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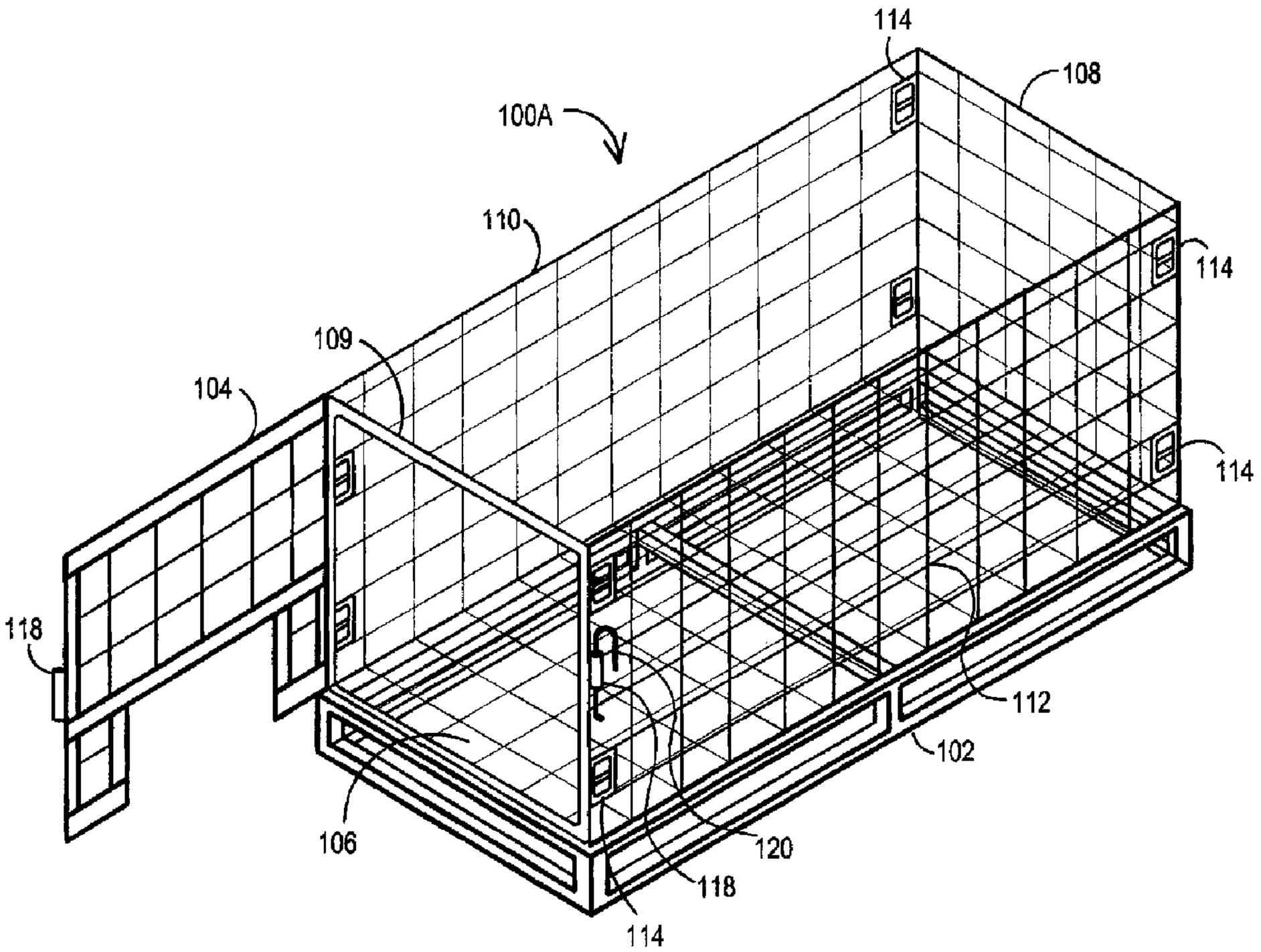
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(54) Titre : CONTENANT PLIANT DE PRESENTATION DE PRODUIT
(54) Title: COLLAPSIBLE PRODUCT DISPLAY CONTAINER



(57) Abrégé/Abstract:
An apparatus is provided for a collapsible product display container with foldable opposing sides, detachable front and back sides, and a detachable front panel. The front and back sides and front panel are attachable without bolts, screws, or other separate

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(57) Abrégé(suite)/Abstract(continued):
hardware. The front panel comprises an opening to allow product to pass through the front side. The front panel is attached via pins and receiving means, creating a hinge mechanism, allowing the front panel or door to open and close the container for loading and unloading product in larger quantities. The front panel can lock or unlock via a locking pin mechanism. The front panel is configured to hold signage with marketing materials in its grooved side and bottom edges. A pallet bottom is configured to allow traditional lifting and moving of the display container.

Abstract of the Disclosure

[0043] An apparatus is provided for a collapsible product display container with foldable opposing sides, detachable front and back sides, and a detachable front panel. The front and back sides and front panel are attachable without bolts, screws, or other separate hardware. The front panel comprises an opening to allow product to pass through the front side. The front panel is attached via pins and receiving means, creating a hinge mechanism, allowing the front panel or door to open and close the container for loading and unloading product in larger quantities. The front panel can lock or unlock via a locking pin mechanism. The front panel is configured to hold signage with marketing materials in its grooved side and bottom edges. A pallet bottom is configured to allow traditional lifting and moving of the display container.

Patent Application for

COLLAPSIBLE PRODUCT DISPLAY CONTAINER

Inventor: Douglas E. Austin

Technical Field

[0001] The techniques described herein relate to a collapsible product display container, and particularly to a product display container configured to have a pallet bottom and be assembled without bolts, screws or other separate hardware.

Background

Current collapsible containers are known in the art for use as pet crates, or for displaying and shipping products. Most current art collapsible containers require assembly via screws, bolts, or other separate hardware. Some current containers are collapsible, wherein four side walls are detachable and are configured to be vertically inserted into a pallet base or bottom via downward protrusions on sides that interact with recesses on the pallet base to engage through vertical motion. Collapsible pallets are also known. Some current foldable pallets that are assembled without screws, bolts, or other similar hardware comprise a pallet bottom having four affixed sides that hinge inward so that the edges of the sides meet and snap together with an attached latch system, wherein the sides are not detachable.

[0002] It would be desirable to provide a collapsible pallet / product display container having features desirable for ease of shipping of the containers with and without product that also has advantageous product display features.

Summary

[0003] The techniques described herein provide an apparatus for a product display container comprising a pallet bottom configured to allow traditional lifting and moving of the display container. The container sides may be assembled easily and include desirable features for use as a product display container.

[0004] In one embodiment, a collapsible product display container is provided. The container may comprise a pallet bottom configured to allow lifting and moving of the display container and at least two foldable sides, wherein the at least two foldable sides are attached to the pallet bottom. The container may further comprise a front side and a back side, wherein the front and back sides are detachable. The container may further comprise a detachable front door, wherein the front and back sides and front door attachable without screws or bolts.

[0005] Another aspect of the techniques described herein provides a collapsible product display container that also serves as a shipping container. The container may comprise a bottom supporting shipping pallet and two opposing attached sides pivotable to upright positions attached to said pallet. The container may further comprise a back side detachably connectable to the opposing sides, a front open frame detachably connectable to said opposing sides and a front pivotably mounted door which closes over the open frame, wherein the two opposing attached sides, the back side, and the front pivotably mounted door form a space for displaying product.

Description of the Drawings

[0006] It is noted that the appended drawings illustrate only exemplary embodiments of the techniques described herein and are, therefore, not to be considered limiting of its scope, for the techniques may admit to other equally effective embodiments.

[0007] FIG. 1A is a perspective view of an assembled collapsible product display container;

[0008] FIG. 1B is a perspective view of an assembled collapsible product display container having a front panel or door opened.

[0009] FIG. 1C shows a view of the collapsible product display container illustrating the inward folding of the sides of the container.

[0010] FIG. 1D shows a perspective view of the collapsible product display container during assembly.

