July 25, 1961 F. V. KULIG 2,993,618

ARTICLE CARRIER

Filed March 8, 1956 2 Sheets-Sheet 1

Fig-1

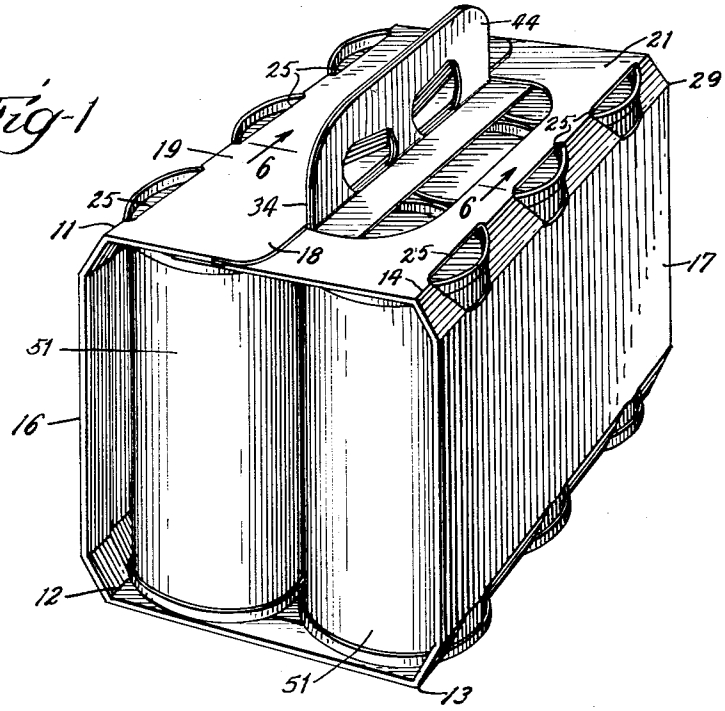
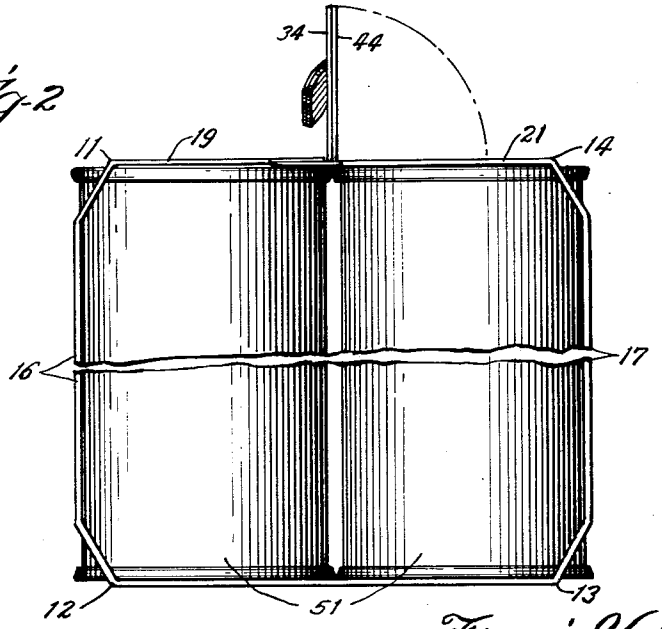


Fig-2



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ARTICLE CARRIER

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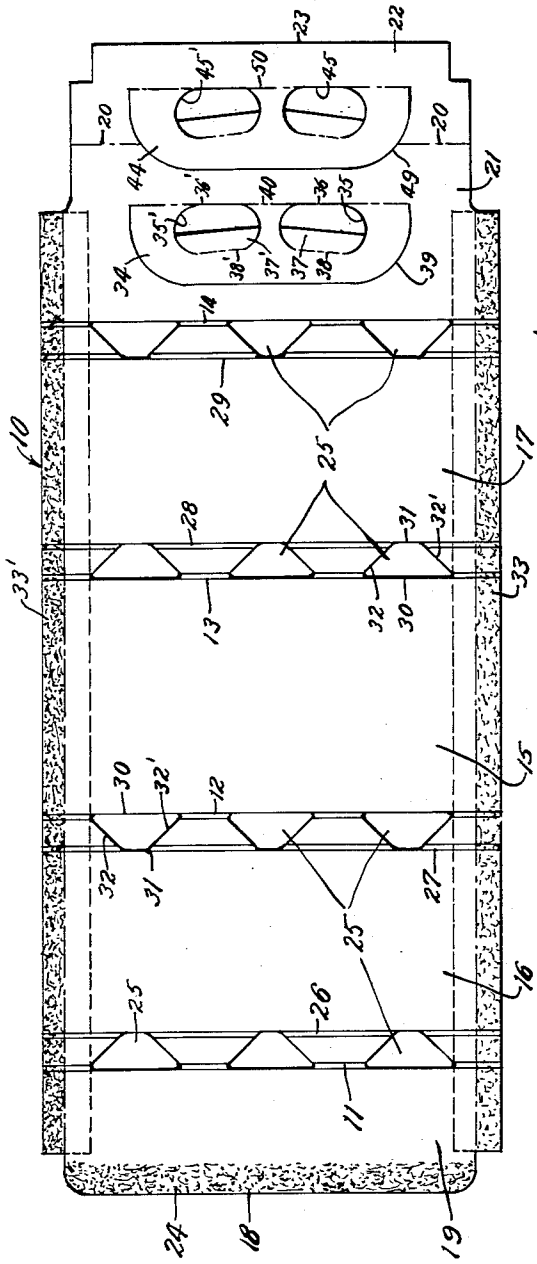


