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Helms

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[54] **CARRIER HAVING REINFORCED HANDLE MEMBER**

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[52] **U.S. Cl.** ..... **206/185,** 229/52 BC

[51] **Int. Cl.** **B65d 75/00**

[58] **Field of Search** ..... 220/110, 111, 112, 113, 220/115; 229/28 BC, 52 BC; 206/162, 175, 180, 193, 427, 188, 185

[56] **References Cited**

UNITED STATES PATENTS

2,476,181	7/1949	Crane et al.	229/52 BC X
2,587,808	3/1952	Arneson	229/52 BC X
2,741,399	4/1956	Arneson	229/52 BC X
3,011,677	12/1961	Struble	220/113
3,140,797	7/1964	Arneson	220/113
3,752,356	8/1973	Forrer	229/52 BC X

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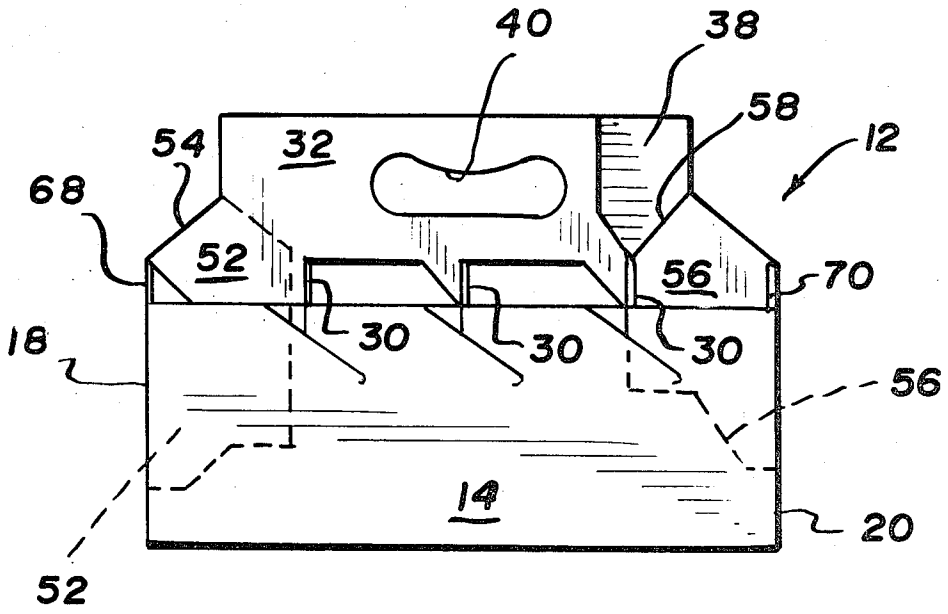
[57] **ABSTRACT**

A carrier carton is formed from a blank of paperboard and has opposed pairs of end walls and side walls and a bottom wall. A load transmitting flap is foldably joined to a handle forming panel along a diagonal fold line. A free edge of the flap is attached to the end wall of the carrier in a face-to-face relationship thereto, thereby transmitting the load from the handle to the end wall.