[0011] FIG. 2 is a front view of a front side of a collapsible product display container;

[0012] FIG. 3 is a front view of a front panel or door of a collapsible product display container;

[0013] FIG. 4 is an aerial view of a front panel or door of a collapsible product display container;

[0014] FIG. 5 is a front view of a back side of a collapsible product display container;

[0015] FIG. 6 is a front view of a first side that connects to the back side and the front panel or door to create hinges of a collapsible product display container;

[0016] FIG. 7 is a front view of a latch mechanism of a collapsible product display container;

[0017] FIG. 8 is an aerial view of a first side of a collapsible product display container;

[0018] FIG. 9 is a front view of a second side that connects to a front side and latches the front panel of a collapsible product display container; and

[0019] FIG. 10 is a front view of advertising material that attaches to a front panel or door of a collapsible product display container.

Detailed Description

[0020] The techniques described herein provide an apparatus for a product display container comprising a pallet bottom configured to allow traditional lifting and moving of the display

container. The container sides may be assembled easily and include desirable features for use as a product display container.

[0021] Fig. 1A shows a perspective view of the collapsible product display container 100A, having a pallet bottom 102 configured to allow traditional lifting and moving of the display container 100A, such as with a forklift or other similar equipment. A first side 110 and a second side 112 are permanently and pivotally affixed to the pallet bottom 102 via a hinge attachment that allows the sides 110, 112 to fold inward onto the pallet bottom 102 for storage of the container 100A when the container 100A is empty. While a preferred embodiment allows the sides 110, 112 to rotate from an inward closed position outward to a horizontal position even with the pallet bottom 102, it is understood that the hinge attachment mechanism could be set to stop the rotation of the sides 110, 112 at a vertical position to meet the edges of a detachable front side 109 and a detachable back side 108 for attachment purposes. The front side 109 may be merely an open frame as shown in more detail in FIG. 2 as an additional front panel or door 104 may be utilized as discussed in more detail below. The front side 109 may provide structural rigidity when the front panel or door 104 is opened. The detachable back side 108 is shown in more detail in FIG. 5, the side 110 is shown in more detail in FIG. 6 and the side 112 is shown in more detail in FIG. 9.

[0022] Thus, the product display container may be shipped to a product supply company as an unassembled relatively compact arrangement to lessen shipping and handling costs. FIG. 1C illustrates how pivotal sides 110 and 112 may be folded inward. In such a configuration the pivotal sides 110 and 112 may be folded inward onto the pallet and the detachable front side 109 and detachable back side 108 may be placed on top of the folded sides such that the height of the container is significantly less than the assembled height when the sides are upright and attached to each other. A supplier of product may then assemble the product display container and fill it with product to be sold. The pallet aspects of the container may than be used to assist in the shipping to and placement at the point of sale location (such as a retail store).

[0023] The product display container may be manufactured from a wide variety of materials. For example in one embodiment the container may be formed from thick rigid metal wire having a mesh pattern. In one embodiment, all of the sides and the pallet may be formed of such metal

wire material. It is understood that the product display container could also be made of metal without a mesh pattern, or made of plastic, or some other rigid material or combinations thereof. In addition, the various components may be formed via a mesh pattern, solid sheets, or other arrangement or combinations thereof. In fact, it will be recognized that the advantageous container provided herein that combines a collapsible mechanism with advantageous product shipping and display functionality is not limited to any particular type of material.

[0024] The back side 108 attaches to the first side 110 and second side 112 via latches 114 located on back portions of the first and second sides 110, 112. The latches 114 may have a sliding bar that inserts into loop-shaped receiving means located on both sides of the back side 108. The front side 109 attaches to the first and second sides 110, 112 via latches 114 located on front portions of the first and second sides 110, 112. A front panel or door 104 comprising an opening 106 attaches to the first side 110 via a hinge mechanism comprising pins 116 located on a side edge the front panel or door 104 that vertically insert into cylinder-shaped receiving means 117 located on a front edge of the first side 110. The front panel or door 104 is shown in more detail in FIG. 3.

[0025] The front panel or door 104 can thus be opened via the hinge mechanism like a door. As shown in FIG. 1A, the front panel or door 104 is closed. As shown in FIG. 1B, the front panel or door 104 is in an open position. The front panel or door may be detachable from the side 110 and attached via the hinge mechanism pins 116 and the cylinder-shaped receiving means 117. Alternatively, the front panel or door may be configured to be permanently attached in a pivotable manner to the side 110.

[0026] FIG. 1D shows the container 100A during assembly. As shown in FIG. 1D, the attached sides 110 and 112 of the container are pivoted upward and then the detached front and back 108 and 109 may be inserted and attached as shown.

[0027] On the opposite side of the hinges of the front panel or door 104 there may be a locking or latching mechanism provided to secure the front panel or door 104 to the side 112. Thus the front panel or door may further comprise a cylinder-shaped receiving means 118 at an opposite side of the front panel or door 104 for receiving a locking pin 120 located on a front

edge of the second side 112. The locking pin 120 inserts vertically into the cylinder-shaped receiving means 118 to lock the front panel or door 104 closed. The opening 106 of the front panel or door 104 allows product to pass into and out of the container 100A even when the front panel or door 104 is in the closed position. Such a closed position, may in one embodiment be a normal point of sale position such that customers may remove product through the opening 106. The front panel or door 104 can be unlocked via the locking pin 120, allowing the front panel or door 104 to swing open for loading or unloading product in larger quantities. The product display container 100A is open at the top, also allowing for top loading and unloading of product in larger quantities.

[0028] A highly versatile container is therefore provided having a variety of independent features that may be used together or in alternative embodiments may be comprised of some subset of the features. For example, the container is collapsible to provide an ease of shipping of the container itself. The container includes a pallet bottom that assists in shipping and movement of the container (for example to and at a point of sale location). The container may be easily assembled without the need for additional hardware, screws and the like. Further, a variety of point of sale uses may be achieved by providing an open top for loading / unloading, a pivotable front door for loading and unloading and a smaller front opening for access to smaller quantities of product.

[0029] In an alternate embodiment, the collapsible product display container 100A is a shipping container that can contain product when shipped or can be shipped empty in a folded, collapsed position. The assembly or product display container 100A may be set up without separate attachment members, and comprises a bottom supporting pallet 102, two opposing sides 110, 112 that are pivotable to upright positions and attached to the pallet 102. A back side 108 and a front open frame or front side 109 are connectable to the opposed up sides 110, 112 without separate attachment members. A front pivotably mounted door or front panel 104 is attachable to the assembly or product display container 100A to open and close over the open frame or front side 109.

[0030] Fig. 2 shows a front side of the product display container 100A. The front side 109 may be a frame that is open, having loop-shaped receiving means 124 on either side edge for

receiving latch bars located on the first and second sides. The front side 109 is detachable and attaches to the front edges of the first and second sides of the container without the use of bolts, screws or other separate hardware. The front side 109 attaches via a latching mechanism that is affixed to the first and second sides, allowing the front side 109 to quickly and easily snap on when the loop-shaped receiving means 124 of the front side 109 engage the latching mechanisms located on the first and second sides.

[0031] Fig. 3 shows a front panel of the product display container 100A. In a preferred embodiment, the front panel or door 104 has an opening 106. It is understood that the front panel 104 could have no opening. Alternately, the front panel opening could be located anywhere on the front panel and could be various sizes depending upon the size of the product held in the container that a user needs to access via the opening 106. The opening 106 is configured to allow product to be removed from or put into the container in small quantities. Grooves 126 along side and bottom edges of the front panel 104 are configured to hold advertising or marketing material or signage in place as described below in more detail with reference to FIG. 10.

[0032] An edge of the front panel 104 connects to a first side 110 of the container and comprises at least two pins 116 configured for insertion into receiving means on an adjacent edge of the first side. Once the pins 116 are inserted vertically into the receiving means of the first side, a hinge mechanism is formed, allowing the front panel 104 to swing open at the hinges for mass product loading or unloading. A receiving means 118 on the opposite edge of the front panel 104 is configured to receive a large latching pin affixed to an adjacent edge of a second side. The receiving means 118 may be a hollow, cylinder-shaped mechanism that causes the front panel 104 to be locked or unlocked via the large latching pin located on a front edge of the second side. The front panel 104 acts as a door to the front of the container and may also hold advertising or marketing materials or signage in place. In an alternative embodiment a separate front panel or door 104 and front side 109 may not be utilized, but rather merely a front panel or door 104 may be utilized without the frame of side 109.

