Nov. 19, 1935. E. S. GOMES 2,021,235

FIBERBOARD CONTAINER SUPPORT

Filed Oct. 10, 1933

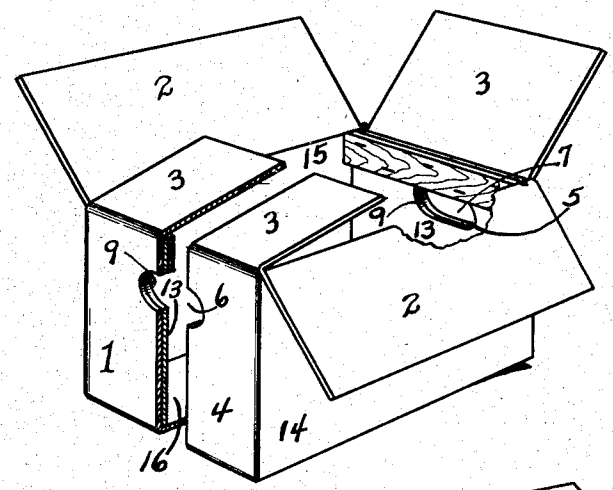


Fig. 1.

Fig. 2.

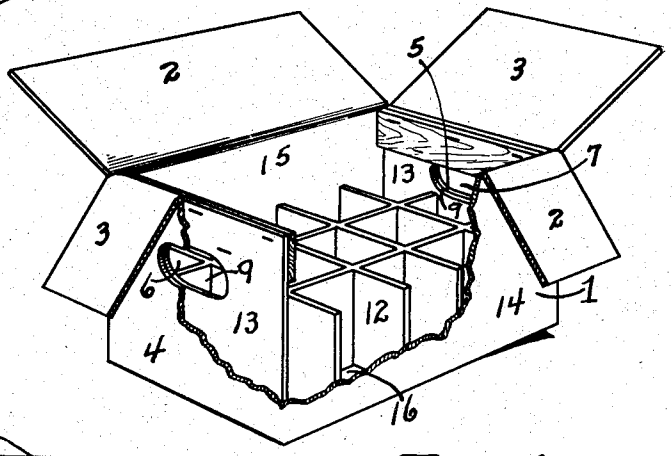


Fig. 3.

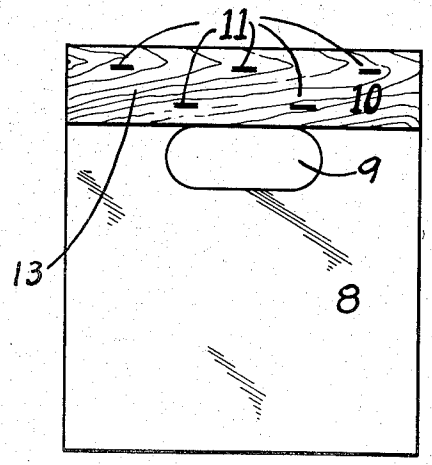
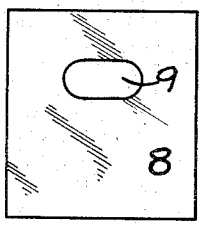


Fig. 4.



Inventor

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FIBERBOARD CONTAINER SUPPORT

Earl S. Gomes, Cincinnati, Ohio

Application October 10, 1933, Serial No. 692,982

5 Claims. (Cl. 229—52)

My invention relates to containers broadly and more particularly to a novel support preferably used in connection with the container to facilitate the safe handling of merchandise, such as bottled beer and the like, when shipped in fiberboard cartons.

The object of my invention is to provide an end support for the container which is simple in construction, economical to manufacture, easily installed within or removed from the container and easily bundled for shipping and storage purposes.

A further object of my invention is to provide a hand hole support, for the wall of a shipping container, which is composed of a minimum number of parts, namely, an upright member with a hand hole therein and a substantially rigid member attached thereto.

A further object of my invention is to provide a hand hole support for the wall of a shipping container which will stand a great amount of end pull as well as a great amount of vertical raising pull.

My invention consists of providing an upright member (preferably of fiberboard) having a hand opening therein and having a substantially rigid member (preferably wood) attached thereto, the lower edge of the rigid member to form a rigid reinforcement for the top edge of the hand hole opening in the wall of the carton and the hand hole opening in the carton support. My invention further consists in the construction, combination, location and arrangement of parts, all as will be hereinafter more fully set forth and finally claimed.

