Dec. 7, 1965 G. C. CURRIE 3,221,876

PACKAGE

Filed Sept. 11, 1963 2 Sheets-Sheet 1

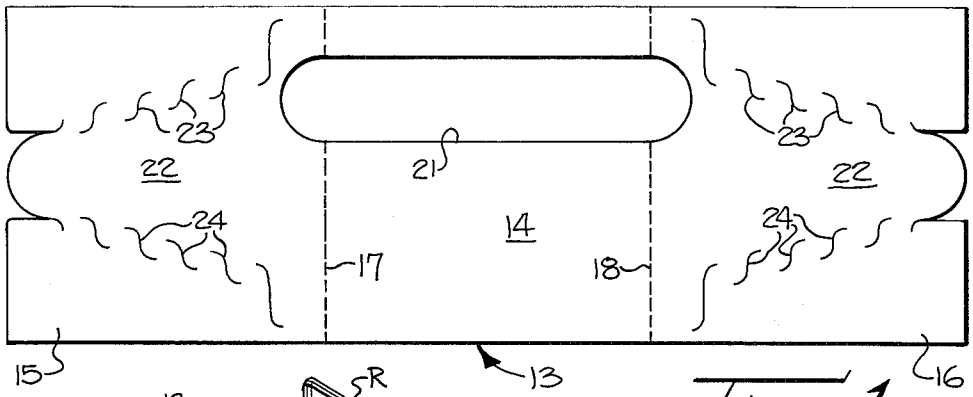


Fig-1

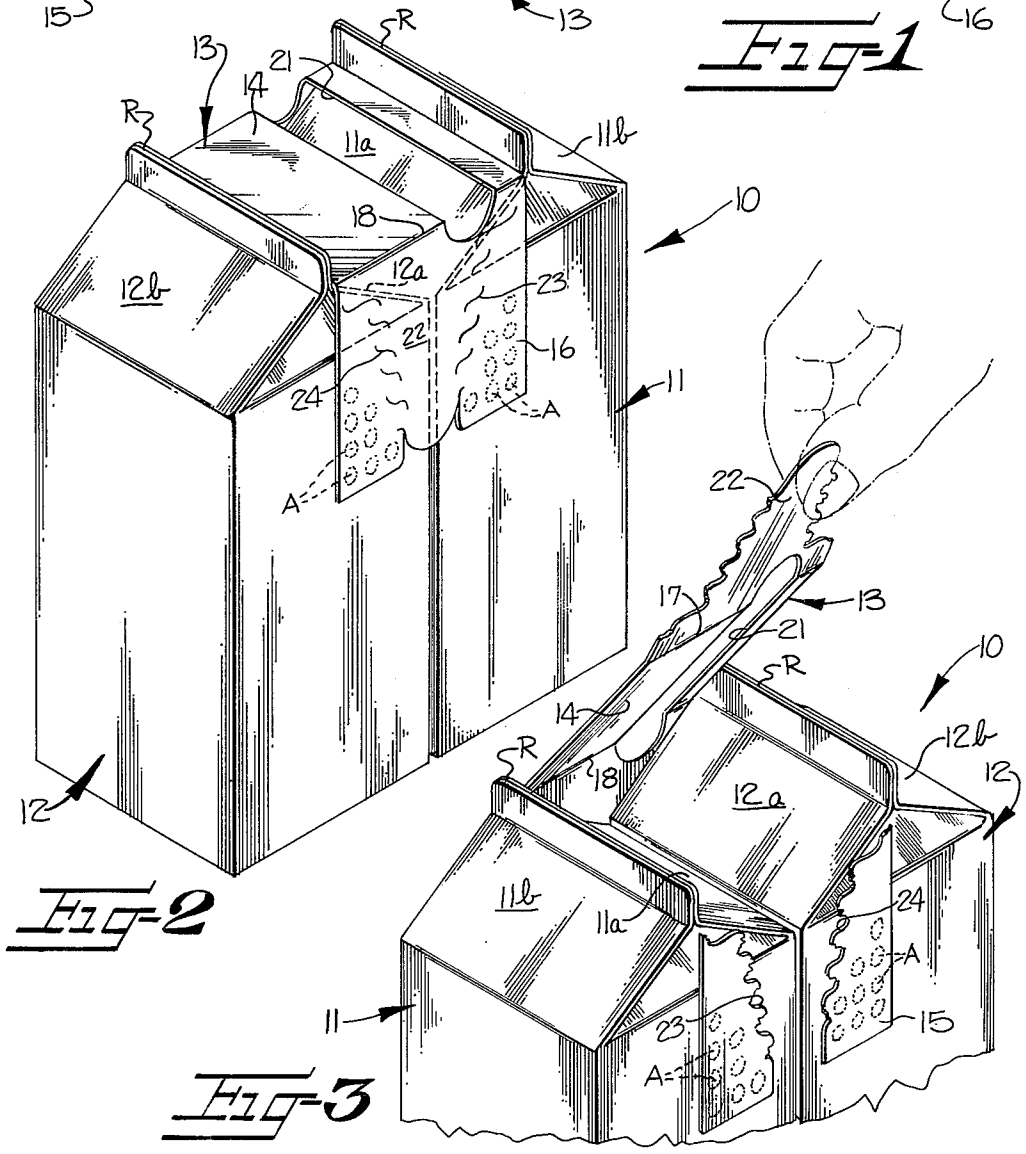


Fig-2

Fig-3

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