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Whyte

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(54) **DOORLESS INTERMODAL CARGO CONTAINER**

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(73) Assignee: **Cakeboxx, LLC**, Aurora, OR (US)

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B65D 8/14 (2006.01)
B65D 45/16 (2006.01)

(52) **U.S. Cl.** **220/1.6**; 220/326; 220/7

(58) **Field of Classification Search** ..... 220/4.01, 220/200, 617, 615, 622, 610, 693, 692, 682; 292/146, 137; 206/600, 386; 217/59, 61, 217/60 R, 62, 57, 56, 43 A, 45, 43 R, 36, 217/12 A, 13, 12 R, 5; D9/414, 443, 435, D9/434; 70/266; *B65D 6/16, 6/00*
See application file for complete search history.

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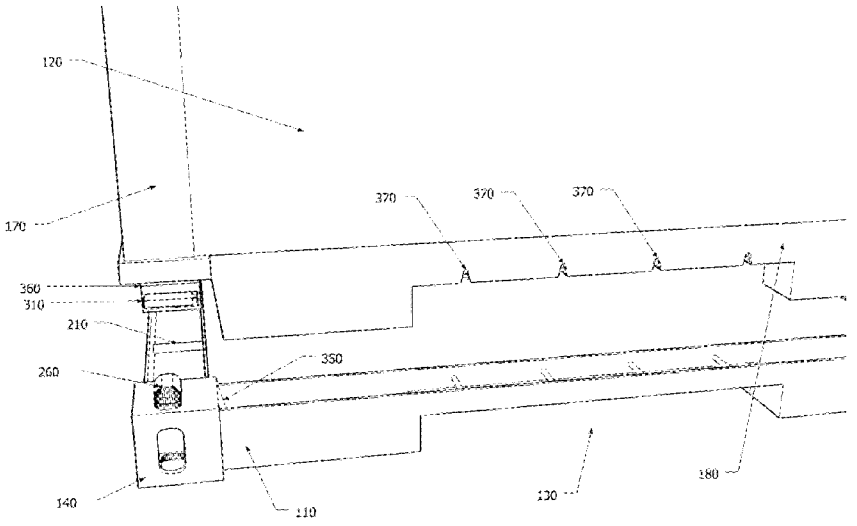
(57) **ABSTRACT**

In one embodiment, an intermodal cargo container includes a lid section having a rectangular box with an open bottom portion. A floor unit has a channel portion arranged around a periphery, and the channel portion receives a bottom edge of the lid section. Locking mechanisms are arranged along an edge of the lid section to couple the lid section to plural rungs that extend across the channel portion. The sliding lock mechanism includes engagement tabs that engage associated rungs extending between two walls of the channel portion. A sealing portion is provided within the channel so as to provide a fluid-tight seal when the lid section is coupled to the floor unit. A powered actuator can assist in moving the lock mechanism. A spring assembly at a corner of the floor unit provides a spring tension to the sliding lock mechanism.

21 Claims, 22 Drawing Sheets



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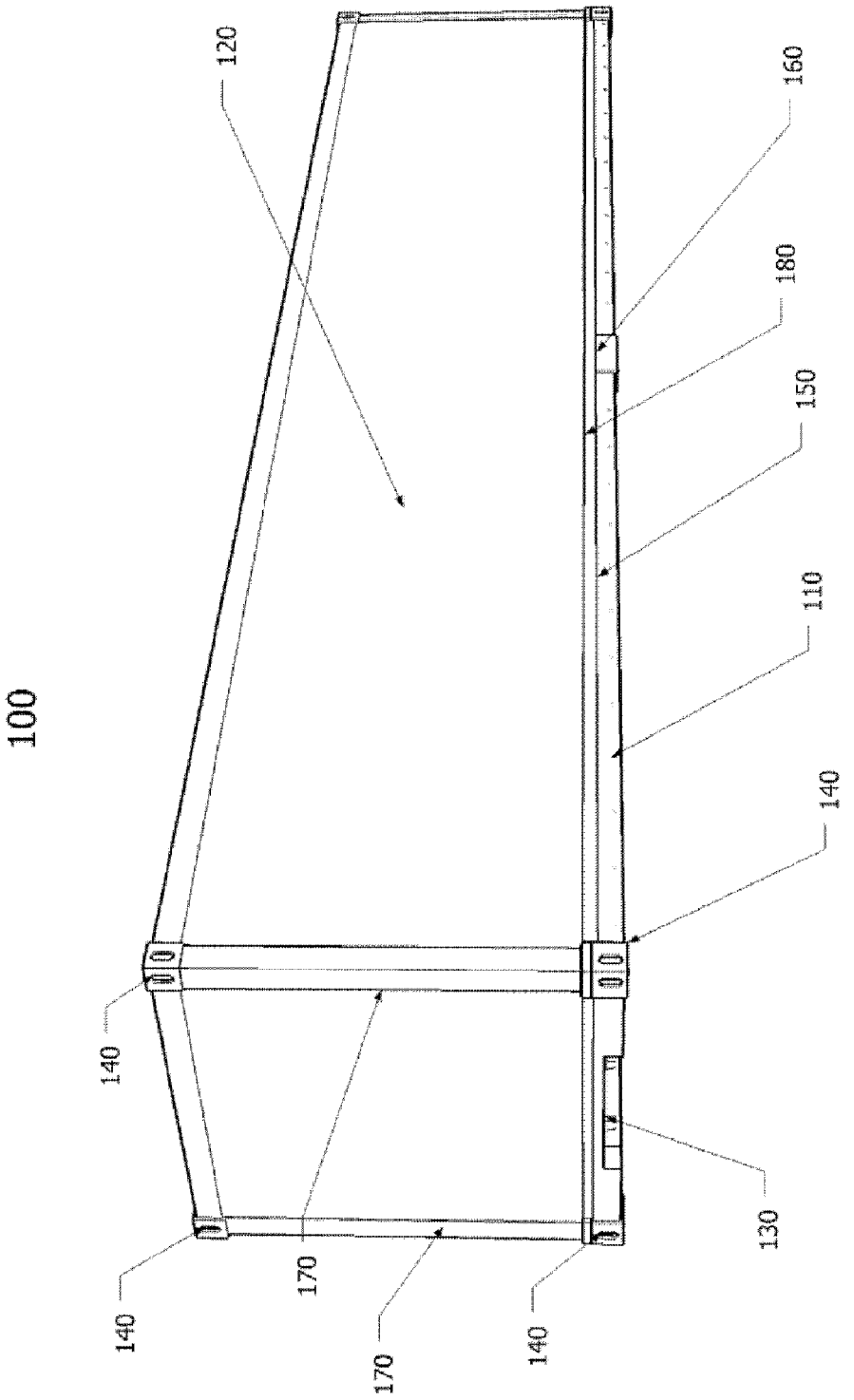

FIG. 1

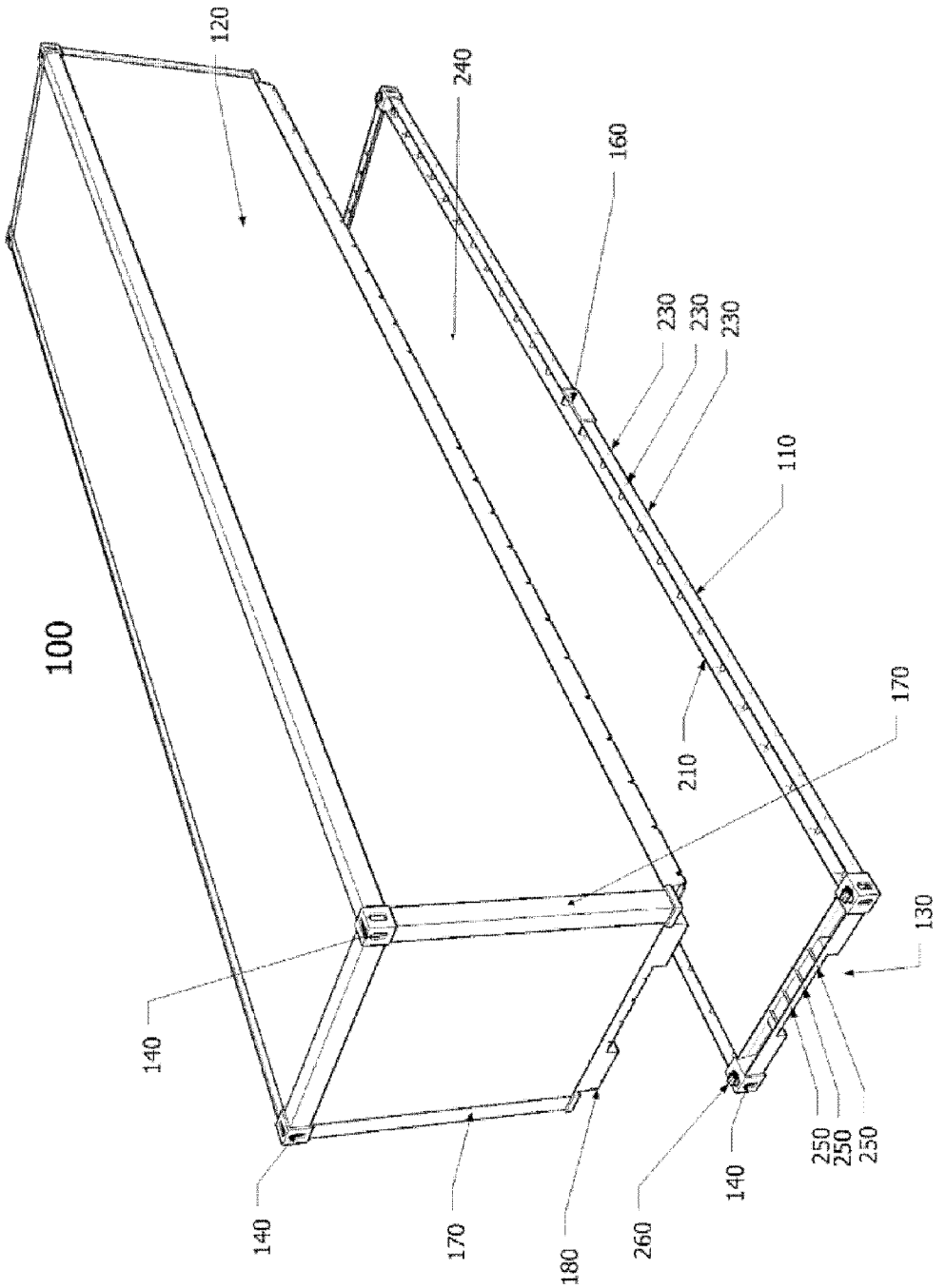
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FIG. 2

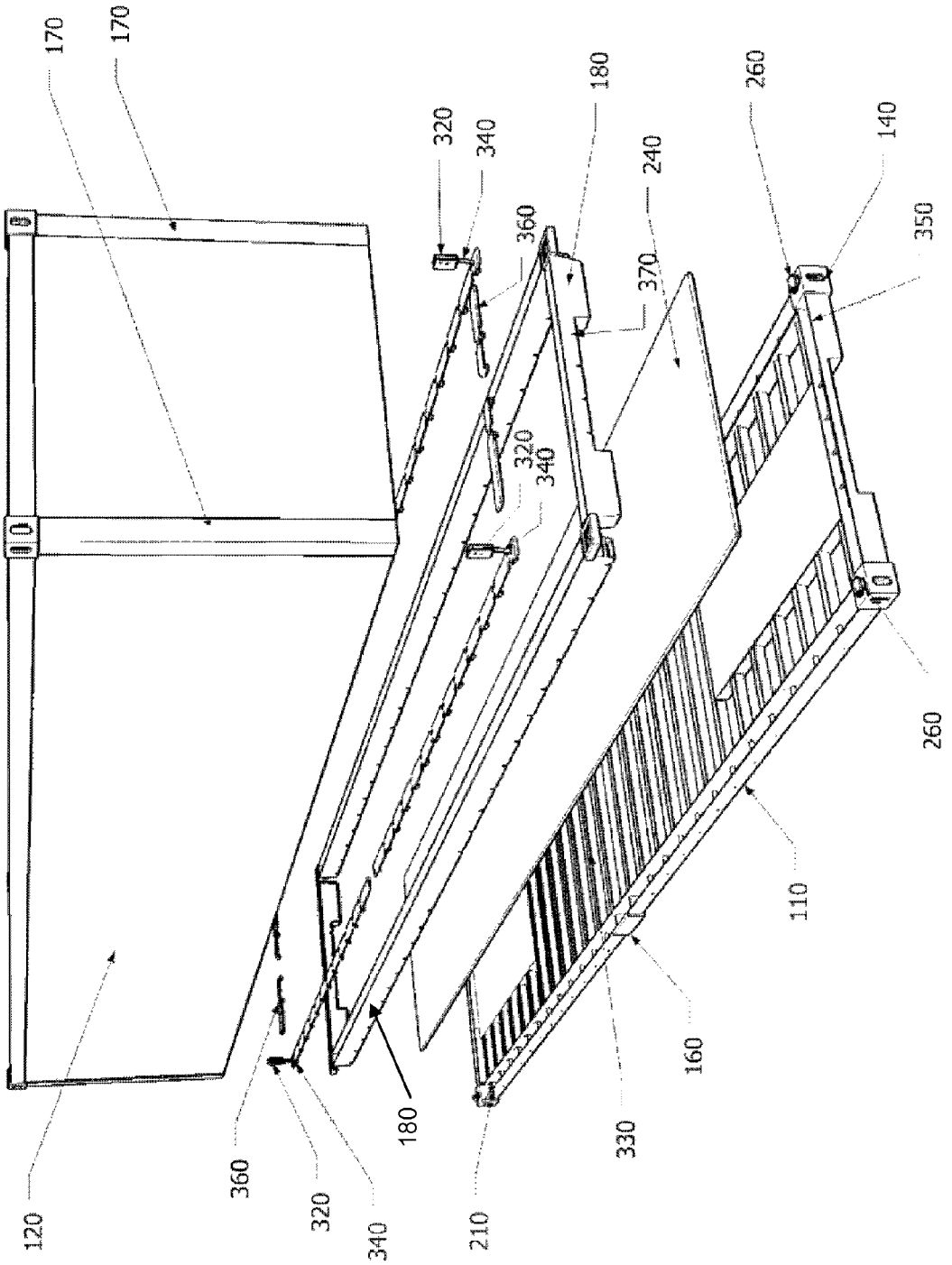
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FIG. 3

