

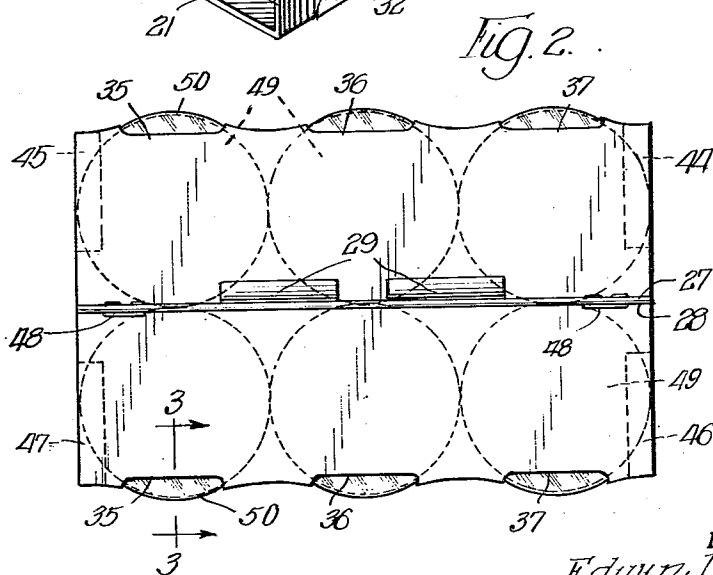
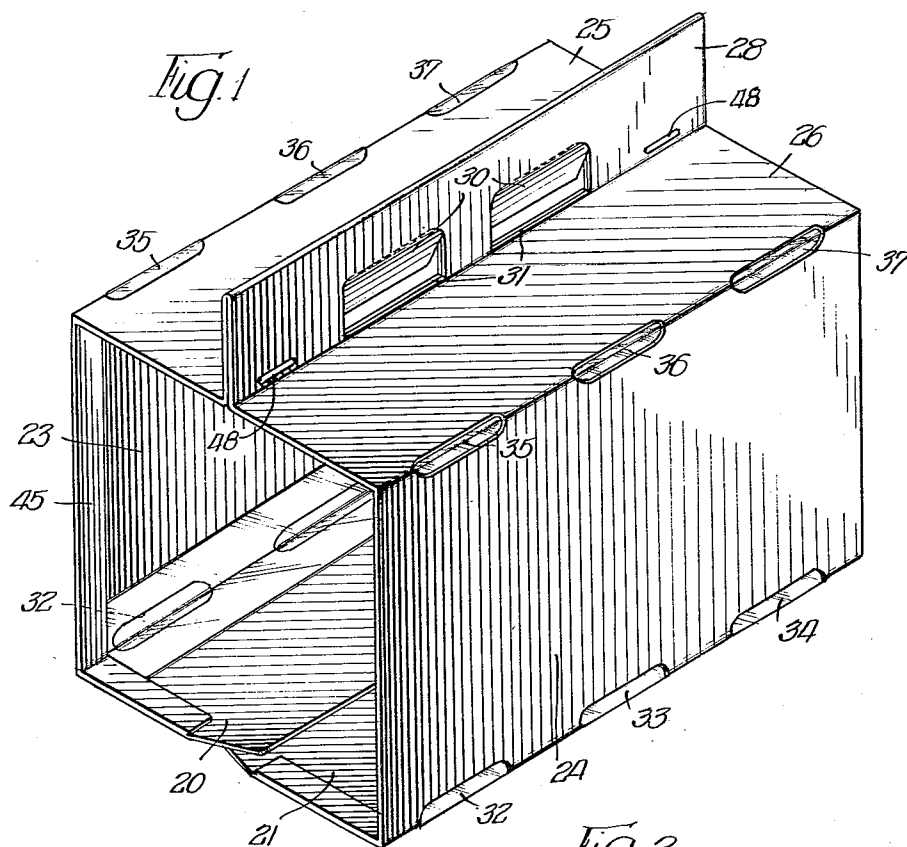
Sept. 10, 1957