A preferred form of the invention is set forth in the accompanying drawing and following description but it is to be understood that such embodiment is presented, merely for the purpose of illustration and is not to be accorded any interpretation which might be calculated to limit the invention short of its true and most comprehensive scope in the art.

In the drawing:

Fig. 1 is a perspective view of my improved carton support made in accordance with my invention and installed in a shipping carton showing the carton partly opened and a portion of the carton broken away to show the supports installed.

Fig. 2 is a perspective view of my improved carton support made in accordance with my invention and installed in a shipping carton with partitions therein, showing the carton partly opened and a portion of the carton broken away to show the supports installed with partitions in the carton.

Fig. 3 is a plan view showing my improved carton support.

Fig. 4 is a plan view of the support blank showing opening therein to form hand hole.

The structure hereinafter described is particularly adapted to be used as an inner support for a fiberboard shipping carton when the carton is provided with openings in the carton wall to form hand holes in the carton wall.

In the embodiment of my invention as illustrated and which shows a preferred construction I provide a shipping carton 1, which may be composed of any suitable kind of fiberboard and is provided with inside top flaps 2—2 and outside top flaps 3—3 to close the top of said carton in a manner well known; in the carton walls designated 4—5 and shown in Fig. 1 and in Fig. 2, openings are provided to form hand holes 6—7, into which one's hand or hands may be inserted to grip the carton walls when carrying the carton.

Referring now in detail to one of the inner supports 13, as shown in Fig. 3, 8 designates one of the upright members, shown in Fig. 4, which is preferably formed from a blank of solid fiberboard, 9 designates a hand hole opening in upright member 8, 10 designates a substantially rigid member which is preferably formed from a piece of wood and is attached to upright member 8 by any suitable means, as for example by staples 11.

In the present showing I have illustrated, in Fig. 1, a carton 1, with my improved inner supports set up against the carton walls 4—5 within the carton; in Fig. 2 I have illustrated a carton 1, with my improved inner supports set up against the carton walls 4—5, within the carton in combination with partitions 12, such as are commonly used in shipping bottled goods and the like.

My improved inner supports 13—13, shown in Fig. 1 and Fig. 2, are preferably of a width suitable for being received between the carton walls 14—15, and are preferably of a heighth suitable to extend from the bottom 16, to the top of the carton walls 4—5, of carton 1, the hand holes 9—9 in inner supports 13—13, are preferably located so as to be oppositely disposed to the hand holes 6—7 of carton walls 4—5.

Heretofore various types of inner supports for fiberboard shipping cartons have been devised but all of said supports, to the best of my knowledge, require an excessive amount of material

or they are so arranged and positioned as to develop an undesirable weakness in the end of the carton when openings for hand holes are provided in the carton walls.

Some of the advantages of my invention over prior construction are that the supporting units may be removably mounted within the carton, as for example when partitions are used, and that the simpliest kind of means, such as a staple or adhesive, may be used to attach the units securely to the carton wall if it is so desired.

It will be obvious that should the supporting units be glued, or stapled, or otherwise attached to the container walls (such as 4—5 in applicant's drawing), it will not be necessary for any part of the unit to extend to the bottom of the container as only enough material will be required in the unit as to afford a reasonable gluing or stapling surface, whereby the unit may be safely attached to the container wall.

In Fig. 2 of the drawing I have shown one kind of a carton, commonly called a regular slotted carton, to illustrate how my improved wall supports may be applied loosely within the container as, for example, when partitions are used in connection with the container. In this case the means for supporting the substantially rigid member 10 within the container would advisedly rest upon the bottom of the container.

It is commonly known that one-piece regular slotted cartons and the like are manufactured and shipped knocked down flat to the customer and in similar types of containers it is well known that it would not be practical to insert or attach my improved supporting means, when the carton is manufactured, as to do so would make it practically impossible to knock the carton down flat for bundling and/or shipping at the box plant.

It is also commonly known that where a Bliss container (as, for example, Fig. 1, Bliss Patent #1,582,375) is desired it is customary for the box plant to supply only the cut blanks for the container to the customer and the blanks are assembled and formed into boxes by the customer who is equipped to assemble and set up such boxes.

To use a thick block of wood, or other material, for my substantially rigid member 10 would offer too great an obstruction to packing the goods for shipment in the carton without adding materially to the size and cost of the container.