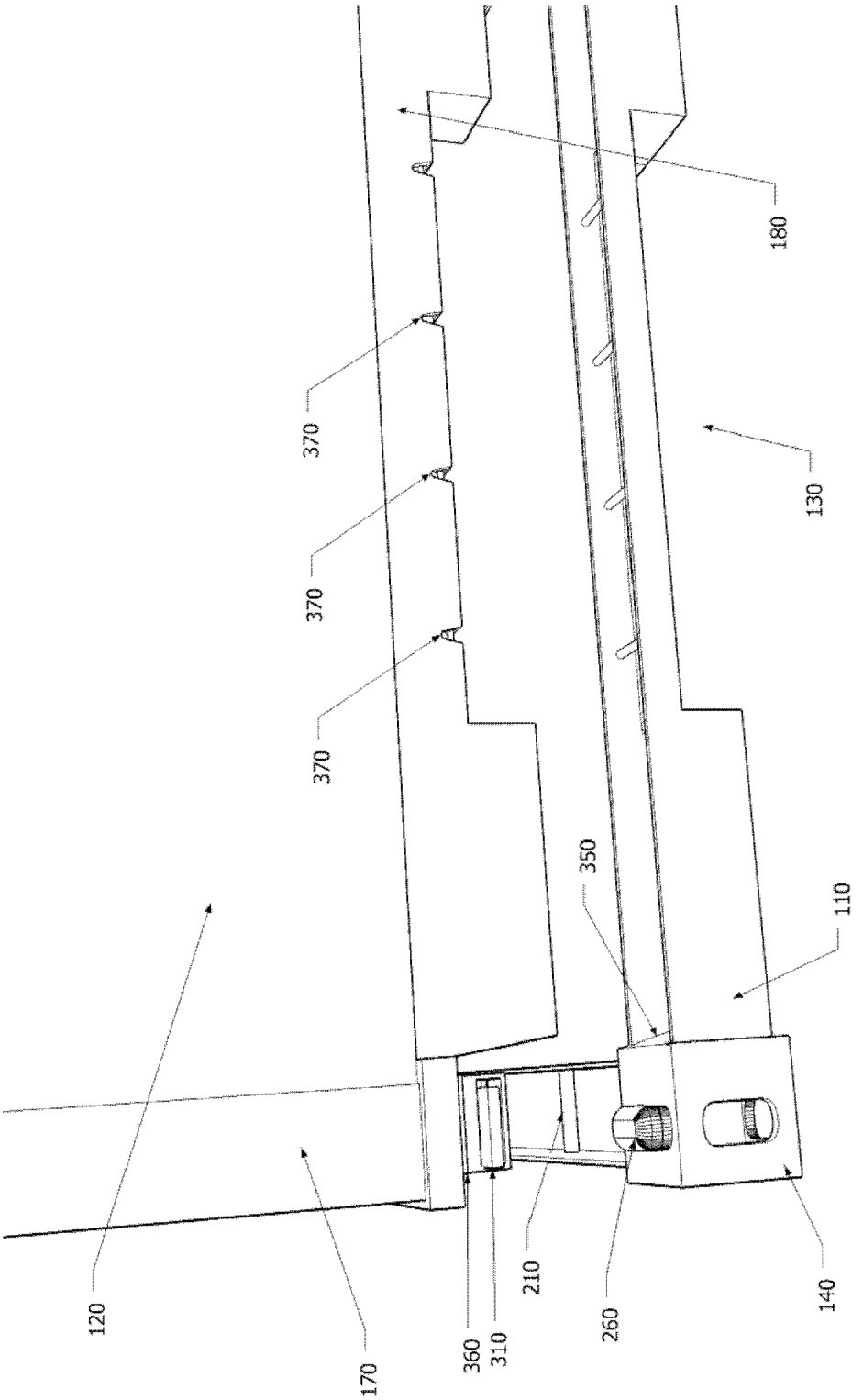


FIG. 4

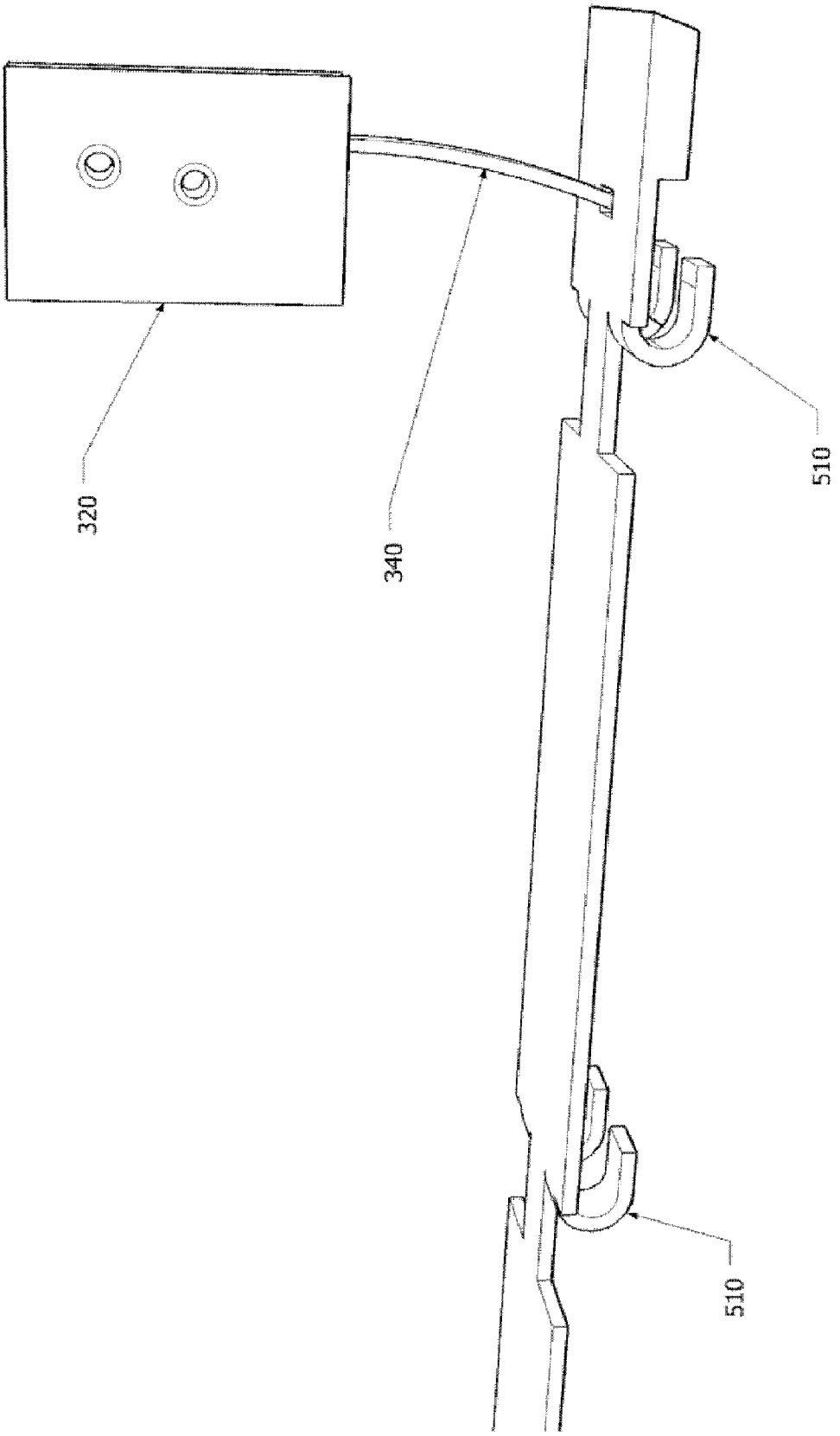


FIG. 5

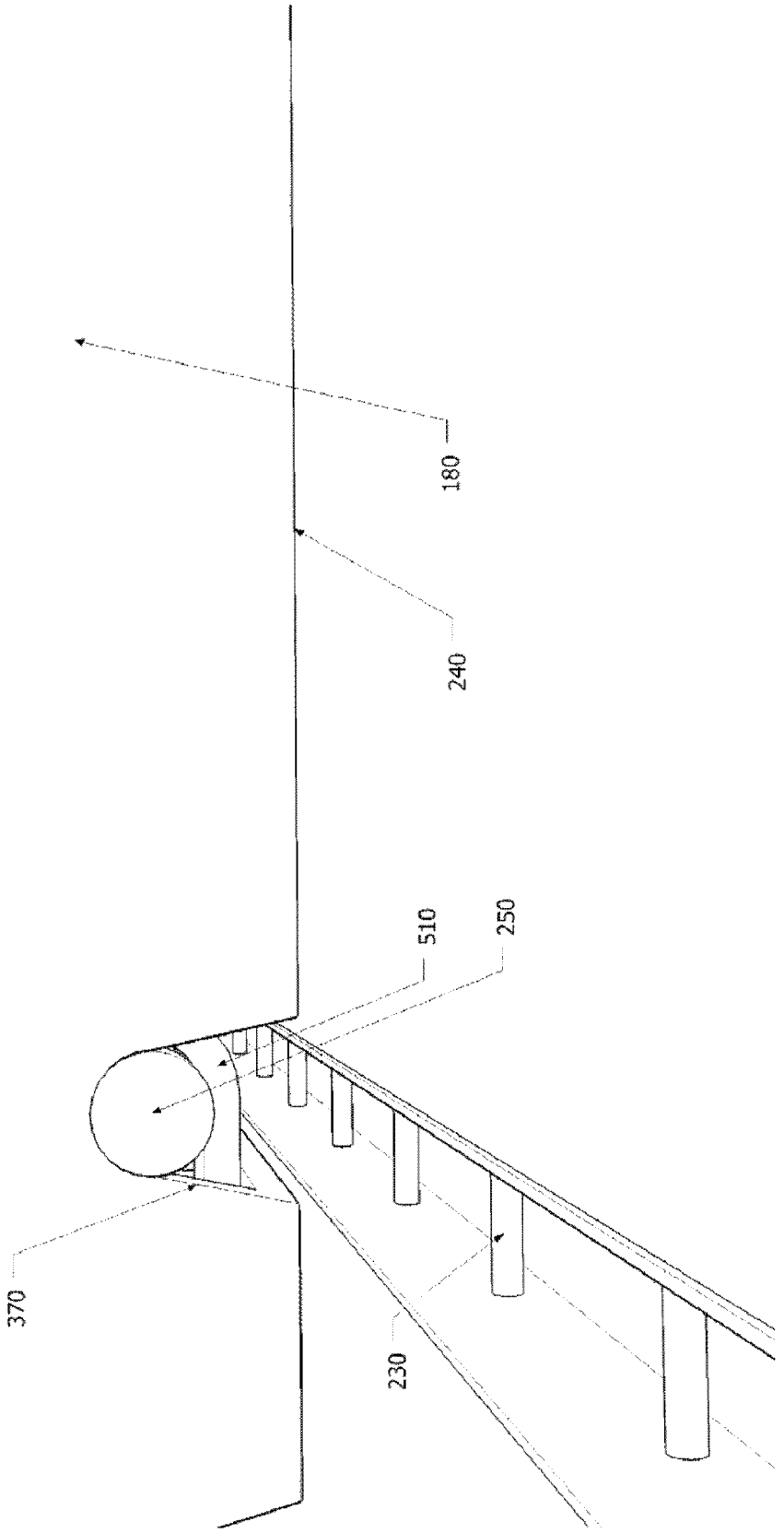


FIG. 6