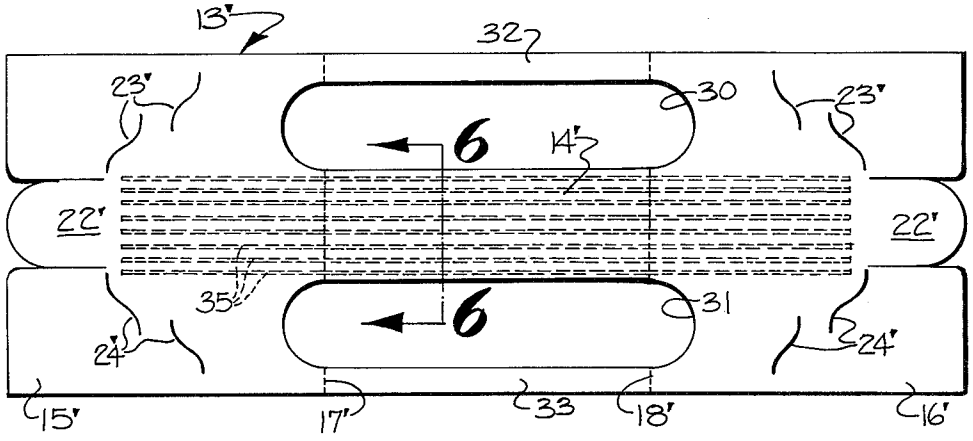


Fig-4

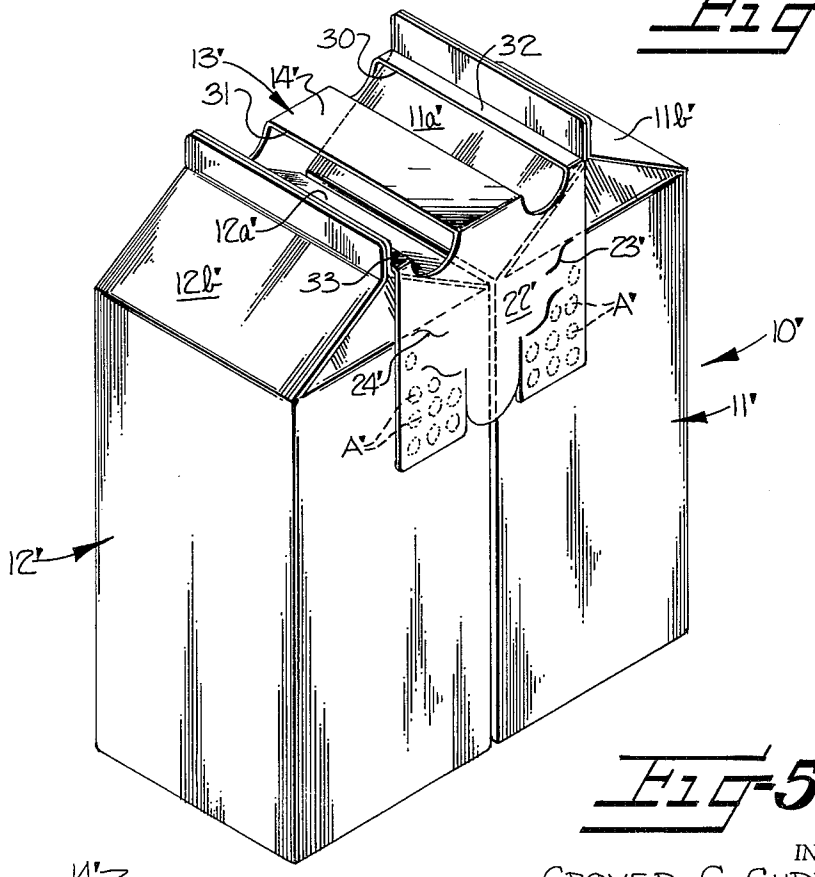


Fig-5



Fig-6

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PACKAGE

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13 Claims. (Cl. 206—65)

