Jan. 31, 1967 R. E. LISIECKI 3,301,586

CONTAINER HANDLE

Filed April 22, 1965

FIG. 1

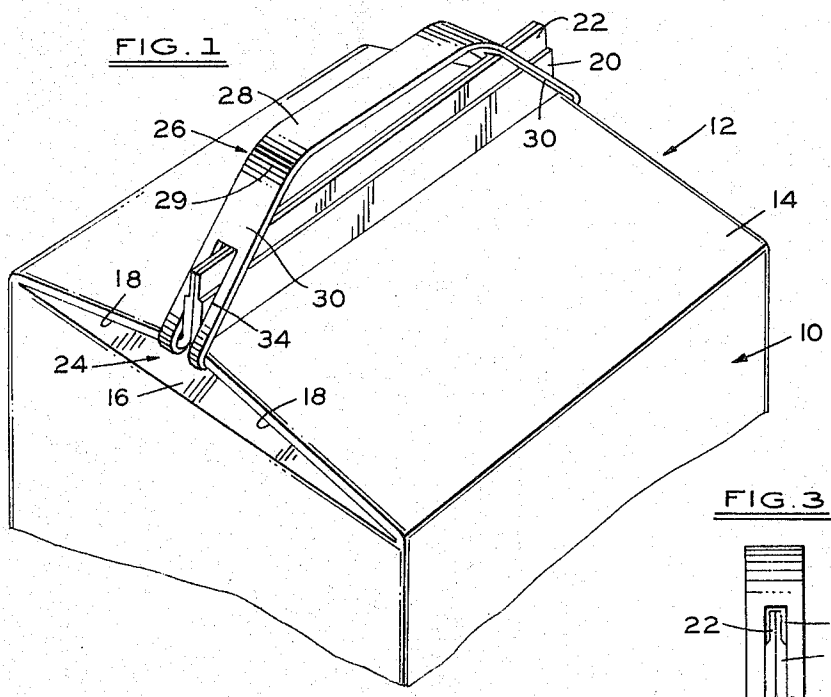


FIG. 3

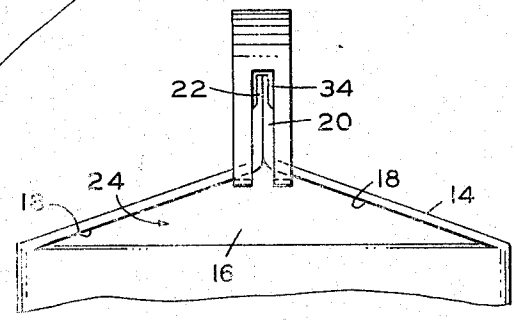


FIG. 2

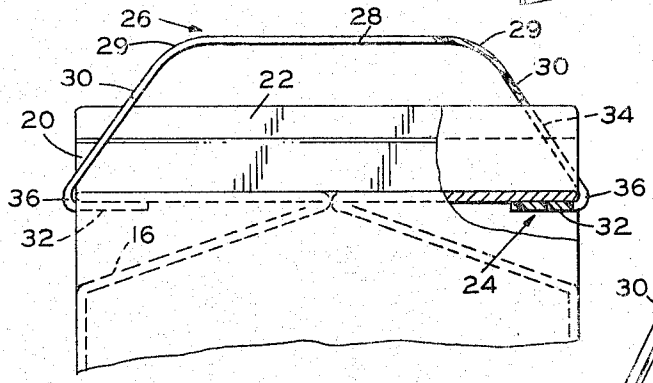


FIG. 4

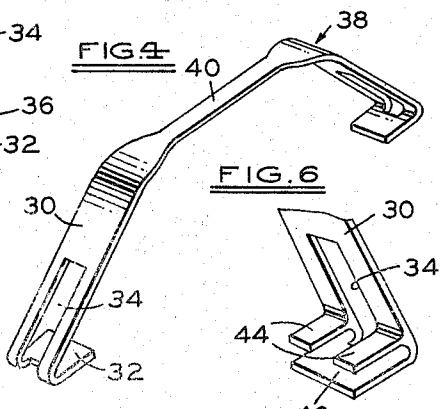
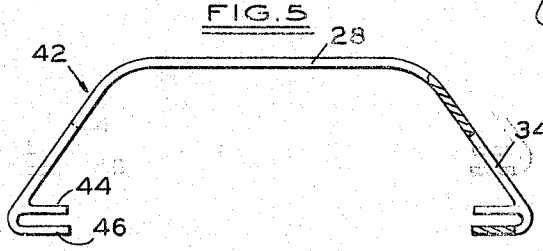


FIG. 6

FIG. 5



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CONTAINER HANDLE

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3 Claims. (Cl. 294—16)

This invention relates to a removable carrier device for holding large containers and more particularly to a removable carrier device for single-service containers having a gable top.

