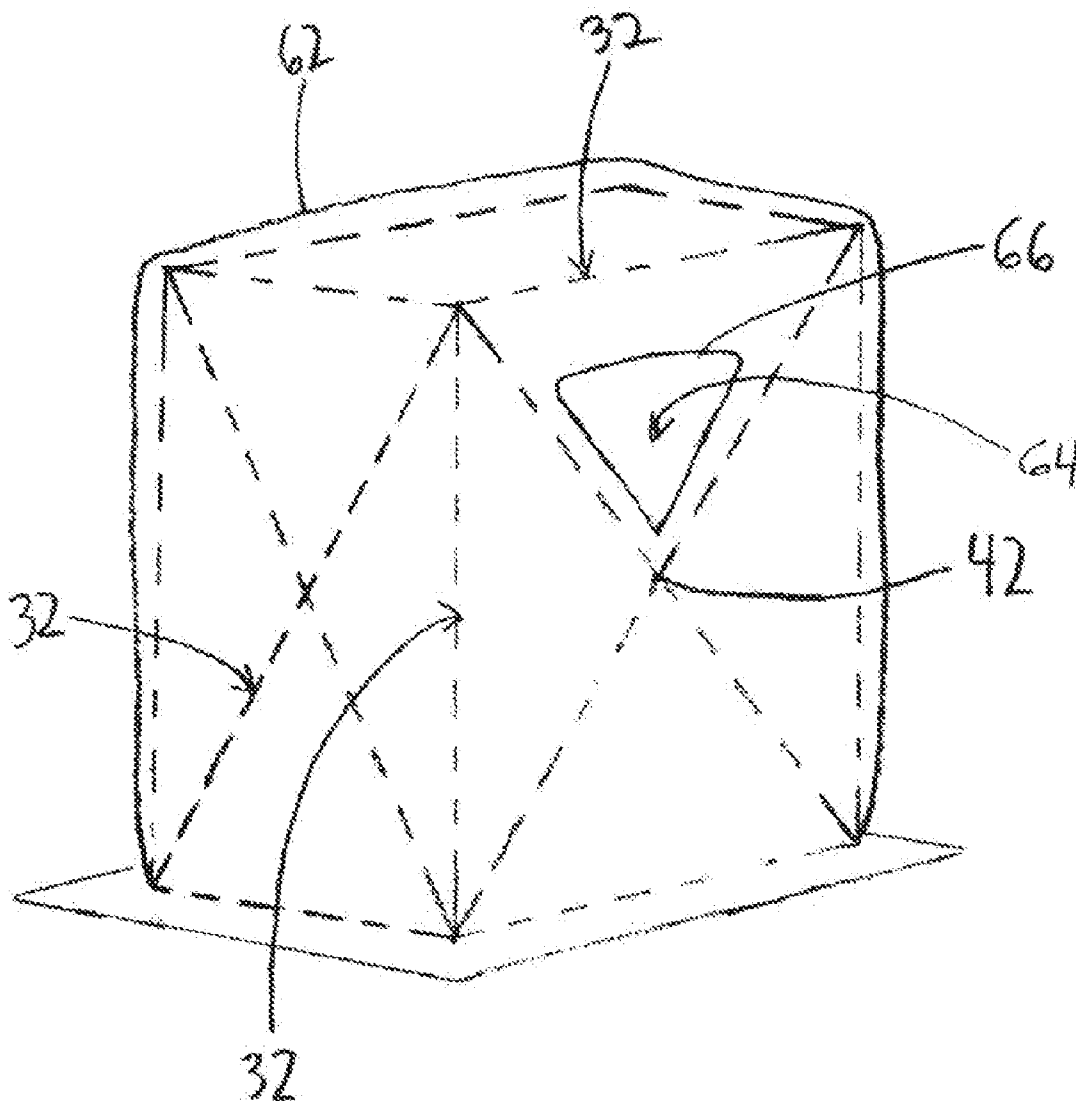


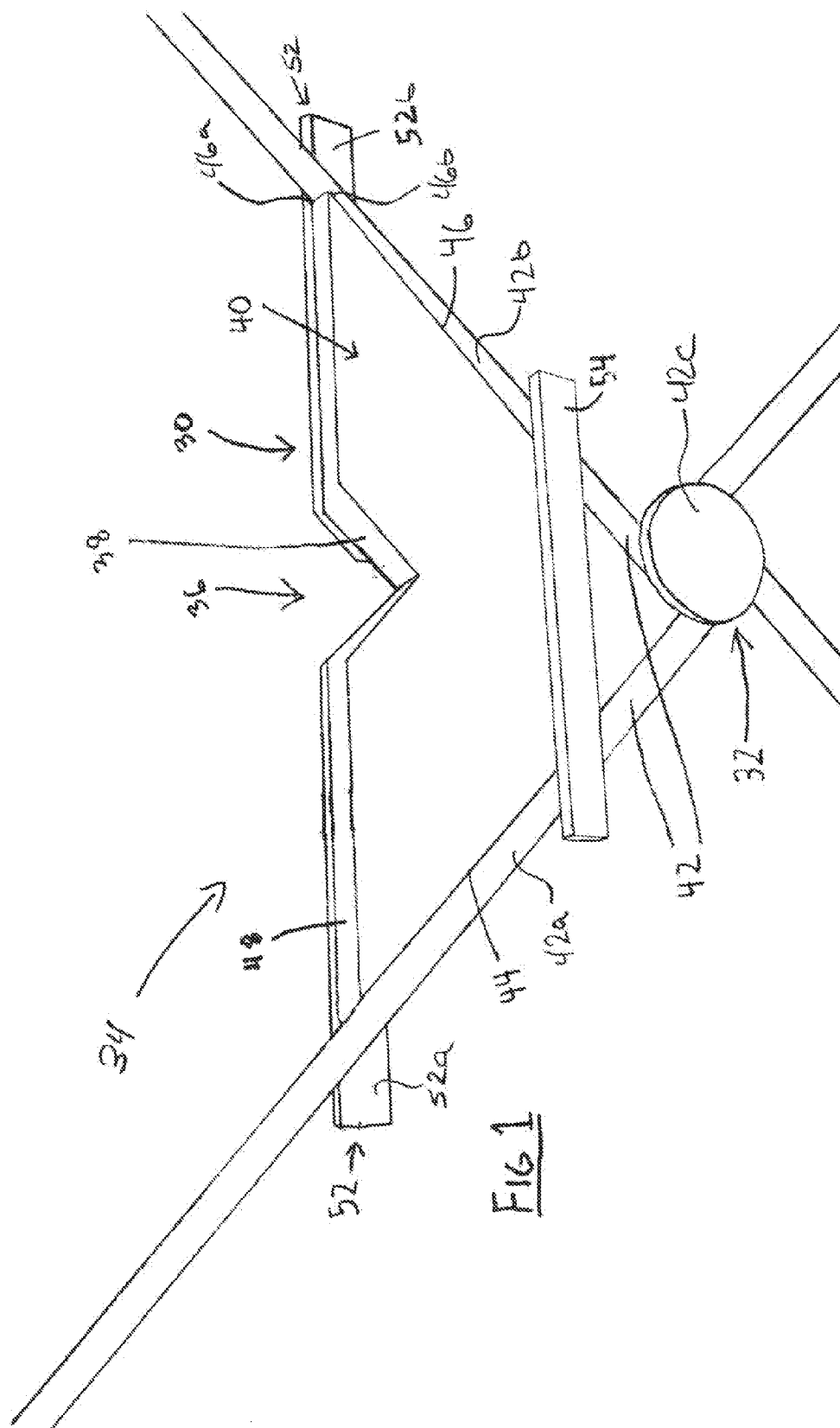


US 20110079258A1

(19) **United States**(12) **Patent Application Publication**
Knasko(10) **Pub. No.: US 2011/0079258 A1**(43) **Pub. Date: Apr. 7, 2011**(54) **ACCESSORY SUPPORT BRACKET FOR A
PORTABLE STRUCTURE**(52) **U.S. Cl. 135/96; 135/120.1; 248/205.1**(76) **Inventor: Steven J. Knasko, Bartlett, IL (US)**(57) **ABSTRACT**(21) **Appl. No.: 12/571,687**(22) **Filed: Oct. 1, 2009****Publication Classification**(51) **Int. Cl.****E04H 15/32** (2006.01)**E04H 15/02** (2006.01)**A47F 5/08** (2006.01)

A blind accessory support bracket is disclosed. The bracket is configured to fit into the X-shaped framework of a hunting blind, tent, or portable structure. Abutments are located on either side of the bracket, containing the framework therebetween, and securing the bracket in place. The bracket may provide a variety of different supports, including a gun brace, a camera mount, or a shelf. When the bracket is located on framework near an opening of the blind, it may assist in aiming or shooting of a camera or gun at a target outside the blind.





