ABSTRACT

In a container for a vehicle or the like a side wall construction for lading control including an upright exterior post provided with lading attachment panel coupled to flanges on the post to provide for the panel to be relatively flush with the rest of the interior wall of the container, the upright panel being provided with a plurality of vertically spaced logistic slots for receiving lading control elements such as strap or lading support bars, an interior wall sheet covering the panel and apertured to expose the logistic slots and attached to the post by rivets or the like.

9 Claims, 9 Drawing Figures
BACKGROUND OF THE INVENTION

1. Field of the Invention
This invention relates to freight bracing and loading apparatus and in particular relates to lading restraining and/or supporting devices mounted on the interior side of a container for use in railroad freight cars, highway trailers, aircrafts or ships, etc.

2. Description of the Prior Art
It is known in the prior art to provide for a plurality of vertically spaced apertures for receiving the hooking element of lading strap whereby lading may be tied to the wall of the container, see for instance, U.S. Pat. No. 2,616,375. It is also known to provide for support structure for the lading which may be received in these vertically spaced or horizontally spaced apertures or logistic slots. Also, it is known to provide for a closure plate to be placed over the interior end of an exterior side post so that the closure plate is more or less flush with the interior wall of the container or freight vehicle and wherein this closure plate carries lading strap anchor means, as shown in U.S. Pat. No. 3,319,585. However, the prior art does not teach an arrangement for supporting the lading strap anchor or logistic slots mounted on a post closure member and adapted to receive thereover the interior wall of the car which is apertured to permit access to the logistic slots. Also, there is no showing of an arrangement to vary the amount of such logistic slots on a closure plate arrangement or panel. It is the instant described invention which purports to overcome the deficiencies in the prior art.

SUMMARY OF THE INVENTION

This invention has for its general object to provide for a freight bracing and loading apparatus or structure on the interior wall of the container such as may be used in a vehicle by insertion of a closure plate or panel at the interior portion of a side post wherein the closure panel is provided with a plurality of lading tying device apertures or logistic slots and wherein the interior paneling or wall of the container covers the closure panel but is provided with suitable openings corresponding to the positioning of the logistic slots to allow access to such logistic slots and, therefore, preventing any encroachment of the closure member or logistic slotted panel into the loading space within the container and, therefore, providing for more cubic space within the container and not creating any obstacle in the loading area.

Further, the closure plate or panel provided with the lading strap hook receiving logistic slots is entrained by flanged portions of the exterior post which flanged portions act as fingers to releasely entrap the closure member which therefore permits the post to be of one material such as aluminum and the closure member of another material such as steel. The closure member provided with the logistic slots may be readily removed from the grooves formed by the flanged portions of the exterior posts and these flanged portions may be sufficiently recessed within the exterior posts to insure that the logistic slot panel member may be located outwardly of the inside space of the container. An alternate form of the invention permits the panel to be riveted to the interior wall portions at the longitudinal ends of the exterior post thereby fully exposing the logistic slots to the container interior.

These and other objects and advantages of the invention will become apparent from reference to the following description, appended claims and attached drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a partial perspective view of a trailer with the van or container rear end portion having its interior exposed to show the inside wall;

FIG. 2 is a partial view of the inside of the cargo body with parts broken away;

FIG. 3 is a sectional view taken along line 3—3 of FIG. 2;

FIG. 4 is like FIG. 3 but is a modification thereof;

FIG. 5 is like FIGS. 3 and 4 but is a further modification thereof;

FIG. 6 is like FIG. 2 but shows a modification thereof;

FIG. 7 is a sectional view taken along line 7—7 of FIG. 6;

FIG. 8 is a sectional view taken along line 8—8 of FIG. 6; and

FIG. 9 is a modified showing of the exterior post construction and of the type of insert or panel leg support used.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings and in particular with reference to FIGS. 1–3 there is shown in FIG. 1 a trailer 2 having a cargo body or container 4 supported on wheels 6 and having rear doors 8 and 10 with the interior of the container being exposed to show the interior side wall 11. The side wall is provided with a plurality of horizontally spaced vertical columns of vertically spaced openings or apertures 12 and a series of `I-shaped logistic slots or openings 14. Each slot 14 is disposed outwardly of its respective aperture 12 in horizontal alignment and in open communication therewith as shown in FIG. 2. These logistic slots 14 are a plurality of vertically spaced openings in the closure member or panel 16 (of steel) that is mounted on the inner or inside end of each exterior side post 18 (of an aluminum extrusion) of the vehicle 2 as seen in FIGS. 1–3.