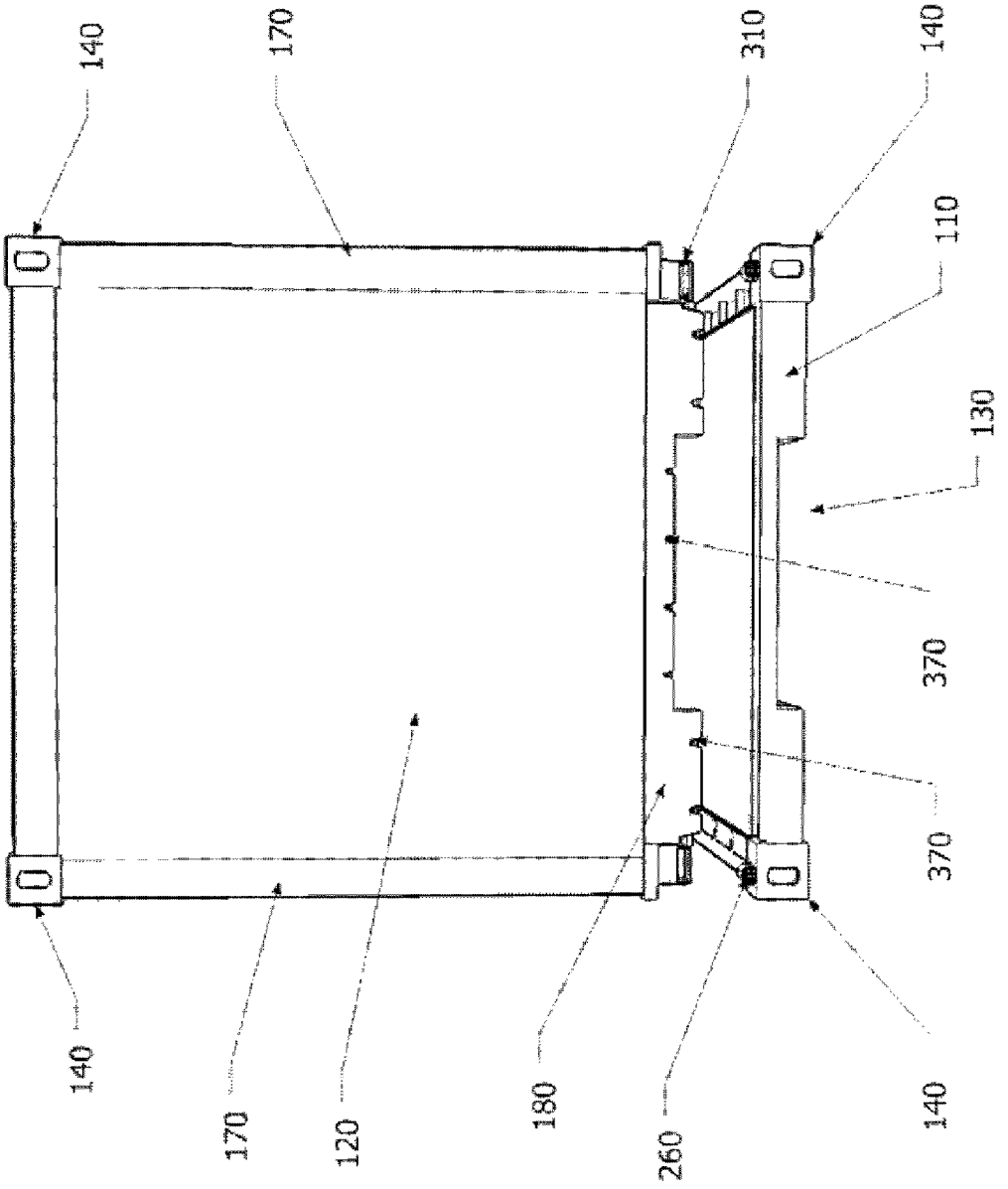
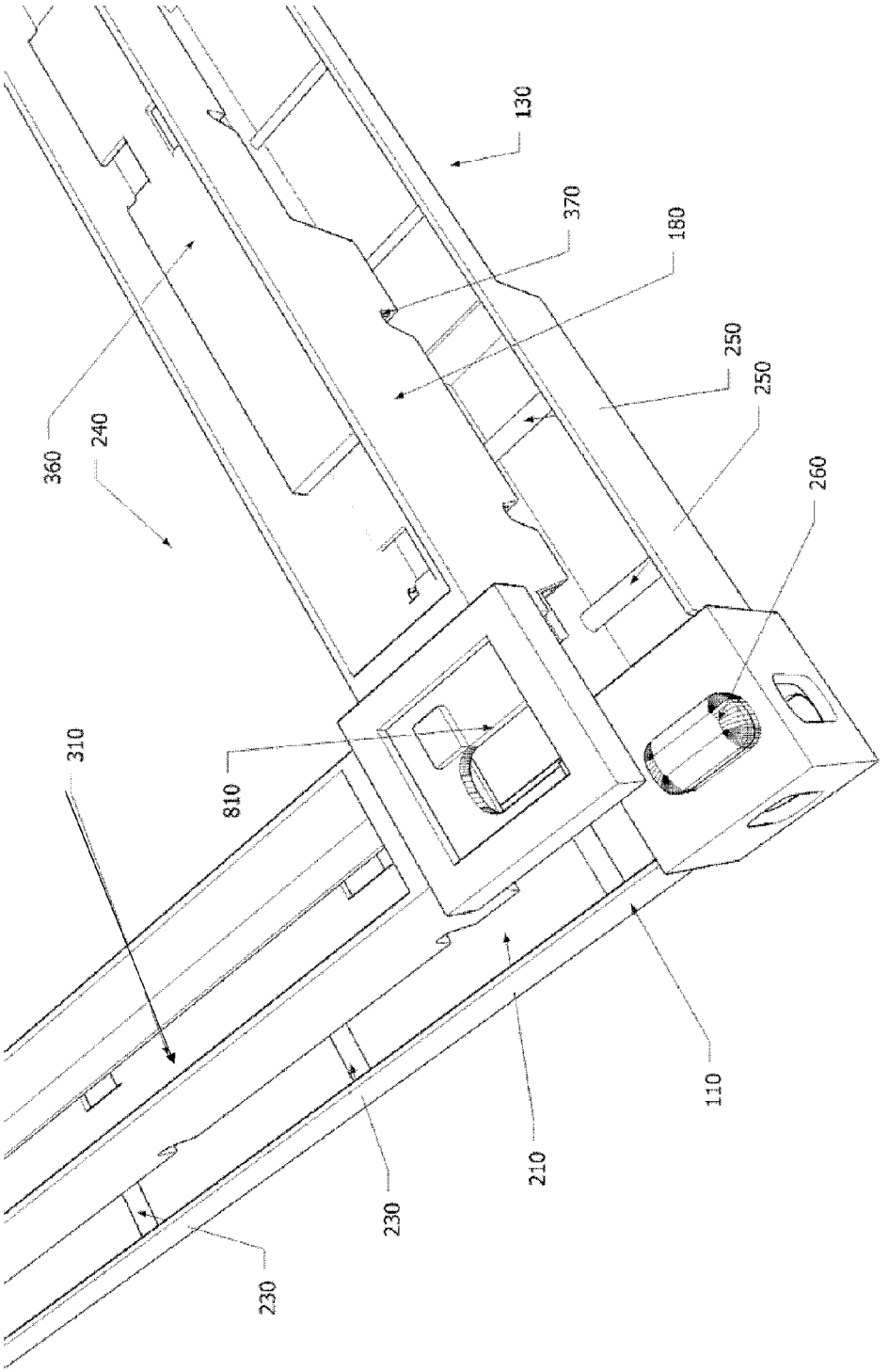


FIG. 7



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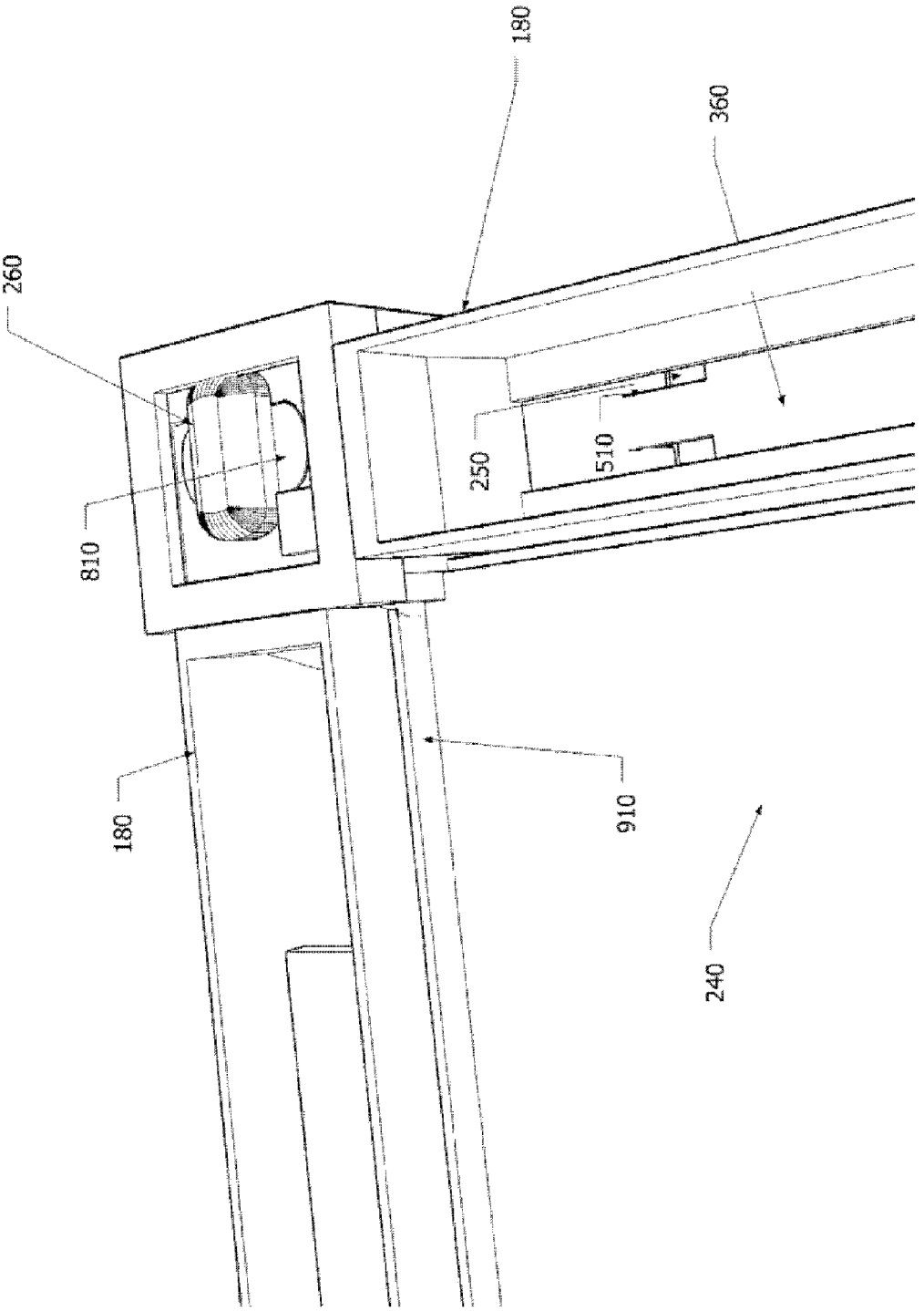