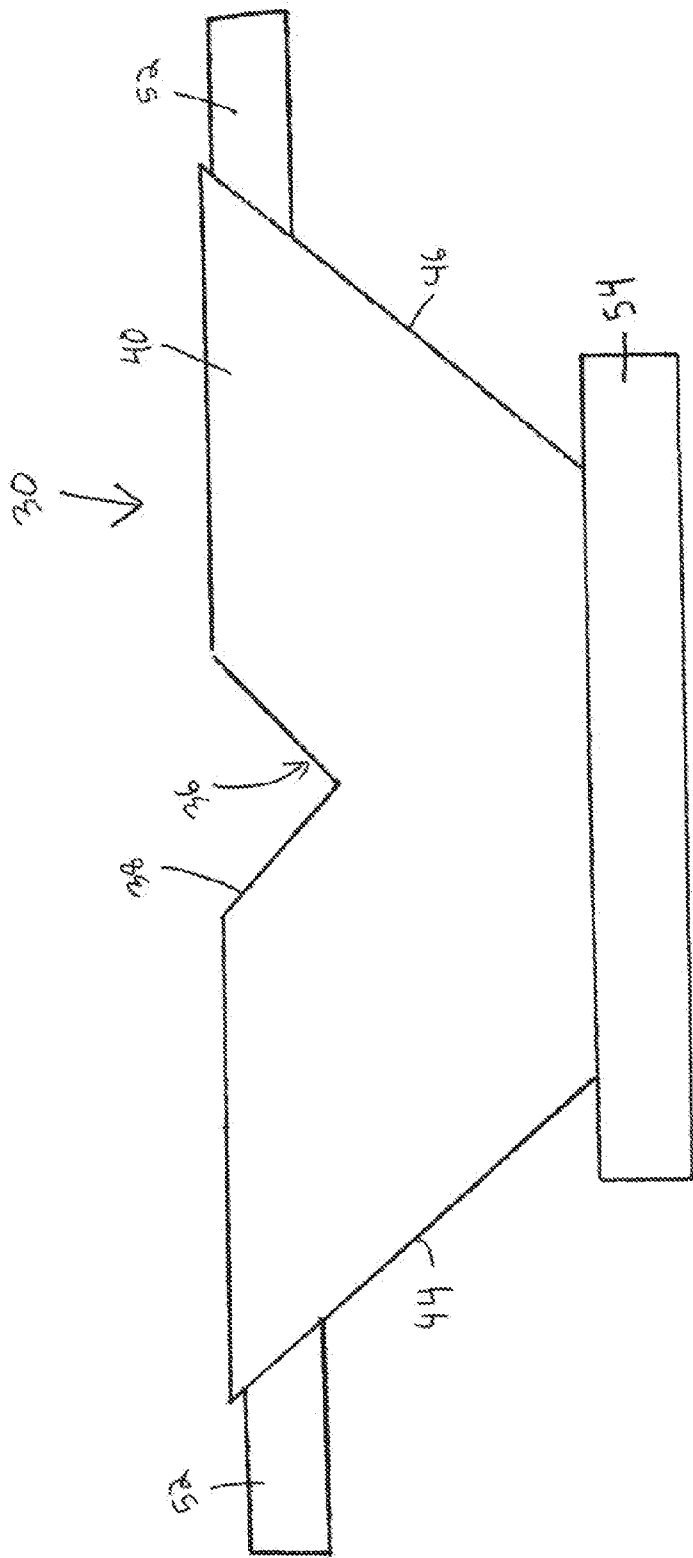
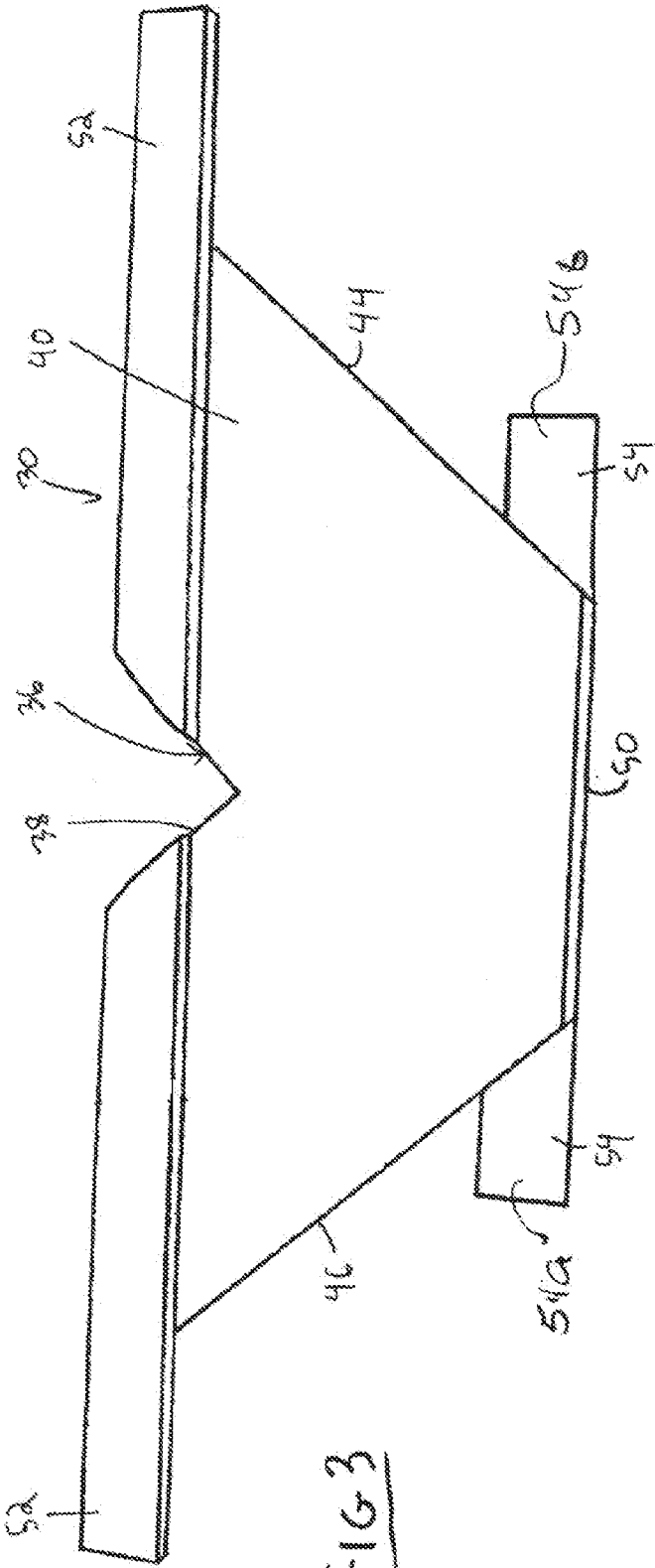