This invention relates to packages and more specifically to means for uniting and carrying two gable top containers.

Gable top containers with suitable pouring spouts such as shown in Patent Nos. 2,750,095; 2,987,234 and others are conventionally employed to package granular material and liquids such as milk, fruit juices and the like. Such containers usually vary in size from one-half pint to one-half gallon, although larger and smaller sizes can be made. Paperboard containers adapted to hold more than one-half gallon are generally considered undesirable for the retail trade because they are cumbersome to handle. Consequently, the one-half gallon size is the largest size gable top container in general use, and purchasers buying in gallon quantities find it necessary to handle two or more such paperboard cartons.

It has been previously proposed to unite two gable top containers into a convenient package for carrying by the provision of a carrrying handle comprising a length of paperboard stock cut to provide finger or hand holes and fastened by staples or wire fasteners to the alined laminar ribs of two adjacent gable top cartons. The carrying handle thus fastened to the two cartons extends above the cartons in position to be grasped for carrying.

This prior art construction has certain disadvantages:

(1) The extension of the carrying handle above the cartons hampers storage of filled cartons because the upstanding handle is subject to being mutilated or torn by stacking of the cartons.

(2) The wire fasteners or staples which penetrate the laminar ribs of the gable tops render the carton subject to tearing or mutilation by relative movement of the cartons and the wire fasteners brought about as by folding the handle during storage or by swinging the package to and fro as it is being carried. Tearing or mutilation of the carton subjects the contents to contamination and/or renders them unsalable.

(3) The prior art package is not readily susceptible of machine assembly. The carrying handles of the prior art are stapled to the cartons after the cartons have been filled and closed. The filled and closed cartons are carried on a conveyor to a point where, as a preliminary step to fastening the handles to the cartons, every other carton is turned 180 degrees so that the pouring spouts on two adjacent cartons which are to form a package with the carrying handle are remote from one another. Otherwise, the staples fastening the handles to the alined laminar ribs of the gable tops will prevent opening of one pouring spout when it is desired to open the cartons.

(4) The width of the stapled carrying handles is limited to the distance between the oppositely facing pouring spouts.

It is therefore an object of this invention to provide means for unitizing a plurality of gable top containers to facilitate their carrying and handling while avoiding the foregoing objections.

It is a more specific object of the invention to provide a package comprising a plurality of gable top cartons interconnected by a carrying handle having a grasping portion overlying an inclined roof panel of a gable top carton to define a hand hold.

It is a further object of the invention to provide a package of the type described wherein the carrying handle is frangible to permit ready separation of the cartons when desired.

Some of the objects of the invention having been stated, other objects will become apparent from the specification when considered with the accompanying drawings, in which:

FIGURE 1 is a plan view of the handle of the present invention;

FIGURE 2 is an isometric view of an embodiment of an assembled package;

FIGURE 3 is a view similar to FIGURE 2, but showing the other side of the package and omitting its bottom portion and illustrating the manner in which the tear tab may be manipulated to separate the cartons when desired;

FIGURE 4 is a plan view similar to FIGURE 1, but showing a modified form;

FIGURE 5 is a view similar to FIGURE 2, but showing a modified form of the invention; and

FIGURE 6 is a vertical sectional view taken along the line 6—6 in FIGURE 4.

Referring more specifically to the drawings, the numeral 10 broadly designates a package comprising paperboard cartons 11 and 12 united by a handle member 13. The cartons 11 and 12 are of gable top construction and include inclined roof panels 11*a*, 11*b* and 12*a*, 12*b* extending from respective side walls of the cartons 11 and 12 to a roof portion R which may comprise a laminar rib as illustrated or a horizontal roof panel such as shown in Patent No. 3,040,950. The remainder of the construction of the cartons 11 and 12 is unimportant to an understanding of the present invention and may be as desired, for example as disclosed in Patent Nos. 2,987,234; 3,073,503, or 3,040,950.