[0033] Fig. 4 shows an aerial view of the front panel or door 104. The pins 116 that create a hinge mechanism are shown on one edge of the front panel 104, and the hollow, cylinder-shaped

receiving means 118 that creates the locking mechanism is shown at the opposite edge of the front panel 104. The grooves 126 that hold advertising or marketing signage are shown extending from the side edges and bottom edge of the front panel 104.

[0034] Fig. 5 shows a view of a back side of the product display container 100A. Loop-shaped receiving means 124 extend from side edges of the back side 108 and are configured for receiving latch mechanisms located on back edges of the first and second sides. In a preferred embodiment, two loop-shaped receiving means 124 are located on two side edges of the back side 108.

[0035] Fig. 6 shows the first side 110 of the product display container. The first side 110 comprises latches 114 on the side edges for connecting with a back side and a front side. In a preferred embodiment, two latches 114 are on a front edge configured to connect to and attach the front side, and two latches 114 are on a back edge configured to connect to and attach a back side. The front edge also comprises at least two receiving means 117 configured to receive pins affixed to a front panel, creating a hinge mechanism for the front panel. The receiving means 117 may be hollow and cylinder-shaped.

[0036] Fig. 7 shows a front view of a latch mechanism 114 of the product display container. The latch mechanism 114 is preferably located on side edges of the first and second opposing sides. It is understood that the latches 114 could also be located on the front side and back side, with the receiving means located on the first and second opposing sides for attaching the front and back sides to the first and second sides. The latch 114 connects with receiving means on the front and back detachable sides and allows attachment of the front and back sides to the permanently affixed first and second opposing sides without bolts, screws, or other separate hardware. The back and front sides snap onto the first and second sides via the latches 114. A bar 130 is affixed to a handle 134 of the latch mechanism.

[0037] The latch mechanisms 114 are pivotably attached to the first and second sides. A user slides the latch 114 by moving the latch handle 134 to point upward, and slides the handle 134 toward the receiving means on a front or back side. Once the bar 130 engages the receiving

means, the handle 134 is pivoted downward to a locked position, holding the newly attached sides in place.

[0038] Fig. 8 shows an aerial view of the first side 110 of the product display container. The latch mechanism 114 and receiving means for pins 117 are shown at a front edge of the first side 110. The latch mechanism 114 can also be seen at the back edge of the first side 110, which attaches the back side to the container.

[0039] Fig. 9 shows the second side 112 of the product display container. The second side 112 may be permanently affixed to the pallet bottom and opposes the first side. The second side 112 is foldable or collapsible to allow for storage of the container when the container is empty, and easy assembly of the container when the container is needed for product display and disbursement. Latch mechanisms 114 on a back edge connect to a back side, while latch mechanisms 114 on a front side connect to a front side. A large locking pin 120 is slidably attached to the front edge of the second side 112 via a cylinder-shaped holding mechanism 119. The locking pin 120 inserts vertically into a receiving means on a front panel to lock the panel across the front side, closing the container.

[0040] Fig. 10 shows a front view of advertising material or signage configured for attachment to a front panel of a product display container. In a preferred embodiment, the advertising material or signage 140 is made of rigid cardboard with advertising on a front side 142, but could also be made of plastic or some other similar material. The advertising material or signage 140 comprises an opening 144 shaped to match an opening 106 of a front panel or door 104 for allowing product to pass through in small quantities. However, the advertising material can cover the front side opening and have a flap or some other slideable or pivotable opening mechanism to allow access to product via the front panel opening. The advertising material 140 is installed by sliding it along the grooves located on the front panel side edges. Once installed, the advertising material 140 rests in the grooves of the bottom and side edges of the front panel. In a preferred embodiment, the signage covers only the mesh portion of the front panel 104 and has an opening matching the opening 106 in the front panel 104. In another embodiment, the signage covers the entire front panel 104, and comprises a bend or other

mechanism to allow the signage to open exposing the opening 106 in the front panel 104 to allow product to pass through the opening 106 in the front panel 104.

[0041] It will be recognized that the various hinges, receiving mechanism, pins, and locking mechanism described herein are merely illustrative. One skilled in the art will recognize the functionality described herein may be achieved through a wide variety of hinges, receiving mechanism, pins, locking mechanisms, attachment means, or the like. It will also be recognized that the container described herein has a variety of independent features that may be used separately from each other and all features are not required in order to gain the benefit of the concepts disclosed herein.

[0042] Further modifications and alternative embodiments of the techniques described herein will be apparent to those skilled in the art in view of this description. It will be recognized, therefore, that the techniques described herein are not limited by these example arrangements. Accordingly, this description is to be construed as illustrative only and is for the purpose of teaching those skilled in the art the manner of carrying out the techniques described herein. It is to be understood that the forms of the techniques described herein shown and described are to be taken as the presently preferred embodiments. Various changes may be made in the implementations and architectures. For example, equivalent elements may be substituted for those illustrated and described herein and certain features of the techniques described herein may be utilized independently of the use of other features, all as would be apparent to one skilled in the art after having the benefit of this description of the techniques.

Claims

What is claimed is:

1. A collapsible product display container, comprising:

a pallet bottom configured to allow lifting and moving of the display container;

at least two foldable sides,wherein the at least two foldable sides are attached to the pallet bottom;

a front side;

a back side, wherein the front and back sides are detachable; and

a detachable front door,

wherein the front and back sides and front door attachable without screws or bolts.

2. The container of claim 1, wherein the foldable sides are permanently attached to the pallet and configured to fold inward.

3. The container of claim 2, wherein the front and back sides attach to the foldable sides via at least one latching mechanism.

4. The container of claim 3, wherein a plurality of latching mechanisms are located on the foldable sides, and a plurality of latch receiving mechanisms are located on the front and back attachable sides.

5. The container of claim 3, wherein the latches are located on the front and back attachable sides, and the latch receiving means are located on the foldable permanently attached sides.

6. The container of claim 1, wherein the front panel is attached to the product display container via a vertical hinge mechanism, the front panel being configured to open at the hinge mechanism.

7. The container of claim 6, wherein the front panel is locked via a locking pin mechanism.

8. The container of claim 1, wherein the front panel comprises an opening configured to allow product to pass through the opening.

9. The container of claim 8, wherein the front panel opening is located at a center bottom portion of the front panel.

10. The container of claim 9, wherein the front panel is configured to hold removable product display signage.

11. A collapsible product display container that also serves as a shipping container, comprising:

a bottom supporting shipping pallet;

two opposing attached sides pivotable to upright positions attached to said pallet;

a back side detachably connectable to the opposing sides;

a front open frame detachably connectable to said opposing sides; and

a front pivotably mounted door which closes over the open frame, wherein the two opposing attached sides, the back side, and the front pivotably mounted door form a space for displaying product.

12. The container of claim 11, wherein the opposing attached sides are attached to the pallet bottom via hinges, the opposing sides configured to fold inward.

13. The container of claim 12, wherein the front and back sides attach to the opposing attached sides via latching mechanisms.

14. The container of claim 13, wherein the latching mechanisms are located on the two opposing attached sides, and latch receiving mechanisms are located on the front and back sides.

15. The container of claim 13, wherein the latching mechanisms are located on the front and back sides, and the latch receiving mechanims are located on the opposing attached sides.

16. The container of claim 11, wherein the front door is configured to open and close.

17. The container of claim 16, wherein the front door is locked via a locking pin mechanism.

18. The container of claim 11, wherein the front door comprises an opening configured to allow product to pass through said opening.

19. The container of claim 18, wherein the front door is configured to open and close.

20. The container of claim 18, wherein the front door opening is located at a center bottom portion of the front door.

21. The container of claim 19, wherein the front door is configured to hold removable product display signage.

22. The container of claim 11, wherein the front door is configured to hold removable product display signage.

23. The container of claim 22, wherein the front door comprises grooves located at least on one side edge or a bottom edge configured to hold removable product display signage.