The idea that only a thin piece of substantially rigid material (as, for example, veneer wood about $\frac{3}{16}$'' thick) can be arranged within a container to form a highly satisfactory reinforcement (such as my substantially rigid members) for a carton wall with a hand hole therein, without said rigid member adding to the size of the carton (as, for example, when bottled beer is packed therein), is new.

By extending the rigid member 10, substantially across the upright member 8, above the opening 9, in the carton, the fiberboard material in the carton walls is strongly reinforced; when gripped through the hand hole in lifting the carton, the weight of the carton is distributed over the top of the end walls 4—5 of the carton wherein hand holes 6—7 are provided.

While the upright member 8, of the supporting unit 13, is largely a spacing and retaining means for the rigid member 10, it also acts with the rigid member to reinforce the carton wall or if made of sufficiently heavy material member 8, may be used without the rigid member 10.

While I have shown and described one particular embodiment of my invention, it will be understood that various changes and modifications can be made without departing from the scope or spirit thereof, as for example, the rigid member 10 need not extend fully to the outer edges of the upright member 8. In practice I have used a piece of thin veneer wood to make the rigid member 10, and a piece of solid fiberboard to make the upright member 8, it being understood of course that other kinds of suitable material can be used.

It is commonly known that the mere cutting of hand holes in the walls of fiberboard boxes has been most unsatisfactory in affording a carrying means for a carton; delivery drivers and the like, in carrying containers wherein hand holes are provided, as for example in wooden beer boxes, find it most convenient to carry a container in each hand, with each hand in a hand hole gripping a wall of the container, thus the strength of the wall of the container nearby the hand hole must be sufficient to carry the entire weight of the loaded container.

When carried by one container side wall it is natural for the carton to drop down until the container wall with a hand hole therein is at the top, thus throwing the strain of the load almost entirely upon said container side wall. Applicant's improved carton support is particularly adapted for this kind of handling as it will stand a great amount of endwise strain by allowing one's hand to firmly grasp and hold the substantially rigid member 10 through the hand hole in the container wall.

The carton supports, forming the subject matter of the present invention have been devised with a view to meeting the above requirements and these have been met, partly by reason of the novel construction of the supporting units, and partly by reason of the particular way in which the members of the units are brought into co-operating relation with one another and with the carton walls.

What I claim as new and desire to secure by Letters Patent is:

1. In a shipping carton comprising a container having a hand hole in one container wall, a supporting unit adapted to lie between said container wall and the article packed, said unit being composed of a substantially rigid member, and an upright supporting member, with an opening therein, connected with said rigid member, said unit being so dimensioned that when said supporting member is placed adjacent said container wall said rigid member will extend horizontally substantially across said container wall and vertically from substantially the upper edge of said container hand hole substantially to the top inside of said container, said opening in said supporting member being adapted to lie oppositely disposed to said container hand hole through which one's hand may be inserted to grasp said rigid member whereby said carton may be carried.

2. In a shipping carton comprising a container having a hand hole in each of two oppositely disposed container walls, a pair of supporting units adapted to lie between said container walls and the article packed, each unit being composed of a substantially rigid member, and an upright supporting member, with an opening therein, connected with said rigid member, said units being so dimensioned that when said supporting members are placed adjacent said oppositely disposed walls said rigid members will extend horizontally

substantially across said oppositely disposed walls and vertically from substantialy the upper edge of said container hand holes substantially to the top inside of said container, the openings in said supporting members being adapted to lie oppositely disposed to said container hand holes through which one's hand may be inserted to grasp said rigid member whereby said carton may be carried.

3. In a shipping carton comprising a container formed from a foldable blank having a hand hole in one wall member thereof, a supporting means adjacent said wall member, and a substantially rigid strip of material supported by said means between said wall member and the article packed and above said hand hole.

4. A support for a fiberboard container, comprising a unit composed of a supporting member with a hand hole therein, a substantially rigid strip of material and means for supporting said strip on said member above said hand hole, said unit being adapted to stand in a vertical position in the end of a container with said strip serving as a reenforcing stiffening means above said hand hole.

5. In a fiberboard container having a hand hole in one wall thereof, an upright unit having an opening therein, said unit being adapted to lie adjacent the inner surface of said wall and between said wall and the article packed with said opening in substantial register with said hand hole and being of such dimensions as to substantially cover said wall and form a vertical support for said container and a stiffened reenforcing means above said hand hole.

EARL S. GOMES.