4 Claims, 3 Drawing Figures



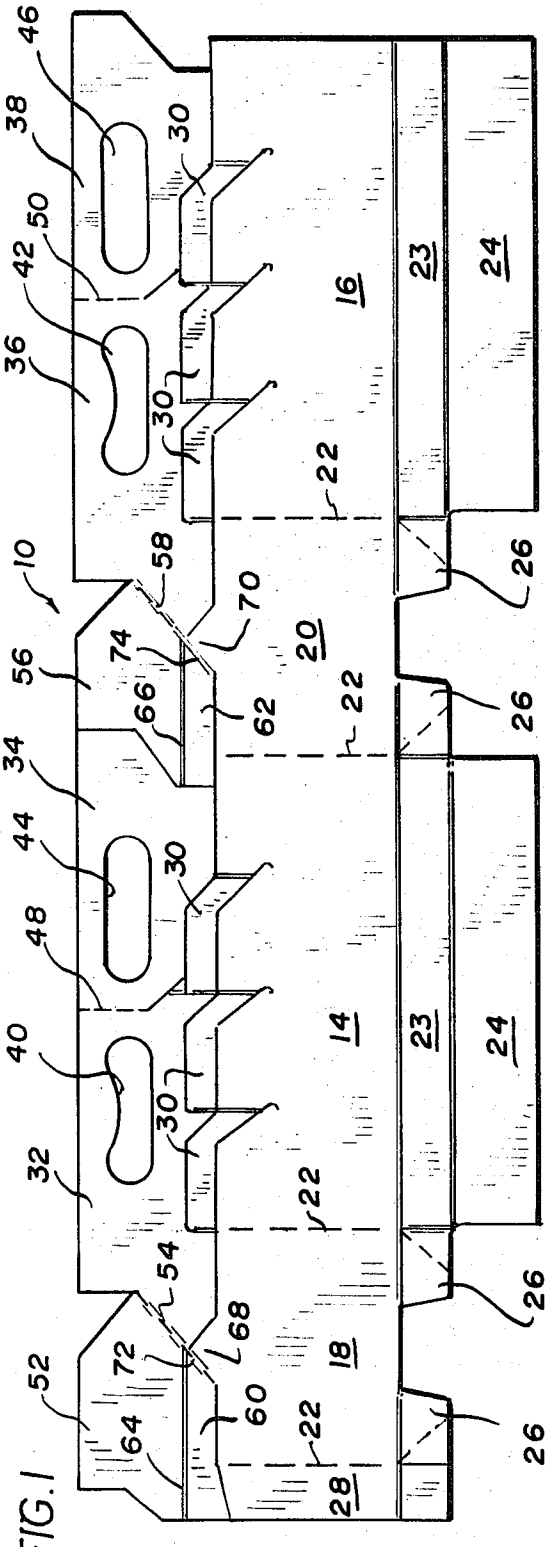


FIG. 1

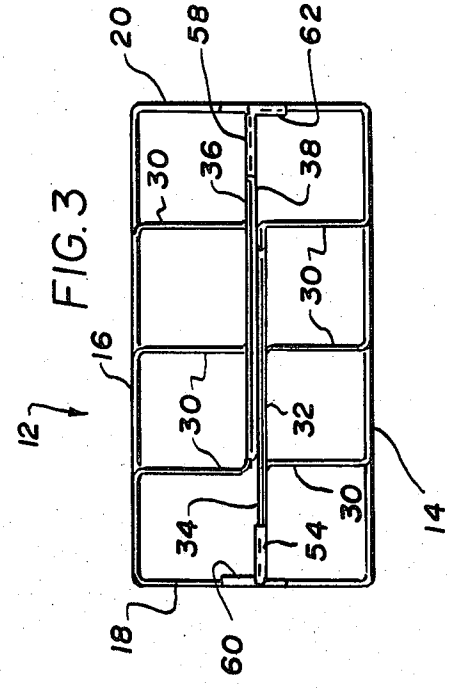


FIG. 3

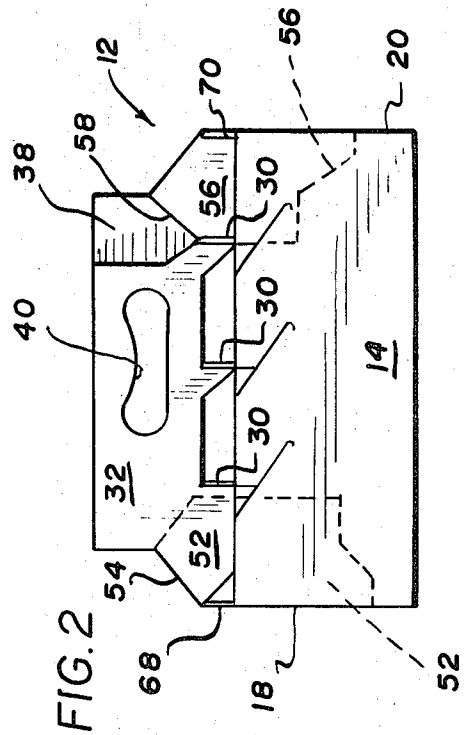


FIG. 2

CARRIER HAVING REINFORCED HANDLE MEMBER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a carrier carton formed from paperboard, or the like, and, more particularly, to a carrier carton having a load transmitting element transferring the load from the carrying handle to certain walls of the carton.

2. The Prior Art

Heretofore, a difficulty has been experienced with carrier cartons formed from paperboard for holding a plurality of bottles or cans with respect to comparative structural weakness of the handle of such carrier or the weakness of the attachment of the handle to the main body of the carrier. The handle had a tendency to break due to its inability to support the load contained in the carrier carton when such carton was being carried by the user.

The present invention overcomes the above disadvantage and provides a load transmitting flap which transfers a portion of the load normally carried by the handle to the walls of the carrier carton, thus improving the overall strength of the carton.

SUMMARY OF THE INVENTION

Generally, this invention provides a load transferring element in a carrier carton formed from paper board, or the like, and suitable for carrying a plurality of articles, such as bottles, cans, and the like. The element, in a form of a flap or strut, extends between the handle and a wall of the carrier, thereby transmitting a portion of the load from the handle to the wall, thus improving the strength and useful life of the carton.

