Aug. 18, 1970 D. AKEIREB 3,524,671

CONTAINER CARRIER CONSTRUCTION

Filed Jan. 3, 1968

FIG. 1

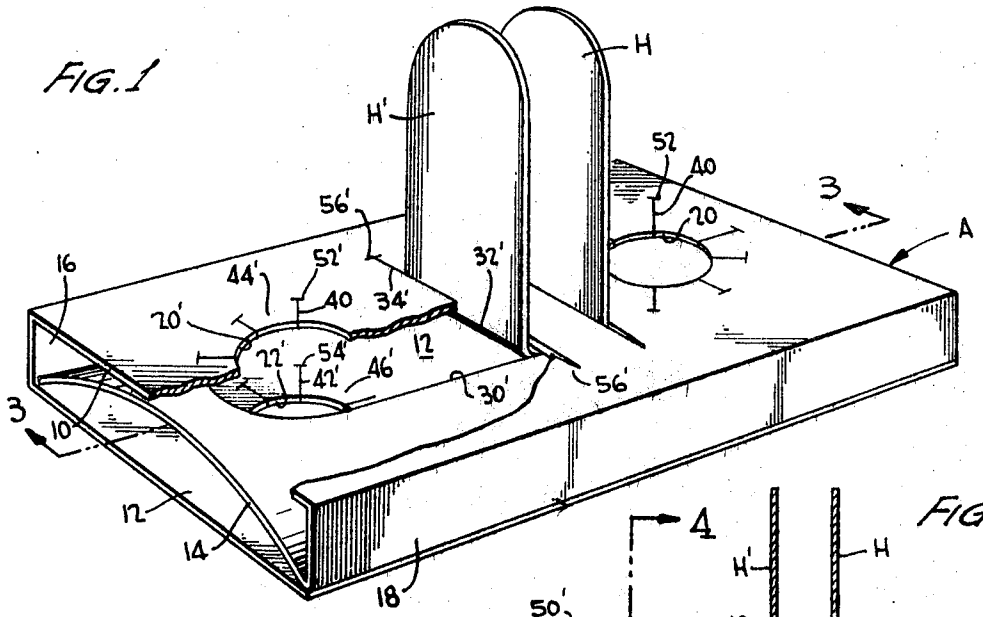


FIG. 3

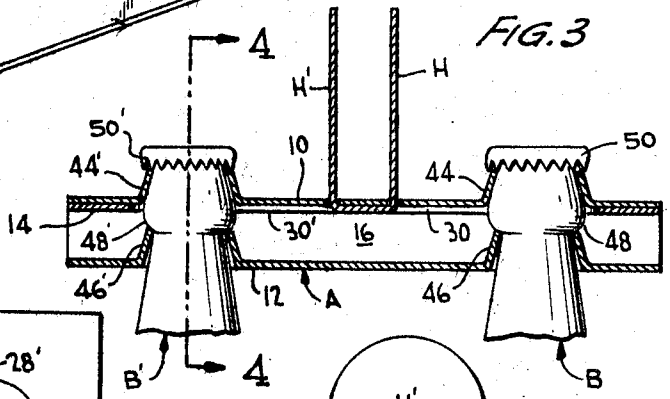


FIG. 2

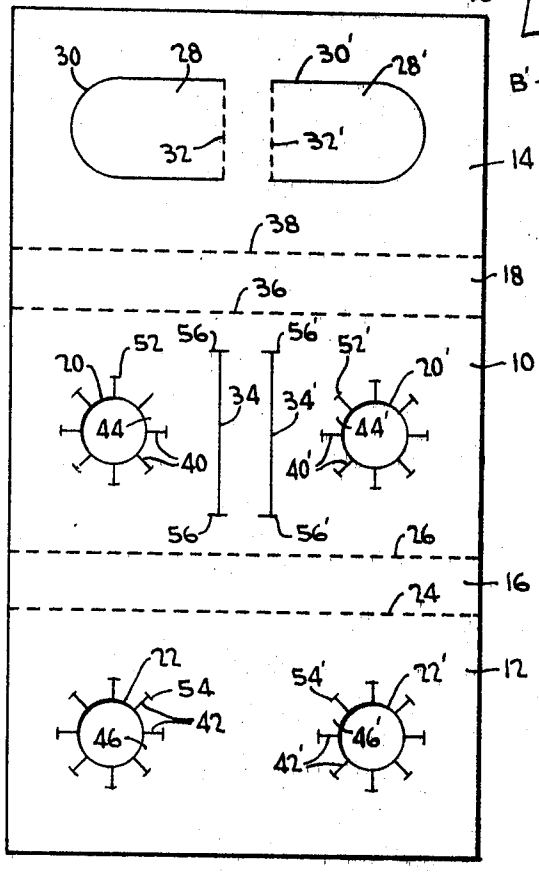


FIG. 4

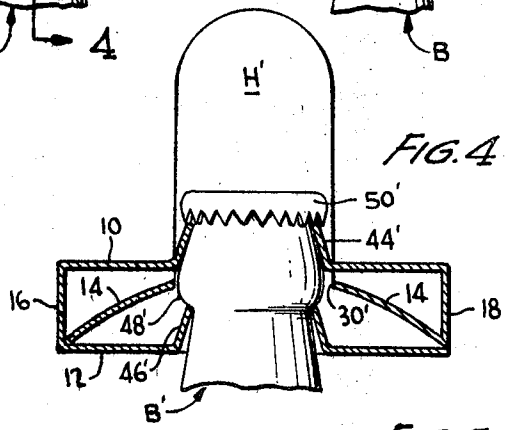
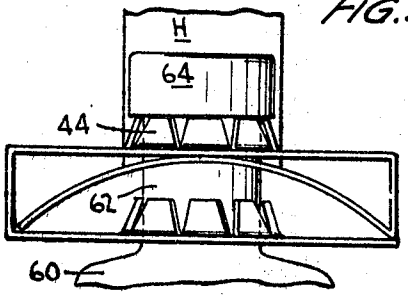


FIG. 5



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CONTAINER CARRIER CONSTRUCTION

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ABSTRACT OF THE DISCLOSURE

Unitary blank of cardboard, chip-board or the like cut and folded to define a container carrier having plural, generally parallel container support panels provided with apertures for receiving therethrough the neck portions of containers to be carried thereby, slits extending generally radially outwardly of the apertures for defining tabs for engaging laterally outwardly extending portions of the containers such as a circumferential bead or the rim of a cap, slits for enabling passage therethrough of handle portions formed from the blank, and transverse short slits at the end of the tab defining and handle passage slits for reducing tendency of the slits to radiate tears outwardly thereof.

The present invention relates to improvements in portable carriers for containers having laterally extending container supporting means such as a circumferential bead formed on a bottle neck or the rim of a cap secured to a bottle.

The need for the present invention arises from the fact that in order to maintain low production costs such carriers are customarily fabricated from cardboard. The use of cardboard, however, has presented a serious problem. Devices which have been otherwise satisfactory, failed because the cardboard employed therein did not possess adequate strength to withstand the stresses encountered. Often, tearing of the cardboard carrier and release of the container from the carrier would result in breakage of the container and the discharge of its contents causing considerable damage to property. There thus remains the need for a simple, efficient device which is free of the above mentioned disadvantages.