Fig 2



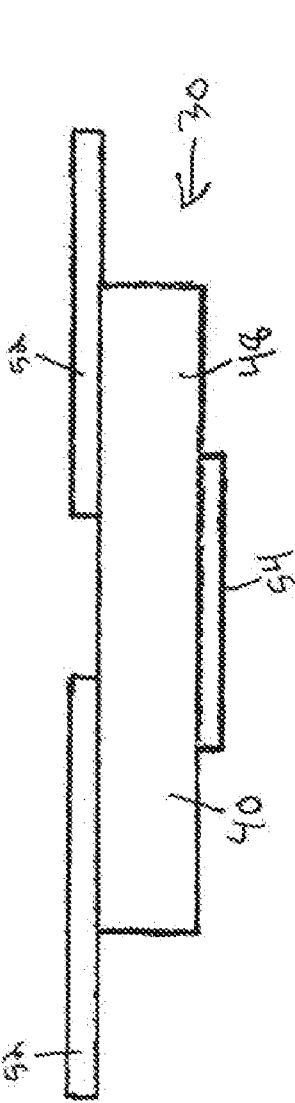


FIG 4

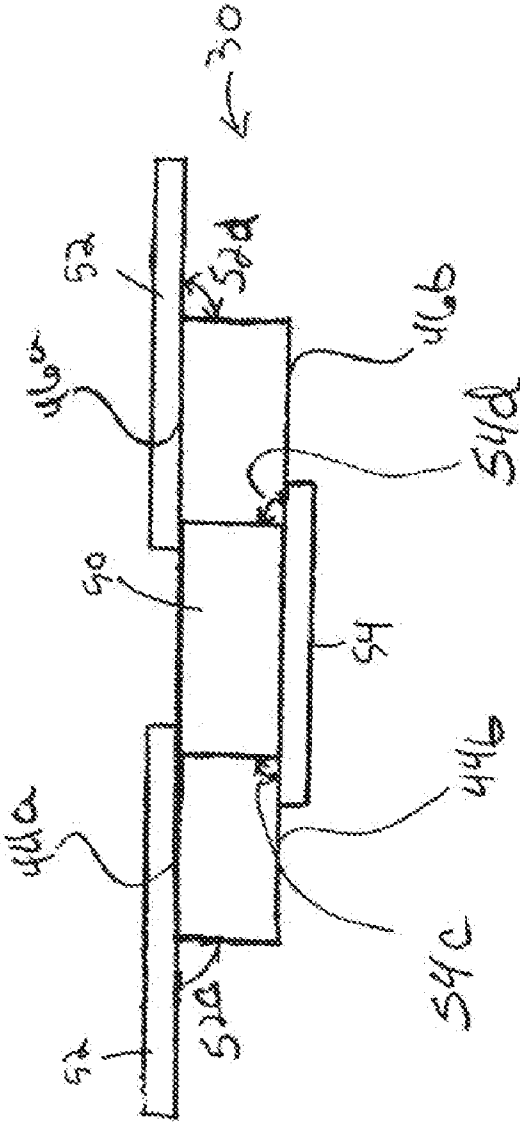


FIG 5

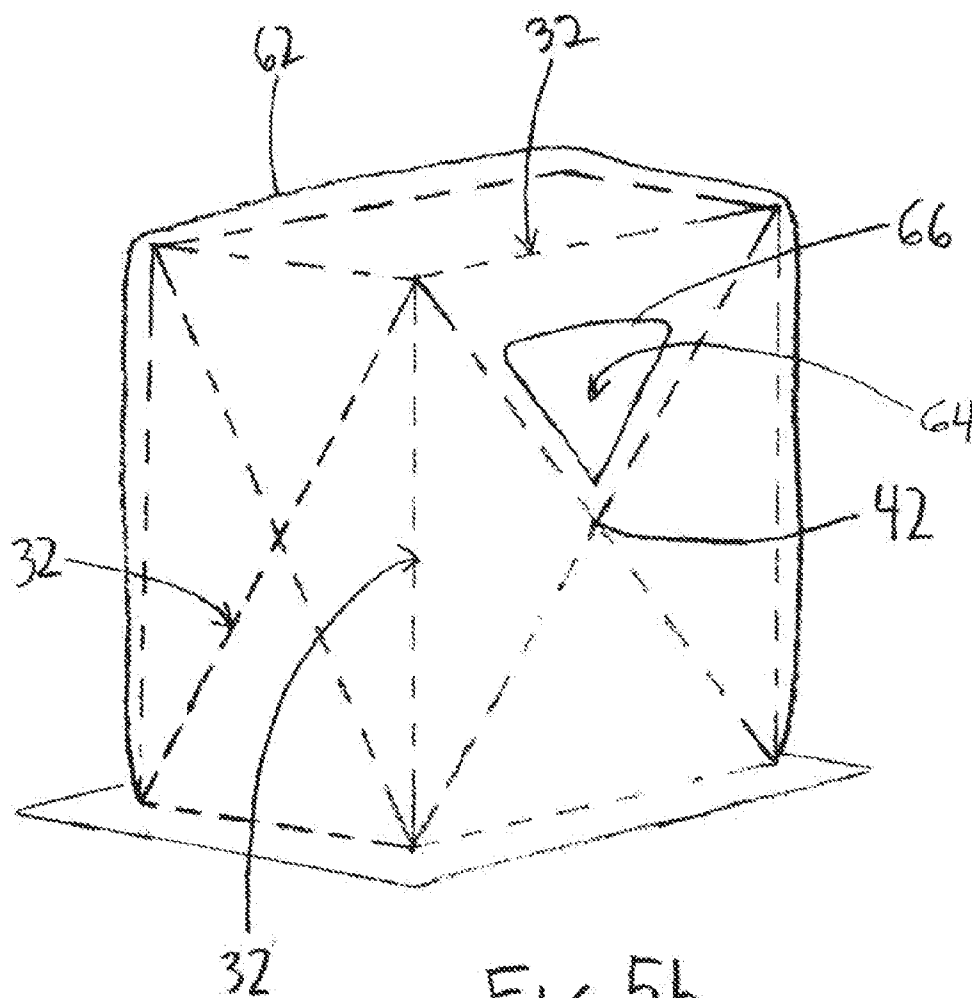
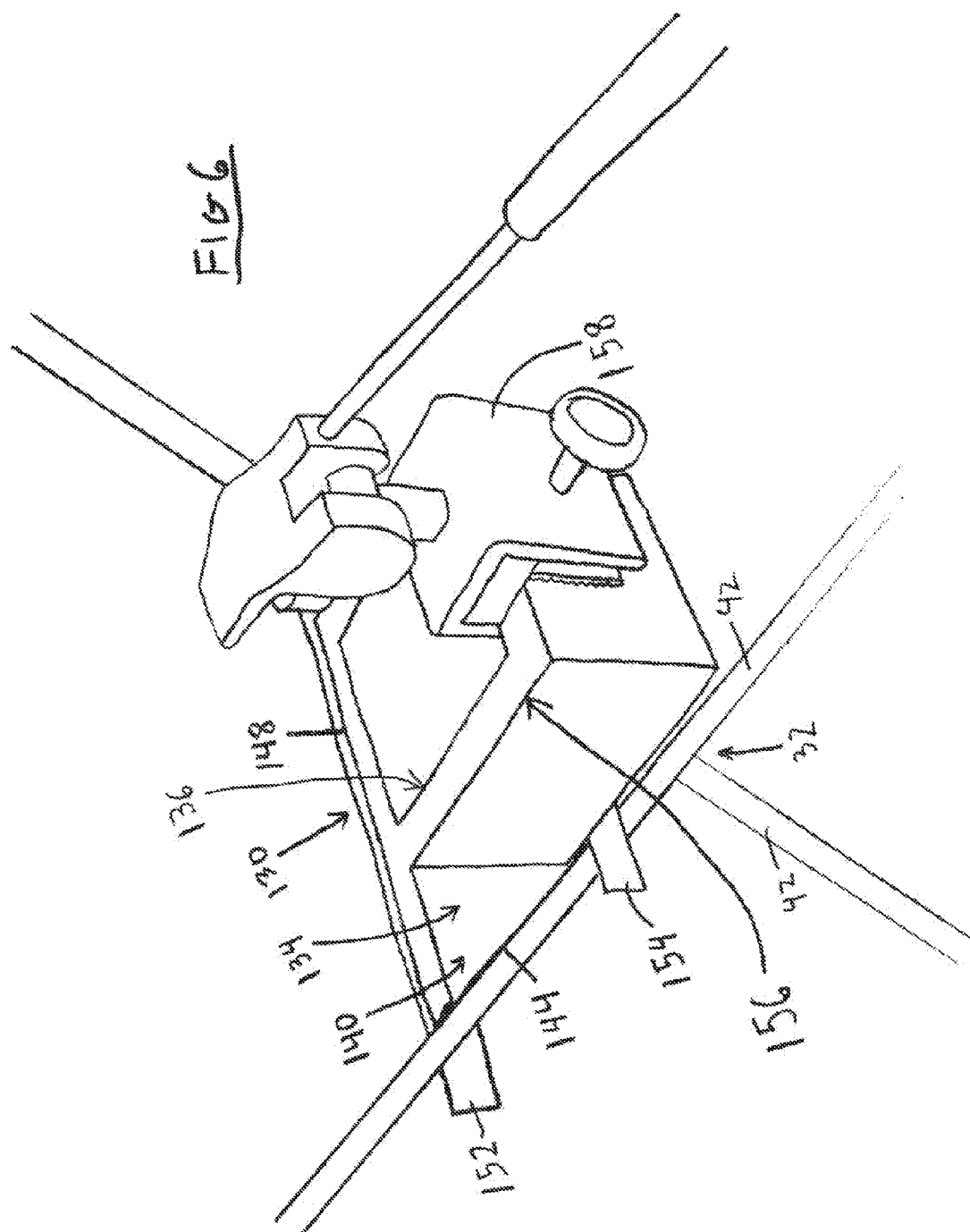
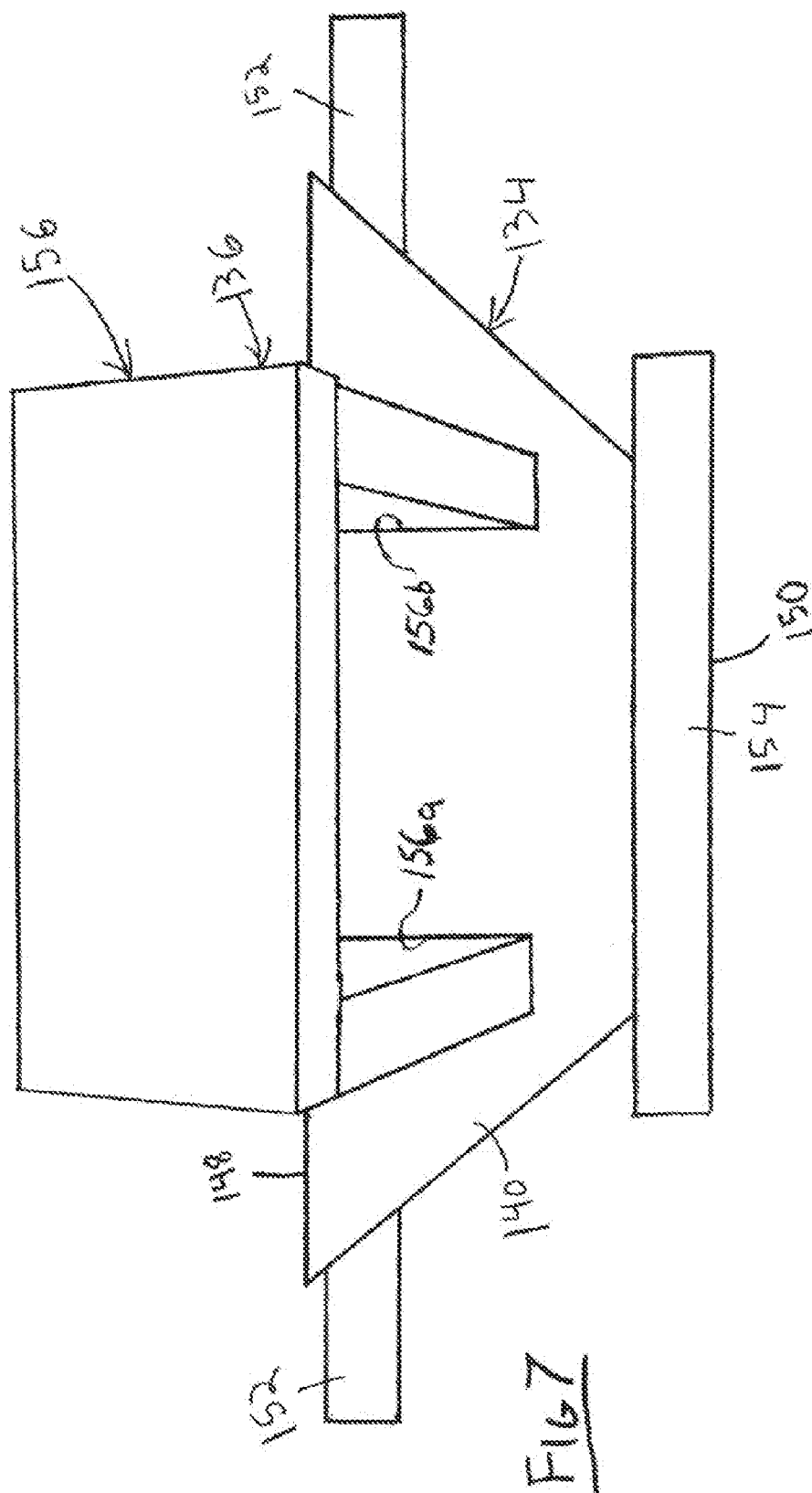
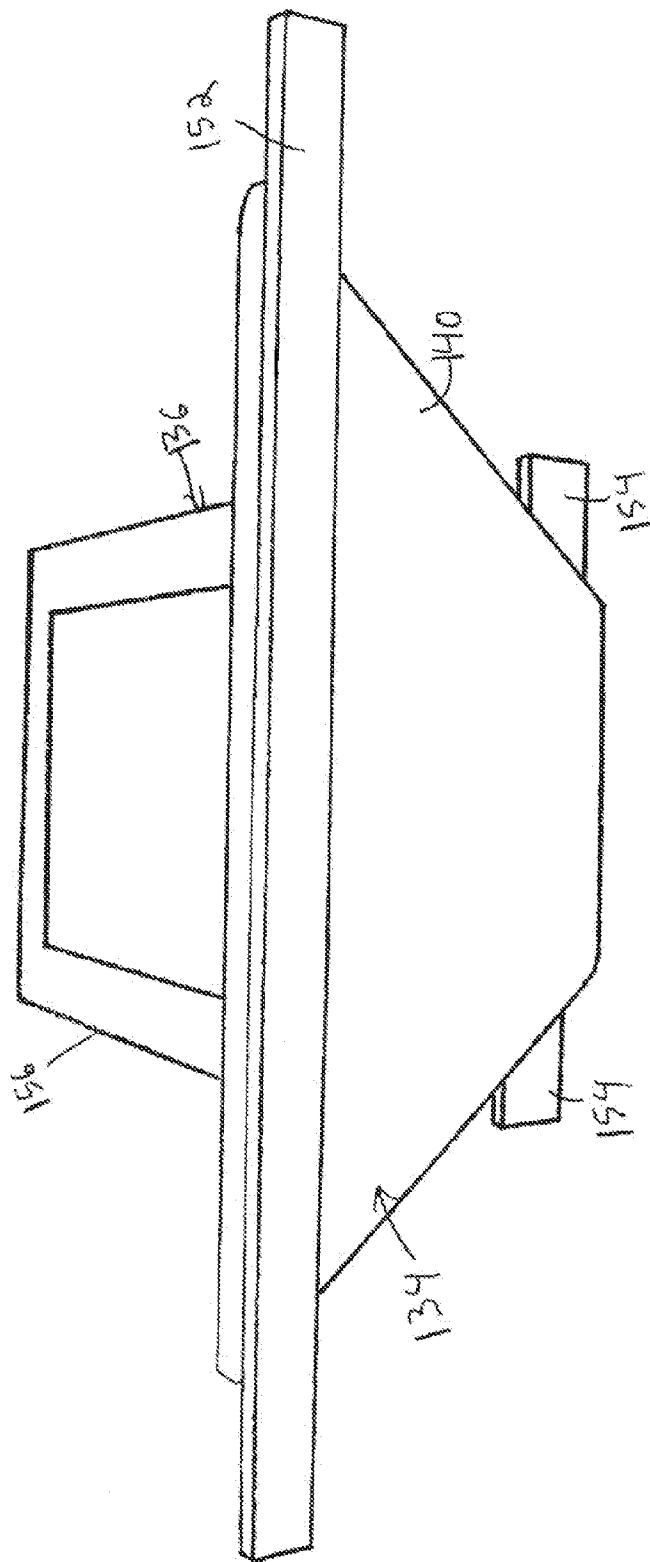


