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PALLET AND SKID REINFORCEMENT

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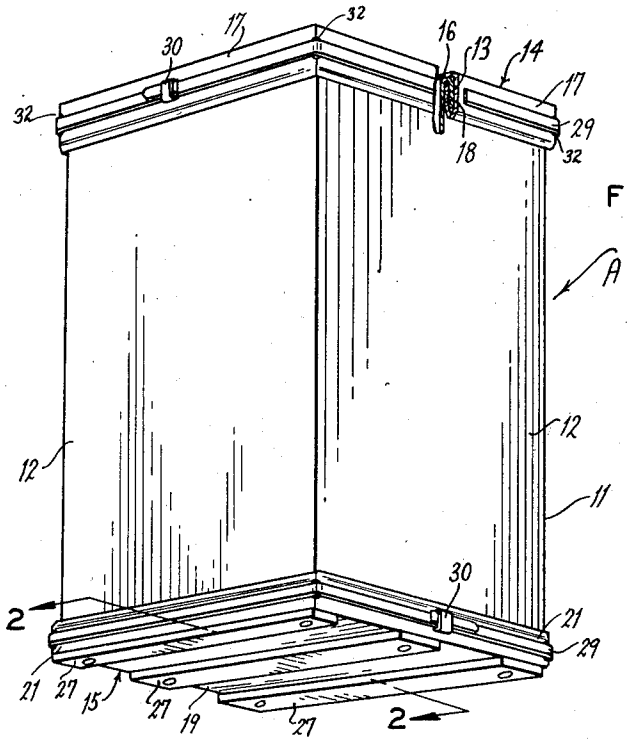


FIG. 1.

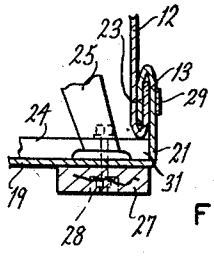


FIG. 4.

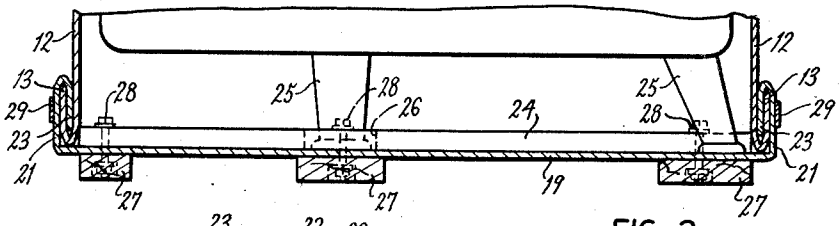


FIG. 2.

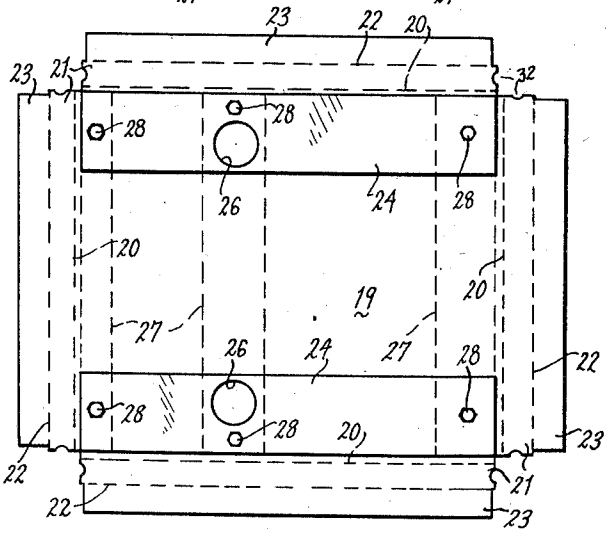


FIG. 3.

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PALLET AND SKID REINFORCEMENT

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1 Claim. (Cl. 206—46)

This invention appertains to a support for a shipping container and more particularly to a support for a receptacle for relatively heavy articles positioned upon a skid member having portions inside the receptacle and other portions exteriorally of the receptacle.

