

United States Patent

Gabarez

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[54] CARRIER CARTON

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[51] Int. Cl.B65d 5/48

[58] Field of Search.....229/28 R; 206/65 R; 220/110, 220/115, 116

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[57]

ABSTRACT

A carrier carton for a plurality of containers such as tubs or pots in which the containers are arranged in a row. The carton is formed from a blank in which container stations are defined by pairs of transverse incisions so that portions of the blank between the incisions are foldable away from the blank to support the bases of the containers and the tops of the containers engage below a remaining portion of the blank.

2 Claims, 5 Drawing Figures

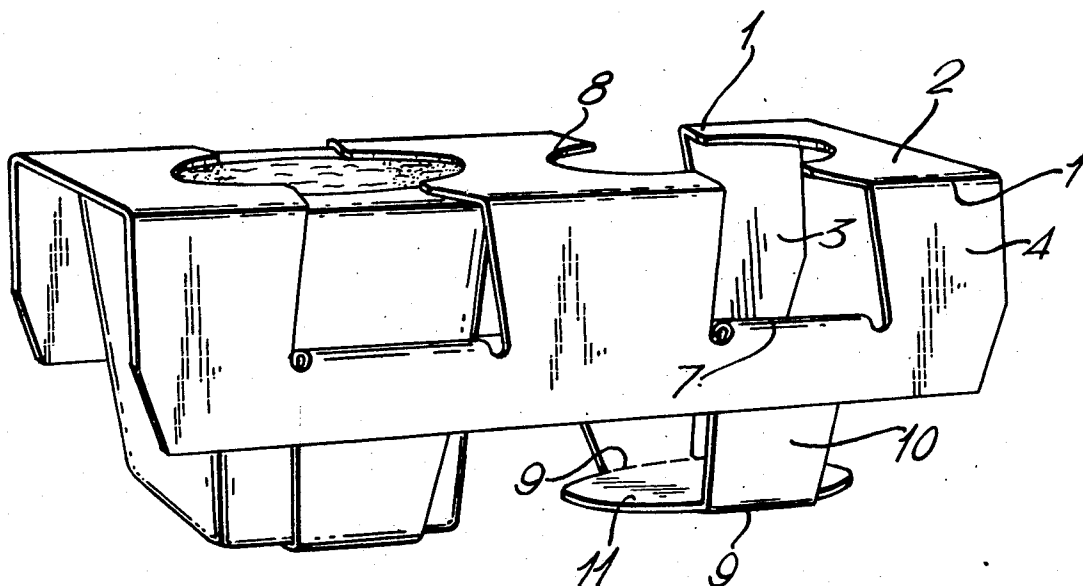


Fig. 1.

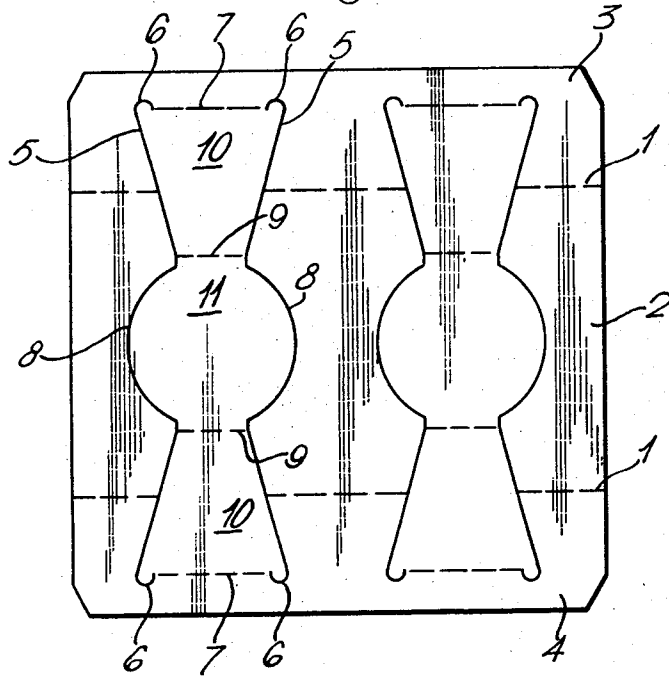
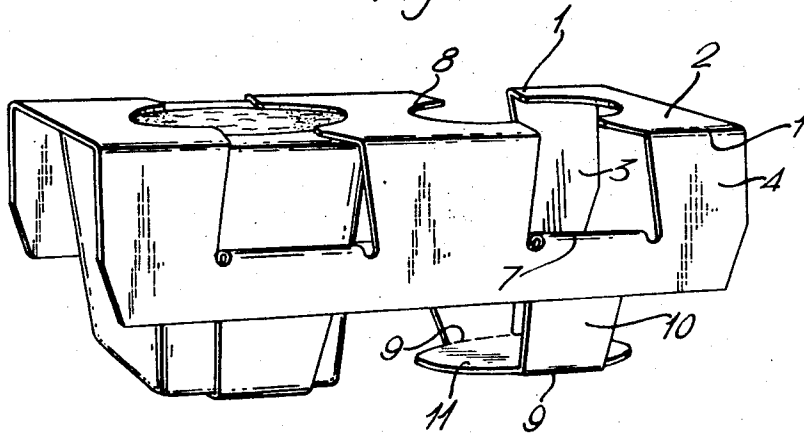