Fig-3

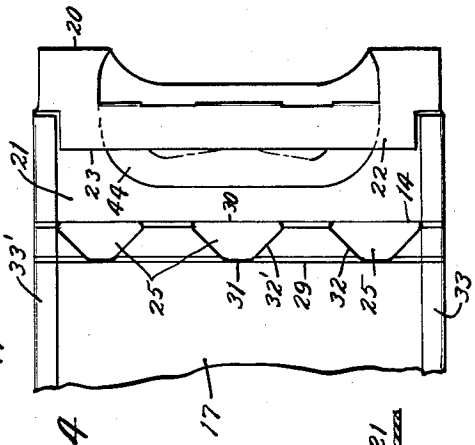


Fig-4

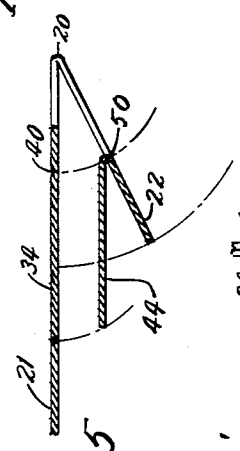


Fig-5

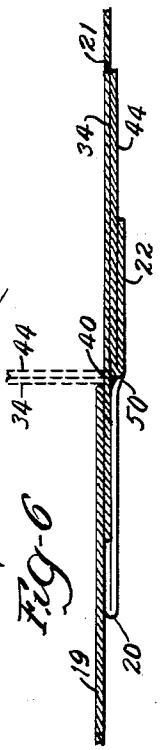


Fig-6

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2,993,618

ARTICLE CARRIER

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Filed Mar. 8, 1956, Ser. No. 570,264
1 Claim. (Cl. 220—112)

This invention relates to packaging and is more particularly concerned with improvements in a packaging unit comprising a container or carrier which is particularly adapted to hold a plurality of cylindrical articles such as cans of a beverage, vegetables or the like which are arranged in row formation therein.

It is a general object of the invention to provide a portable container for a plurality of cans of merchandise or like objects which container is formed from paperboard or similar material cut and scored to provide a pair of opposed side walls, a top wall and a bottom wall connecting the top and bottom edges respectively of the side walls, together with a handle formation characterized by multiple plies of material which are cut from the top wall and from a reinforcing panel which extends beneath a portion of the top wall.

It is a more specific object of the invention to provide a merchandise container and carrier which is particularly adapted for packaging cans of liquid or similar material, and which has a body portion formed from a blank of paperboard material, with the blank being cut and scored to provide a bottom wall and upstanding side walls which terminate in top wall forming flaps, the latter being adapted to be turned inwardly of the top edges of the side walls and to be secured to each other to form the top wall of the container, one of the top wall forming flaps having a handle formation cut therefrom and also having an adjoining reinforcing panel which is reversely folded and secured on the inside of said flap with a cooperating handle forming portion cut from said reinforcing panel and folded to extend through the aperture in the top wall forming flap which results from the cutting of the handle portion therefrom and being secured to said handle forming portion in upstanding relation to the top wall.

It is a further object of the invention to provide a combination carrier and container of the type described which includes a top wall formed of two panel sections secured along adjoining margins, one of the panel sections having an integral reinforcing panel which is secured to the inner wall thereof, and a double ply handle formation which is cut from the one panel of the top wall and the reinforcing panel therefor and which extends in upstanding hinged relation to the top wall with the two plies being secured in face to face engagement.

It is another object of the invention to provide a carrier of the type described which includes a top wall having two panel sections secured along their inner margins, with one of the panel sections having a reversely folded extension member secured to the inner face thereof and a bendable handle formation which comprises a double ply of material, one of the plies being cut from the top wall panel and folded into upstanding relation along the longitudinal center line of the carrier and the other of the plies being cut from the reinforcing extension member and projecting through the aperture provided in the top wall panel by cutting the first ply therefrom and positioned in face to face engagement with the first ply.