The post 18 includes a front or outer wall 19, transverse walls 20 and longitudinal flanges 21. As viewed in FIG. 3 the left end flange 21 is attached to inner wall section 22 by rivet 23 and the right end flange 21 connects by means of rivet 24 with wall section 25 which is overlapped by wall section 22 also held by rivet 24. Each transverse wall section 20 is provided with outer and inner perpendicularly extending flanges 26 and 27 located within the post 18 and define a closure or panel member receiving slot or groove 28. The removably insertable panel 16 includes a central portion 29 in which are located the logistic holes 14 as defined by the inwardly directed flanges 30 of the central portion 29. The panel 16 is further provided with recessed or outer end portions 31 which are received in the grooves 28. Each of the end portions 31 is connected to the central portion 29 by a diagonal portion 32. Thus the ends 31 extend outwardly of the central portion 29 of the closure member 16. The flanges 26 and 27 are also outwardly of the end flanges 21 so as to allow the central
portion 29 of the closure member to be outwardly of the interior of the container and to allow the wall section 22 of the wall 11 to pass over the closure member 16 and overlap and couple with the wall section 25 of the wall 11. The flange 26 in FIG. 9 is provided with outwardly directed bulbous portion 33 which is provided with slot portion 34 connecting with the panel receiving slot or groove 28. Referring now to FIG. 2 it is seen on the left side that the panel 16 is not full length and is supported by two spaced inserts or support legs 36 whose construction, as readily shown in FIG. 9, provides a slotted modified form from that shown in FIG. 3 and comprises an elongated member in cross-section having an elongated flange portion 35 and a bulbous end or knob portion 37, the flange portion 35 having a perpendicularly outwardly extending protuberance 38 extending into the slotted portion 34 of the bulbous portion 33 of the outer flange 26. The elongated portion 35 of the insert or leg 36 supports an end of the closure member 16 and its bulbous end 37 prevents the panel 16 from wedging in between the legs 36 and the flanges 26 or 27. The protuberance 38 of the elongated flange 35 of the insert or support leg 36 prevents inadvertent removal of the legs 36 from the grooves 28, but the leg 36 may be removed by sliding it out vertically of the groove 28. FIG. 9 shows a modified exterior post 18d in which one of the essential differences is that the lower flange 27a is not upwardly or outwardly from the flange 21 and post 18d still allows for the closure member such as a closure member 16 to be outwardly of the interior of the car. The insert or support leg 36 may vary in length as may the panel 16 provided with the logistic slots 14 and, in fact, the wall of the vehicle may be a logistic slotted panel the entire vertical extent thereof.

FIG. 4 shows a modified post 18c which has end flanges 21a having a recessed portion 39 to receive flat elongated closure member 16a over which are riveted wall sections 11a. This arrangement exposes the logistic slots 14 within the interior of the container and yet keeps them out of the interior of the container. FIG. 5 is another modification where the post 18b is provided with a pair of inner flanges 40 connecting wall sheets 11b and closure member or panel 16b by rivets 23 being connected to flange portions 40a and 40b respectively to make the closure member or panel in line with the inner wall sections 11b, 11b. As in the case of the modification of FIG. 4, the logistic slots are exposed to the interior of the vehicle. FIGS. 6–8 show still another modification of the exterior post 18c having inner longitudinally extending flanges 41 connected to a continuous inner wall 42 having openings 12 for access to the logistic slots 14 of the closure member or insert 16c. The closure member is provided with flanges 30, a central portion 43, a curved portion 44, and longitudinally extending end portions 45 extending into depending flanges 46 and 47 at the ends of the outer front wall 48. The end flange 47 is shorter than the end flange 46 so as to provide a slot 49 to receive its respective end portion 45, as seen in FIG. 7. Further, as shown in FIG. 8, these flange 46 and 47 and the slot 49 are L-shaped to receive also the tips 50, 50 and a shank 51 (which has an enlarged end or knob 52) of the modified type of support leg or insert 36c which can support the panel 16c in the same manner that insert 36 supports the panel 16.