Fig. 2.



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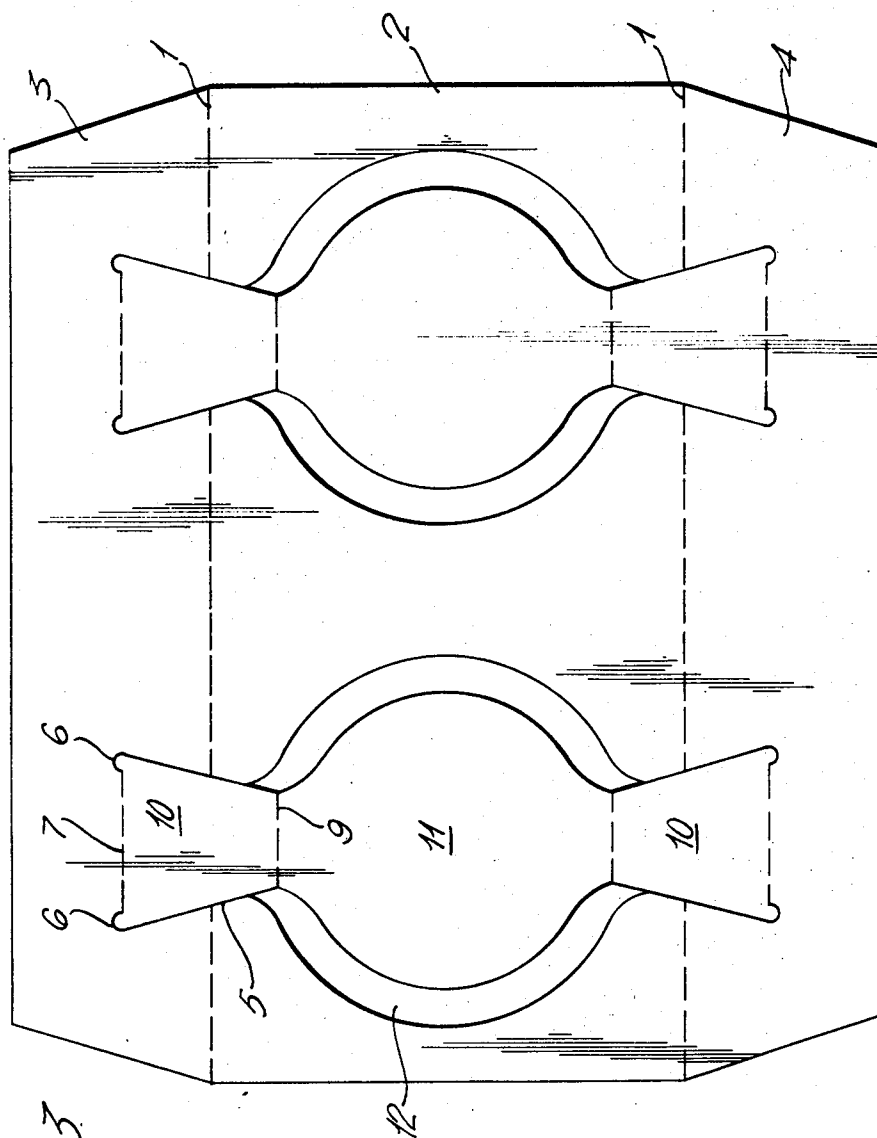


Fig. 3

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Fig. 4.