DRAWING

FIG. 1 is a plan view of a blank of paperboard cut and scored for forming a specific carrier carton incorporating the features of the present invention;

FIG. 2 is a side elevational view of the carrier carton formed from the blank illustrated in FIG. 1; and

FIG. 3 is a plan view of the carrier carton illustrated in FIG. 2.

Referring now to the drawing, more specifically to FIG. 1, there is shown a paperboard blank, generally designated **10**, which is scored and cut in a specific manner to form a carrier carton, generally designated **12**, and best seen in FIG. **2**.

The blank and carrier illustrated in the drawing and described herein is but an exemplification of the invention, since the present invention could equally well be applied to blanks and carriers of different structural features.

The carrier carton **12** has a pair of side walls **14** and **16**, respectively, joined to end walls **18** and **20**, respectively, by score lines **22**. In the exemplary carrier the bottom wall is formed of panels **23** and **24**. Gussets **26** are formed at the bottom of each of the end walls **18** and **20**. A manufacturers glue flap **28** is connected to the end wall **18** along another score line **22**, enabling formation of a tubular structure when, in formation of the carrier, the glue flap is secured by adhesive or other means to the free edge of the side wall **16**.

A plurality of article separating straps **30** are formed at the top edge of the side walls **14** and **16** for separating the articles, such as bottles, in the carrier.

The carrier of the present embodiment is provided with several handle forming panels **32, 34, 36** and **38** to form a multi-ply carrier handle. The handle forming panels have apertures formed therein for insertion of a hand by person carrying the carton.

The aperture **40** in the panel **32** is substantially identical to the aperture **42** in the panel **36,** while the aperture **44** in the panel **34** is substantially identical to the aperture **46** in the panel **38.**

The handle forming panels are converted to the respective side walls of the carrier by the article separating straps **30.**

The panel **34** is foldable about score line **48** so as to be placed in a face-to-face relationship with the panel **32.** Likewise, the panel **38** is foldable about a score line **50** to place the panel **38** in a face-to-face relationship with the panel **36,** thus increasing the thickness of the handle member of the carrier.

Load transmitting flap or strut **52** is hingedly secured to the panel **32** along a diagonal score line **54.** Load transmitting flap **56** is hingedly attached to the panel **36** along a diagonal score line **58.**

Flaps **52** and **56** are formed with tabs **60** and **62,** respectively, foldably connected to the flaps by fold lines **64** and **66,** respectively.

The top portions of end walls **18** and **20** have substantially triangular extensions **68** and **70,** respectively, integrally formed therewith. One edge of the triangular extension **68** is defined by a continuation **72** of the diagonal score line **54.** The triangular extension **70** formed with the end wall **20** has one of its edges defined by a continuation **74** of the diagonal score line **58.**

In formation of the handle structure of the carrier, after handle forming panels **36** and **38,** as well as **32** and **34,** have been brought into respective face-to-face contact as hereinabove described, the load transmitting flaps **52** and **56** are folded inwardly about the respective diagonal score lines **54** and **58.**

The tabs **60** and **62** are, at the same time, folded about the continuations **72** and **74** of the diagonal score lines and attached by adhesive, or otherwise, to inner surfaces of respective end walls **18** and **20.**

Thus, a substantial connection is established between the handle and the end walls of the carrier transferring a portion of the load from the handle to the end walls.

I claim:

1. In a carrier carton formed from a unitary blank of foldable paperboard for packaging a plurality of similar articles, said carrier having opposed pairs of interconnected end walls and side walls and a bottom wall, the improvement comprising:

a. at least one handle forming panel connected to the top portion of each of said side walls by at least one article separating strap;

b. a load transmitting flap foldably joined to an end of said handle forming panel along a diagonal score line;

c. said flap having a tab integrally formed therewith and connected to said end wall along a score line forming a continuation of said diagonal score line;

d. said tab being folded inwardly along said score line and secured in a face-to-face relationship with the inner surface of said end wall to present a load car-

rying member transmitting the load from said handle to said end wall.

2. In a carrier carton formed from a unitary blank of foldable paperboard for packaging a plurality of similar articles, said carrier having opposed pairs of interconnected end walls and side walls and a bottom wall, the improvement comprising:

a. at least one handle forming panel for providing a handle of a carrier carton;

b. a load transmitting flap foldably joined to an end of said handle forming panel along a diagonal score line;

c. said load transmitting flap being connected to the top portion of an end wall along a continuation of said diagonal fold line and being folded therealong so that a portion thereof is in face-to-face contact with the inner surface of said end wall and is secured thereto to present a load carrying member transmitting the load from said handle to said end wall.

3. A carrier carton as defined in claim **2,** wherein said top portion of said end wall presents a substantially triangular extension with one edge thereof being defined by said continuation of said diagonal fold line.

4. A carrier carton as defined in claim **2,** wherein the handle is formed from a plurality of handle forming panels.

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