The handle 13 may be formed from a rectangular sheet of material such as paperboard and, when properly positioned about the cartons 11, 12, is of inverted U-shaped configuration. The handle 13 includes a web or grasping portion 14 which spans the inclined roof panels 11*a*, 12*a* of respective cartons 11 and 12, and end or anchor portions 15, 16 disposed on either side of the web 14 and defined by transverse score lines 17, 18, respectively.

In FIGURES 1, 2 and 3, the grasping portion 14 is cut away to define an elongated oval-shaped opening 21 therethrough. The opening 21 is shown as extending completely across the web, beyond the score lines 17, 18 and a short distance into the anchor portions 15, 16 to be of sufficient size to readily accommodate the width of a person's hand. The opening 21 thus serves as an entrance for the four fingers of a person's hand into the space defined by the inclined roof panels and the web 14, whereby the fingers may be brought in engagement with the inner surface of web 14 to carry the cartons 11, 12, it being understood that the anchor portions 15, 16 are secured to the side walls of the cartons adjacent opposite ends of the roof panels 11*a*, 12*a*.

The anchor portions 15 and 16 include centrally located tear tabs 22, each defined by lines of cut 23, 24 which diverge outwardly from points adjacent the medial portion of the lower edge of each anchor portion 15, 16 to points adjacent the juncture of respective score lines 17 and 18 with the longitudinal edges of the handle 13. The remaining areas of the anchor portions which are located exteriorly of the tear tabs 22 are coated or adapted to be coated with a pattern of suitable adhesive A for securing the handle and cartons together to define a package. The tear tabs 22 are not treated with adhesive.

In assembling the package 10, the cartons or containers 11 and 12 are placed in abutting juxtaposition with their respective roof panels R in parallel relation and with their proximal inclined roof panels 11*a* and 12*a* in facing angular relation to each other. The anchor portions 15, 16, except the tear tabs 22, are treated with adhesive A

and the handle **13** is then positioned about the cartons **11** and **12** in inverted U-shaped configuration with the web **14** horizontally disposed in superposed spaced relation to the inclined roof panels **11***a*, **12***a* to define a space therebetween. The score lines **17**, **18** overlie the inclined end edges of the panels **11***a* and **12***a* to position the anchor portions **15**, **16** in closely spaced juxtaposition with the side walls of the cartons **11** and **12**.

Prior to the positioning of the handle **13** about the cartons **11** and **12** in the manner described, a suitable adhesive is applied to either the cartons or the anchor portions **15** and **16** exteriorly of the tear tabs **22** as indicated at A in FIGURE 1.

The use of hot melt adhesives has been found to provide a satisfactory bond between the handle and carton. Hot melt adhesives having a melting point of between 260° and 265° F. and heated to a temperature of between 275° and 375° F. prior to application to areas of the cartons to which the indicated portions of the handle **13** are to be secured have been found satisfactory. Best results are obtained by applying the adhesive A in a spaced or discontinuous pattern with a suitable glue head because the bonding effect takes place when the adhesive is cooled below its melting point, and a discontinuous pattern enables the adhesive to cool at a faster rate. By applying the adhesive in a discontinuous pattern of small dots, it has been found that the bonding effect takes place virtually simultaneously with the application of the handle **13** to the cartons with the adhesive A therebetween. Economy of adhesive is, of course, another advantage of the discontinuous pattern. The hot melt adhesive penetrates wax, plastic or other coatings conventionally applied to the surface of milk cartons thereby enabling the adhesive to make contact directly with the stock of the carton. This assures a satisfactory bond.

When it is desired to separate the cartons **11** and **12** prior to use, either of the tabs **22** may be grasped and pulled outwardly and upwardly to tear the frangible tab **22** from its anchor portion **15** along the lines of cut **23** and **24** in FIGURE 3. The anchor portion **15** remains adhesively secured to the cartons **11** and **12**. After the tab **22** is moved to the position shown in FIGURE 3, it may be moved downwardly about the opposite side of the package to separate the other tear tab **22** from its anchor portion **16** whereupon the cartons **11** and **12** are separated for use.

Referring to FIGURES 4 and 5, there will be observed a modified form of package which is similar to the package illustrated in FIGURES 1 through 3 and wherein like parts bear like reference characters with the prime notation added.