More specifically, one of the primary objects of the present invention is to provide a carrier wherein the bottle supporting means which includes a plurality of hinged supporting tabs has slits of small extent provided at the location of the hinge line of each tab overlying each two neighboring tabs in order to prevent tearing of the tabs.

Another object of the invention is to provide a bottle carrier which is capable of supporting a bottle of the type having a neck that is provided with a circumferential bead.

Still another object of the invention is to provide a bottle carrier which is capable of supporting a bottle from its closure cap.

Yet another object of the invention is to provide a bottle carrier which is formed from a cardboard blank and, therefore, readily stored and shipped.

A further object of the invention is to provide a bottle carrier which is formed from a cardboard blank, which blank includes a portion that on being displaced from the blank provides a carrying handle.

A still further object of the invention is to provide a bottle carrier which is durable, readily manufactured and of relatively low cost.

The invention will be better understood, and objects other than those set forth above will become apparent, after reading the following detailed description thereof. Such description refers to the annexed drawings presenting preferred and illustrative embodiments of the invention.

In the drawings:

FIG. 1 is a perspective view of the bottle carrier showing a portion of the top panel broken away;

FIG. 2 is a plan view of a blank from which the carrier of FIG. 1 is formed;

FIG. 3 is a longitudinal sectional view, taken on line 3—3 of FIG. 1, showing the supporting tabs displaced by a bottle;

FIG. 4 is a transverse sectional view, taken on line 4—4 of FIG. 3, showing the supporting tabs displaced by a bottle; and

FIG. 5 is a view similar to FIG. 4 with the carrier applied to a type of bottle neck that has no laterally extending container supporting means.