FIG. 9

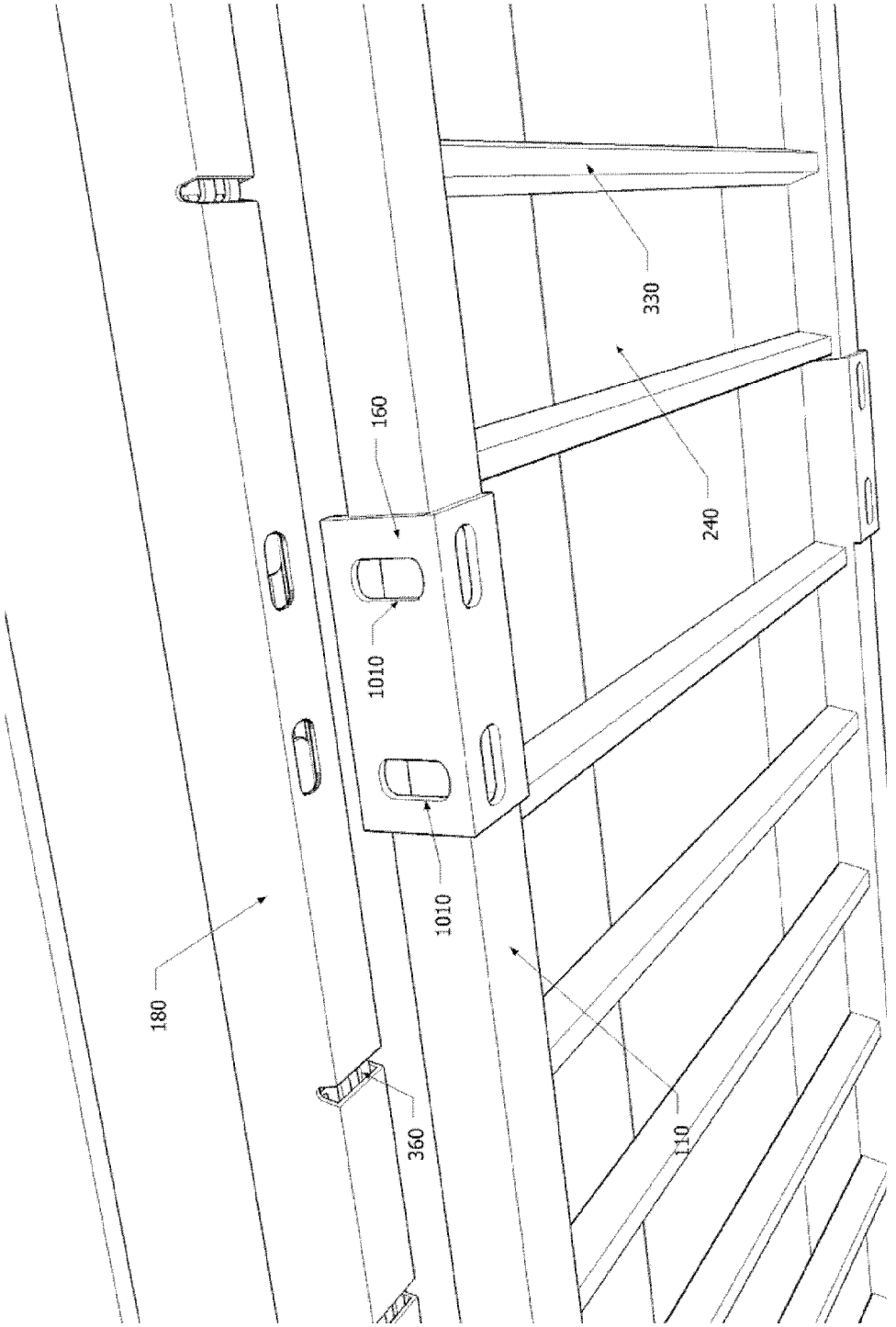

FIG. 10

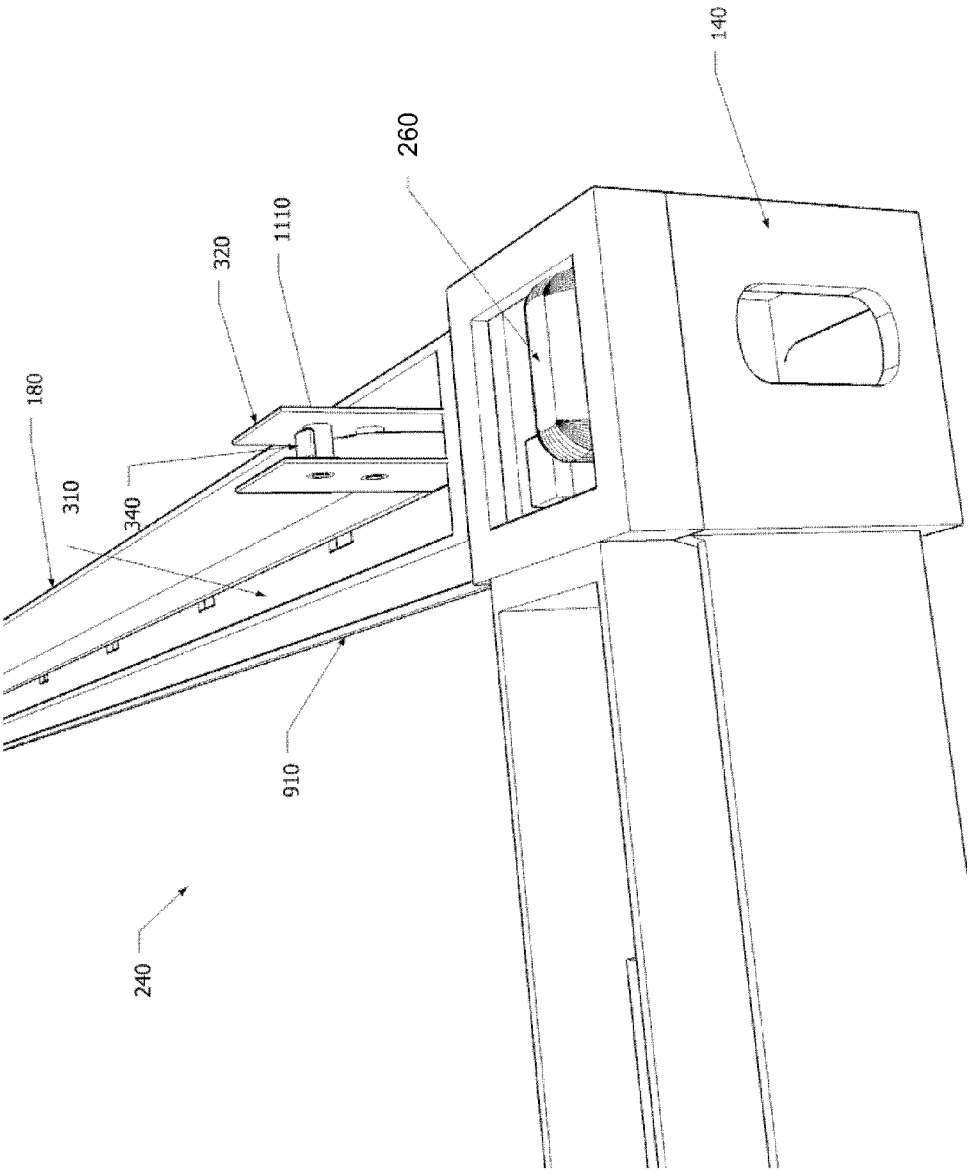

FIG. 11

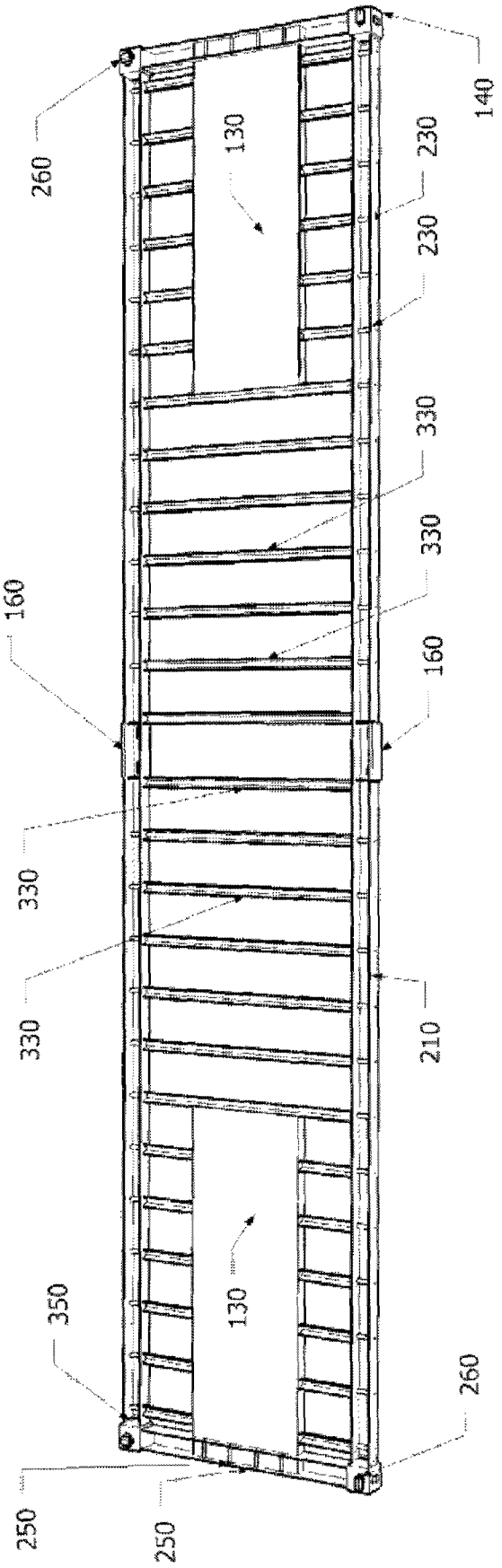
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FIG. 12