FIG 5b







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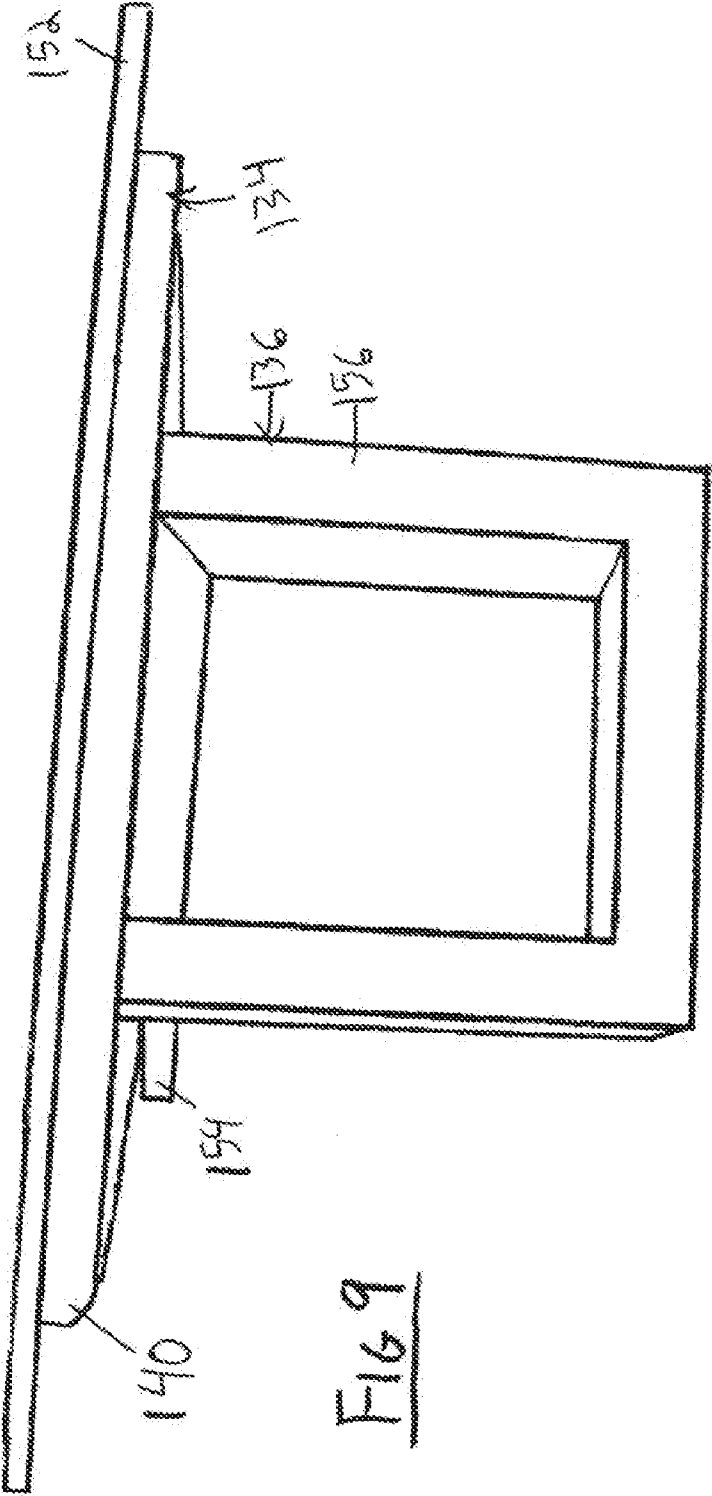