E. L. ARNESON
ARTICLE CARRIER

2,805,791

Filed June 13, 1955

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 4

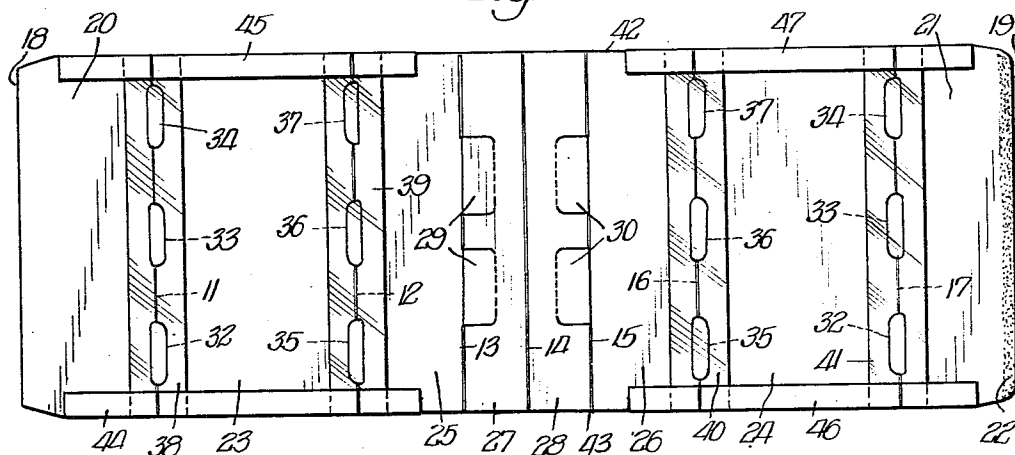


Fig. 5

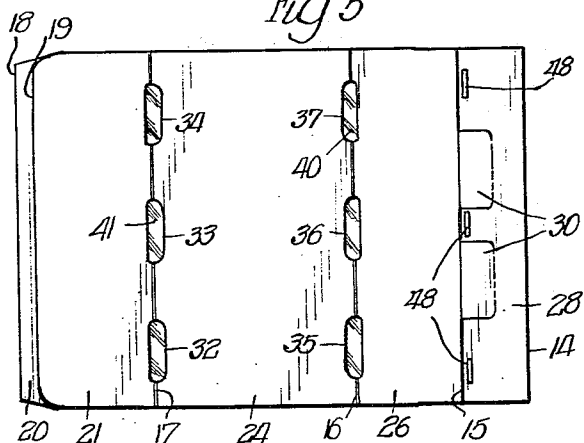
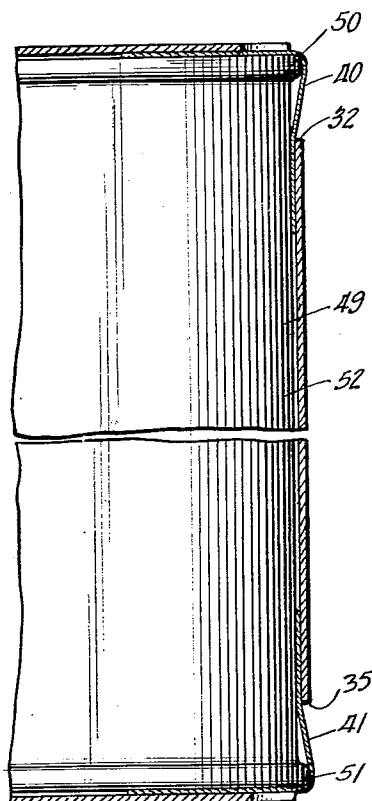


Fig. 3



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ARTICLE CARRIER

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4 Claims. (Cl. 220—112)

This invention relates to containers and is more particularly concerned with improvements in a combination container and carrier of the type which is adapted to hold a plurality of cylindrical articles such as cans of beer, vegetables or the like which are arranged in a row formation in the carrier.