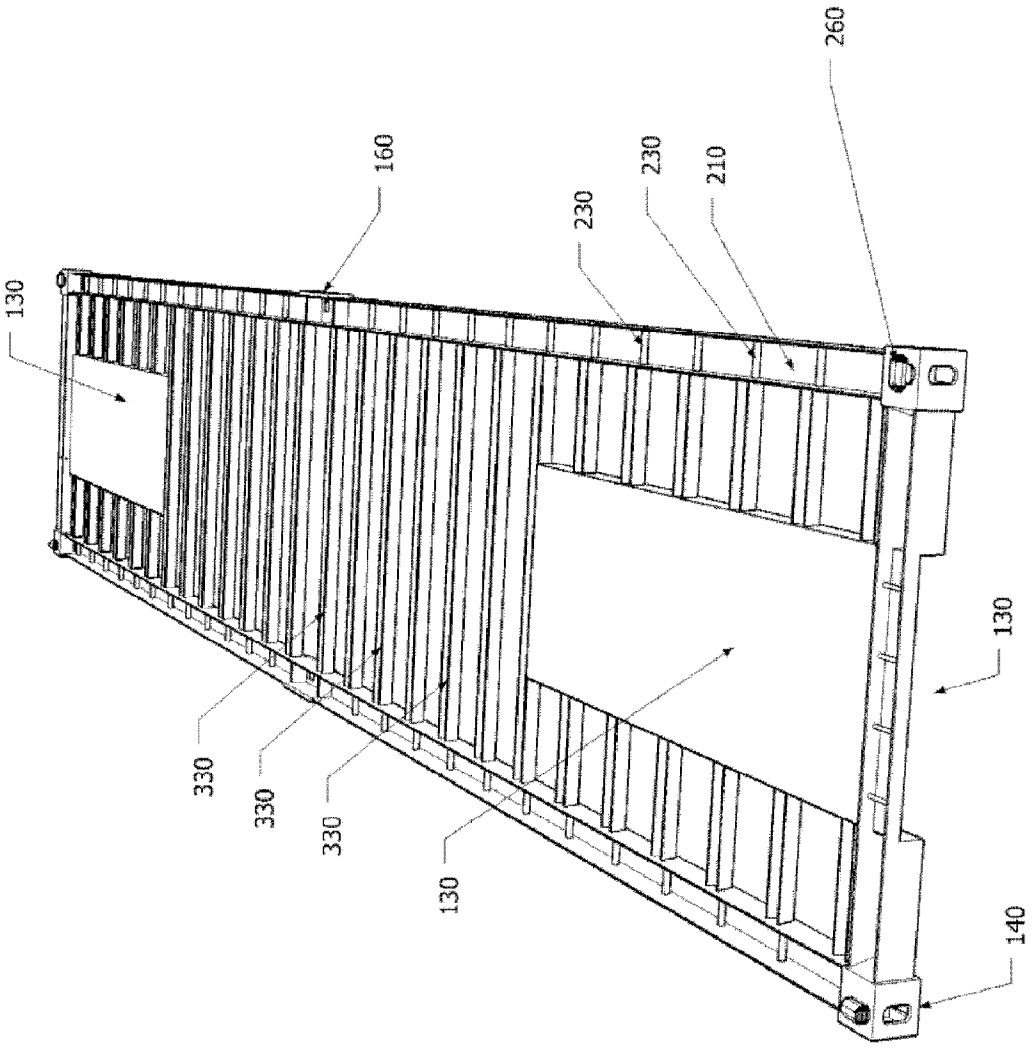

FIG. 13

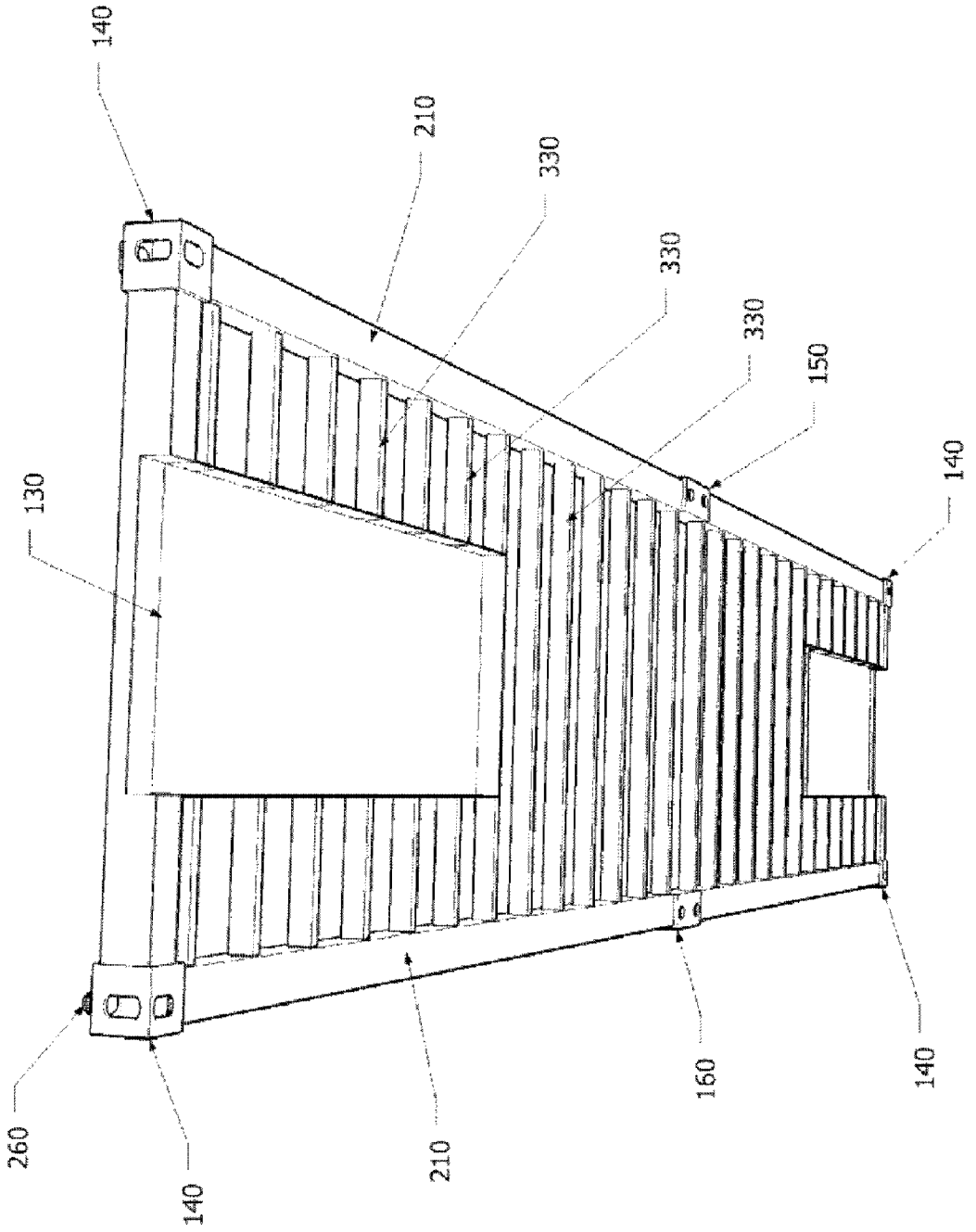

FIG. 14

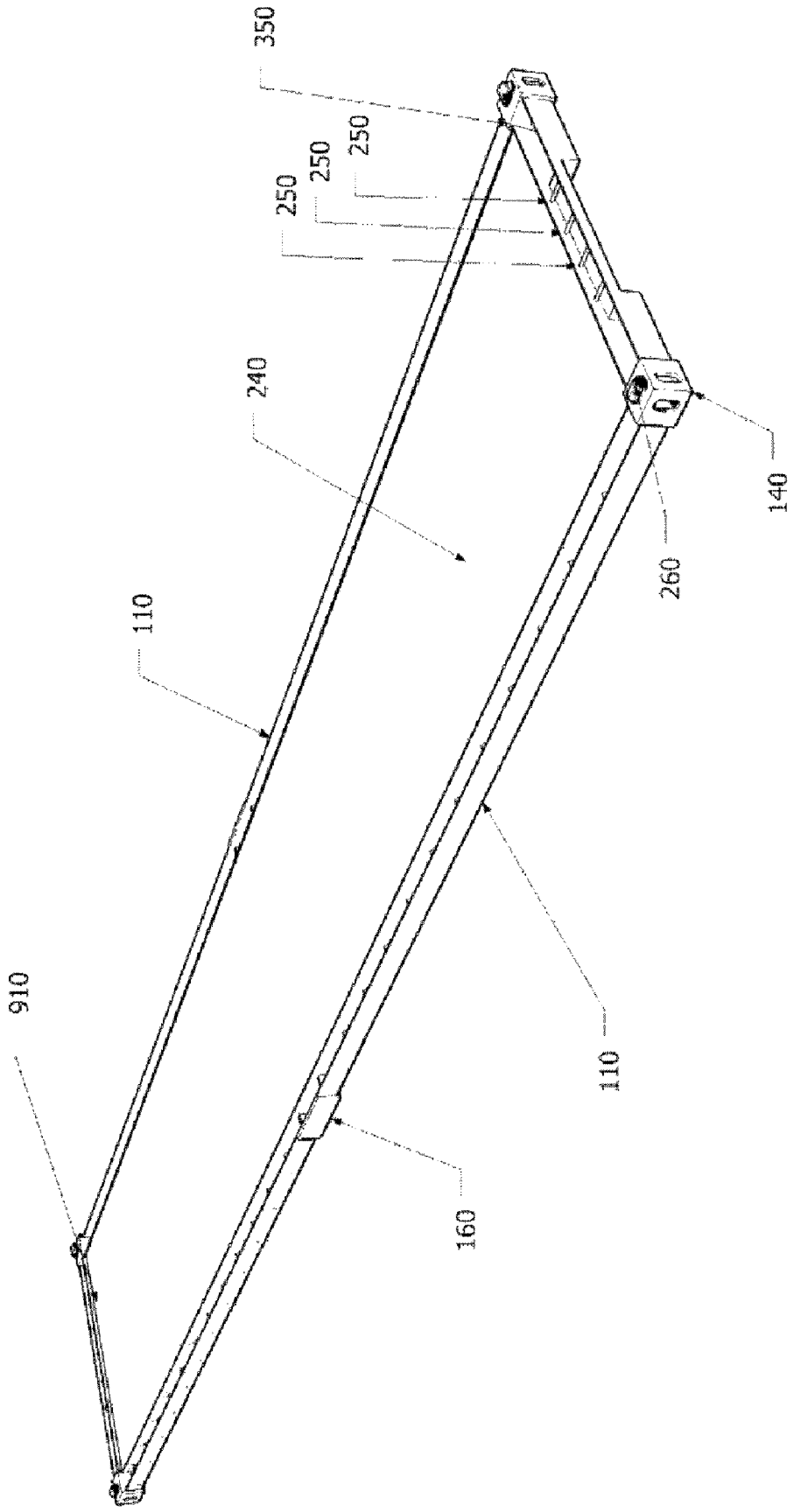

FIG. 15

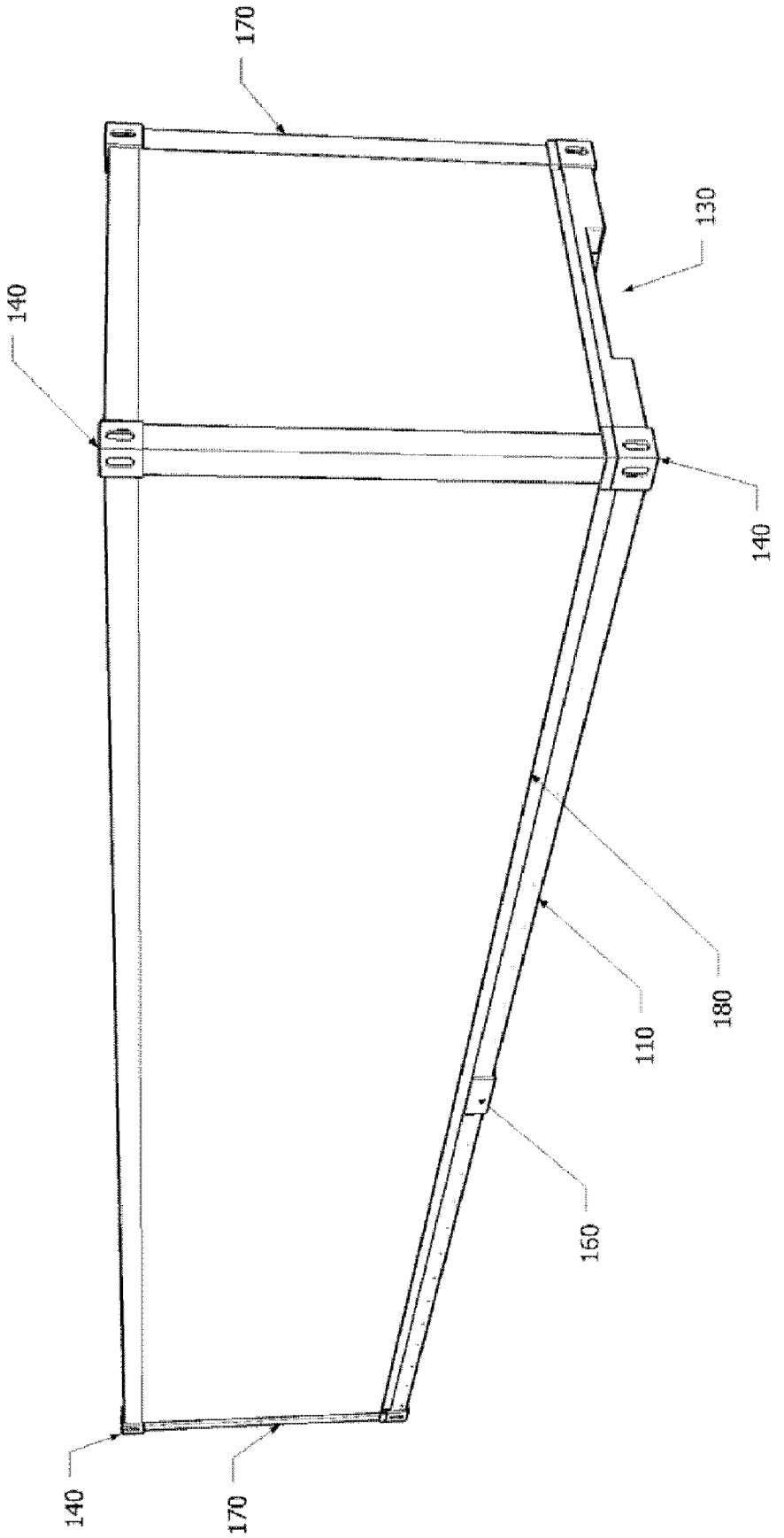

FIG. 16

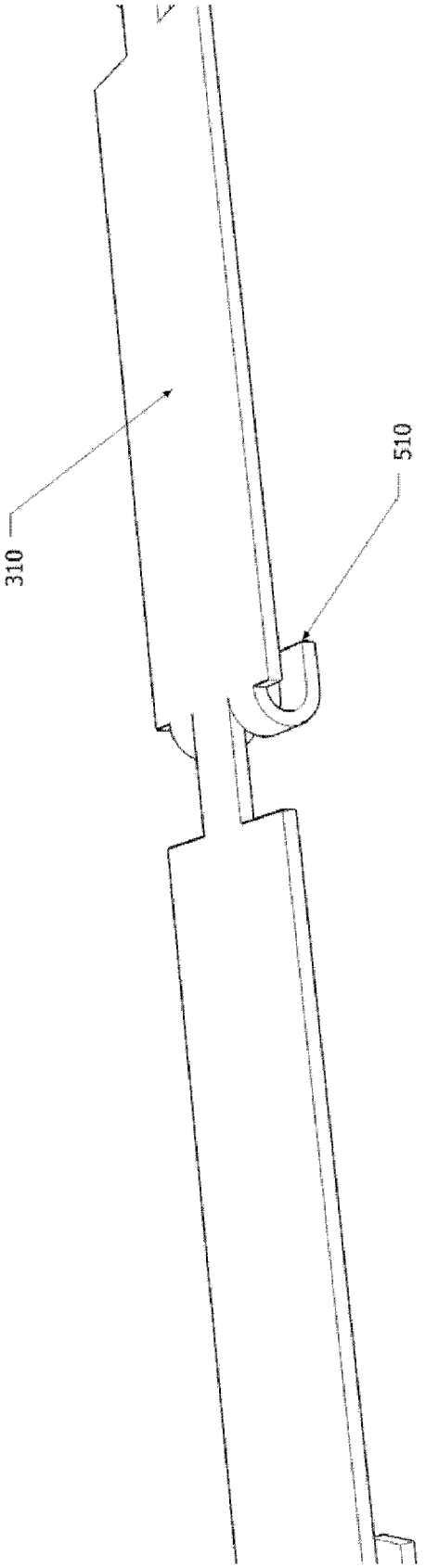

FIG. 17

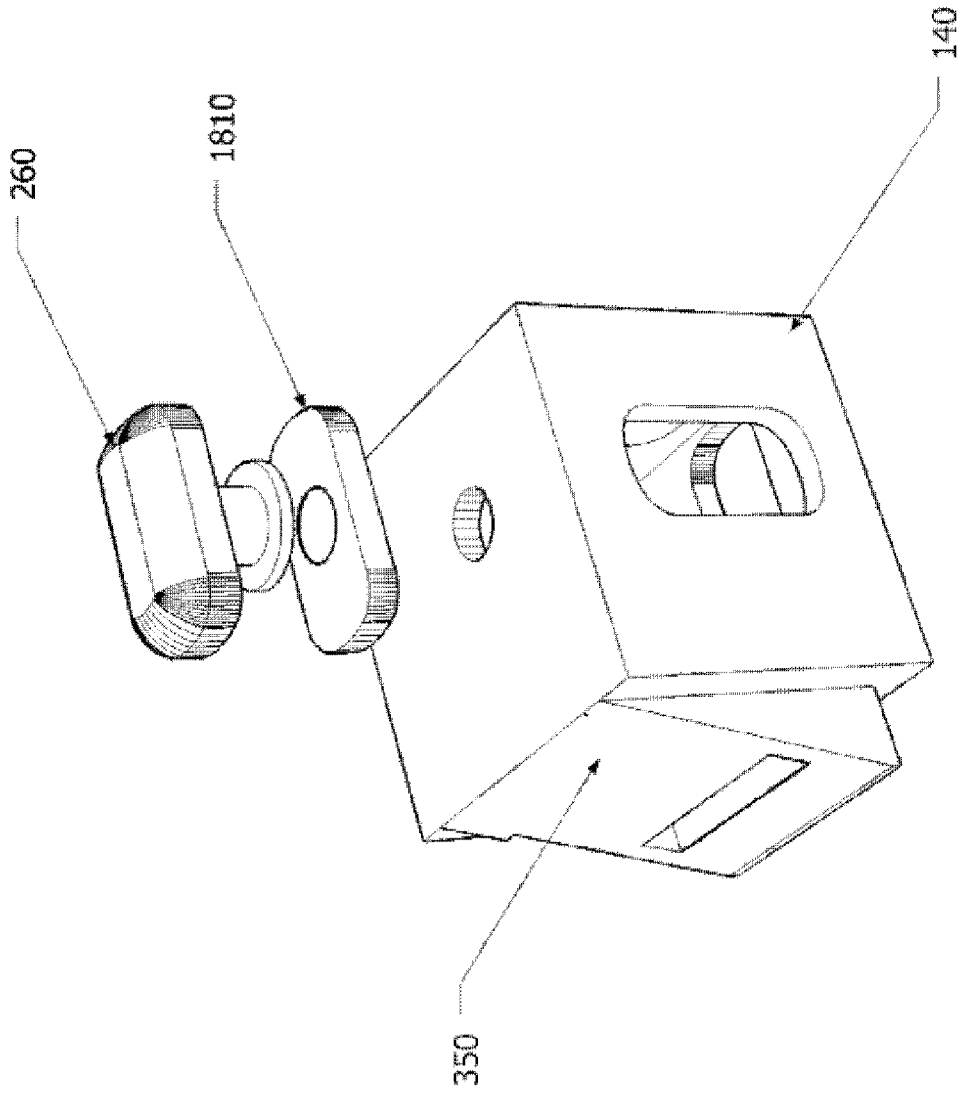

FIG. 18

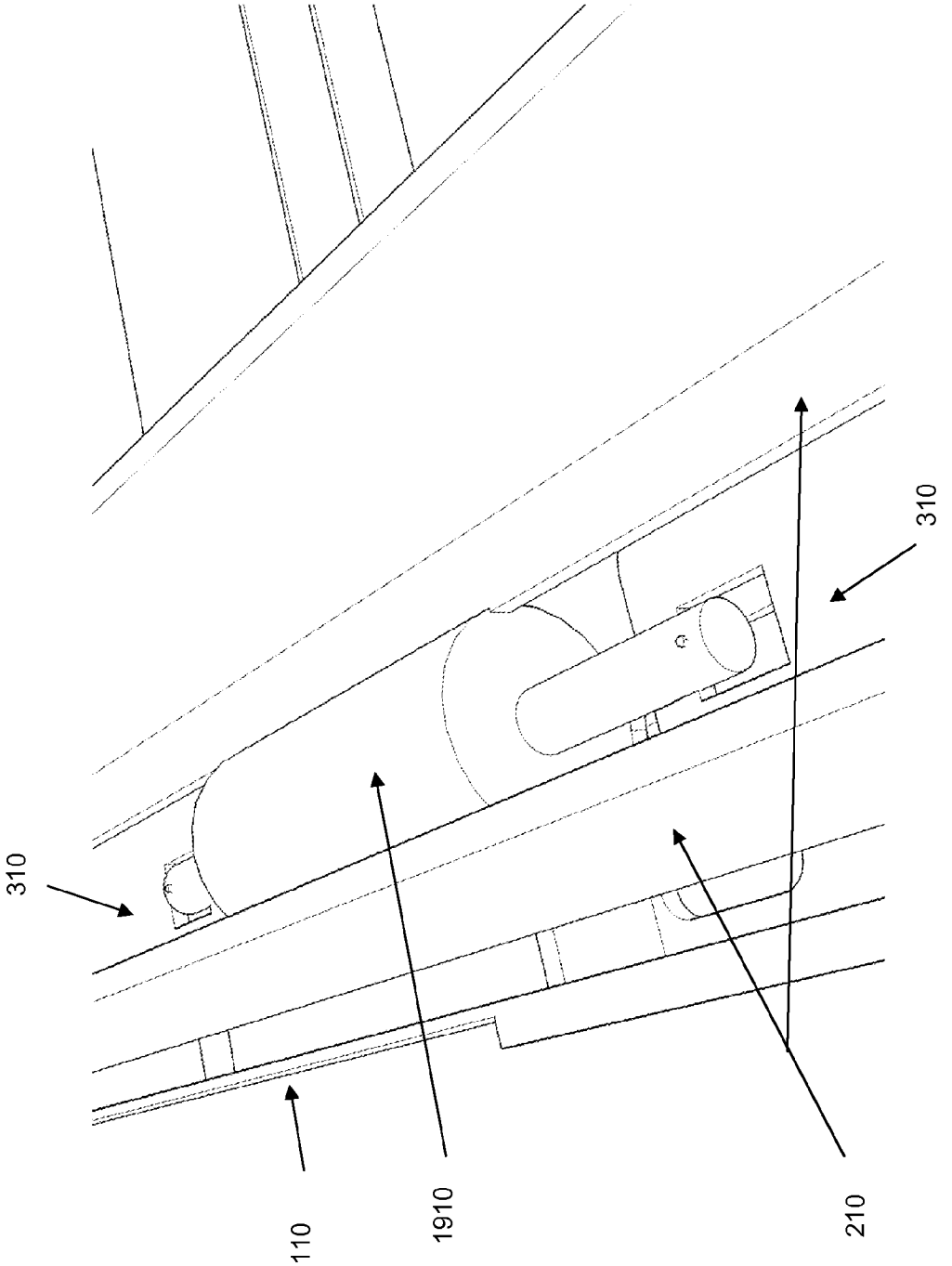

FIG. 19

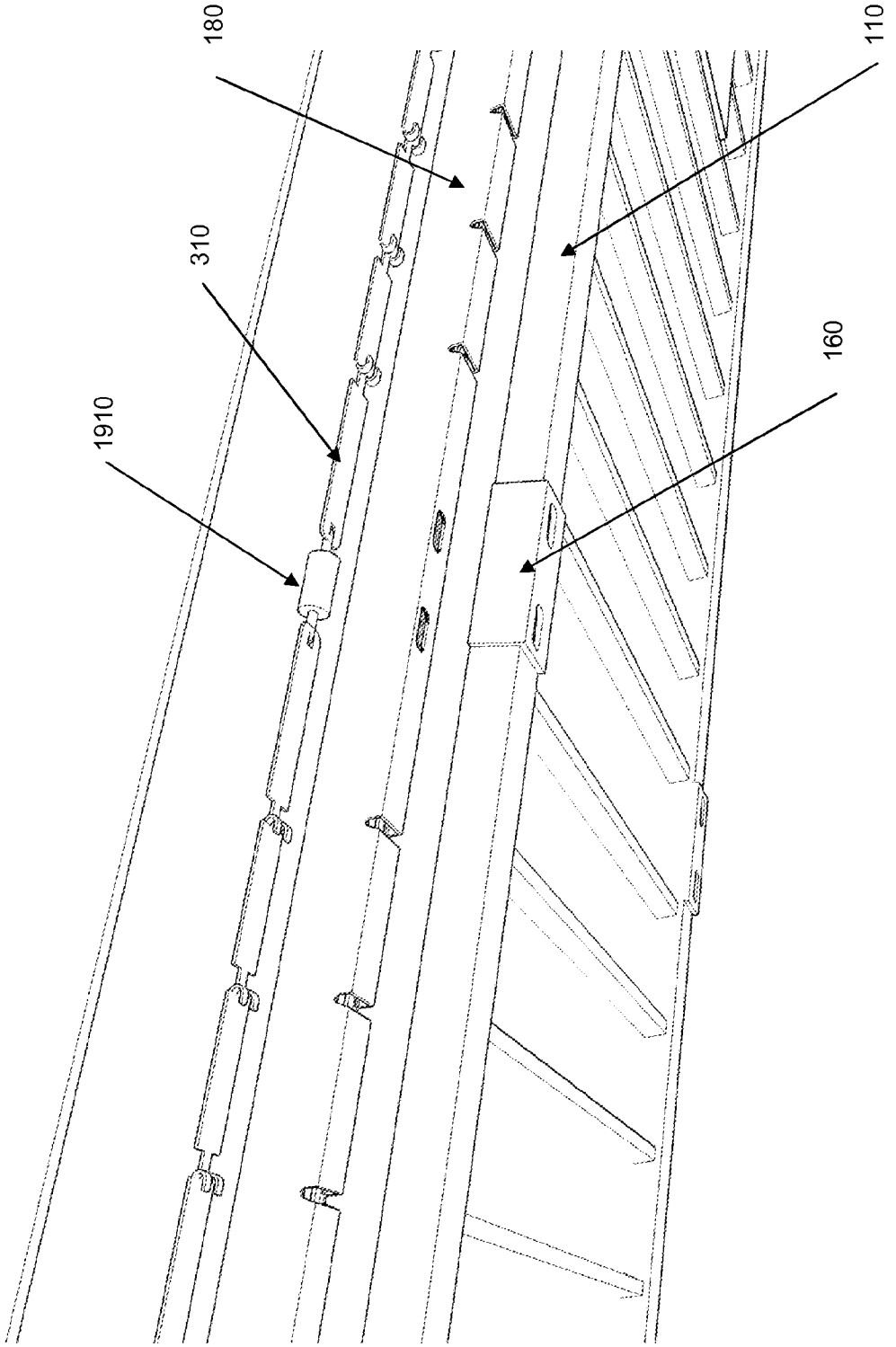