The handle **13'** of the modified form of package differs from the handle **13** in that the web or grasping portion **14'** is traversed by two elongated and oval-shaped lines of cut **30** and **31** which define correspondingly numbered cut-out portions on opposed sides of the grasping portion **14'**. The cut-out areas **30** and **31** likewise define marginal strips **32** and **33** which are helpful in positioning the handle **13'** about a pair of alined cartons **11'** and **12'** as illustrated in FIGURE 4. The marginal strips **32** and **33** are adapted to engage the upper edges of the proximal inclined roof panels **11***a'* and **12***a'*, which upper edge portions serve as a seat for the handle **13'** on the cartons **11'**, **12'**. This is also true in the first form of the invention wherein the longitudinal edges of the grasping portion **14** are seated on the upper edges of the inclined roof panels **11***a*, **12***a*.

It will be observed in FIGURES 4 and 5 that the diverging lines of cut **24'** terminate a further distance from their respective score lines **17'** and **18'** than do their corresponding score lines **24** in the first form of the invention. As most clearly seen in FIGURE 5, the uppermost line of cut or weakened area **24'** terminates approximately at the upper edges of the side walls of the cartons **11'**, **12'**. This is advantageous because when the tear tabs **22'** are manipulated to separate the cartons as described in connection with the first form of invention, there is no remaining anchor portion protruding above the side walls of the carton.

It may be desirable in certain instances to strengthen the grasping portion **14'** as by laminating reinforcing material **35** such as filaments extending longitudinally of the handle **13** or **13'**, as illustrated in FIGURES 4 and 6, so that the reinforcing or laminar material **35** traverses the grasping portion **14** or **14'** with its opposite ends secured to the anchor portions **15**, **16** or **15'**, **16'**.

Although the invention has been described and illustrated in terms of a package comprising two gable top cartons, it is within the spirit of the invention to form packages of any desired number of gable top cartons wherein the space defined by an inclined roof panel is used as space for a hand hold. Likewise, the invention contemplates the use of any grasping portion disposed within or overlying the space defined by inclined roof panels of gable top cartons. In fact, the invention is useful for carrying a plurality of cartons of any type which have roof panels and side walls that terminate in a different plane from that occupied by the roof panels to thereby define a space through or over which the grasping portion of a handle may be positioned.

There is thus provided a convenient package for transporting two containers which is readily susceptible of being formed by machinery and which may be easily stored without danger of damaging the contents of the package, and wherein means are provided for readily separating the components of the package when desired.

In the drawings and specifications there has been set forth a preferred embodiment of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only, and not for purposes of limitation, the scope of the invention being defined in the claims.

I claim:

1. A package comprising two gable top cartons having vertical side walls and inclined roof panels, the cartons being in juxtaposition with their proximate roof panels in facing angular relation to each other; and a handle located between the proximate roof panels and secured to each carton, said handle comprising a pair of anchor portions adhesively secured to opposite side walls of each of said cartons for uniting said cartons and a grasping portion extending between and being connected to said anchor portions and spaced above at least portions of said proximate inclined roof panels to define a space therebetween and having a width coextensive with the distance between the upper edges of said proximate roof panels, said grasping portion having an elongate opening therethrough of sufficient length and width to receive at least some of the fingers of a person's hands for carrying said package.

2. A package comprising two gable top cartons having vertical side walls and inclined roof panels, the cartons being in juxtaposition with their proximate roof panels and facing angular relation to each other; and a handle located between the proximate roof panels and secured to each carton, said handle comprising a pair of anchor portions adhesively secured to opposite side walls of said carton for uniting said cartons and a grasping portion extending between and being connected to said anchor portions and spaced above at least portions of said proximate inclined roof panels to define a space therebetween and having a width coextensive with the distance between the upper edges of said proximate roof panels, said grasping portion having an elongate opening therethrough which extends into said anchor portions and being of sufficient length and width to receive at least some of the fingers of a person's hand for carrying said package.

3. A package comprising two gable top cartons having vertical side walls and inclined roof panels, the cartons being in juxtaposition with their proximate roof panels and facing angular relationship to each other; and a

handle located between the proximate roof panels and secured to each carton, said handle comprising a pair of anchor portions adhesively secured to opposite side walls of each carton for uniting said cartons and a grasping portion extending between and being connected to said anchor portions and spaced above at least portions of said proximate inclined roof panels to define a space therebetween and having a width coextensive with the distance between the upper edges of said proximate roof panels, said grasping portions having an elongate opening therethrough of sufficient length and width to receive at least some of the fingers of a person's hand for carrying said package, said anchor portions including a tear tab for separating said package.