Thus it can be seen that there is provided a freight bracing and loading arrangement for containers or cargo bodies of vehicles which employs a removable panel slidable in a track defined by flanges in the exterior post of the container or vehicle wherein the panel is provided with a plurality of vertically spaced logistic slots or tie-down device receiving slots for receiving the hooked ends of tie-down devices or lading straps and further where a post and panel may be covered by an inner wall which is also slotted to permit access to the logistic slots.

The foregoing description and drawings merely explain and illustrate the invention and the invention is not limited thereto, except as the appended claims are so limited, as those skilled in the art who have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention, wherein.

What is claimed is:

1. In a container for a vehicle or the like a side wall construction for lading control including:
   an upright generally U-shaped exterior side post,
   an upright lading attachment panel carried at the post and substantially flush with the interior of the container,
   a said upright panel being provided with a plurality of vertically spaced logistic slots for receiving lading control elements,
   a side wall covering the panel and apertured to expose the logistic slots and having fastening means attaching the wall to the post, and
   said exterior post having a pair of flanges on each end of the post and extending inwardly of the post toward one another to form a pair of spaced slots to provide a track to receive said panel.

2. The invention according to claim 1, and each pair of flanges on each end of the side post being recessed within the post.

3. The invention according to claim 1, and said post having an outer longitudinal wall, said flanges on each end of the post forming said pair of slots depending from the outer longitudinal wall in perpendicular fashion to provide for a pair of slots to receive the fore-and-aft ends of the panel,
   said panel having a central protruding portion and recessed end portions receivable in said flange slots,
   the central portion of the panel being substantially flush with the exterior side of the side wall.

4. In a container for a vehicle or the like a side wall construction for lading control including:
   an upright generally U-shaped exterior side post,
   an upright lading attachment panel carried at the post and substantially flush with the interior of the container,
   said upright panel being provided with a plurality of vertically spaced logistic slots for receiving lading control elements,
   a side wall covering the panel and apertured to expose the logistic slots and having fastening means attaching the wall to the post, and
   said exterior post having a pair of flanges at each end of the post, each pair of flanges defining a panel receiving slot facing the other slot and cooperative with it to receive said panel.

5. The invention according to claim 4, and
an insert member receivable in each of said slots below said panel for supporting said panel.

6. The invention according to claim 5, and said insert member having an enlarged end portion projecting outwardly of each respective slot for supporting an end of said panel.

7. The invention according to claim 6, and the enlarged end portion of the insert member diverging outwardly.

8. The invention according to claim 6, and the enlarged end portion of the insert member being generally T-shaped.

9. In a container for a vehicle or the like a side wall construction for lading control including:

   an upright generally U-shaped exterior side post,
   an upright lading attachment panel carried at the post and substantially flush with the interior of the container,

   the upright panel being provided with a plurality of vertically spaced logistic slots for receiving lading control elements,
   a pair of interior walls spaced on opposite sides of said panel,
   said side post being provided with fore-and-aft flanges for engagement with the ends of the panel and the ends of the interior walls,
   each of the fore-and-aft flanges having a first inner flange part extending longitudinally into the post and a second outer flange part extending longitudinally out of the post,
   the ends of the panel connecting with the inner flange parts and each wall connecting with a respective outer flange part, the walls and the panel being in general longitudinal alignment with one another.

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