FIG. 20

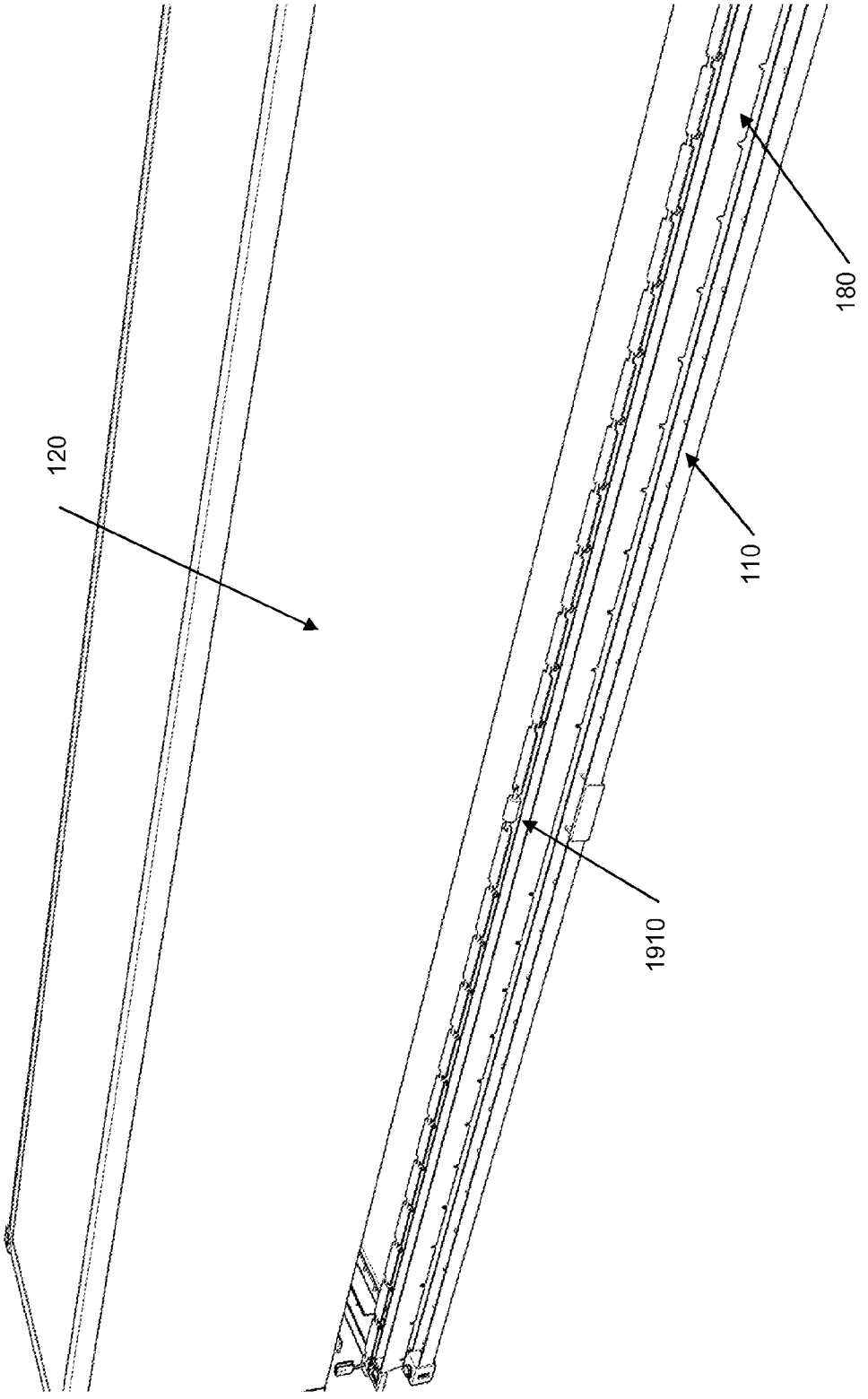

FIG. 21

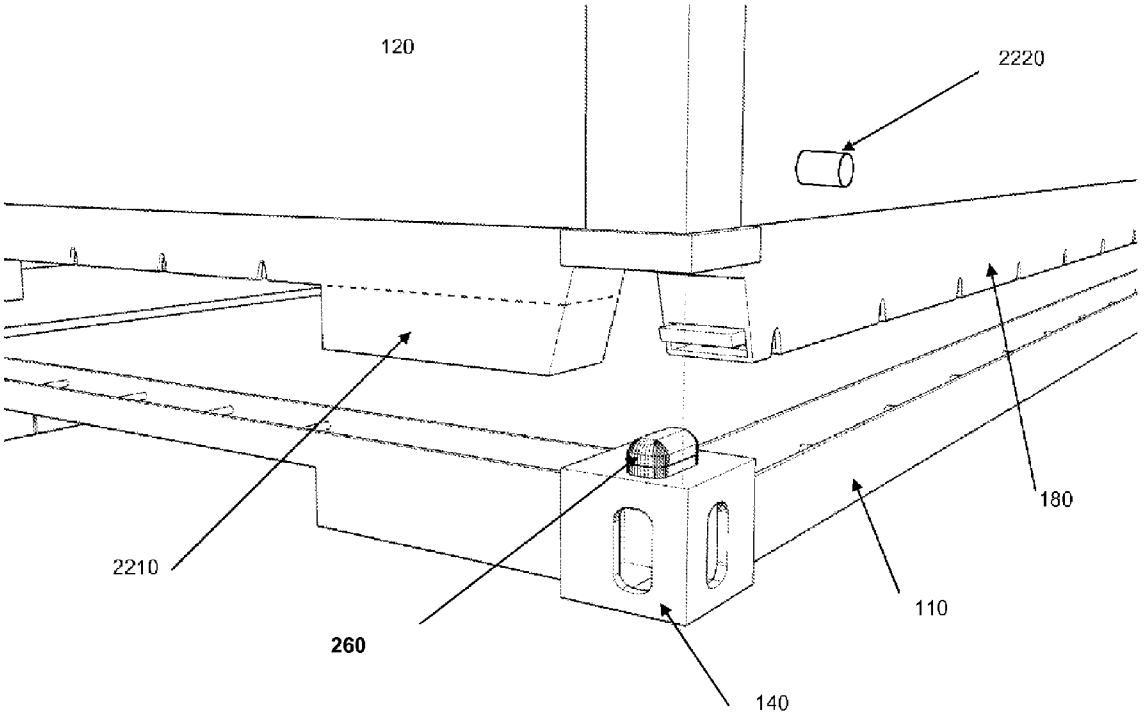

FIG. 22

DOORLESS INTERMODAL CARGO CONTAINER

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims benefit under 35 USC 119(e) to Provisional application 60/793,418 filed on Apr. 19, 2006, the entire contents of which are incorporated herein by reference.