FIG 9

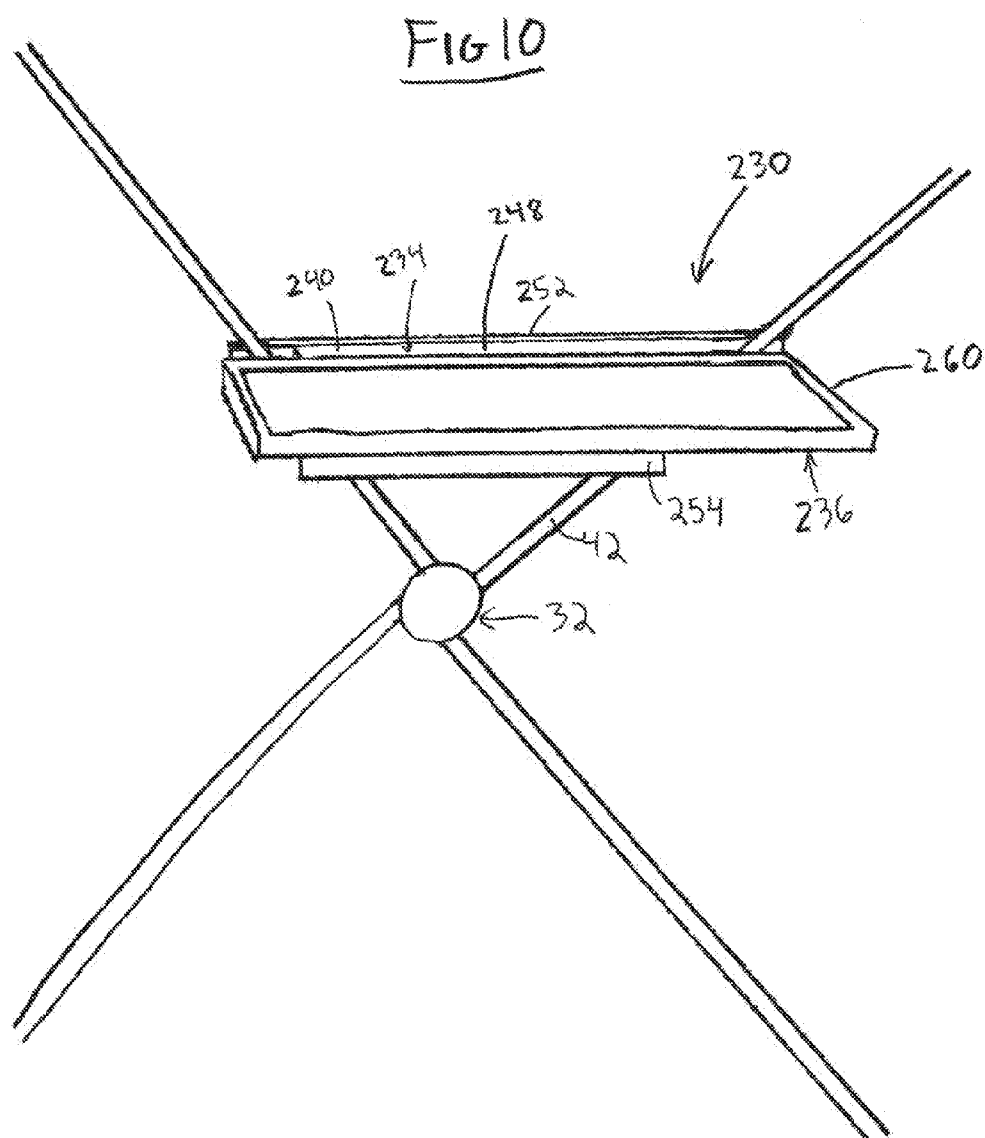


FIG 11

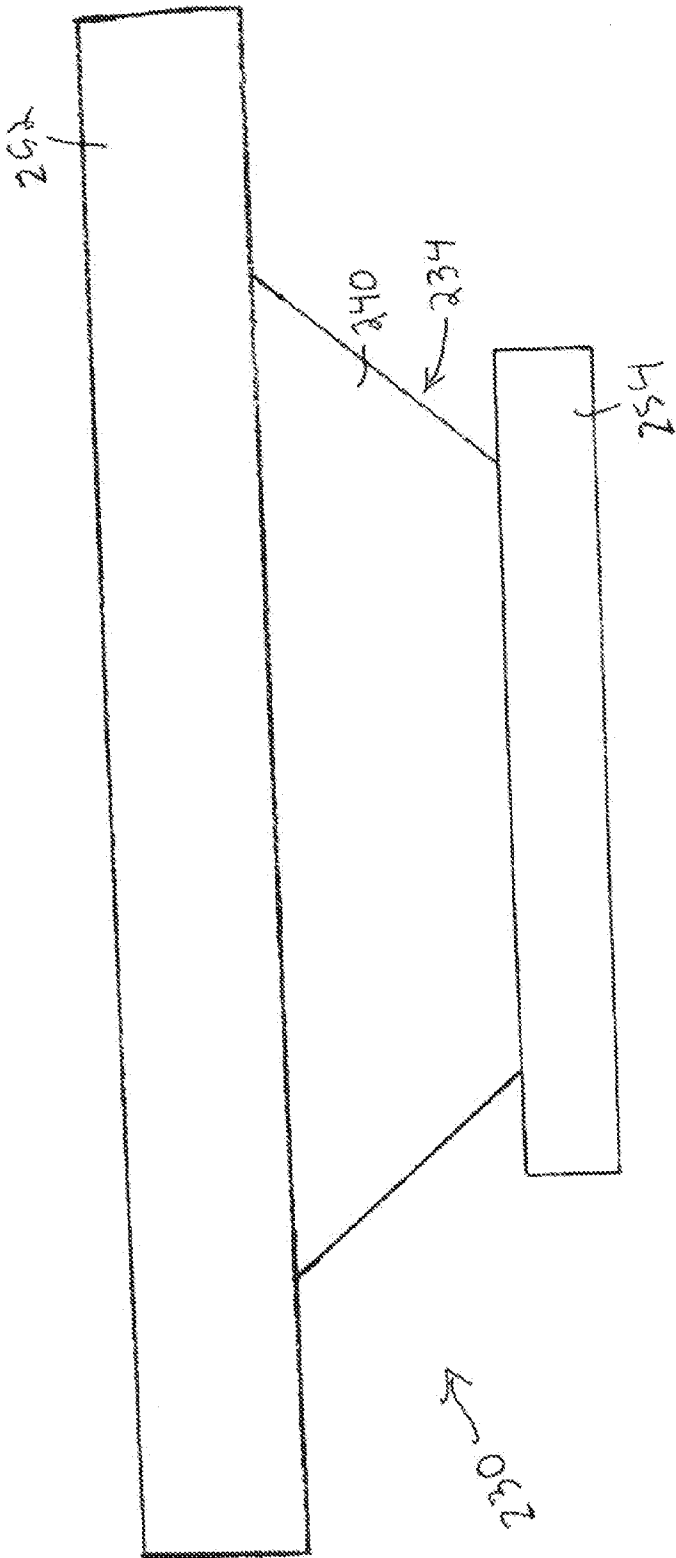
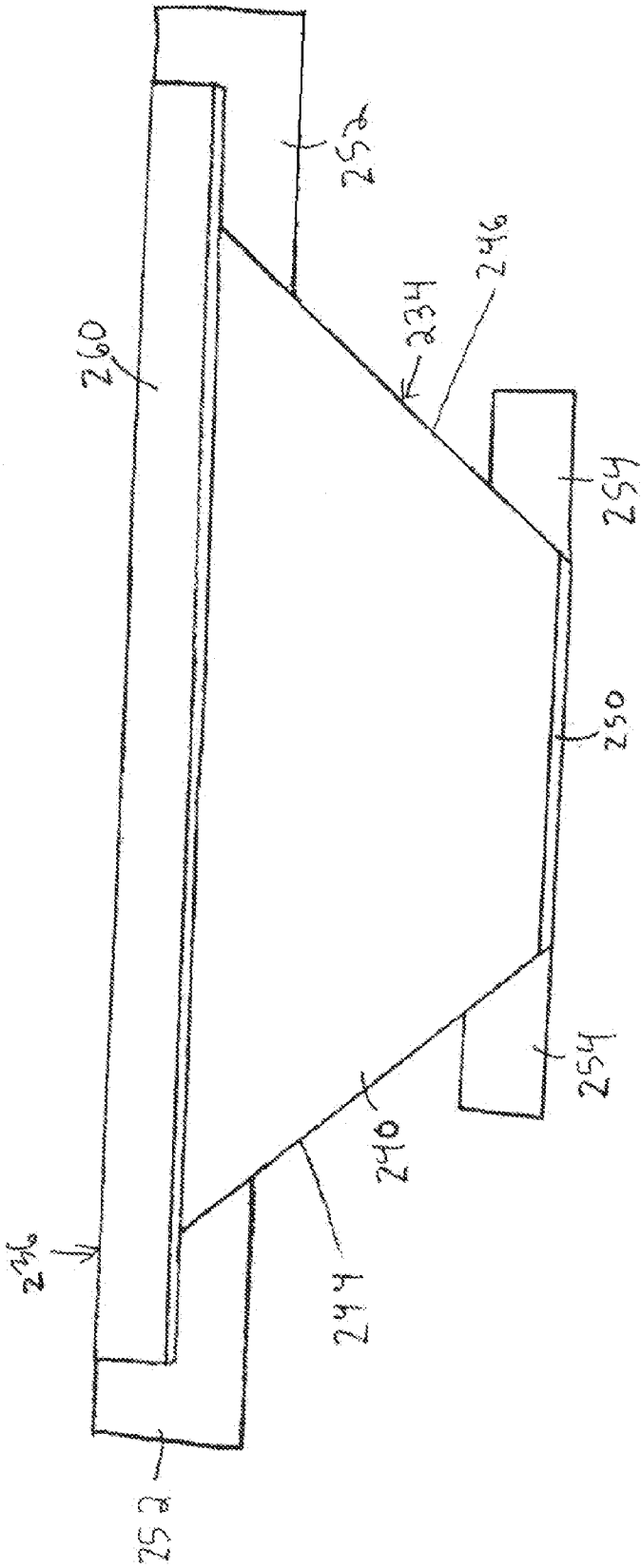
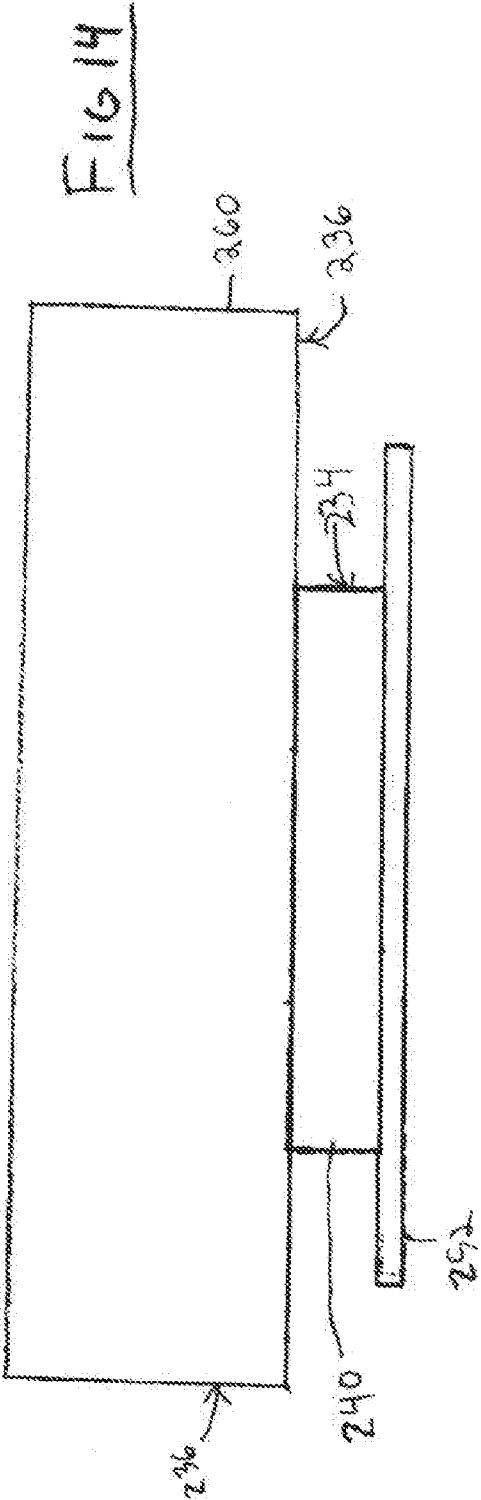
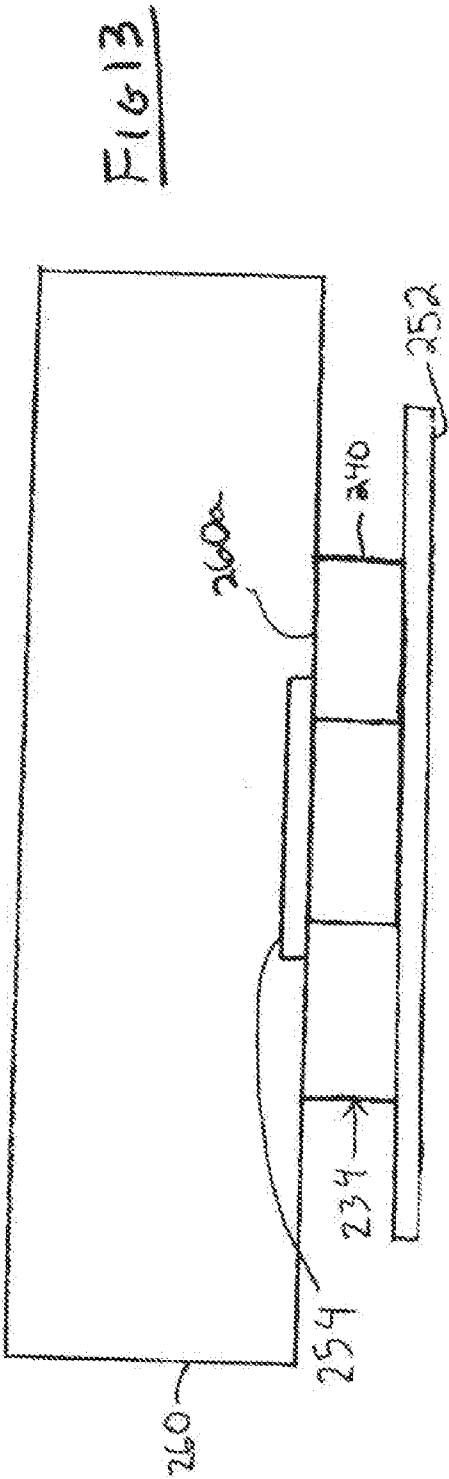