It is a general object of the invention to provide a portable and collapsible container for a plurality of cans of merchandise, which container is formed from a single sheet of paperboard, or similar material, cut and scored to provide a pair of opposed side walls, a top and a bottom, with the top and bottom connecting the top and bottom edges respectively of the side walls and with the top having a pair of handle forming sections to provide a means for manually transporting the container.

It is a more specific object of the invention to provide a container formed from a single blank of paperboard or similar material which is adapted to hold a plurality of rows of merchandise containers, such as cans, or the like, wherein the blank is cut and scored to provide a top and depending side walls which terminate in bottom forming flaps adapted to be positioned around a plurality of the cans which are arranged in row formation, the flaps being connected at the bottom, and the side walls having slots in the top and bottom edges at the junction of the side walls with the top and bottom walls which are adapted to receive edge portions of the cans to retain the same in row formation within the carrier and the top having handle forming sections to facilitate carrying the container.

It is a further object of the invention to provide a carrier of the type described in which the slot formations provided for receiving the top and bottom edges of the merchandise containers are reinforced by a strip of relatively thin flexible and somewhat stretchable sheet material which is secured to the inner walls of the container around the edges of the slots to reinforce the same against rupture when the merchandise containers are positioned therein.

It is another object of the invention to provide in an article carrier of the type described an edge reinforcement at the open ends of the carrier which is adapted to prevent accidental tearing of the top, bottom and sides at the edges thereof with subsequent release of the end articles therefrom.

These and other objects and advantages of the invention will be apparent from a consideration 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 condition which embodies therein the principal features of the invention;

Fig. 2 is a top plan view of the carrier;

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Fig. 3 is a partial section taken on the line 3—3 of Fig. 2 to a greatly enlarged scale and with portions thereof broken away;

Fig. 4 is a plan view showing the inside face of a blank of paperboard which has been cut and scored preparatory to forming the carrier; and

Fig. 5 is a plan view of the blank shown in Fig. 4 in the folded condition in which it is supplied to the user.

Referring to the drawings there is illustrated in Fig. 1 an article carrier which embodies therein the principal features of the invention and which is adapted to be formed from a blank of paperboard or other similar material which is relatively flexible and bendable, which is capable of being cut and folded as shown and which has sufficient strength and rigidity to support the merchandise containers which it is designed to receive.

The paperboard blank 10 which is illustrated particularly in Fig. 4 is divided by transversely extending score lines 11, 12, 13, 14, 15, 16 and 17 into a plurality of connected panels of rectangular shape which are adapted to be folded into wall and handle forming relation in the completed container. The endmost score lines 11 and 17 cooperate with the transversely extending end edges 18 and 19, respectively, to define a pair of rectangular end panels 20 and 21 which are adapted to be positioned with portions of their free marginal end edges in overlapping relation to form the bottom of the container. One of these panels is preferably provided with an adhesive strip or area 22 adjacent the end edge thereof for securing together the overlapped portions of the same. Other fastening means such as staples, or the like, may be used, if desired. The score lines 11, 12 and 16, 17 define rectangular side wall forming panels 23 and 24, which, in the set up form of the container are in oppositely disposed relation. The score lines 12, 13 and 15, 16 define rectangular top forming panels 25 and 26 which are adapted to be positioned in a common plane at right angles to the side wall panels 23 and 24 to bridge the article receiving space between the same and form the top wall of the container while the score lines 13, 14 and 15 define a pair of adjoining rectangular handle forming panels 27 and 28 which are relatively narrow and which are adapted to be folded about the transverse center score line 14 into face-to-face upstanding relation relative to the top wall panels 25, 26 and which are provided with cooperating pairs of tab formations 29, 29 and 30, 30, the latter being foldable about the transverse score lines 13 and 15, respectively, to provide a pair of adjacent apertures 31 for receiving the fingers of the hand in carrying the container.