BACKGROUND

This application relates to the intermodal shipping industry, and more particularly to containerization using intermodal shipping containers. Even more particularly, this application provides an improvement to homeland security by making inspection of containerized cargo faster, easier, and more reliable than conventional techniques.

Containerization is a system of intermodal freight transport cargo transport using standard ISO containers (known as "Shipping Containers" or "Isotainers") that can be loaded and sealed intact onto container ships, railroad cars, planes, and trucks.

Intermodal shipping containers generally are hollow rectangular cubes which may vary in size from 20×8.5×8 feet, to 40, 45, and 50 foot lengths, which may rise in height to 9.5 feet. These containers generally have standardized dimensions and corner posts in accordance with industry standards applicable to intermodal shipping containers.

There are five common standard lengths, 20-ft (6.1 m), 40-ft (12.2 m), 45-ft (13.7 m), 48-ft (14.6 m), and 53-ft (16.2 m). United States domestic standard containers are generally 48-ft and 53-ft (rail and truck). Container capacity is measured in twenty-foot equivalent units (TEU). A twenty-foot equivalent unit is a measure of containerized cargo capacity equal to one standard 20 ft (length)×8 ft (width)×8 ft 6 in (height) container. In metric units this is 6.10 m (length)×2.44 m (width)×2.59 m (height), or approximately 38.5 m^3. These sell at about US$2,500 in China, the biggest manufacturer. Most containers today are of the 40-ft (12.2 m) variety and are known as 40-foot containers.

The use of US measurements to describe container size, despite the fact the rest of the world uses the metric system, reflects the fact that US shipping companies played a major part in the development of containers. The overwhelming need to have a standard size for containers, in order that they fit all ships, cranes, and trucks, and the length of time that the current container sizes have been in use, makes changing to an even metric size impractical.

Access to the interior of an intermodal shipping container has conventionally been limited to a door or doors on one end of the container. This conventional arrangement has made it difficult to load cargo of certain shapes, and has also made security inspections and physical access to the cargo at ports of entry problematic because access to the first-loaded cargo at the end of the container away from the door is generally difficult. In addition, the conventional door arrangement has resulted in a certain amount of undesirable pilferage.

Further, the presence of doors on one end of the container results in a structural weakening of the container, thus limiting the number of containers that can safely be vertically stacked, as well as limiting access for offloading of cargo from the container.

What is needed is a container configured to facilitate security inspection of cargo contained within the container. What is further needed is a cargo container that allows relatively easy physical access to cargo contained therein to reduce the time and effort of loading and unloading the container. What is still further needed is an intermodal cargo container without conventional doors that constrains or prohibits unauthorized access to the contents of the container, and which provides increased structural integrity and physical security.

SUMMARY

The cargo container of this disclosure, marketed as "CakeBoxx"™, may have the same external dimensions as common ISO standard intermodal shipping containers. They are designed to fit into the system without any adjustments and perform the expected functions without changes in process or policy. They are designed to fit into the existing intermodal shipping system without any adjustments and perform the expected functions without changes in process or policy. Thus, the container of this disclosure has all the structural strength of ordinary containers, with increased compression load resistance, especially where the door hinges would normally be competing with the load bearing column for the limited available space.

The container of this disclosure may be scaled up or down and can come in any length, height or width that would be functional and desirable within the global intermodal shipping system. However, the net internal ("usable") volume of a 40' container of this disclosure exceeds the net internal volume of a conventional 40' container because there is no need to reserve empty space above the load so that it can be lifted, for example, by a forklift. The container of this disclosure increases the net internal capacity by being able to be loaded from the side with wide, full span pallets loaded slightly more than 8 feet high, rather than from a more restrictive end through a door. Further, when closed, an embodiment of the container may be made impervious to pilferage, water, moisture, and light.

As a consequence of the above, intermodal shipping containers of this disclosure are efficient, secure and convenient, and are desirable from the standpoint of increasing the ability to conduct efficient and timely security inspections at ports of entry, for example.

In one embodiment, the container of this disclosure is a mechanically simple device with few moving parts and, when closed, does not readily reveal that there are any moving parts, doors, latches, or even any interior access. When opened, the container floor is completely accessible from all sides, and horizontal tubes inside a gutter portion are the "rungs" that comprise attachment points for the lower section. The corner posts may be configured to have permanent "twist locks" on them that both guide the descent of the top "canopy" and, when closed, rotate to form redundant security latches and direct line of tension connections.

In one embodiment, an intermodal cargo container includes a lid section; a floor unit comprising a channel portion arranged around a periphery thereof, wherein the channel portion is arranged to receive a bottom edge portion of the lid section; and a sliding lock mechanism arranged to slidingly couple the lid section to plural rungs connected to and extending across the channel portion.

In another embodiment, an intermodal cargo container includes a lid section comprising a rectangular box having an open bottom portion; a floor unit comprising a channel portion arranged around a periphery thereof, wherein the channel portion is arranged to receive a bottom edge portion of the lid section; plural sliding locking mechanisms arranged along an open edge of the lid section to slidingly couple the lid section to plural rungs connected to and extending across the channel portion, wherein the sliding lock mechanism comprises

engagement tabs that engage associated rungs extending between two walls of the channel portion; corner boxes arranged at each corner of the floor unit and at corners of an upper portion of the lid section; a sealing portion arranged within the channel portion, wherein the sealing portion provides a fluid-tight seal when the lid section is coupled to the floor unit; an actuator arranged to mechanically assist in moving the sliding lock mechanism in responsive to an operator command; a gooseneck cavity portion arranged at each end of the container; and a spring assembly arranged at a corner of the floor unit so as to provide a spring tension to the sliding lock mechanism.

In other aspects, the container may be lined with insulating material, or with food grade plastic film to allow raw foodstuffs, e.g., corn or grain, to be shipped. In additional aspects, at least the floor of the container may have slots or holes to allow the free flow of air into the container while maintaining cargo integrity, depending on the shipping need.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a perspective view of a closed intermodal shipping container of this disclosure. Typically, both ends of the container are alike or similar;

FIG. **2** depicts two sections two sections of the container vertically separated (approximately 4 feet), with a "gutter" running around the floor's perimeter being visible on the bottom section;

FIG. **3** illustrates five main sub-assemblies of the container of this disclosure in a vertically exploded view;

FIG. **4** provides a close-up view of fastening together of the two main assemblies when the top section is lowered into the perimeter gutter of the bottom section;

FIG. **5** illustrates a sliding latch;

FIG. **6** depicts a close-up view of a rung captured by a sliding latch, with the gutter wall removed for clarity;

FIG. **7** is an end-view of a slightly opened container with the goose-neck tunnel;

FIG. **8** provides a detail view of the interior of a corner post assembly including a corner post twist lock pin;

FIG. **9** provides a second detailed view of the interior of a corner post assembly showing the corner post twist lock pin in a rotated position used when the upper and lower sections are mated;

FIG. **10** provides a view of the center-span "ISO casting" where mechanical release action is accomplished;

FIG. **11** provides a perspective view of the sliding latch bar springs and corner "twist-locks" in the normal "closed" position;

FIG. **12** is illustrative of a bottom frame in an embodiment of this disclosure;

FIG. **13** illustrates an end view of the frame of FIG. **12**;

FIG. **14** illustrates a bottom view of the frame of FIG. **12** showing both goose-neck tunnels;

FIG. **15** illustrates a bare platform of the container ready for loading;

FIG. **16** provides a perspective view of a closed intermodal shipping container of the disclosure;

FIG. **17** depicts an exemplary slider strap;

FIG. **18** provides an exploded view of an exemplary corner casting;

FIG. **19** illustrates an exemplary embodiment of an actuator useful to latch and unlatch the top portion to/from the floor section;

FIGS. **20-21** provide additional view of the actuator arrangement of FIG. **19**; and

FIG. **22** provides an end view of the container illustrating a void or reserved space useful for enclosing container security mechanisms and/or electronic alarm assembly.

DETAILED DESCRIPTION

In one embodiment, the container is a relatively simple device requiring few moving parts and, when closed, the container is outwardly configured so that it is not readily apparent that there are any moving parts, doors, latches, or even any interior access.

In FIG. **1**, Intermodal Shipping Container **100** ("container") is illustrated in an exterior perspective view, and is seen to comprise floor support frame **110**; upper section or canopy **120**; gooseneck area or "tunnel" **130**; ISO corner box assemblies **140**; separation point or plane **150** used as a reference plane to illustrate the separation of canopy **120** from floor support frame **110**; center span assembly **160**; corner columns **170**; and latch housing **180**, generally joined to canopy **120** by welding, for example.

In the expanded perspective view of FIG. **2**, the above elements are illustrated along with further details of floor support frame **110** and latch housing **180**, as well as the interior of container **100**. Floor support frame **110** includes perimeter channel or "gutter" **210** around the periphery of frame **110** and floor **240**. Channel **210** may included a rubberized or other type of sealing material therein (not shown) which can provide a liquid and/or airtight seal between the interior of container **100** and the external environment.

The frame perimeter comprises channel **210** that may be of a convenient width and height, e.g., 5.5 inches±1.5" on either axis. Perimeter channel rungs or horizontal tubes **230** span channel **210** along both long sides of container **100**. End rungs **250** span channel **210** along both ends of container **100** above gooseneck area **130**. Floor or deck **240** is attached to frame **110** to provide a surface on which cargo may be arranged. Floor **240** may be a solid material such as wood, metal, or synthetic material, e.g., ECOBoard®. Alternatively, floor **240** may comprise a grating having slots or other openings such as slotted boards to allow fresh air to flow into and out of container **100**, and which may be desirable for the secure shipment of fresh fruits and vegetables, for example.

FIG. **2** illustrates that floor **240** is completely accessible from all sides for loading or unloading when container **100** is opened. In FIG. **2**, the upper and lower sections are vertically separated by approximately 4 feet, and gutter **210** running around the perimeter of floor **240** is visible.

Horizontal tubes **230** inside gutter **210** are the "rungs" that comprise the attachment points for the lower section of container **100**. Further, corner posts **140** have permanent "twist locks" on them that both guide the descent of the top canopy **120** and, when closed, rotate to form redundant security latches and direct tensioned connections that secure canopy **120** to support frame **110**.

The five main sub-assemblies of container **100** are illustrated in the vertically exploded view of FIG. **3**. These include frame **110**, made of steel or other suitable material, for example, that may be supportably connected to floor **240**. Latch housing **180** captures side latch sections **310** and end latch sections **360** so as to allow only one axis of back-and-forth sliding motion when interconnected with spring assembly **320** and spring **340**. Latch housing **180** may be connected to canopy **120** by welded joints, for example. Cross-bracing **330** is connected across the width of frame **110** to provide additional support for floor **240** and to stiffen container against torque and other stresses, and may be made of steel or other suitable materials, for example.

Spring assemblies **320** contain associated springs **340** that intersect sliding latch sections **310**. These are the mountings and springs that apply outward pressure to the sliding latch sections **310** and, when container **100** is closed, springs **340** remain engaged with rungs **230** and **250** of channel **210**.

In one embodiment, upper section **120** could be the top seven or more feet of an ordinary shipping container, except for corner columns **170**, which may be reinforced for additional strength.

The fastening together of the two main assemblies, i.e., canopy **120**—latch housing **180** together with floor **240**—floor support frame **110**, is accomplished by lowering top section **120** into perimeter gutter **210** of bottom section **110**, which causes sliding latch sections **310** and **360** to initially move out of the way, then latch onto rungs **230** and **250**.