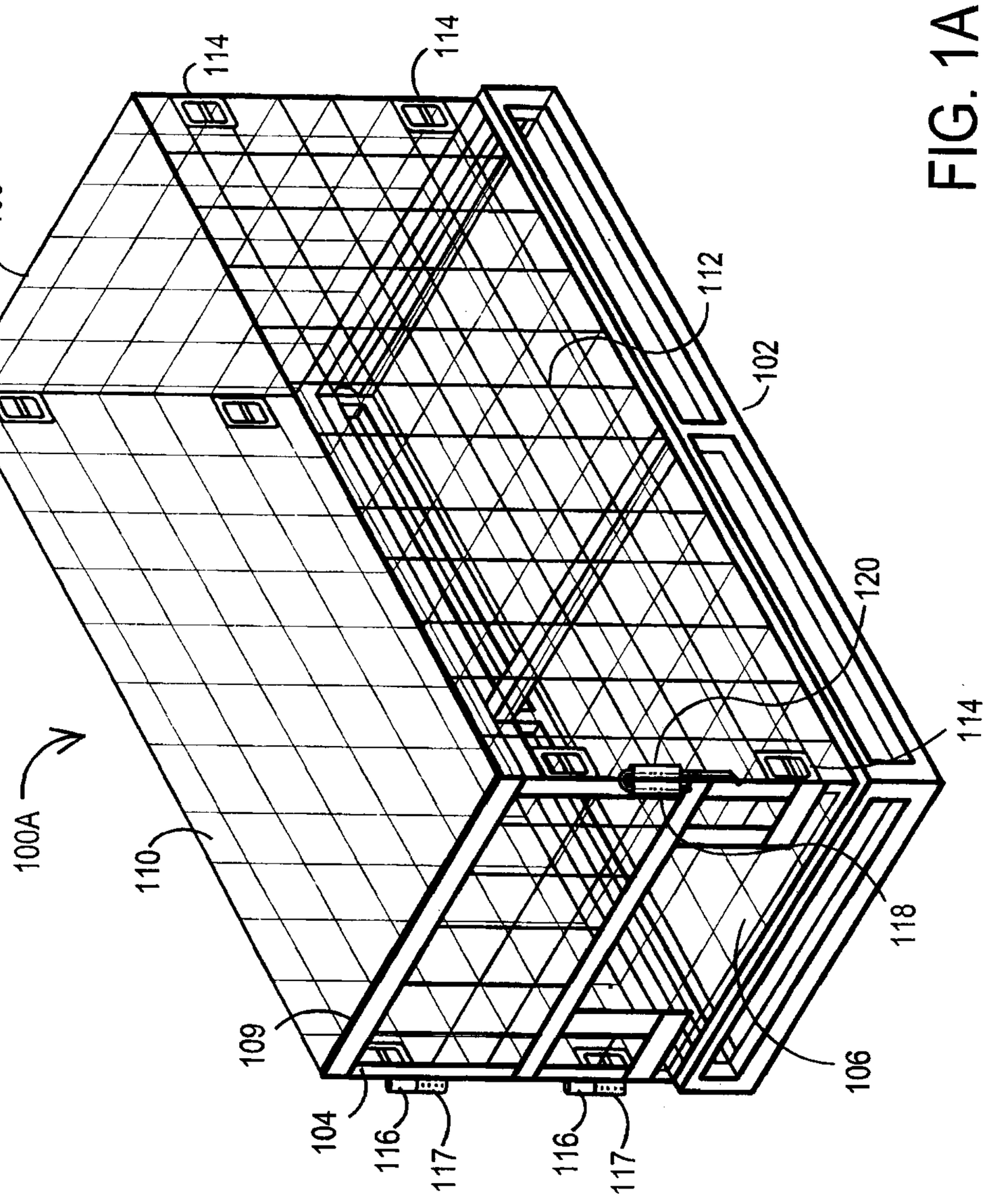


FIG. 1A

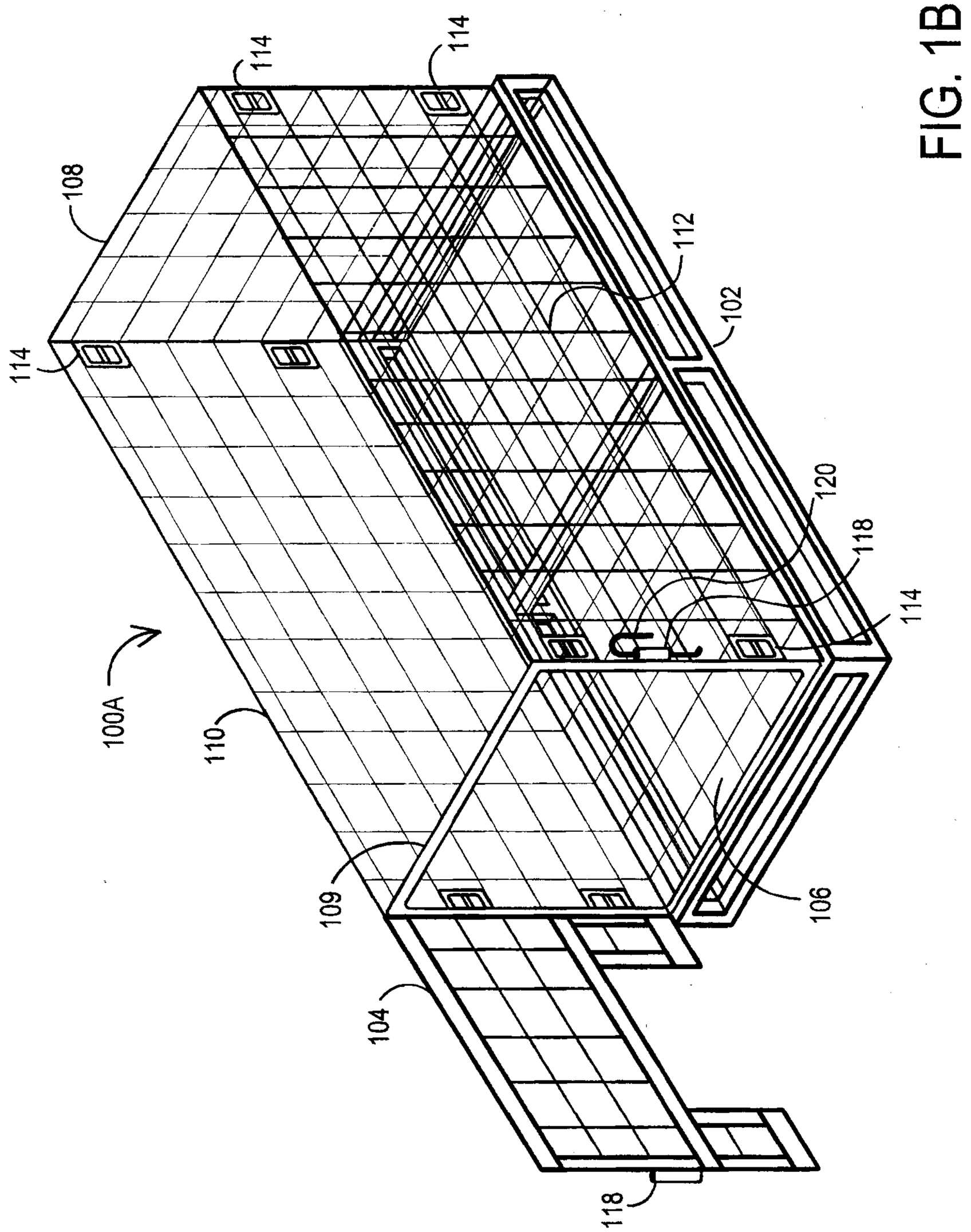


FIG. 1B

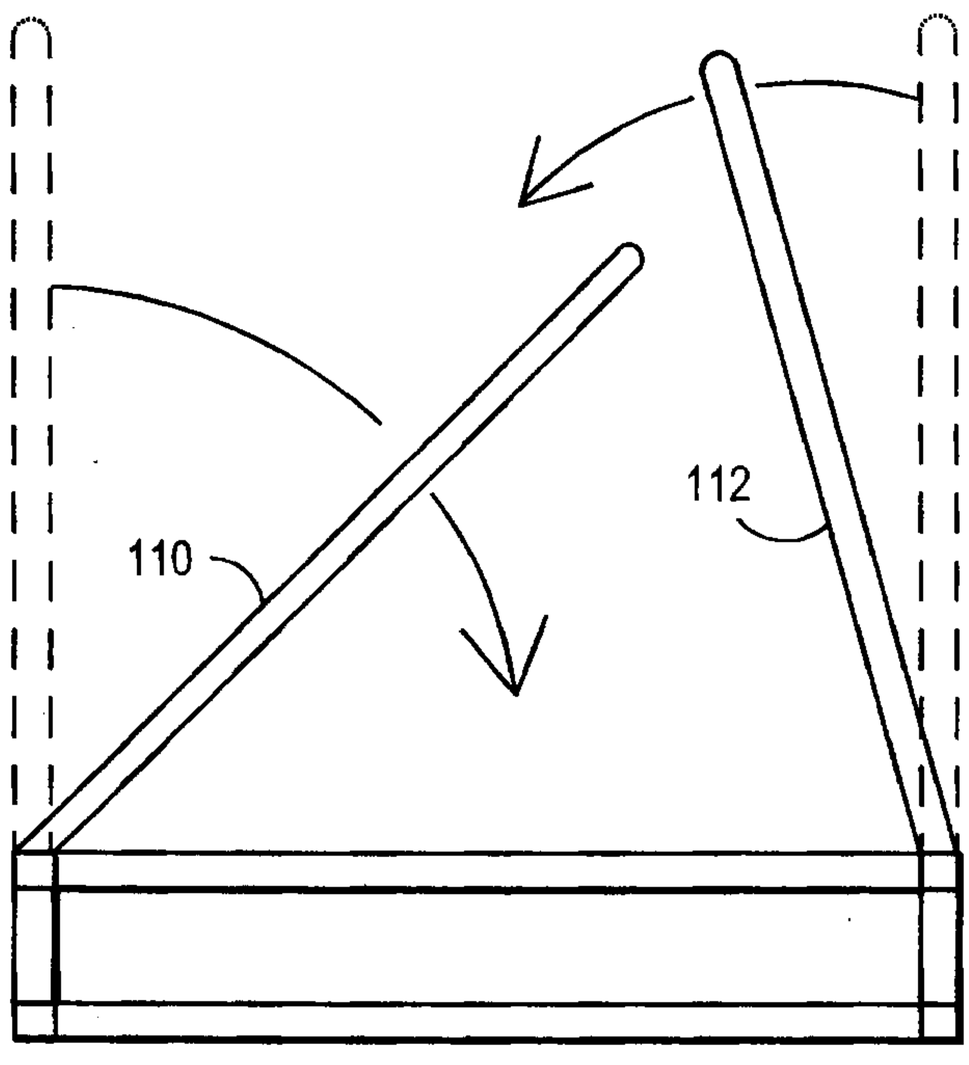