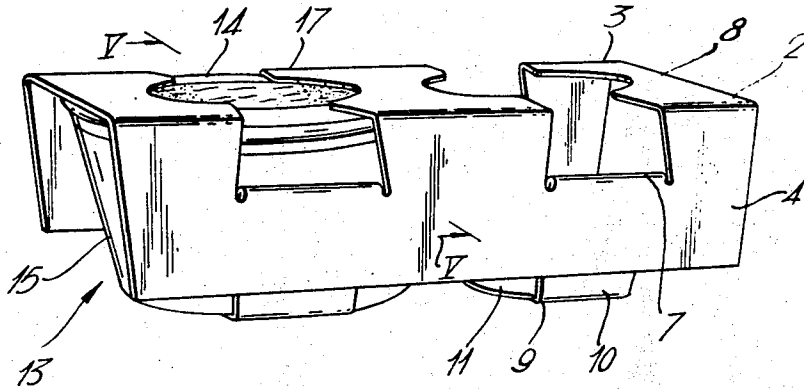
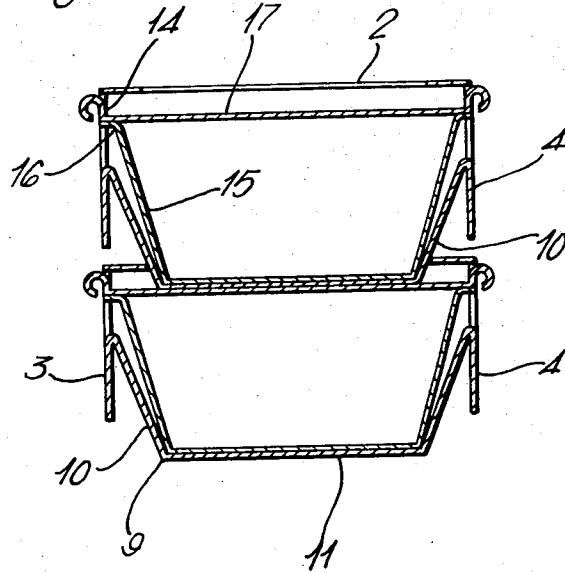


Fig. 5.



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CARRIER CARTON

This invention relates to a carrier carton for containers, such as tubs or pots, formed from a flat blank of cardboard, paperboard or like material and adapted to retain two or more containers.

It is often desirable to combine two or more containers together in a single pack. A great many carrier cartons have been proposed for this purpose, most of which are formed from a cardboard blank which is folded to form a hollow tubular sleeve adapted to surround the containers. The manufacture, erection and filling of such cartons necessitates a number of operations, both at the board production stage and at the packing stage. Moreover, the blanks require a not inconsiderable amount of cardboard.

The object of the present invention is to provide a carrier carton for a plurality of containers which is very simple to manufacture, erect and fill and which requires a minimum quantity of cardboard.

According to the present invention there is provided a carrier carton for a plurality of containers arranged in a row, comprising a blank divided by two parallel fold lines into a central panel and two side panels, a container station for each container to be contained being defined by spaced incisions having their ends in the side panels joined by fold lines, the incisions extending substantially transverse to the fold lines across the central panel to define therebetween base supports, two further fold lines extending across the base supports so that the base supports are foldable away from the central panel within the side panels to form the carrier.

Parts of the incisions in the central panel can be in the shape of an arc of a circle to provide the largest possible apertures in the central panel and thereby afford the best possible view of the packed container.

When the containers to be contained within the carrier carton are circular the distances between the incisions at each station in the side panels can be adapted to receive the rim of the containers. In this way the location of the containers within the carrier carton is enhanced.

Each incision can remove at least a part of the central panel so that parts of the base supports are narrower than the apertures formed in the central panel when the base supports are folded away into the erected position. When the containers to be contained within the carrier cartons are formed with recessed tops nesting and stacking of filled cartons is facilitated since there is no necessity for accurately aligning one carton above the other before the cartons will nest.

Embodiments of the invention will now be described by way of example with reference to the accompanying diagrammatic drawings in which:

FIG. 1 is a plan view of a blank for a carrier carton,

FIG. 2 is a perspective view showing a carrier carton erected from the blank of FIG. 1 with a container in position at one of the container stations,

FIG. 3 is a plan view of an alternative blank,

FIG. 4 is a perspective view of a carrier carton erected from the blank of FIG. 3 with a container in position in one of the stations and

FIG. 5 is a cross-sectional and elevation along the line V—V in FIG. 4 showing two stacked carrier cartons as shown in FIG. 4 with containers in position.

Referring to FIG. 1, the blank is divided by two parallel fold lines 1 into a central panel 2 and two side panels 3 and 4, the fold lines being designed to permit folding through 90°.

Two incision lines 5 are formed at each of two container stations substantially transverse to the parallel fold lines 1. The ends 6 of the incisions 5 in the side panels 3 and 4 terminate in a curve of small radius which turns the end of the incision through 180° to minimize the ends of the incisions constituting natural starting points for tearing.

Between the ends 6 of the incisions at each container station is a fold line 7. The incision lines 5 comprise straight line incisions extending from the ends 6 in the side panels into the central panel 2 where the incisions are formed in the shape of an arc 8.