FIG 12





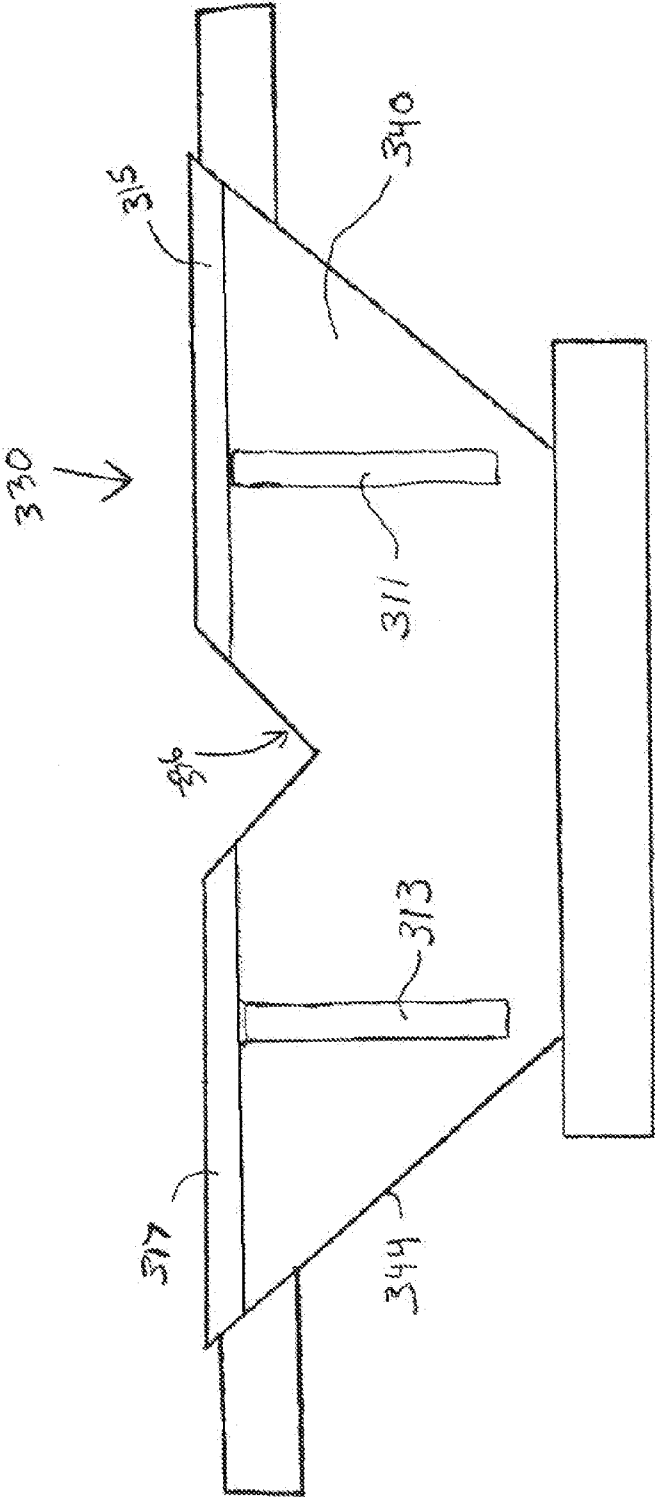


FIG 15

ACCESSORY SUPPORT BRACKET FOR A PORTABLE STRUCTURE

FIELD OF THE INVENTION

[0001] This invention relates to support brackets, particularly those that are used in portable enclosures, particularly supporting a camera or gun on the framework of a hunting blind.

BACKGROUND OF THE INVENTION

[0002] Interacting with animals, especially through hunting, bird watching, or photography, is a popular activity. Interacting with animals in a natural environment is preferable. In this way, animals must be prevented from detecting when an observer, hunter, or photographer is present. If this is not done, animals may be frightened and stay away from the location of the individual. Therefore, it is important to make the individual visually undetectable.

[0003] Blinds are often utilized to conceal individuals and equipment in such an environment. Numerous types of blinds exist, and many are generally portable and collapsible structures. A common type of hunting blind is one that is a cover portion supported by a framework. The cover portion could range anywhere from a rubber-like substance to a type of fabric material. This cover portion is held in a desired position and shape due to the structure of the framework, which is then supported by the ground. In a number of such blinds have a X-shaped framework on at least one side of the blind, such as disclosed in U.S. Pat. Nos. 6,296,415 and 7,320,332.

[0004] It is known in the prior art to have a support for a gun or camera located near a window of a blind such as described in U.S. Pat. No. 5,964,435. However, supports like those described are large and would be difficult to transport. Also, if more than one is needed, the task of transporting them becomes even greater. In addition, the support must be attached to the tent wall and supported on the ground, making guaranteed stability impossible on insubstantial or uneven terrain. The tent wall may not be of sufficient strength to support particular accessories. When the tent wall is made of fabric, supports depending on wall support are limited by the amount of force the wall will bear. Furthermore, the size and complexity of mounting makes their interchangeability cumbersome. Due to this, only one sort of support is provided that must try to suffice for all sorts of attachments.

[0005] The present inventor has recognized the need for a blind accessory support bracket that is reasonably small and easy to transport.

[0006] The present inventor has also recognized the need for a blind accessory support bracket that is securely mounted on a blind regardless of the terrain or blind location.

[0007] The present inventor has also recognized the need for a blind accessory support bracket that maximizes that utilizes the support frame work of a blind.

[0008] The present inventor has also recognized the need for a blind accessory support bracket that is capable of being designed for a specific accessory and interchanged with other specifically designed supports.

SUMMARY OF THE INVENTION

[0009] The present invention comprises a blind accessory support bracket for use with a blind tent or portable structure having an X-shaped frame component. This blind accessory

support bracket includes a blind attachment portion coupled to an accessory support portion.