FIG. 1C

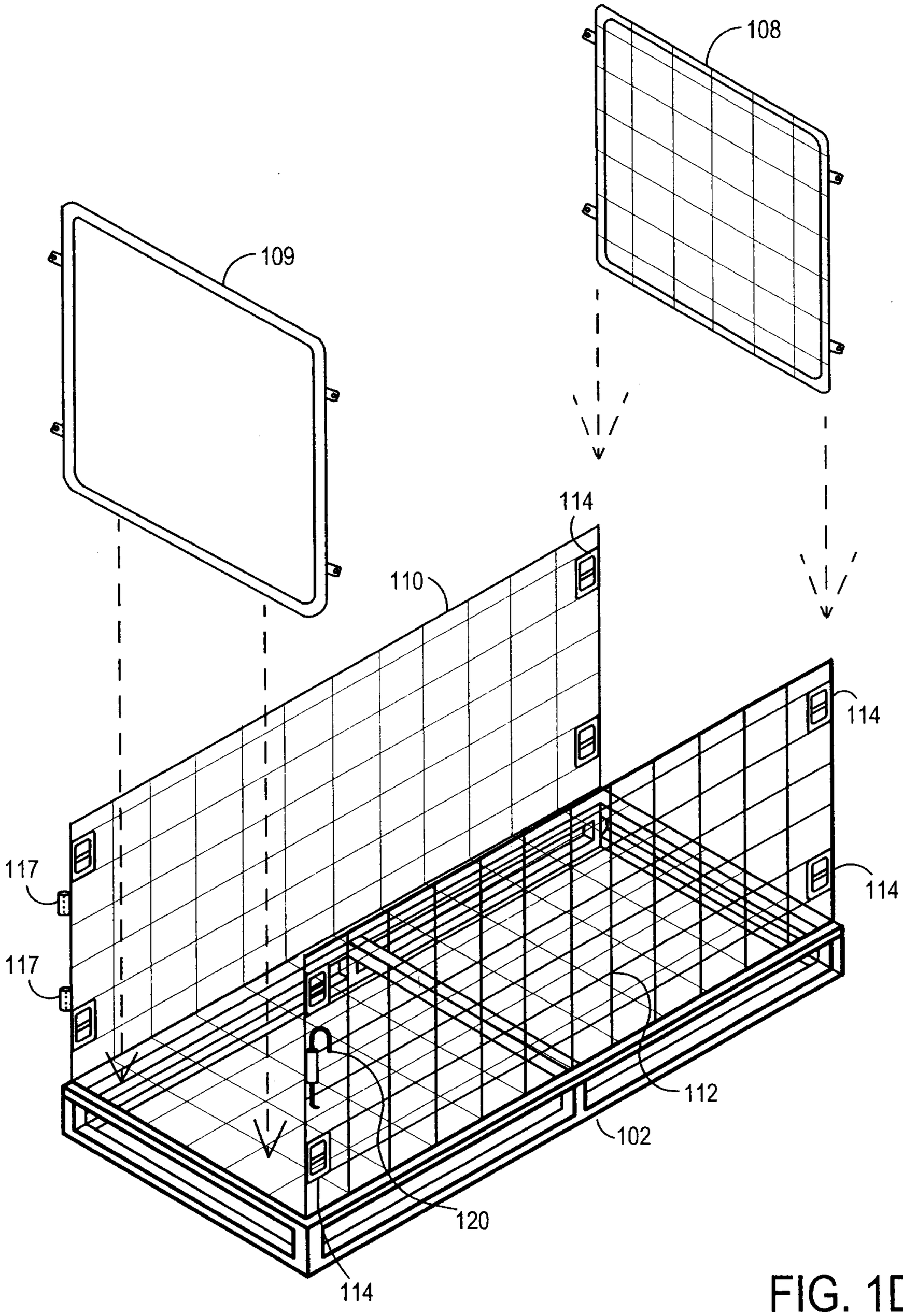


FIG. 1D

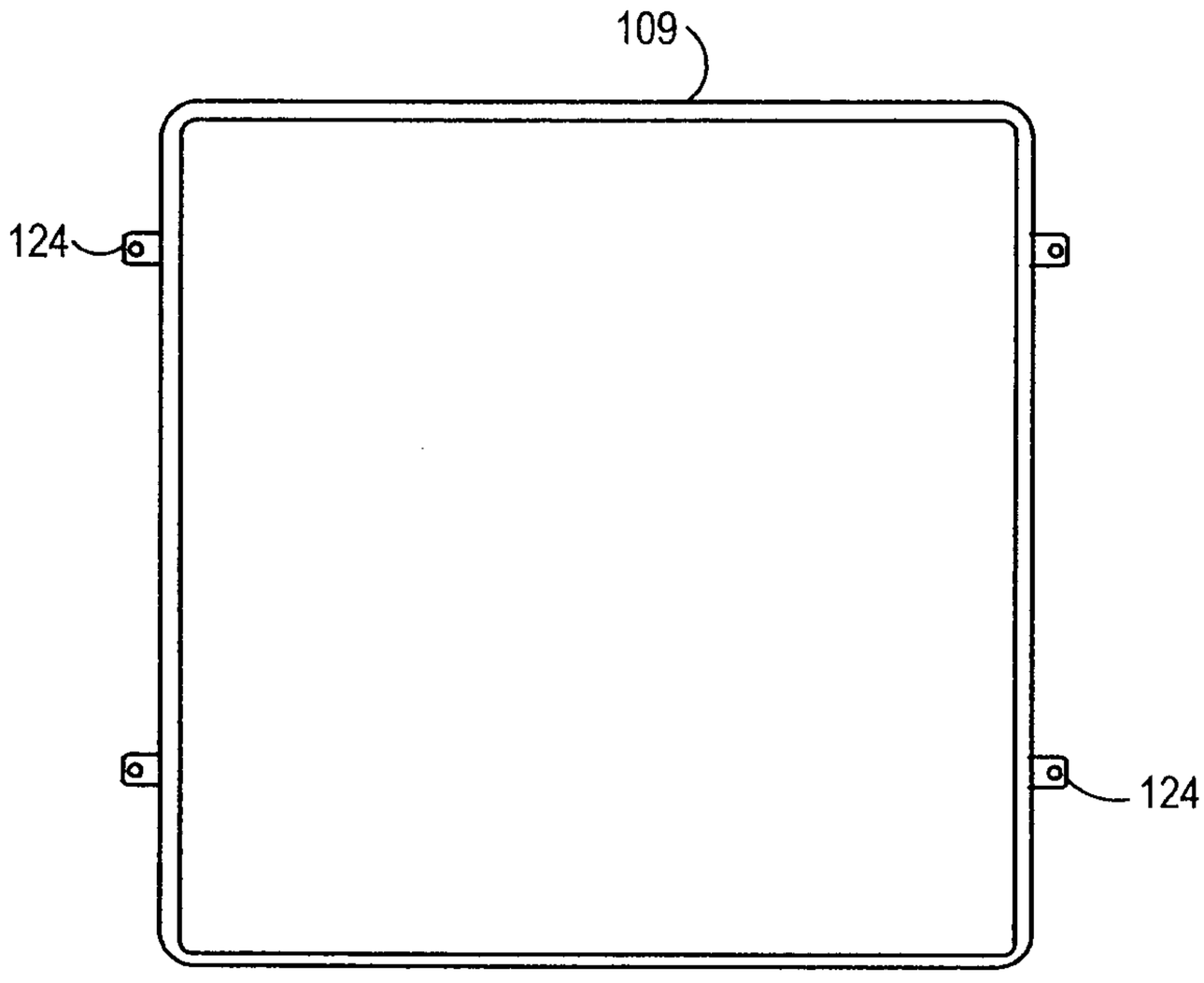


FIG. 2

FIG. 3

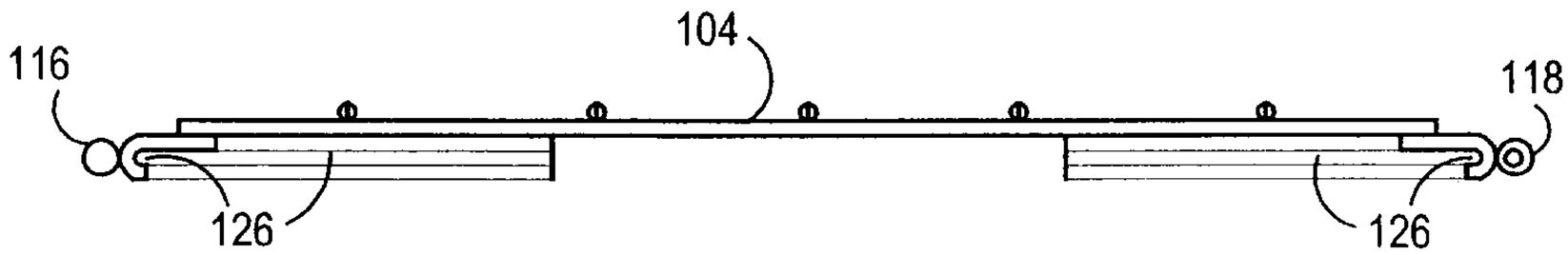