In the packaging of fluids such as milk and other dairy products, extensive use is made of containers having a gable top. Recently milk and other beverages have been marketed in one gallon volume containers of this type. The increased weight of these larger containers has resulted in the need for a carrying means to enable such containers to be more conveniently transported by the consumer.

It is an object of the present invention to provide a carrier which includes a hand grip portion whereby a container may be carried in an efficient and easy manner.

Another object is to provide a carrier which is easily removable when the container is to be opened for dispensing of its contents.

A further object of the invention is the provision of a carrier which may be inexpensively produced so that it is disposable as a single-service item.

Still another object is to provide a carrier that does not interfere with vertical stacking of a plurality of similar containers.

It is another object of this invention to provide a carrier which does not mar or damage the container structure.

A further object of the invention is the provision of a carrier that can be thermoformed from sheet plastic.

A final object of the present invention is the provision of a carrier for a container which may be applied to containers by automatic feeding and attachment machines.

Other objects and advantages will become apparent as the following description proceeds taken in connection with the accompanying drawings wherein:

FIG. 1 is a fragmentary perspective view showing a carrier of the invention engaging a gable top container;

FIG. 2 is a front elevational view partly in section of the container and carrier illustrated in FIG. 1;

FIG. 3 is a side elevation of the container and carrier illustrated in FIG. 1;

FIG. 4 is a perspective view of a modified container carrier;

FIG. 5 is a side elevational view of a further modified carrier; and

FIG. 6 is a fragmentary perspective view of the carrier of FIG. 5.

While the invention is susceptible of various modifications and alternative constructions, certain illustrative embodiments have been shown in the drawings and will be described below in considerable detail. It should be understood, however, that there is no intention to limit the invention to the specific forms disclosed, but on the contrary, the invention is to cover all modification, alternative constructions and equivalents falling within the spirit and scope of the invention as expressed in the appended claims.

Gable topped containers are shown in U.S. Patent No. 3,116,002 issued December 31, 1963, to D. J. Crawford. While a brief description of these containers will suffice for present purposes, reference should be made to the Crawford patent for a more detailed description of the character and structure of the containers. Such containers comprise (as shown in FIG. 1) a rectangular

tubular body portion **10** surmounted by a gable topped closure portion **12**. Forming the gable topped closure is a pair of opposed upwardly inclined roof panels **14** overlying the body **10**, a pair of inwardly inclined triangular end panels **16**, and inwardly folded triangular fold back panels **18** connecting the roof panels and triangular end panels **14**, **16**. The closure panels are surmounted by rib panels which, in the folded and closed container, define an upstanding rib **20** sealed by means of sealing panels **22**, which are abuttingly secured together along the entire length of the top rib.

This structure forms substantially identical indentations or recesses indicated at the points designated at **24**, in opposite sides of the top portion **12** beneath the opposite ends of the rib **20**. Each of the recesses is substantially in the shape of a hollow triangular pyramid formed by the single triangular panel **16** and the pair of triangular panels **18**.

The invention comprises a carrier **26** which is adapted to carry the container, fragmentarily shown in FIG. 1. The carrier is preferably made from a single elongated flat strip of plastic material such as polyethylene or polystyrene or any other suitable plastic material. The generally horizontal handle strap **28** is rigidly and permanently bowed or looped at its extremities **29** to enable a person to readily use the strap for grasping the same by projecting above the top panels **22** and to impart a certain amount of spring tension for a purpose hereinafter described.

The handle strap **28** has sloping intermediate portions **30** terminating in inwardly directed tongues **32** which are positioned in recesses **24** and engage the fold back panels **18** of the container adjacent to the rib **20**. The intermediate portions and tongues **30**, **32** are provided with central longitudinal apertures or slits **34** having a length along members **30** substantially equal to the intercepted diagonal distance of the rib **20**, **22**. The width of the apertures **34** is slightly greater than the width of rib **20** to allow the carrier to be received in the aperture, as best shown in FIG. 3. In this way the carrier will assist in preventing the rib panels **20** from separating during transportation of the container.