A common method of shipping relatively heavy, bulky articles is to place the item to be supported, upon a rigid, heavy-duty frame or support and then position a relatively light, open bottom container body over the contents and the supporting member. Still another method of shipping articles of this type is to place the item upon a supporting frame and place both within a closed container.

In many applications, such as the shipping of consumer items, including stoves, refrigerators and hot water heaters and the like, it is important to provide every possible protection for the contents. Obviously, the open bottom container does not provide protection against moisture, dirt and other foreign substances.

It is also desirable to provide a supporting member which will elevate the contents sufficiently to permit entry beneath, of the lifting elements of fork trucks and the like. It is equally apparent that the container which completely encloses the skid and the article is unsuitable for use with modern lifting equipment. Therefore, it is an object of this invention to provide a completely sealed container for relatively large, heavy articles and means for rigidly supporting the contents and elevating the container to permit entry of lifting elements.

Still another object of this invention is to provide a heavy-duty container for articles of the type described, employing a supporting frame within the container and an elevating skid positioned on the outside of the container, the supporting frame and the elevating skid being firmly connected together through the bottom of the closure of the container. These and other objects of the invention will be apparent upon an understanding of the detailed description which follows.

In the accompanying drawings which form a part of this specification, like numerals and symbols refer to like parts wherever they occur.

Fig. 1 is a side, perspective view of a container employing this invention;

Fig. 2 is a fragmentary view of the container taken through section 2—2 of Fig. 1;

Fig. 3 is a top plan view of a preferred form of a container bottom employing this invention;

Fig. 4 is an enlarged, detailed, vertical section of one of the bottom corners of another embodiment of a container employing this invention.

The exterior container A, illustrated in Fig. 1 consists of a body member 11 having vertical side walls 12. Each side wall 12 is provided along its top and bottom edges with foldably connected end marginal flaps 13. The container A, which is illustrated, is provided with a top closure member 14 and a similar bottom closure member 15. The top closure member 14 employs a top panel 16 adapted to fit over the upper portion of the body

member 11. The top panel 16 is likewise provided with top side flanges 17 foldably connected along its side margins. Each top side flange 17 is provided with a foldably connected top side flap 18.

In a similar manner, the bottom closure member 15 is provided with a bottom panel 19 having side scores 20 which define foldably connected bottom side flanges 21. Intermediate scores 22 define foldably connected bottom side flaps 23. Supporting pieces 24, preferably constructed of wood or similar rigid material, are placed on the upper, inner surface of the bottom panel 19. In the embodiment illustrated, the supporting skids 24 are spaced apart a distance suitable to receive the legs 25 of the article to be carried. For purposes of illustration, a hot water heater having three supporting legs is illustrated. The supporting skids 24 may be positioned and spaced in any desired manner so as to conform with the legs or other supporting elements of the articles to be carried.

In the embodiment illustrated, the supporting pieces 24 are provided with suitably positioned openings 26 to receive the leg members 25. The remaining supporting leg 25 of the figures illustrated will rest upon the top of the bottom panel 19 as illustrated in Fig. 2. The openings 26 prevent the article carried from shifting or otherwise moving within the container during transit.

As most clearly shown in Fig. 2, supporting strips 27 are positioned against the underface of the bottom panel 19. It is desirable to position the supporting strips 27 so that they are directly beneath the supporting legs 25. It is also desirable, if possible, to position the supporting strips 27 in parallel relation to each other so that spaces or voids, extending the width of the container, are available. As illustrated in Fig. 3, it is desirable that at least two of the supporting members 27 are positioned adjacent the opposed outer margins of the bottom panel 19. The supporting skids 24 and the supporting strips 27 may be connected together by fastenings 28 which extend through the members and the bottom panel 19 at the points of intersection. Any desired type of fastening device may be used, as long as the skids 24 and the strips 27 are fixed with respect to each other and with respect to the panel 19. It has been found that a standard carriage bolt of suitable length is satisfactory. The bottom assembly is now in position for use.