FIG. 4

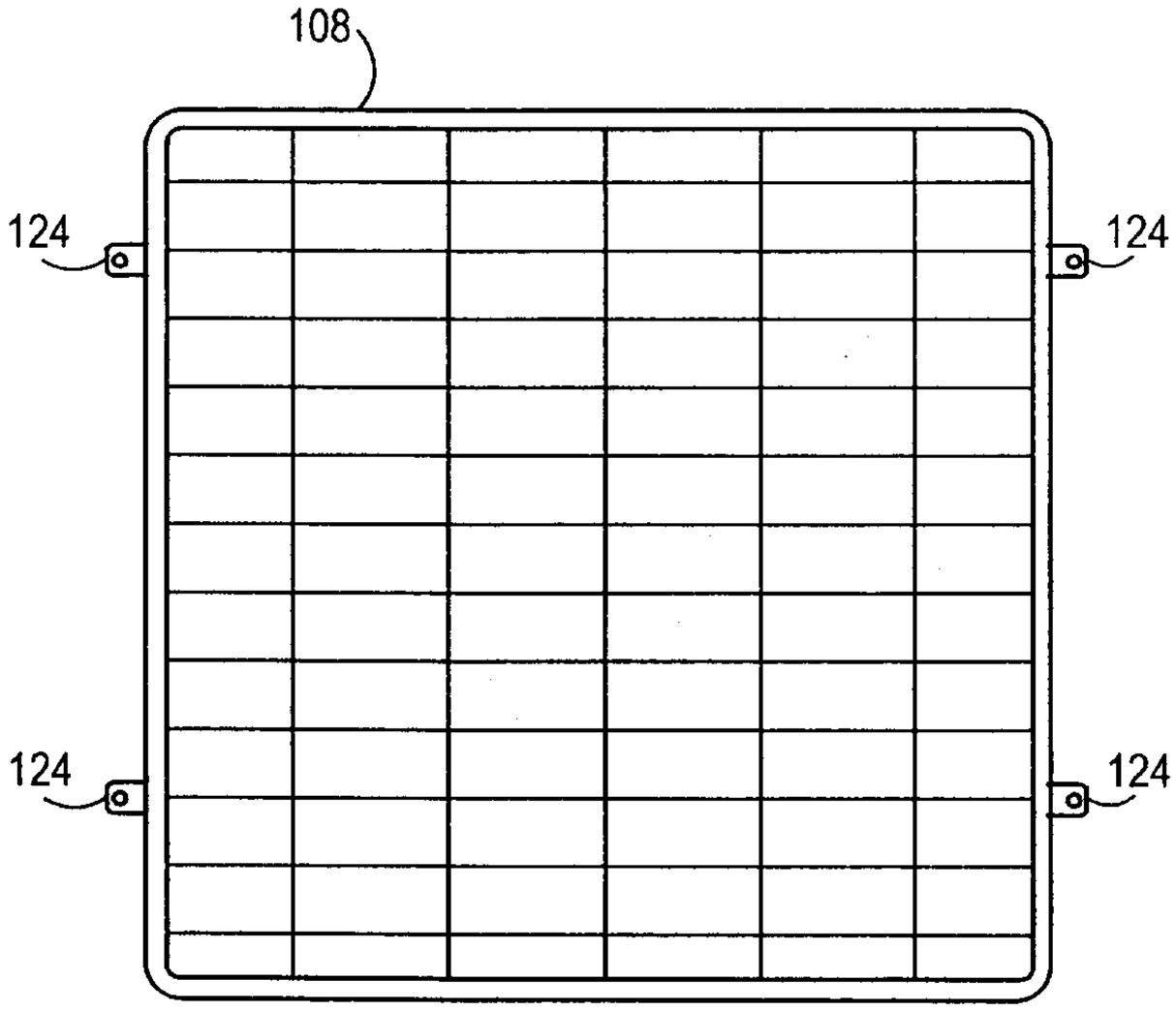


FIG. 5

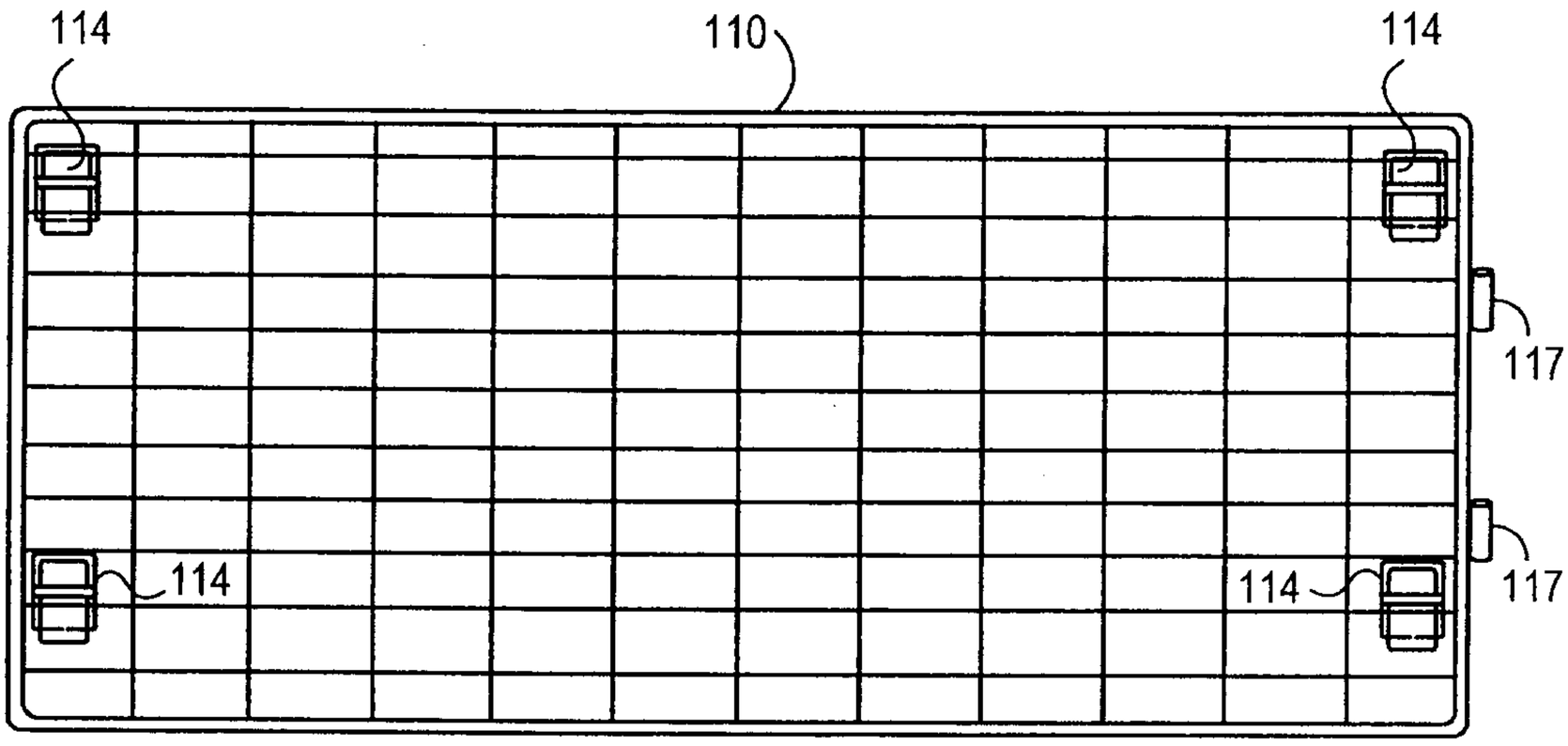


FIG. 6

