attached to the valance extrusion using the same mechanical fastener as the brace, thus forming a continuous loop around the peripheral rim which provides structural strength. In addition, the valance clamp also mechanically fastens to the intersecting protective angle, i.e., L-shaped extrusion, thereby providing more structural resilience.

[0057] During the preparation of the valance components for assembly, each valance member, e.g., valance extrusions 108, must be cut to the proper length for the particular case. By eliminating the need to perform a time consuming miter cut on each valance extrusion member, the case fabricator saves time. The present invention valance corner requires a simple perpendicular cut made on each valance member with a standard chop saw. The cutting of the valance extrusions and L-shaped extrusions is now performed the same way as the other protective angles used on the exterior edges of the case. The present invention valance corner provides a known distance from the edge of the case, e.g., length 116, to the mating face of the valance extrusion, e.g., one inch, so that case builders can easily and properly determine the length the valance extrusion by merely knowing the size of the case panel.

[0058] Another advantage during the cutting stage is that several pieces of valance extrusion can be stacked or ganged together and cut at the same time. Cutting the pieces at the same time makes these pieces exactly the same length, which is ideal for manufacturing multiple cases of the same size with the proper dimensions. Such a method saves an enormous amount of time and effort for a case fabricator.

[0059] Moreover, during assembly, the valance corner eliminates the assembly skill required in fitting mitered valance components together. The mitered component must be fitted so that the tongue or groove forms a continuous loop around the peripheral rim. Case fabricators must make several adjustments in the positioning or to the length of the valance extrusions to minimize any gaps at the mitered corners. A general practice for building many cases of the same size is to individually match tongue and groove extrusions together as a pair to ensure a reliable fit. This matching practice requires additional time and effort to manage the various parts through each step of the production process. The present invention valance corner eliminates this matching technique, thereby reducing storage space required between the cutting stage and the assembly stage, and the organization effort required to keep track of the individual pieces.

[0060] In view of the foregoing and in view of the figures, it should be appreciated that valance corners 100 and 101 each comprise engagement portion 118, which in turn comprises first, second and third mating surfaces 102, 104 and

106, respectively, and sealing edge **120**. Sealing edge **120** comprises first and second sealing extensions **122** and **124**, respectively, arranged orthogonal relative to each other and comprising first and second ends **126** and **128**, respectively. Moreover, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces **102** and **104**, respectively, form the first and second ends **126** and **128**, respectively, of the sealing edge **120**. Valance corners **100** and **101** further comprises securing portion **130** comprising first, second and third securing extensions **132**, **134** and **135**, respectively, arranged orthogonal relative to each other. The securing portion **130** is fixedly secured to the engagement portion **118** using any means known in the art, e.g., welding or adhesives. Alternatively, the entire present invention valance corner may be formed from a single unitary material, e.g., molded or cast metal or plastic. As can be seen in the figures, first and second securing extensions **132** and **134**, respectively, are arranged parallel to the first and second sealing extensions **122** and **124**, respectively. Third securing extension **135** is arranged to be secured to L-shaped extrusion **110**. It should be appreciated that in some embodiments, securing portion **130** is arranged on an exterior surface of engagement portion **118**, or forms the exterior surface of portion **118**, and that “exterior surface” is intended to mean the surface closest to the exterior surface of the travel case. It should be further appreciated that the present invention valance corner permits the cutting of valance extrusions as described above in part due to the perpendicular arrangement of mating surface **102** relative to securing extension **132** and mating surface **104** relative to securing extension **134**.

[0061] In some embodiments, sealing edge **120** further comprises arcuate portion **136** disposed between the first and second sealing extensions **122** and **124**, respectively. Sealing edge **120** may further include tongue **138** and/or groove **140**. First and second cross sections **142** and **144** of the first and second mating surfaces, respectively, are preferably formed to match a cross section of a complimentary valance extrusion, e.g., cross section **112** or **114**. It should be appreciated that “match”, as used herein, is intended to mean that the two cross sections are identical or substantially identical to each other. In other words, when assembled, the valance extrusion and present invention valance corner form a continuous sealing edge having little or no discontinuity. Furthermore, the first and second securing extensions may each comprise a length, e.g., length **148**, which is greater than a length of each of the first and second sealing extensions, e.g., length **116**.