When the supporting skids 24 and the supporting strips 27 are secured together in the manner described, an extremely sturdy and rigid unit is provided. This occurs because the relatively thin bottom panel is positioned between the members 24 and 27 and firmly held so that it will not bend or deflect. The panel 19 has a great resistance to forces in a horizontal plane, hence, the entire bottom unit is substantially strengthened and rigidized. In this manner an unusual reinforcement is obtained by utilizing a member which also effectively seals the bottom of the container.

The assembly is placed upon any suitable base such as a floor, table or conveyor. The article to be supported is then lowered onto the assembly so that the legs 25 are positioned within the openings 26. The openings 26 may be dimensioned so that they will snugly receive the legs 25. As previously described, in a particular article described, one of the legs 25 rest directly on the upper surface of the bottom panel 19. The body member 11 of the container is then slipped over the article and downward onto the bottom side flanges 21. The bottom end marginal flaps 13 are then bent substantially vertically upwardly into spaced parallel relationship with the adjacent side walls 12. The bottom side flanges 21 are then folded upwardly about the side scores 20 into substantially flatwise relation with the vertically positioned bottom end marginal flaps 13. The bottom side flaps

23 are then bent inwardly and downwardly about the intermediate scores 22 into position between the adjacent marginal end flaps 13 and the side walls 12 as illustrated in Fig. 2. A steel strap 29 or any other suitable securing means such as wire, rope, etc., is positioned around between the side flanges 21 as shown in Figs. 1 and 2. The securing means 29 is then tightened in place. The bottom closure 15 is thus firmly and immovably secured to the body member 11.

The top closure 14 may then be placed upon the upper portion of the body member 11. In a similar manner the end margin flaps 14 are folded downwardly in spaced parallel relation with the adjacent side walls 12, and the top side flanges 17 are then folded downwardly into substantially vertical relation. The top side flaps 18 are folded inwardly into interlocking relationship between the previously positioned top end marginal flaps 13 in the adjacent side wall 12. Similarly, a steel strap 29, or other securing means, is tightened in place around the positioned top side flanges, as shown in Fig. 1.

The completed container is now packed and ready for shipment. The supporting strips 27 elevate the bottom panel 19 a sufficient distance above the supporting surface so as to permit the entry of lifting elements.

Various other types of containers may employ this invention. For instance, a container having a body member 11, with top and bottom closure flaps instead of the top and bottom closures 14 and 15, might also utilize the invention.

Still other variations may be used. For instance, as illustrated in Fig. 4 in this embodiment of the container, the hereinbefore described bottom closure 15 is employed. The container side walls 12 are foreshortened and the bottom side flanges 21 are extended so as to permit an extension 31 of the supporting skids 24 to be positioned beneath the side walls 12 as illustrated. In this embodiment, the bottom of the side walls 12 is positioned snugly against the upper surface of the extension 31. In this manner, the supporting pieces 24 are held firmly in position in the container, therefore, providing additional strength and security to the package. In other respects, the bottom closure 15 of the embodiment illustrated in Fig. 4 is similar to the arrangement illustrated in Figs. 1 and 2.

In order to more firmly anchor the steel strap 29 or other banding means, it may be desirable to provide the top side flanges 17 and the bottom side flanges 21 with end notches 32. The notches 32 prevent the banding means from sliding off of the closure member during transit.

While the invention has been illustrated and described in detail in the drawings and the foregoing description, the same is to be considered illustrative and not restrictive in character.

What I claim as my invention is:

In a shipping package comprising a paperboard container having an article therein, the container comprising connected together upright side walls and a bottom closure panel secured to the side walls, and an interior, article engaging skid formed of a plurality of relatively narrow slat members, each of the slats being spaced apart and in contacting relationship with adjacent interior portions of the bottom panel, supporting members comprised of spaced apart runners in contacting relationship with adjacent exterior portions of the panel and at substantially right angular overlapping relationships with portions of the slats and with portions of the bottom panel fixed between the overlapping portions of the slats and the supporting member, there being an opening in at least two slats, the openings being directly over the overlapping portions of the slats and the supporting members thus providing closed bottoms for the openings, at least two legs of the article having the ends thereof in the said openings so as to prevent lateral movement of the article in and relative to the container, and means securing the slats and supporting members to the bottom panel.

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