The incisions 5 and the fold lines 7 define therebetween base supports which are in turn subdivided by further fold lines 9, parallel to the fold lines 1 and 7, into side members 10 and base members 11. The fold lines 7 are designed to allow for folding through 180° in the same direction as fold lines 1, and the fold lines 9 are designed to allow for folding through 90° in the opposite direction to the fold lines 1 and 7.

The incisions and fold lines combine to allow the base supports to be folded away from the central panel as the side panels are folded from the central panel along the fold lines 1, the base supports then lying generally within the side panels 3 and 4 in the erected condition as shown in FIG. 2. As is shown in FIG. 2, the base members 11 engage the bottom of the containers, one of which is shown in position, the base member being supported by the side members 10 from the fold lines 7 in the side panels. The top of the container engages below the central panel 1 and the position of the fold line 7 is determined such that the distance between the base member and the central panel corresponds to the height of the container.

The blank is simple to manufacture in a single pressing operation with the minimum of scrap or substandard blanks and uses only a minimum amount of cardboard. No intermediate erecting or joining operations are necessary and a number of flat blanks can be stacked to form regular piles since the blanks are wholly of a single thickness with no double thickness seams or joins.

When required, erection can be simply effected by pressing the base supports and applying a slight inward pressure to the edges of the blank forming the side panels to cause the blank to fold along the hinge lines 1, 7 and 9 in the desired directions. Containers can then be inserted into place where they are held firmly in place by the elasticity of the cardboard when the inward pressure on the edges of the blank is released.

These operations of erection and inserting containers can be performed by hand or automatically by machine.

Referring now to the alternative embodiment shown in FIGS. 3 to 5, the blank is again divided into a central panel 2 and side panels 3 and 4 by parallel fold lines 1. Two incision lines 5 at each container station extend generally transverse to the fold lines, and together with fold lines 7 joining their ends in the side panels, again define base supports which are further subdivided as before by fold lines 9 into side members 10 and base supports 11.

In this embodiment parts of the incision lines 5 in the central panel 2 completely removes, in the regions of the arc shaped incision 8, portions 12 of the central panel so that the base member 11 is smaller than the aperture left in the central panel on folding of the base supports into the erected position.

Erection and filling of a carrier carton from the blank of FIG. 3 is effected as before.

As can be seen from FIGS. 4 and 5 this construction is particularly useful when the containers to be located within the carrier carton have recessed tops. Such a container 13 is shown in FIGS. 4 and 5 in which a rim portion 14 of the container is slightly larger than a body portion 15 of the container so that an internal shoulder 16 is formed on which a closure lid 17 rests. The closure lid is inwardly spaced from the top of the container and because the base member 11 is smaller than the aperture in the central panel, stacking of the containers into the position as shown in FIG. 5 is facilitated. Accurate alignment of the base members with the aperture in the central panel of the carrier carton next below is not necessary and if the bottoms of the containers are radiused to meet the side walls of the containers, this nesting and stacking of the carrier cartons is even further facilitated.

The container of FIGS. 4 and 5 is circular and it will be seen that in this case the width between the fold lines 1 can advantageously be slightly less than the diameter of the rim of the container so that the rim of the container protrudes slightly through the aperture left in the side panels 3 and 4 by the side members 10 which have been folded away. This provides even more positive location of the containers in the carrier carton.

It is thus apparent that both the manufacture and the use of the carrier carton according to the invention are extremely simple and economical. Moreover, the

finished carrier carton has large apertures in the central panel which afford a good view of the tops of the containers. Naturally the blanks may be printed or given any decorative or advertising matter as is desired.

The carrier carton according to this invention is particularly convenient for containers such as yoghurt tubs which are square or circular in cross-section and are tapered from top to bottom with their smaller end at the bottom. The carrier carton can however be used with square or circular containers which are tapered in the reverse direction or which are cylindrical.

What we claim is:

1. A carrier carton for a plurality of containers arranged in a row, comprising a blank divided by two parallel fold lines into a central panel defined between said fold lines and a side panel joined to the central panel along each of the fold lines, the side panels being free along their outer edges, a container station for each container, each station being defined by a pair of spaced incisions having their ends in the side panels joined by fold lines, the incisions extending transverse to the fold lines across the central panel to define therebetween base supports, two further fold lines extending across the base supports parallel with the aforesaid fold lines and dividing the base supports into a base member and side members, the base supports being foldable away from the central panel to provide a base member parallel with and spaced from the central panel to engage the containers therebetween, said base member being carried from the side panels by the side members.

2. A carrier carton according to claim 1 in which the distances between the incisions at each station in the side panels is adapted to receive the rim of the containers.

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