Referring more in detail to the drawings, the reference character A designates a carrier for a pair of bottles B, B'. Carrier A is formed initially from a cardboard blank C. Blank C consists of a first elongated panel **10**, a second elongated panel **12** and a third elongated panel **14**. First panel **10** is joined to second panel **12** by a first side panel **16** and first panel **10** is joined to third panel **14** by a second side panel **18**.

Openings **20**, **20'** are formed in first elongated panel **10**. Similar openings **22** and **22'** are formed in the second elongated panel **12**. Opening **20** and **20'** are, respectively, arranged to align with openings **22** and **22'** when second elongated panel **12** is folded along a line **24** that separates second elongated panel **12** from first side panel **16** and then said first side panel **16** is folded about a line **26** that separates side panel **16** from first elongated panel **10**.

Handle elements **28**, **28'** constitue a portion of third elongated panel **14**. A first carrying handle H is formed by severing handle elements **28** along line **30** and then displacing it from the plane of the blank by folding it about line **32** as a hinge until it extends outwardly in a direction away from elongated panel **14**. In a similar manner, a second carrying handle H' is formed by severing handle **28'** along line **30'** and then displacing it outwardly from the plane of the blank by folding it about line **32'** as a hinge until it extends outwardly in a direction away from elongated panel **14**.

A pair of spaced transverse slits **34**, **34'** are provided in first elongated panel **10**. These slits **34**, **34'** are located to receive therethrough handle elements H, H' when second side panel **18** is folded about line **36** and then third elongated panel **14** is folded about line **38** as a hinge until first and second carrying handles H and H' pass, respectively, through slits **34**, **34'** as shown in FIG. 1.

Extending radially outwardly from openings **20**, **20'**, **22** and **22'** are, respectively, a plurality of slits **40**, **40'**, **42** and **42'**. Tabs **44**, **44'**, **46** and **46'** are formed, respectively, between each pair of adjacent slits **40**, **40'**, **42** and **42'**. These tabs, when displaced outwardly in the direction of the carrying handles H, H', form supporting tabs for laterally extending container supporting means such as circumferential beads **48** formed on bottle necks, such as B or caps **50** secured to conventional bottles.

Each of tabs **44**, **44''** is hingedly connected with first elongated panel **10** along a respective hinge line (not shown) which extends between each pair of adjacent

slits 40, 40'. Slit means 52, 52' are provided substantially at the location of the hinge line of each tab 44, 44' and extend in opposite directions from a plane passing through slits 40, 40' a distance which is a minor fractional portion of the length of the hinge line of each associated tab.

It has been found that the presence of the slit means 52, 52' substantially eliminates the likelihood of tearing of the tabs 44, 44' along the hinge lines when said tabs are subjected to flexing stresses as bottles or other containers are inserted into the portable carrier or carried thereby.

In a similar manner, the slit means 54, 54' provided substantially at the location of the hinge line of each tab 46, 46' and extending in opposite directions from a plane passing through slits 42, 42', a distance which is a minor fractional portion of the length of the hinge line of each associated tab 46, 46', eliminates the likelihood of tearing of tabs 46, 46' when they are subjected to stress conditions.

Slits 56, 56' located, respectively at the ends of the pair of spaced transverse slits 34, 34' and which are similar in construction to slits 52, 52' serve to prevent tearing of slits 34, 34' when such slits 34, 34' are subjected to undue stresses by the carrying handles H, H'.

FIG. 5 shows the portable carrier of the present invention applied to the type of bottle 60 which has an elongated neck 62 and no supporting bead or shoulder. The bottle 60 must, therefore, be supported by the tabs 44 which extend from elongated panel 10 and engage the cap 64 which is secured on the bottle 60.

Although openings 20, 20' and 22, 22' are shown to be of circular configuration in the preferred embodiment of the invention for cooperation with portions of bottles circular in cross-section, it should be apparent that such openings could have a configuration other than circular when they are required to cooperate with bottle portions of non-circular configuration. It should also be noted that although in the preferred form of the invention the side panels are plane surfaces it is within the scope of the invention that they may be curvilinear.