[0010] The blind attachment portion is similar for all different support apparatuses. The blind attachment portion has a body that is shaped to fit snugly into the top V-shape formed by the X-shaped framework of the blind. This body may be upside down triangularly shaped or upside down trapezoidally shaped. The body lies in the same plane as the X-shaped framework, and the sides of the body resting against the framework making up the top of the X-shape. Therefore, the blind attachment portion body is prevented from sliding down by the X-shaped framework of the blind. In this way, the blind accessory support bracket of the present invention may support as much downward force as the framework of the blind can withstand. Further, the blind attachment portion contains retaining abutments to prevent movement of the blind accessory support bracket in a direction perpendicular to the plane in which the X-shaped framework lies. A top abutment and a bottom abutment extend out from the blind attachment portion body, in a direction substantially parallel to the plane of the ground. The top abutment is attached to the blind attachment portion body on a side outside of the X-shaped structure, toward the blind outer covering. The bottom abutment is attached to the blind attachment portion body on a side inside of the X-shaped structure, toward the inside of the blind. Both the top and bottom abutments are transverse to the X-shaped framework at their respective locations.

[0011] When the blind accessory support bracket is mounted on the blind, the top and bottom abutments press against the X-shaped framework of the blind on an outside and an inside, respectively. When an amount of weight is applied to the accessory support portion, a torque is applied to the blind attachment portion, pressing and securing the abutments on the framework with increased force. The blind accessory support bracket is prevented from becoming displaced inside of the framework by the top abutment and prevented from becoming displaced outside of the framework by the bottom abutment.

[0012] The accessory support portion may be of a number of configurations, and may serve a number of functions. One embodiment shows the accessory support portion as a camera brace or a gun brace. Different accessory support portions are designed depending on the different mounting mechanisms of the cameras or guns. In addition, the accessory support portion may comprise a shelf for use with a number of accessories.

[0013] The blind accessory support bracket is preferably located on the framework of a blind on the inside of an opening of the blind. Therefore, the camera or gun brace supports a camera or gun with a clear viewing and aiming medium. In this way, the activity becomes more easy and efficient through the assistance of the blind accessory support bracket.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a perspective view of a blind accessory support bracket of the invention mounted on the framework of a blind, wherein the accessory support portion comprises a gun brace;

[0015] FIG. 2 is a rear view of the blind accessory support bracket of FIG. 1;

[0016] FIG. 3 is a front view of the blind accessory support bracket of FIG. 1;

[0017] FIG. 4 is a top view of the blind accessory support bracket of FIG. 1;

[0018] FIG. 5 is a bottom view of the blind accessory support bracket of FIG. 1;

[0019] FIG. 5*b* is a perspective view of a blind with an internal framework shown with the use of dashed lines;

[0020] FIG. 6 is a perspective view of a second embodiment of a blind accessory support bracket of the invention mounted on the framework of a blind, wherein the accessory support portion comprises a camera brace with camera mounting fastened thereon;

[0021] FIG. 7 is a rear bottom perspective view of the blind accessory support bracket of FIG. 6;

[0022] FIG. 8 is a front top perspective view of the blind accessory support bracket of FIG. 6;

[0023] FIG. 9 is a top perspective view of the blind accessory support bracket of FIG. 6;

[0024] FIG. 10 is a perspective view of a third embodiment of a blind accessory support bracket of the invention mounted on the framework of a blind, wherein the accessory support portion comprises a shelf;

[0025] FIG. 11 is a front view of the blind accessory support bracket of FIG. 10;

[0026] FIG. 12 is a rear view of the blind accessory support bracket of FIG. 10;

[0027] FIG. 13 is a bottom view of the blind accessory support bracket of FIG. 10;

[0028] FIG. 14 is a top view of the blind accessory support bracket of FIG. 10; and

[0029] FIG. 15 is a rear view of a fourth embodiment of a blind accessory support bracket.

DETAILED DESCRIPTION

[0030] While this invention is susceptible of embodiment in many different forms, there are shown in the drawings, and will be described herein in detail, specific embodiments thereof with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the specific embodiments illustrated.

[0031] FIGS. 1-5 show one embodiment of the blind accessory support bracket 30 mounted on a frame 32 of a hunting blind, tent, or portable structure. The blind accessory support bracket 30 comprises a blind attachment portion 34 and an accessory support portion 36.

[0032] In this embodiment, the accessory support portion 36 comprises a notch 38 formed into a blind attachment portion body 40. Notch 38 may be sized, shaped, and configured to fit a gun barrel for support when hunting. In one embodiment, notch 38 is

[0033] V-shaped in the center of the blind attachment portion body 40.

[0034] Blind attachment portion 34 rests on a portion of an X-shaped structure 42 of the framework 32. In one type of X-shaped framework, a first frame member 42*a* converges toward a second frame member 42*b*. The first and second frame members 42*a*, 42*b* converge to a connection point 42*c*. The first and second frame members 42*a*, 42*b* of the type shown in FIG. 1 are the upper V portion of the X-shaped framework.

[0035] Blind attachment portion body 40 is upside down trapezoidally shaped, with a first lateral side 44 and a second lateral side 46 configured to rest against X-shaped structure 42. The first lateral side 44 is shaped to rest on the first

converging frame member 42*a* and the second lateral side 46 is shaped to rest against the second converging frame member. In one embodiment, the lateral sides 44, 46 are shaped to contact the corresponding converging frame members 42*a*, 42*b* along substantially the entire surface of the lateral sides 44, 46. The lateral sides have a front edge 44*a*, 46*a* and a back edge 44*b*, 46*b* defining a width of each lateral side.

[0036] While the embodiment shown is a trapezoidal shape, other shapes fitting with the top of an X-shaped structure are possible configuration of the accessory support bracket 30. Blind attachment portion body 40 also has a top 48 and bottom 50 that are substantially parallel. Blind attachment portion body 40 lies in the same plane as X-shaped structure 42. The sides 44, 46 press down against X-shaped structure 42 and resist the tendency of the blind accessory support bracket 30 to fall downward. Blind attachment portion body 40 may be injection molded out of plastic or made of another material such as wood or metal.

[0037] Blind attachment portion 34 also comprises a top abutment 52 and a bottom abutment 54. Abutments 52, 54 extend out from blind attachment portion body 40 in a direction substantially parallel to top 48 and bottom 50. It is also possible for the abutments to extend from the body 40 at angles other than parallel to the top 48 or the bottom 50. Abutment 52 extends in front of the X-shaped structure 42 and the abutment 55 extends behind the X-shaped structure. Abutments 52, 54 may be injection molded out of plastic or made of another material such as wood or metal. The abutments may also be integrally molded with the body 40 to form one unified component. Top abutment 52 is positioned on a forward side of the X-shaped structure 42 in relation to an inside location 64. The inside location 64 is where the user is on the inside of the blind, tent, or support structure. If the blind is not a fully enclosed structure, the inside user location 64 is behind the a wall having the X-shaped structure with a support 30. Top abutment 52 prevents the motion of the blind accessory support bracket 30 in a direction out of the plane of the X-shaped structure, and toward the inside location 64.

[0038] The top abutment 52 has two inside facing portions 52*a*, 52*b* at opposite lateral ends of the abutment 52. The first inside face 52*a* of the abutment 52 and the adjacent portion of the sidewall 44 form a L-shaped channel portion 52*c* for receiving the frame member 42*a*. Likewise a second inside face 52*b* and the adjacent portion of the sidewall 46 form an L-shaped channel portion 52*d* for receiving the frame member 42*b*.

[0039] Bottom abutment 54 is located on a rear side of X-shaped structure 42, with respect to the inside location 64. Bottom abutment 54 prevents the motion of the blind accessory support bracket 30 in a direction out of the plane of the X-shaped structure 42, and away from the inside location 64. With these provisions, the blind accessory support bracket 30 is provided with resistance to motion in the forward, rearward, and downward directions and provides significant stability.

[0040] The bottom abutment 54 has two inside facing portions 54*a*, 54*b* at opposite lateral ends of the abutment 54. The first inside face 54*a* and the adjacent portion of the sidewall 44 form a L-shaped channel portion 54*c* for receiving the frame member 42*a*. Likewise a second inside face 54*b* and the adjacent portion of the sidewall 46 form an L-shaped channel portion 54*d* for receiving the frame member 42*b*.

[0041] While the embodiment shown provides channel portions 52*c*, 52*d*, 54*c*, 54*d*, in an alternatively embodiment the

channel portions comprise channels extending along both the front and back sides of a frame member **42a** or **42b** and extending along the length of the side wall and when positioned on a frame **42**.

[0042] FIG. **5b** shows the outside of a blind to be used in connection with the present invention. Blind covering **62** lies on the framework **32**. Blind covering **62** encloses the inside location **64**. Framework **32** is located inside blind covering **62**, but is shown here with the use of dashed lines. An opening **66** is shown just above X-shaped structure **42**. The opening **66** is shown as a triangle shape but may take other forms, including square or rectangle. The blind accessory support bracket **30** is preferably mounted on X-shaped structure so that the accessories being supported thereby are readily alignable with the opening **66**.

[0043] FIGS. **6-9** show second embodiment of a blind accessory support bracket **130** mounted on the framework **32** of a hunting blind. The blind accessory support bracket **130** comprises a blind attachment portion **134** and an accessory support portion **136**.

[0044] Blind attachment portion **134** rests on an X-shaped structure **42** of framework **32**. Blind attachment portion body **140** is upside down trapezoidally shaped, with sides **144**, **146** configured to rest against X-shaped structure **42**. The body **140** is similar in structure to the body **40**. Blind attachment portion body **140** also has a top **148** and bottom **150** that are substantially parallel. Blind attachment portion body **140** lies in the same plane as X-shaped structure **42**. The sides **144**, **146** press down against X-shaped structure **42** and resist the tendency of the blind accessory support bracket **130** to fall downward. Blind attachment portion body **140** may be injection molded out of plastic or made of another material such as wood or metal.