These and other objects and advantages of the invention will be apparent from a consideration of the form of the article carrier which is shown by way of illustration in the accompanying drawings wherein:

FIG. 1 is a perspective view of a carrier in fully erected and filled condition which embodies therein the principal features of the invention;

FIG. 2 is an end elevation to an enlarged scale and with portions thereof broken away;

FIG. 3 is a plan view showing the inside face of a paperboard blank which has been cut and scored preparatory to forming the body of the carrier;

FIG. 4 is a partial plan view showing the paperboard blank of FIG. 3 with portions thereof in initially folded relation;

FIG. 5 is a fragmentary longitudinal section showing the folding of the handle forming portions of the blank; and

FIG. 6 is a section to an enlarged scale on the line 6—6 of FIG. 1.

Referring to the drawings, there is illustrated in FIGS. 1 and 2 a combination container and article carrier which embodies therein the principal features of the invention and which is adapted to be formed from paperboard or similar relatively flexible and bendable blank material which is capable of being cut and folded to provide the carrier walls and which has sufficient strength and rigidity to support the merchandise which the carrier is designed to receive. For the purpose of illustration, the invention is shown in a carrier particularly designed to accommodate six cans of merchandise of standard size, such as canned beer or vegetables.

The paperboard blank **10** which is illustrated particularly in FIG. 3 is cut and scored to provide the walls and handle formation for the carrier. The blank **10** is generally rectangular in shape and is divided by transversely extending score lines **11**, **12**, **13** and **14** into a plurality of integrally connected panels of rectangular shape which are adapted to be folded into wall forming relation in the completed container. The transverse score lines **12** and **13** define between them a rectangular panel **15** which is adapted to form the bottom of the carrier. The transverse score lines **11** and **14** cooperate with the transverse score lines **12** and **13** to define a pair of rectangular side wall forming panels **16** and **17**, which, in the set up form of the container, are in oppositely disposed relation. The transverse score line **11** defines with the end or marginal edge **18** of the blank a rectangular top wall forming panel or flap **19** while the transverse score line **14** and a longitudinally spaced transverse score line **20** define a generally rectangular cooperating top wall forming panel or flap **21** which has an integral reinforcing panel **22** extending between the score line **20** and the end edge **23** of the blank. The panels **19** and **21** are adapted, in the erected position of the container, to be positioned in a plane at right angles to the side wall panels **16** and **17**, respectively, and to bridge the article receiving space between the same and form the top wall of the container. The panel **19** is provided with an adhesive area **24** along its marginal edge which is adapted to be employed in securing the panels **19** and **21** into top wall forming position.

Can accommodating apertures or openings **25** are died out of the top and bottom edges of the side wall panels **16** and **17**, respectively. Vertically aligned pairs of these apertures **25** are provided in each of the side walls **16** and **17** for each of the cans, there being three apertures along each edge fold line **11**, **12**, **13** and **14** since the illustrated carrier is designed to accommodate two longitudinal rows of three cans each. The apertures **25** are of truncated triangular outline and the direction of orientation of the apertures in the blank alternates in the successive transversely extending zones or areas adjacent the edge forming crease lines **11**, **12**, **13** and **14**, which zones or areas are defined between the edge forming crease lines and parallel fold lines **26**, **27**, **28** and **29**, respec-

tively, each of the latter being spaced an equal distance from the adjacent edge forming crease line and inwardly of the side wall panels **16** and **17**. The apertures **25** which are identical are each defined by a relatively wide base margin **30**, an opposed parallel margin **31** of lesser width, and convergent angular side margins **32** and **32'** connecting the respective ends of margins **30** and **31**. The margins **30** coincide with the edge forming crease lines **11**, etc. and the margins **31** coincide with the fold lines **26**, etc. and the apertures are spaced transversely across the blank in accordance with the spacing of the cans or other objects to be packaged.

The longitudinal side edges of the blank **10** which form the end margins of the erected container are provided with integral, relatively narrow, longitudinally extending, side reinforcing panels **33** and **33'** which are adapted to be folded inwardly of the blank and adhesively secured to the bottom thereof as indicated in dotted line in FIG. 3 to form an edge reinforcement for the ends of the carrier.

The top wall forming panel **21** is cut and scored to form a generally rectangular handle formation **34** and identical oval shaped hand holds **35**, **35'** on opposite sides of the longitudinal center line of the blank, the latter being cut on the C-shaped lines **36**, **36'** to provide tabs **37**, **37'** which are foldable on the crease lines **38**, **38'**, the latter connecting the termini of the C-shaped cutting lines. The handle member **34** is cut from the panel **21** on the generally U-shaped line **39** and is foldable on a crease line **40** which extends transversely of the blank and which is interrupted by the cutting lines **36**, **36'** forming the hand hold cutouts **35**, **35'**.