The side wall panels 23 and 24 are each provided at the top and bottom edges thereof which extend along the score lines 11, 12 and 16, 17 with a series of cut-outs 32, 33, 34 and 35, 36, 37, which cut-outs are in the form of elongate apertures having a substantial portion thereof in the side walls and extending over the respective score lines into the bottom and top forming panels 20, 21 and 25, 26. Relatively narrow elongate strips of sheet material 38, 39, 40 and 41 are secured over the transversely aligned sets of cut-out openings 32, 33, 34 and 35, 36, 37 which strips of material are of sufficient width to cover the openings and to provide for adherence of substantial portions of the surface thereof to the margins of the material in the blank which adjoin each of the openings so that the openings are covered and the edges of the material defining the same are reinforced by the strips.

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The reinforcing strips 38, 39, 40 and 41 extend substantially to the longitudinal edges or side edges 42 and 43 of the blank and the surface portions thereof which contact the surface portions of the blank are adhered thereto by heat sealing or by other adhesive sealing means. These reinforcing strips 38, 39, 40 and 41 are preferably formed of a relatively thin, flexible, transparent, continuous plastic film of the type which is tough and slightly stretchable, such as, pliofilm, polyethylene or other material having like characteristics.

The blank 10 is additionally provided along its longitudinal side edges with relatively narrow reinforcing strips of paperboard or similar material which are indicated at 44, 45, 46 and 47. These edge reinforcing strips extend along the longitudinal side edges of the blank 10 for a sufficient distance to reinforce the end edges of the container along the opposed side walls 23, 24 and adjoining portions of the top and bottom walls 25, 26 and 20, 21 and cover the end margins of the strips 38, 39, 40 and 41 at the corners of the carton.

In assembling the container or carrier for use, the blank 10 is first folded about the center score line 14 to bring the handle forming panels 27 and 28 into face-to-face engagement where they may be secured by the use of an adhesive, or by suitably placed staples 48, or any other suitable fastening elements, so that when the wall forming panels of the carrier are opened up to receive the two rows of aligned articles, such as the merchandise containers or cans, indicated at 49, which are adapted to be positioned in the carrier, the top wall forming panels 25 and 26 are folded about the score lines 13 and 15. In placing the cans 49 in the carrier the cans are arranged in row formation and the partially set up carrier is placed thereover in the form of a hood with the side walls 23, 24 and the adjoining bottom wall forming flaps 20 and 21, respectively, being extended in depending relation from the top forming panels 25 and 26. The bottom forming panels 20 and 21 are then folded inwardly about the score lines 11 and 17 to bring their end margins into overlapping relation beneath the rows of cans 49 where they may be secured by the adhesive 22 or other securing means. In the set-up condition, the carton side walls 23 and 24 are spaced from each other a distance which is less than the over all width of the transversely aligned pairs of merchandise containers or cans 49 so that the outwardly projecting seam formations 50 and 51 at the top and bottom edges of the cans 49 (Fig. 3) extend into vertically aligned pairs of apertures 32 and 35 in Fig. 3 and the portions of the side walls 23 and 24 which extend vertically between the apertures tend to bulge outwardly as indicated at 52.

The merchandise containers or cans 49 are securely held in the carrier by the frictional engagement of the top and bottom edge portions with the top and bottom reinforcing strips 38, 41 and 39, 40, respectively, the latter being forced into the respective apertures over which they extend by reason of the difference in the width of the carrier between the transversely aligned apertures and the transverse width of the cans. The strips reinforce the edges of the paperboard which surround the apertures and prevent rupture of the same which otherwise tends to occur due to the tension in the material resulting from the locking engagement with the edges of the can and relative movements of the cans during packing and subsequent handling of the filled carriers. The edge strips 44, 45, 46 and 47, of course, reinforce and protect the end edges of the carrier against breaking or tearing which would permit the release of the end cans.