[0045] Blind attachment portion **134** also comprises a top abutment **152** and a bottom abutment **154**. Abutments **152**, **154** extend out from blind attachment portion body **140** in a direction substantially parallel to top **148** and bottom **150**. Abutments **152**, **154** are transverse to the X-shaped structure **42**. Abutments **152**, **154** may be injection molded out of plastic or made of another material such as wood or metal.

[0046] Top abutment **152** is positioned on a forward side of the X-shaped structure **42**, with respect to the inside location **64**. Top abutment **152** prevents the motion of the blind accessory support bracket **130** in a direction out of the plane of the X-shaped structure, and toward the inside location **64**.

[0047] Bottom abutment **154** is located on a near side of X-shaped structure **42**, with respect to a blind location **64**. Bottom abutment **154** prevents the motion of the blind accessory support bracket **130** in a direction out of the plane of the X-shaped structure **42**, and away from the location **64**. With these provisions, the blind accessory support bracket **130** is provided with resistance to motion in the forward, rearward, and downward directions and provides significant stability.

[0048] In this second embodiment, however, the accessory support portion **136** comprises a camera brace **156**. Camera brace **156** is mounted on a near side of blind attachment portion **134**, with respect to the inside location **64**. FIG. **6** shows a camera stand **158** clamped onto camera brace **156**. In one embodiment the camera brace **156** is a squared annular shape. Accessory support portion **136** comprising a camera brace **156** may be injection molded with the rest of blind accessory support bracket **130**, or made of another material such as wood or metal. The Accessory support may be integrally molded or formed with the body **140** to comprise a

unitary part. A third embodiment is shown in FIGS. **10-14**. In this embodiment, a blind accessory support bracket **230** is mounted on the framework **32** of a hunting blind. The blind accessory support bracket **230** comprises a blind attachment portion **234** and an accessory support portion **236**.

[0049] Blind attachment portion **234** rests on an X-shaped structure **42** of framework **32**. Blind attachment portion body **240** is upside down trapezoidally shaped, with sides **244**, **246** configured to rest against X-shaped structure **42**. The body **240** is similar in structure to the body **40**. Blind attachment portion body **240** also has a top **248** and bottom **250** that are substantially parallel. Blind attachment portion body **240** lies in the same plane as X-shaped structure **42**. The sides **244**, **246** press down against X-shaped structure **42** and resist the tendency of the blind accessory support bracket **230** to fall downward. Blind attachment portion body **240** may be injection molded out of plastic or made of another material such as wood or metal.

[0050] Blind attachment portion **234** also comprises a top abutment **252** and a bottom abutment **254**. Abutments **252**, **254** extend out from blind attachment portion body **240** in a direction substantially parallel to top **248** and bottom **250**. Abutments **252**, **254** are transverse to the X-shaped structure **42**. Abutments **252**, **254** may be injection molded out of plastic or made of another material such as wood or metal.

[0051] Top abutment **252** on a forward side of the X-shaped structure **42**, with respect to the inside location **64**. Top abutment **252** prevents the motion of the blind accessory support bracket **230** in a direction out of the plane of the X-shaped structure, and toward the inside location **64**.

[0052] Bottom abutment **254** is located on a near side of X-shaped structure **42**, with respect to the inside location **64**. Bottom abutment **254** prevents the motion of the blind accessory support bracket **230** in a direction out of the plane of the X-shaped structure **42**, and away from the inside location **64**. With these provisions, the blind accessory support bracket **230** is provided with resistance to motion in the forward, rearward, and downward directions and provides significant stability.

[0053] In this third embodiment, the accessory support portion comprises a shelf **260**. Shelf **260** is attached on a near side of blind attachment portion **234**, with respect to a inside location **64**. Accessory support portion **236** comprising a shelf **260** may be injection molded with the rest of blind accessory support bracket **230**, or made of another material such as wood or metal.

[0054] In a fourth embodiment, as shown in FIG. **15**, the blind accessory support bracket **330** comprises a blind attachment portion body **340**. The support bracket is configured to engage one or more accessory support portions, such as accessory support portions **136**, **236**. The accessory support portions **136**, **236** are interchangeably and detachably connectable with the blind attachment portion body **340**.

[0055] The blind attachment portion body **340** has an engagement device for securing the attachment support portions to the body **340**. The engagement device may comprise any number of means of securing one component to another component. The engagement device may comprise channels **311**, **313** for lockably receiving end portions **156a**, **156b** of the camera brace **156**. The engagement device may have a horizontal channel **317**, **315** for lockably receiving a front end engagement portion **260a** of the shelf **260**. The engagement device may comprise dovetailed channels for slidably receiving dovetail members of the accessory support portion. The

engagement device may also comprise other devices and methods of releasably attaching one component to another component, such as a lock and release mechanism. While the blind accessory support bracket 330 is shown in FIG. 15 with an accessory support portion 336, the accessory support portion 336 is optional in an embodiment configured to interchangeably and detachably connect various accessory support portions.

[0056] From the foregoing, it will be observed that numerous variations and modifications may be effected without departing from the spirit and scope of the invention. It is to be understood that no limitation with respect to the specific apparatus illustrated herein is intended or should be inferred.

1. An accessory support for a portable structure having a frame with at least two converging frame members:

a body having opposite lateral sidewalls where each side converges toward the other, the lateral sidewalls configured to rest against converging frame members of the support structure to support the body;

the body having a plurality of securing members configured to secure the body between the converging frame members; and

the body comprising an accessory support portion.

2. The accessory support according to claim 1, wherein the opposite lateral sides of the body are a first lateral sidewall and a second lateral sidewall; the first lateral sidewall configured to rest against the first converging frame member of the portable structure, the opposite second lateral sidewall configured to rest against a second converging frame member of the portable structure.

3. The accessory support according to claim 1, wherein the accessory support portion comprises a gun brace.

4. The accessory support according to claim 3, wherein said gun brace comprises a notch for supporting the barrel of a gun.

5. The accessory support according to claim 1, wherein the accessory support portion comprises a camera mount.

6. The accessory support according to claim 5, wherein the camera mount comprises a squared annular ring configured to receive a camera or camera support.

7. The accessory support according to claim 1, wherein the accessory support portion comprises a shelf.

8. The accessory support according to claim 1, wherein each side wall has a first front edge and a back edge defining the width of the sidewall;

said securing members comprise a first abutment and a second abutment;

the first and second abutments extending beyond the plane that extends along the width of the first side wall, the first abutment extending laterally from the front edge, the second abutment extending laterally from a rear edge wherein a channel portion is formed between the sidewall and the first abutment and a second channel portion is formed between the sidewall and the second abutment and each channel portion configured to support the body on a frame member of the structure.

9. The accessory support according to claim 8, said securing members comprise a third abutment and a fourth abutment;

the third and fourth abutments extending beyond the plane that extends along the width of the second side wall opposite the first side wall, the third abutment extending laterally from the front edge, the fourth abutment extending laterally from a rear edge wherein a third

channel portion is formed between the sidewall and the third abutment and a fourth channel portion is formed between the sidewall and the fourth abutment and each channel portion configured to support the body on a frame member of the structure.

10. The accessory support according to claim 1, wherein each sidewall has a first front edge and a back edge defining the width of the sidewall;

said securing members comprise a first abutment and a second abutment;

the first abutments extends beyond the plane that extends along the width of the first side wall,

the second abutments extends beyond the plane that extends along the width of the second side wall,

the first abutment extending laterally from the front edge of the first sidewall, the second abutment extending laterally from a rear edge of the second sidewall wherein a channel portion is formed between the first sidewall and the first abutment and a second channel portion is formed between the second sidewall and the second abutment and each channel portion configured to support the body on a frame member of the structure.

11. The accessory support according to claim 1, wherein each side wall has a front edge and a back edge defining the width of the sidewall;

said securing members comprise a first abutment and a second abutment; the first abutment extending laterally beyond the first and second sidewalls in a plane that is longitudinally ahead of the lateral plane defined by the front edge, the second abutment extending laterally beyond the first and second sidewalls in a plane that is longitudinally behind the lateral plane defined by the back edge.

12. The accessory support according to claim 1, wherein the securing members comprise a first abutment and a second abutment; the first abutment is adjacent the sidewall on a first side and the second abutment is adjacent to the sidewall on and opposite second side.

13. The accessory support according to claim 1, wherein said securing members comprise a first abutment, the first abutment located near a top side of said body and longitudinally forward of said sidewalls, the second abutment located near the bottom of said body and longitudinally rearward of said sidewalls.

14. An accessory support for a portable blind having a frame with converging frame members:

a body having opposite lateral frame engaging contact surfaces where each surface converges toward the other, the lateral surfaces configured to rest against converging frame members of the support structure to support the body;

the body having a plurality of securing members configured to secure the body between the converging frame members; and

the body comprising an accessory support portion and an engagement device configured to detachably connect the accessory support portion to the body.

15. The accessory support according to claim 14, wherein the accessory support portion comprises a gun brace having a notch for supporting the barrel of a gun.

16. The accessory support according to claim 14, wherein the accessory support portion comprises a camera mount.

17. The accessory support according to claim 1, wherein the accessory support portion comprises a shelf.

18. The accessory support according to claim 1, wherein the securing members extend laterally beyond the support surfaces to limit the longitudinal movement of the body.

19. An accessory support for a portable blind having a frame with converging frame members:

a body having converging frame engaging means for supporting the body against converging frame members of the support structure;

the body having a plurality of securing means for securing the body between the converging frame members and for limiting longitudinal movement of the body; and the body having an accessory support means for supporting accessories.

20. An accessory support according to claim 19, wherein the accessory support means is selected from the group consisting of: a gun mount, a camera mount, and a shelf.

* * * * *