The end panel **22** of the blank which is defined by the transverse score line **20** and the end margin **23** of the blank is cut and scored to provide a handle formation **44** which may be substantially identical with the handle formation **34** and which is provided with the hand holds **45**, **45'** identical with the hand holds **35**, **35'**. The handle formation **44** is cut from the portion of the panel **22** which adjoins the transverse fold line **20** and a corresponding portion of the top wall forming panel **21** so that the aperture resulting from the cutting out of the handle formation **44** extends into the adjoining portion of the panel **21**. The handle formation **44** is adapted to fold about a transverse crease line **50** of the same character as the transverse crease line **40**. The panel **22** is initially folded, as shown in FIGS. 4 and 5, reversely about score line **20** into engagement with the inner face of the panel **21**, with the handle formation **44** being first folded in the opposite direction about its hinge line **50** and extended through the aperture **39** to bring it into face to face engagement with the handle formation **34**. A suitable adhesive is applied to the interengaging faces of the panels **21**, **22** and the handle formations **34**, **44** prior to the folding operation to secure the same in connected relation.

The blank **10** is cut, scored and folded with the application of adhesive as required to provide the collapsed form of the carrier which is illustrated in FIG. 4.

In assembling the carrier with the cans **51** or other objects which it is adapted to receive, the cans are positioned with their ends properly located on the bottom wall forming panel **15**, the latter being in the condition shown in FIG. 4. The side wall panels **16**, **17** are then folded into upstanding relation along the outer side walls of the two rows of cans and the top wall forming panels **19** and **21** are folded inwardly into wall forming relation with the marginal edges overlapping and secured by the adhesive **24**.

In the assembled and erected condition of the carrier shown in FIGS. 1 and 2, the cans or other objects are securely held at the top and bottom edges in the apertures **25**. The double score lines at the top and bottom edges of the side walls permit a double fold or double bend and insure that the edges of each aperture **25** will be pulled into contact with the walls of the container adjoining the bottom edge or chine on the can, the distance between the score lines **11** and **12** and the score lines **13** and **14** in the completed carrier being less than the maximum width of the bottom edges of the transversely aligned cans. The double ply handle formation **34**, **44** is adapted to be hinged into upstanding relation for carrying the package while it will normally tend to return to its initial position when released due to the fact that one portion thereof is integral with the reinforcing panel **22**, the latter being secured in reinforcing relation beneath the inner marginal portions of the panel **21** and extending a substantial distance over the aperture **39** in the panel **21**. The handle **34**, **44** will not interfere with stacking of the filled carriers for storage or display purposes. The reinforcing panel **22** reinforces the aperture **39** against tearing, particularly at the corners or at the extremities of the hinge line **40**. The handle **34**, **44** when grasped and pulled in any direction does not tear the material at the terminal ends of the fold lines **40** and **50**, each of the handle portions **34** and **44** tending to prevent the tearing of the other.

While specific materials and particular details of construction have been referred to in describing the form of the carrier illustrated, it will be understood that other materials and other details of construction may be resorted to within the spirit of the invention.

I claim:

A blank for fabricating an open ended tubular carton which is adapted to enclose, when erected, a plurality of cylindrical articles arranged in row forming relation and in longitudinal and transverse alignment, said blank comprising a generally rectangular sheet of relatively stiff bendable paperboard material which is divided by longitudinally spaced, transversely extending spaced crease lines into a bottom wall forming panel, side wall forming panels at opposite edges thereof and top wall forming panels at opposite ends of the blank, one of said top wall forming panels having a handle forming panel member cut therefrom and a transverse score line forming a hinge about which said handle panel is adapted to be swung to an upright position normal to the plane thereof, and said last mentioned top wall forming panel being divided by a transverse score line to provide an integral reinforcing end section, a cooperating handle reinforcing member cut from said reinforcing end section and said end section having a transverse score line forming a hinge about which said handle reinforcing member is adapted to be swung, said hinge forming transverse score lines being spaced approximately equal distances in the longitudinal direction of the blank from said transverse score line which divides said last mentioned top wall forming panel, and said handle panel member and handle reinforcing member extending in the same direction from their respective hinge lines, whereby when the reinforcing section is doubled back and secured against the body of said one top wall panel the two handle forming members are positioned in superimposed relation and both said handle forming members are adapted to be swung about a common hinge to an upright position out of the plane of the panel and section from which they are cut.

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