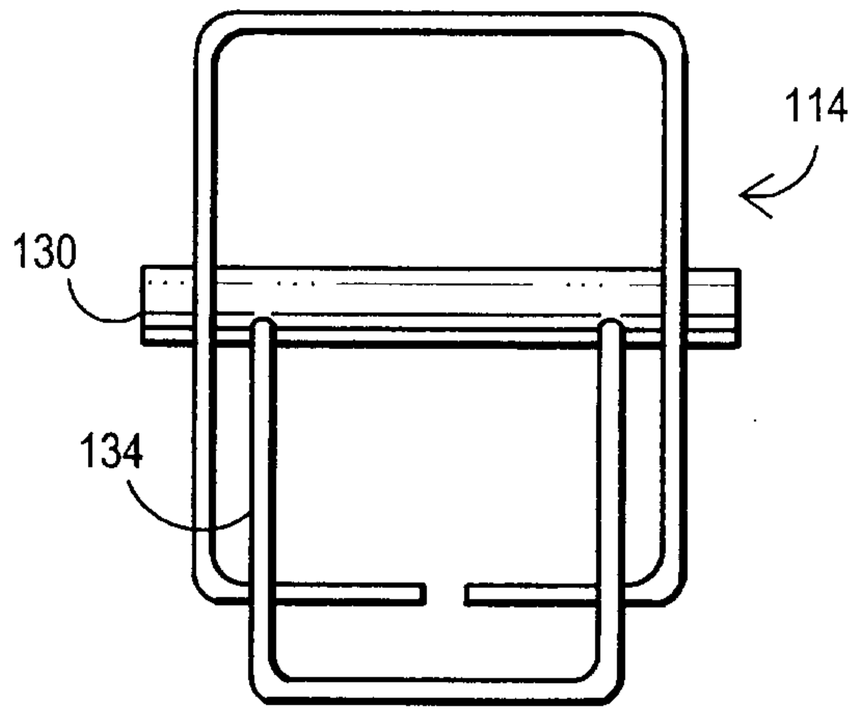


FIG. 7

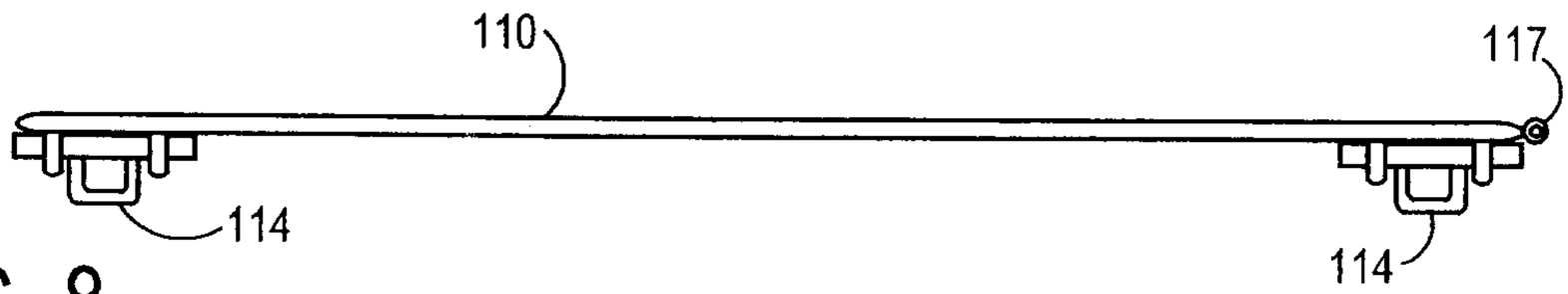


FIG. 8

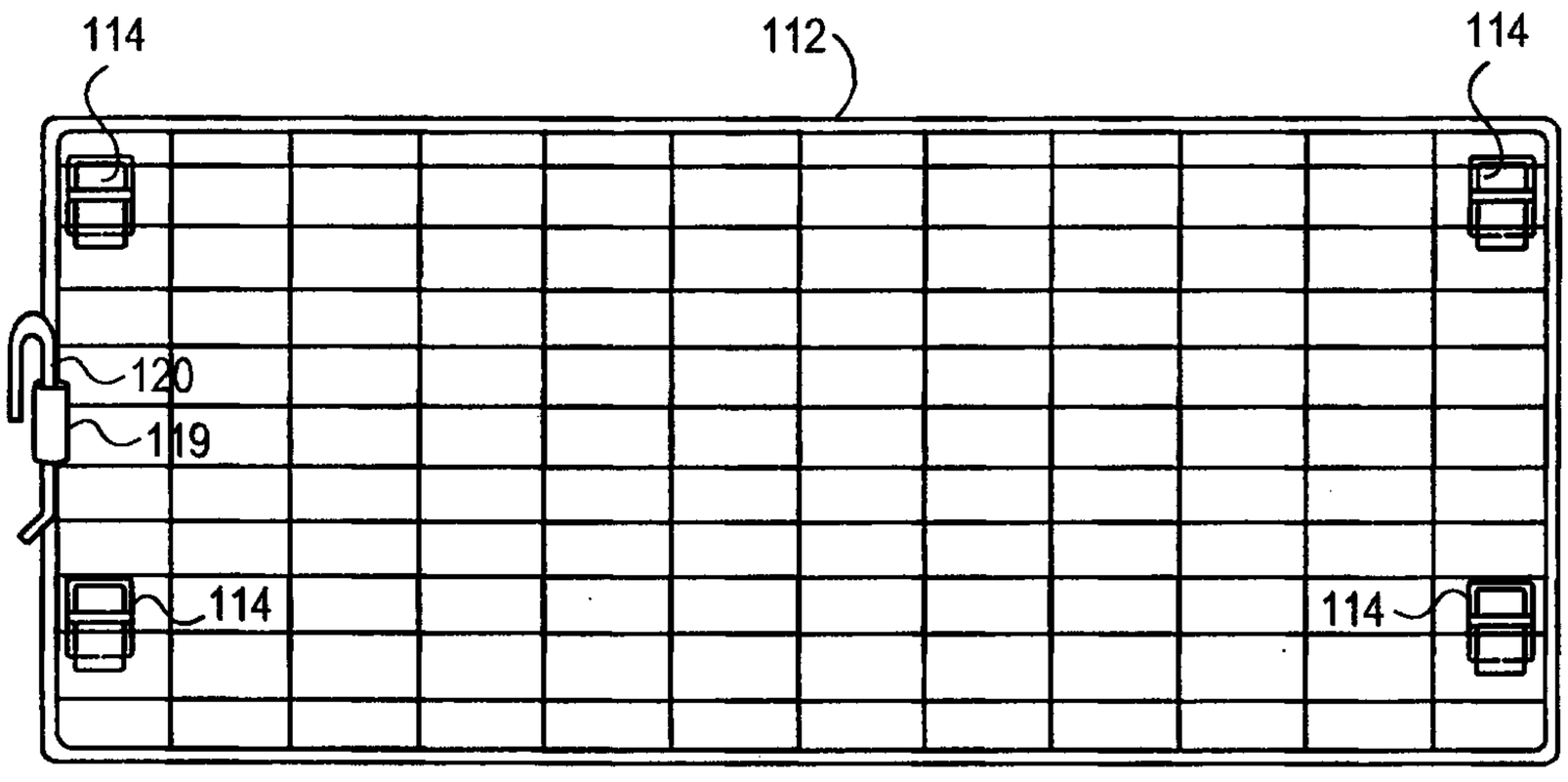


FIG. 9