The various panels referred to above are preferably integral portions of a so-called "chip board" blank and the lines between panels are fold lines provided by scores on the blank. The blank with the fold lines, slits and cuts or severances therein can thus be stamped with a conventional die stamping machine.

It is significant to note that the handle elements H, H' are located between the bottle receiving openings of the device and spaced apart preferably by a distance less than the diameter of the openings for the bottle necks but greater than the distance between the handle receiving slit 34, 34' and its closest circumferential slit or cut 52. This assures maximum strength.

After reading the foregoing detailed description, it will be apparent that the objects set forth initially have been achieved.

Accordingly, what is claimed is:

1. A portable carrier for containers having laterally extending container supporting means comprising a carrier body, said carrier body having first opening means therethrough; a plurality of slits extending outwardly from said first opening means and forming therebetween a plurality of supporting tabs for supporting said container supporting means; each of said tabs being hingedly connected with said carrier body along a respective hinge line; and slit means provided substantially at the location of the hinge line of each tab overlying each two neighboring tabs through a minor fractional portion of the length of the hinge line of each associated tab to thereby prevent tearing of the tabs along the hinge lines when said tabs are subjected to flexing stresses by the containers supported thereby.

2. A portable carrier as in claim 1 wherein said opening means comprises a plurality of openings spaced laterally with respect to each other.

3. A portable carrier as in claim 1 wherein said carrier body further comprises carrying handle means.

4. A portable carrier as in claim 3 wherein said handle means comprises a pair of spaced apart elements extending in a direction away from said carrier body.

5. A portable carrier as in claim 1 wherein said carrier body comprises a folded blank of material providing a first elongated panel; side panel means attached to and extending from said first elongated panel; a second elongated panel spaced from said first elongated panel, said second elongated panel being attached to and extending from said side panel means in the direction of said first elongated panel, said second panel being provided with a second opening means extending therethrough aligned with said first opening means; a plurality of slits extending outwardly from said second opening means and forming therebetween a plurality of supporting tabs for supporting a container supporting means; each of said tabs extending from said second opening means being hingedly connected with said carrier body along a respective hinge line; and slit means, provided substantially at the hinge line of each tab associated with said second opening means, overlying each two neighboring tabs through a minor fractional portion of the length of the hinge line of each associated tab to thereby prevent tearing of the tabs along the hinge lines of said second opening means when said tabs associated with said second opening means are subjected to flexing stresses by the containers supported thereby.

6. A portable carrier as in claim 5 wherein said side panel means comprises a first and a second side panel and said second elongated panel is attached to said first side panel at the end thereof remote from the first elongated panel; wherein a third elongated panel is located between said first and second elongated panels, is attached to said second panel at the end thereof remote from said first elongated panel, extends therefrom in the direction of said first and second panels, and contacts said first elongated panel intermediate said side panels.

7. A portable carrier as in claim 5 wherein said side panel means comprises a first and a second side panel; said second elongated panel is attached to said first side panel at the end thereof remote from the first elongated panel; a third elongated panel is located between said first and second elongated panels, is attached to said second side panel at the end thereof remote from said first elongated panel and extends therefrom in the direction of said first and second panels; and carrying handle means comprising a pair of spaced handle slits formed in said first elongated panel and elongated flat carrying elements extending from said third elongated panel, respectively, through said spaced handle slits.

8. A portable carrier as in claim 7 wherein said elongated flat carrying elements constitute displaced portions of said third elongated panel.

9. A portable carrier as in claim 8 wherein said displaced portion of said third elongated panel defines clearance opening means disposed between said first and second elongated panel means and generally in alignment with said first and second opening means.

10. A portable carrier for containers comprising a folded blank of material providing a first elongated panel; side panel means attached to and extending from said first elongated panel; a second elongated panel spaced from said first elongated panel, said second elongated panel being attached to and extending from said side panel means in the direction of said first elongated panel, aligned opening means in said first and second elongated panels; a third elongated panel located between said first and second elongated panels, attached to and extending from said side panel means in the direction of said first and second elongated panels; and carrying handle means comprising a pair of spaced apart handle slits formed in said first elongated panel and elongated flat carrying elements extending from said third elongated panel, respectively, through said spaced handle slits.

11. A portable carrier as in claim 10 wherein said elongated flat carrying elements constitute displaced portions of said third elongated panel, defining clearance openings therein.

12. A portable carrier as in claim 10 wherein said spaced apart handle slits are provided at their terminal ends with minute transverse slits.

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