4. A package, as defined in claim 3, wherein said tear tabs are defined by upwardly diverging tear lines extending from transversely spaced points adjacent the medial portion of the lower edge of respective anchor portions to points adjacent the marginal edges of respective anchor portions at their juncture with the grasping portion.

5. A package, as set forth in claim 3, wherein the adhesive securing the anchor portion to the carton is confined to areas of the anchor portion other than the respective tear tabs.

6. A package comprising two gable top cartons having vertical side walls and inclined roof panels, the cartons being in juxtaposition with their proximate roof panels in facing angular relation to each other; and a handle located between the proximate roof panels and secured to each carton, said handle comprising a pair of anchor portions adhesively secured to opposite side walls of each carton for uniting said cartons and a grasping portion extending between and being connected to said anchor portions and spaced above at least portions of said proximate inclined roof panels to define a space therebetween and having a width coextensive with the distance between the upper edges of said proximate roof panels, said grasping portion having an elongate opening therethrough defined by marginal strips of different widths to locate the opening more closely adjacent one carton than the other and being of sufficient length and width to receive at least some of the fingers of a person's hand for carrying said package.

7. A package comprising two gable top cartons having vertical side walls and inclined roof panels, the cartons being in juxtaposition with their proximate roof panels in facing angular relationship to each other; and a handle located between the proximate roof panels and secured to each carton, said handle comprising a pair of anchor portions adhesively secured to opposite side walls of each carton for uniting said cartons and a grasping portion extending between and being connected to said anchor portions and spaced above at least portions of said proximate inclined roof panels to define a space therebetween and having a width coextensive with the distance between the upper edges of said proximate roof panels, said grasping portion including a central web located directly above the juncture of the carton and extending between the anchor portions, marginal strips extending between the anchor portions in the same plane as the central web and equally spaced from opposite edges of the central web, and the central web and marginal strips defining elongate openings in the grasping portion of sufficient length and width to receive at least some of the fingers of a person's hand for carrying said package.

8. A package, as set forth in claim 7, wherein the openings in the grasping portion extend into the anchor portions.

9. A package, as set forth in claim 7, wherein each anchor portion includes a tear tab.

10. A package, as set forth in claim 9, wherein the tear tab is defined by upwardly diverging tear lines extending from transversely spaced points adjacent the medial portion of the lower edge of respective anchor portions to points adjacent the marginal edges of respective anchor portions at their juncture with the grasping portion.

11. A package, as set forth in claim 9, wherein the adhesive securing the anchor portions to the carton is confined to the areas of the anchor portion other than the respective tear tab.

12. A handle blank adapted to be bent to form a generally inverted U-shaped handle for uniting and carrying a pair of containers arranged in upstanding side-by-side abutting relationship; said blank comprising a generally rectangular sheet of material divided by spaced transversed score lines extending across the entire width of said sheet to define a middle grasping portion and two end portions on opposite sides of said middle grasping portion, said middle grasping portion having an elongate opening therein of sufficient length and width to receive at least some of the fingers of a person's hand therein, said end portions each having tear lines therein dividing said end portion into a tear tab and anchor portions on opposite sides of said tear tab, said end portions being adapted to be fractured along said tear lines to separate said tear tabs and said anchor portions, and said blank being adapted to be formed into a handle having the anchor portions of said end portions adhesively secured to the pair of containers.

13. A handle blank adapted to be bent to form a generally inverted U-shaped handle for uniting and carrying a pair of containers arranged in upstanding side-by-side abutting relationship; said blank comprising a generally rectangular sheet of material divided by spaced transversed score lines extending across the entire width of said blank to define a middle grasping portion and two end portions on opposite sides of said middle grasping portion, said middle grasping portion having an elongate opening therein of sufficient length and width to receive at least some of the fingers of a person's hand therein, said end portions each having tear lines therein extending longitudinally of said blank and divergingly outwardly to generally the juncture of said transverse score lines with the longitudinal edges of said blank, said tear lines dividing said end portions into a tear tab and anchor portions on opposite sides of said tear tab, said end portions being adapted to be fractured along said tear lines to separate said tear tabs and said middle grasping portion from said anchor portions, and said blank being adapted to be formed into a handle having said anchor portions of said end portions adhesively secured to the pair of containers.

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