In operation, and when canopy **120** is lowered onto the lower section, sliding latches **310** and **360** strike the sloped sides **350** of gutters **210** which are sloped sides of the corner casting boxes **140**. This causes latch sections **310** to slide sideways far enough that curved engagement tabs or "claws" **510** in FIGS. **5**, and **6** allow rungs **230** or **250** from the lower section to settle into the cutout section of latch housing **180**, and to rest on cutout or notched section **370**.

As the upper section is lowered to its resting position, twist-locks **260** will come into alignment with hole **810** (see FIG. **8**) in corner post **140**, as the previously mentioned spring tension will force sliding latches **310** and **360** outwards into the hole on face **350** in FIG. **18**, thus capturing the corner casting and all the rungs in the lower frame gutters as depicted in FIG. **6**. In one embodiment, there may be 64 such claws **510** and rungs **230**/**250** within channel **210** of frame **110**, around the perimeter of container **100**.

The ends of container **100** may each have four short sections of the "sliding latches" **410** as shown in FIG. **5**, and the sides of container **100** may each have two much longer sections. (See page 11.) All 12 pieces release with inward motion and capture with outward motion.

FIG. **6** illustrates a close-up of a captured rung **250**, with the gutter wall removed to aid in exposition. Other perimeter rungs **230** are visible below, in their normal positions.

FIG. **7** provides an end view of a slightly opened container **100** with a goose neck tunnel **130** clearly visible. Unlike conventional containers, both ends of container **100** may have such tunnels **130**, thus eliminating the need for conventional "north-south" pre-alignment of containers when changing modes of transportation.

Corner post twist locks **260** act as guides, but they can then be turned to lock container **100** shut. All conventionally appropriate seals and locks may be attached either at one or more of twist locks **260**, or near spring assemblies **320**. A detail of the interior of the corner post assembly is shown in FIG. **8**. When the upper and lower sections are mated, twist lock **260** may be rotated as seen in FIG. **9**.

Corner twist locks **260** are somewhat redundant fasteners in some respects, and may not be completely necessary to the functional latching together of the upper and lower sections of container **100**. But, when used, their inaccessibility and strength will make it very difficult to illicitly intrude into a container interior, and nearly impossible to do so without leaving dramatic, indelible evidence of such intrusion.

Also visible in FIG. **9** is the slight vertical lip **910** around the perimeter of the deck or floor **240**. Lip **910** provides an edge to "grab" the bottom of a pallet as it is being lowered to the deck and to hold it, precisely located, as a forklift truck driver pulls the forks from the pallet that is being loaded. Such precise location of the pallet edge helps maximize the utility of the entire deck area and minimize the likelihood of cargo protruding beyond the floor edge. This makes it easier to load pallets that extend the full **8** foot span of the cargo deck. Lip **910** is shorter than the thickness of typical pallet bottom boards and does not interfere with normal operations.

Optional center-span assembly **160** or "ISO casting" looks somewhat like the castings that were placed in the middle of conventional 40' containers so that they could be stacked on top of two common 20 ft. containers. Center-span assemblies **160** are fully functional as ISO locking points, but they also provide access to the inward ends of the sliding latch bars or side latch sections **310** and any associated locks, seals and springs. In another aspect, castings **160** are absent and the latching function is accomplished either by actuator **1910** or by manual means with conventional hand tools through a mid-span slit.

A slight, e.g., less than 2 inch, inward motion of sliding latch bars **310** pulls engagement claws **510** aside and allows latch housings **180** to be lowered into floor support frame **110**. This inward motion may be accomplished with conventional hand tools or, in one embodiment, with pneumatic, hydraulic or electric power tools (not shown) that use the ISO holes to locate themselves prior to applying force on the springs.

Mechanical release action may be accomplished at the middle of the container **100** by powered mechanical action. For example, and as illustrated in FIGS. **19-21**, a mechanical or electromechanical latch actuator **1910** may be included to aid in latching and unlatching the various slide latch mechanisms **310**. Latch actuator **1910** may be pneumatically actuated, or hydraulically actuated, or may be motor driven, as in the conventional art, all under operator control (not shown).

Spring **340** and sliding latch sections **310** comprise a relatively simple assembly. The components are easy to fabricate and assemble and the resultant function is very strong, durable and easy to maintain. No lubrication is necessary and no part that might be considered "delicate" is exposed to possible damage. The motion needed to lock and unlock the two sections is a short back and forth, straight line motion.

In terms of producing the novel container of this disclosure, all but the lower 9 inches is similar to a conventional ISO standard container design which may be reused to a great extent, including the floor and center bracing. Rungs **230** along the sides, and four of the eight rungs **250** on each end may be 1 inch in diameter, and the four rungs over the goose neck tunnel sections **130** may be approximately half that size, e.g., ½ inches in diameter, and made of a suitable material, e.g., steel.

Side latch sections **310** and end latch sections **360** may be, for example, 5/16 inch metal stock which is approximately 5 inches wide, and side latch sections **310** may be 18 ft., 9½" long on the sides. Rather than heating, cutting and forming the "C-shaped" or "J-shaped" engagement tabs **510**, it may be desirable to simply weld short pieces of channel with an approximate 1 inch throat to the unmodified strap.

The corner box assemblies **140** or castings may be the same as conventional Isocontainers, except that the two inner sides have sloped surfaces **350** that push the side latch sections **310** and end latch sections **360** back as top **120** is inserted into floor support frame **110**, and the top of corner block **140** has a twist lock or corner post twist lock **260** which may be rotated to "lock" corner box **140** to upper section **120**.

In another embodiment, useful for certain cargo, e.g., grain or other raw foodstuffs, container **100** may be inverted so that floor support frame **110** is located at an upper position, and so that the top of canopy **120** becomes the "bottom" of container **100**, this enabling the containment of grain-type or other

loose cargo. The inside portion of canopy **120** may be lined with a food grade plastic liner (not shown), typically a 6 mil polyethylene sheet.

Further, security of container **100** may be enhanced beyond that provided by the locking features, discussed above, by use of conventional alarm devices suitably arranged in void or reserved space **2210**, as illustrated in FIG. **22**. Still further, a conventional Global Positioning System (GPS) transceiver (not shown) may also be enclosed in reserved space **2210** to aid in tracking of container **100** while in transit.

Optional port **2220** may be used to obtain a gas sample of the contents of container **100**, in the case of the potential presence of flammable or noxious vapors in side container **100** or, in an alternative embodiment, port **2220** may be configured as a viewing port arranged to allow for viewing of the contents of container **100** from outside the container.

A method of offloading or inspecting a container of this disclosure includes the steps of decoupling the top section from the floor unit; removing the top section from the bottom section; inspecting the contents/cargo of the container by visual or instrument means (e.g., x-ray); and removing contents of the container from the side or ends of the container floor.

Conversely, cargo may be loaded into the container from the side and ends; the top section may be lowered onto the lower section or floor unit; and the top section may then be coupled onto the floor unit.

In an embodiment suitable for grain transport, the container top (lined with a food grade plastic sheet) may be inverted; the cargo poured into the inverted top section; and what was known as the "bottom" or "floor" unit may be coupled to the inverted top section. Because of the presence of the ISO corner boxes, the container of this disclosure may be shipped either in a "normal" or an "inverted" orientation.

LIST OF REFERENCE NUMBERS

No.	Name	FIGS.
100	Intermodal shipping container	1, 2, 16
110	Floor support frame	1, 2, 3, 4, 7, 8, 10, 12, 13, 14, 15, 16, 19, 20, 21, 22
120	Upper section or canopy	1, 2, 3, 4, 7, 16, 21, 22
130	Gooseneck area or "tunnel"	1, 2, 3, 4, 7, 8, 12, 13, 14, 15, 16
140	ISO corner box assembly	1, 2, 3, 4, 7, 8, 12, 13, 15, 16, 18
150	Separation point or plane	1
160	Center span assembly	1, 2, 3, 10, 12, 13, 14, 15, 16, 20
170	Corner column	1, 2, 3, 4, 7, 16
180	Latch housing	2, 3, 4, 6, 7, 8, 9, 10, 11, 20, 21, 22
210	Perimeter channel or "gutter"	2, 3, 4, 8, 12, 13, 14, 15, 19
230	Perimeter channel rungs or horizontal tubes	2, 8, 12, 13, 14
240	Floor or deck	2, 3, 4, 6, 8, 9, 10, 11, 15
250	End rungs	2, 3, 6, 8, 912, 15
260	Corner post twist lock	2, 3, 4, 7, 8, 9, 11, 12, 13, 14, 15, 18, 22
310	Side latch sections	3, 4, 7, 8, 10, 11, 17, 19, 20
320	Spring assembly	3, 11
330	Cross-bracing	3, 10, 12, 13, 14
340	Spring	3, 10, 11
350	Sloped side	3, 4, 7, 12, 13, 15, 18
360	End latch sections	3, 4, 5, 6, 8, 9, 10, 11
370	Cutout or notched section	3, 4, 6, 7, 8
510	Curved engagement tab or "claw"	4, 5, 6, 9, 17
810	Corner post hole	8, 9
910	Vertical lip or edge	9, 11, 15
1010	Access hole	10, 13, 15, 16
1110	Center span rung	11
1810	Block	18
1910	Latch actuator	19, 20, 21
2210	Enclosed electronics space	22
2220	Sampling port	22

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An intermodal cargo container, comprising:

a lid section;

a floor unit comprising a channel portion arranged around a periphery thereof, wherein the channel portion is arranged to receive a bottom edge portion of the lid section; and

a sliding lock mechanism comprising a plurality of claws that simultaneously slide horizontally to engage a plurality of rungs connected to and extending across the channel portion so as to lock the lid section to the floor unit,

wherein the bottom edge portion of the lid section and the channel portion are arranged to completely contain and prevent the sliding lock mechanism from being directly accessed from either inside or outside the intermodal cargo container.

2. The cargo container of claim **1**, further comprising corner boxes arranged at each corner of the floor unit.

3. The cargo container of claim **1**, wherein the lid section comprises a rectangular box having an open bottom portion.

4. The cargo container of claim **1**, further comprising a sealing portion arranged within the channel portion, wherein the sealing portion provides a fluid-tight seal when the lid section is coupled to the floor unit.

5. The cargo container of claim **1**, further comprising an actuator arranged to mechanically assist in horizontally moving the sliding lock mechanism responsive to an operator command.

6. The cargo container of claim **1**, further comprising a layer of insulation on the lid section and the floor unit.

7. The cargo container of claim **1**, wherein the floor unit comprises a plurality of spaced-apart members arranged to allow air to freely flow into and out of an interior portion of the cargo container.

8. The cargo container of claim **1**, further comprising a plastic liner on an interior portion of the lid section suitable for storing foodstuffs therein.

9. The cargo container of claim **1**, further comprising a viewing port arranged on a section of the lid section so as to allow an interior portion of the cargo container to be viewed from outside the container.

10. The cargo container of claim **1**, further comprising a sampling port arranged on the lid section, wherein the sampling port is suitable for connection to a gas analyzer.

11. The cargo container of claim **1**, further comprising a gooseneck portion arranged at each end of the container,

wherein a bottom portion at each end of the floor unit is recessed so as to receive a corresponding gooseneck portion.

12. The cargo container of claim **1**, comprising plural sliding locking mechanisms arranged along an open edge of the lid section.

13. The cargo container of claim **1**, comprising an enclosed space extending below the latch housing and floor unit and containing an alarm system or a position indication system therein.

14. The cargo container of claim **1**, comprising a spring assembly arranged at a corner of the floor unit so as to provide a spring tension to the sliding lock mechanism.

15. The cargo container of claim **14**, wherein the spring assembly engages the sliding lock mechanism through a slot in the sliding lock mechanism.

16. The cargo container of claim **1**, further comprising corner boxes arranged at each corner of the floor unit and at corners of an upper portion of the lid section.

17. An intermodal cargo container, comprising:

a lid section comprising a rectangular box having an open bottom portion:

a floor unit comprising a channel portion arranged around a periphery thereof, wherein the channel portion is arranged to receive a bottom edge portion of the lid section:

plural sliding locking mechanisms, each comprising a plurality of claws that simultaneously slide horizontally to engage a plurality of rungs connected to and extending across the channel portion so as to lock the lid section to the floor unit;

corner boxes arranged at each corner of the floor unit and at corners of an upper portion of the lid section;

a sealing portion arranged within the channel portion, wherein the sealing portion provides a fluid-tight seal when the lid section is coupled to the floor unit:

an actuator arranged to mechanically assist in moving the sliding lock mechanism responsive to an operator command:

a gooseneck portion arranged at each end of the container; and

a spring assembly arranged at a corner of the floor unit so as to provide a spring tension to the sliding lock mechanism.

18. The cargo container of claim **1**, wherein the lid section and floor unit are cooperatively arranged so as to allow separation therebetween and/or rejoining while in a transport-capable configuration on a vehicle.

19. The cargo container of claim **1**, wherein the lid section and floor unit are cooperatively arranged so as to allow separation therebetween and/or rejoining without requiring removal of the cargo container from a transport vehicle.

20. The cargo container of claim **1**, wherein, when the cargo container is configured in a closed position, the lid section and floor unit are cooperatively arranged to prevent access to the sliding lock mechanism, to prevent access to an interior portion of the cargo container and to allow separation between the lid section and the floor unit while in a transport-capable configuration.

21. The cargo container of claim **1**, wherein, when the cargo container is configured in a doorless configuration, the lid section and floor unit are each arranged without a door or other opening therein such that access to an interior portion of the cargo container is precluded without separating the lid section and floor unit from each other.

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