[0062] FIGS. 11a through 12b depict another embodiment of the present invention valance corner, i.e., valance corners **200** and **201**. In these embodiments, valance corners **200** and **201** each comprise engagement portion **218**, which in turn comprises first, second and third mating surfaces **202**, **204** and **206**, respectively, and sealing edge **220**. Sealing edge **220** comprises first and second sealing extensions **222** and **224**, respectively, arranged orthogonal relative to each other and comprising first and second ends **226** and **228**, respectively. Moreover, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge. Valance corners **200** and **201** each further comprise securing portion **230** comprising first, second and third securing extensions **232**, **234** and **235**, respectively, arranged orthogonal relative to each other. The securing portion is fixedly secured to the engagement portion

using any means known in the art, e.g., welding or adhesives. Alternatively, the entire present invention valance corner may be formed from a single unitary material, e.g., molded or cast metal or plastic. As can be seen in the figures, the first and second securing extensions are arranged parallel to the first and second sealing extensions, respectively, while third securing extension **135** is arranged to be secured to L-shaped extrusion **110**. Again, it should be appreciated that in some embodiments, securing portion **230** is arranged on an exterior surface of engagement portion **218**, or forms the exterior surface of portion **118**, and that “exterior surface” is intended to mean the surface closest to the exterior surface of the travel case. It should be further appreciated that the present invention valance corner permits the cutting of valance extrusions as described above in part due to the perpendicular arrangement of mating surface **202** relative to securing extension **232** and mating surface **204** relative to securing extension **234**.

[0063] In these embodiments, sealing edge **220** further comprises only first and second sealing extensions **222** and **224**, respectively, which sealing extensions are directly connected to each other, or in other words, there is no structure between the sealing extensions, such as an arcuate portion. The sealing edge may further include tongue **238** and/or groove **240**. As with the embodiments described supra, the cross sections of the mating surfaces are formed to match the cross section of a complimentary valance extrusion, e.g., cross section **112** or **114**. It should be appreciated that “match”, as used herein, is intended to mean that the two cross sections are identical or substantially identical to each other. In other words, when assembled, the valance extrusion and present invention valance corner form a continuous sealing edge having little or no discontinuity.

[0064] Thus, it is seen that the objects of the present invention are efficiently obtained, although modifications and changes to the invention should be readily apparent to those having ordinary skill in the art, which modifications are intended to be within the spirit and scope of the invention as claimed. It also is understood that the foregoing description is illustrative of the present invention and should not be considered as limiting. Therefore, other embodiments of the present invention are possible without departing from the spirit and scope of the present invention.

What we claim is:

1. A valance corner comprising:

an engagement portion comprising first, second and third mating surfaces and a sealing edge, wherein the sealing edge comprises first and second sealing extensions arranged orthogonal relative to each other and comprising first and second ends, respectively, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge, respectively; and, a securing portion comprising first and second securing extensions arranged orthogonal relative to each other, the securing portion fixedly secured to the engagement portion, wherein the first and second securing extensions are arranged parallel to the first and second sealing extensions, respectively.

2. The valance corner of claim 1 wherein the sealing edge further comprises an arcuate portion disposed between the first and second sealing extensions.

3. The valance corner of claim 1 wherein the first sealing extension is directly connected to the second sealing extension.

4. The valance corner of claim 1 wherein the sealing edge is a tongue.

5. The valance corner of claim 1 wherein the sealing edge is a groove.

6. The valance corner of claim 1 wherein first and second cross sections of the first and second mating surfaces, respectively, match a cross section of a valance extrusion.

7. The valance corner of claim 1 wherein the first and second securing extensions each comprise a length greater than a length of each of the first and second sealing extensions, respectively.

8. A valance corner consisting essentially of:
an engagement portion comprising first, second and third mating surfaces and a sealing edge, wherein the sealing edge comprises first and second sealing extensions arranged orthogonal relative to each other and comprising first and second ends, respectively, each of the first, second and third mating surfaces are arranged orthogonal relative to the other mating surfaces and the first and second mating surfaces form the first and second ends of the sealing edge, respectively; and,
a securing portion comprising first and second extensions arranged orthogonal relative to each other, the securing portion fixedly secured to the engagement portion, wherein the first and second extensions are arranged parallel to the first and second sealing extensions, respectively.

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