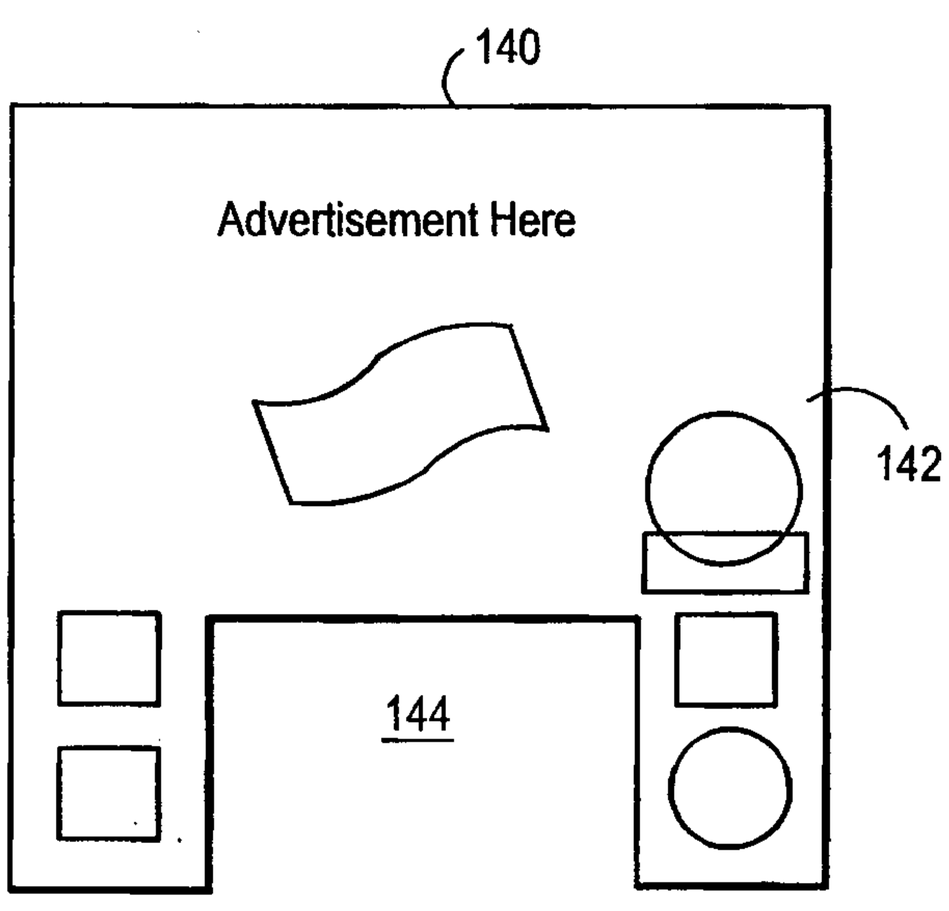
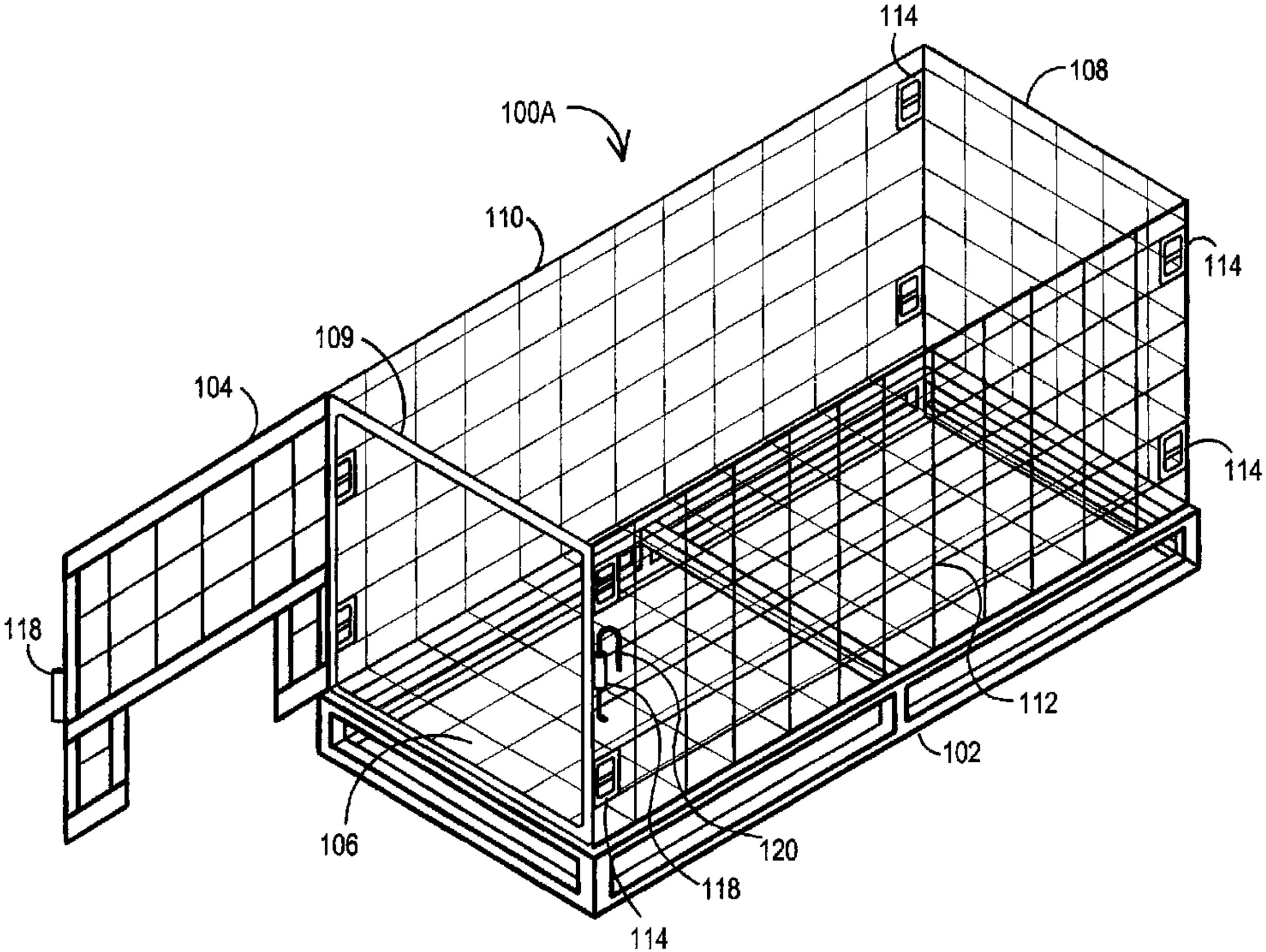


FIG. 10


114
108
100A
110
114
109
104
118
112
102
106
120
118
114