The inherent spring in the plastic material, due to the bending of the carrier into its handle and tongue configuration, keeps the tongues **32** in close frictional engagement with their corresponding triangular wall sections **18**. It is to be pointed out that this tight frictional connection between the hook portion **36** of the carrier and the upper edges of the recesses **24** prevent the carrier from disengaging from the container when being transported.

The situation encountered when several containers are placed in open cases and vertically stacked results in engagement and downward movement of handle **28** toward panels **22**. In order to prevent the inherent spring in the carriers **26** from causing excessive outward travel of tongues **32** and possible disengagement from the containers, applicant's tongues are of sufficient length so that a portion of the tongues will remain in engagement with their associated recess. It will be noted that the provision for relative movement between the carrier and the container also prevents any damage to the containers.

When the user desires to put the carrier on a container, it is only necessary that he extend the tongue portions **32** outward and align the rib **20**, **22** with the aperture **34**. The release of the tongue **32** will cause the spring tension to move them into assembled position with the container. The container assembly as illustrated in FIG. 1 may be readily disassembled by merely exerting an outward pull on either one of the tongues **32**, whereby the tongue becomes disengaged and the carrier will be free of the container. When the carriers

are applied to cartons by automatic machines various methods of assembly may be followed without departing from the invention.

A feature of applicant's invention is the formation of an acute angle of approximately 50° between the downwardly sloping portions **30** and the substantially horizontal tongues **32**. By this arrangement the portions **36** are given their hook configuration to insure a positive gripping action between the carrier and the container and thereby preventing slippage between the members. Thus the greater the downward force on the tongues the tighter will be the frictional engagement of the portions **36** with the container. It will be noted in this regard that the carrier **26** will be formed from material having sufficient thickness, for example in the case of plastic approximately one-sixteenth inch, to withstand any forces encountered in normal usage.

In FIG. 4, a modified carrier **38** construction is illustrated. The same basic carrier is modified by removing a portion of the material to provide a narrower handle **40**. The reason for tapering handle **40** is that, depending upon the type of material used and the size of the container, the spring tension of the carrier may be lessened to reduce the outward spread of the tongues **32** when subjected to downward acting forces. Similarly the thickness of the material at area **40** may be reduced to achieve a like reduction in risiliency of the carrier.

As a further modification of applicant's invention, FIGS. 5 and 6 disclose the modified carrier **42** with the addition of tabs **44** which are adapted to engage the panels **14** of the container. The frictional connection made by the cooperation of tongue **46** with the tabs **44** provides an alternate structure for preventing disengagement of the carrier when handle **28** is subjected to downward forces. The tabs and tongue could be made to converge at their extremities, if desired, to increase their clamping action against the container panels.

While the embodiments of the present invention as herein disclosed constitute preferred forms, it is to be understood that the forms might be adopted.

I claim as my invention:

1. A removable resilient carrier attachment for a gable top liquid-proof paperboard container of the type having a pair of inclined top panels and a pair of ridge-forming panels extending upward from the top panels with recesses underlying opposite ends of the ridge, said carrier comprising;

(a) a flexible member constituted of an integral piece of strip-like resinous plastic sheet material and including a horizontal central handle portion extending approximately one-half the length of the container rib to be positioned in spaced relation to the ridge-forming panels,

(b) a pair of outwardly sloping portions integrally connected to the ends of said handle such that they form an acute angle with the horizontal within the range of 45° to 55° and having parallel sided slits for receiving the end portions of the container ridge therein,

(c) a pair of tongues for engaging the undersurface of the container recesses integrally connected to the extremities of said sloping portions and extending inwardly in a substantially horizonal plane toward each other, the free ends of said tongues being spaced apart to provide an opening, and

(d) said carrier handle being spaced above said ridge a distance such that when it is subjected to a downward flattening action toward the container to force said tongues away from one another said handle will contact said rib prior to effecting disengagement of said carrier from the container recesses.

2. The carrier as set forth in claim **1** wherein horizontal tabs are provided in spaced relation which said tongues for engagement with the top panels of the container.

3. The carrier as set forth in claim **1** wherein said handle portion is reduced in width approximately one-half to increase the flexibility of said carrier.

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