While specific materials and particular details of construction have been referred to in describing the form of container or 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:

1. A carrier for a plurality of cylindrical articles hav-

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ing a top and a bottom and a pair of oppositely disposed side walls, said side walls having a plurality of openings at spaced intervals along the junction of the side walls and the top and bottom, respectively, for receiving portions of the articles at the top and bottom edges thereof, the distance between said side walls being slightly less than the dimension of the articles in the direction transverse of the carrier whereby, when the articles are positioned in the carrier with the edge portions thereof in said openings, the side walls will bulge outwardly where they contact the articles adjacent the openings, and a flexible, slightly stretchable reinforcing sheet of relatively thin film material extending over said openings and secured to the marginal portions of the carrier walls which surround said openings whereby the edge portions of the articles which project into said openings are frictionally engaged by the stretched reinforcing sheet.

2. A carrier formed from a single blank of relatively stiff, bendable paperboard or similar sheet material which is cut and creased to provide, when erected, opposed generally rectangular side walls and connecting top and bottom walls with said top wall having a handle formed integral therewith, and with said side walls having portions cut away at the junction of the side walls with the top and bottom, respectively, to provide spaced apertures for receiving edge forming portions of cylindrical articles positioned in said carrier, said side walls being spaced apart a distance slightly less than the transverse space required to accommodate the articles whereby the edge portions of the articles will be forced into said apertures and the side walls will bulge outwardly in the areas between vertically spaced pairs of said apertures, and a relatively thin and slightly stretchable plastic film covering said apertures and secured to the internal surface of the marginal wall portions of the carrier surrounding said apertures for frictionally engaging the articles and reinforcing the cut edges of the material surrounding said apertures.

3. A container for a plurality of cylindrical articles which are arranged in row formation and in longitudinal and transverse alignment, said container being formed from a blank of relatively flexible paperboard material which is cut and creased to provide, when erected, oppositely disposed side walls and top and bottom connecting walls, said side walls having longitudinally spaced vertically aligned openings for receiving the outermost top and bottom edge portions of said articles, the transverse distance between the side walls being slightly less than the transverse dimension of said articles and said side walls being flexible outwardly of the container where they contact said articles adjacent said openings, and strips of relatively thin, slightly stretchable continuous plastic sheet material secured to the inner surface of said container at the top and bottom edges of said side walls, said strips of sheet material bridging the openings in said side walls and being secured in reinforcing relation to the edges of the paperboard material around said openings whereby to prevent rupture thereof due to outward flexing of said side walls, and said sheet material being stretched over edge portions of the articles which project through said openings to frictionally retain the same in position therein.

4. A carton for a plurality of cylindrical articles which are arranged in row formation and in longitudinal and transverse alignment, said carton being formed from a blank of relatively flexible paperboard material which is cut and creased to provide, when erected, oppositely disposed side walls and top and bottom connecting walls, said side walls having longitudinally spaced vertically aligned openings for receiving the outermost top and bottom edge portions of said articles, the transverse distance between the side walls being slightly less than the transverse dimension of said articles and said side walls being flexible outwardly of the carton where they contact said articles adjacent said openings, strips of

relatively thin, slightly stretchable sheet material secured to the inner surface of said carton at the top and bottom edges of said side walls, said sheet material bridging the openings in said side walls and being secured in reinforcing relation to the marginal edges of the paperboard material around said openings whereby to prevent rupture thereof due to outward flexing of said side walls, and relatively narrow strips of reinforcing material integrally secured along the margins of the top, bottom and side walls at the ends of the carton and extending across the corners thereof to prevent tearing of said margins.

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References Cited in the file of this patent

UNITED STATES PATENTS

1,987,491	Nejelski	Jan. 8, 1935
2,432,481	Lyons	Dec. 9, 1947
2,491,423	Snyder	Dec. 13, 1949
2,559,948	Currie	July 10, 1951
2,565,449	Emrick	Aug. 21, 1951
2,656,959	Currie	Oct. 27, 1953