Oct. 30, 1962 R. A. COTE 3,061,142

BOTTLE CARRIER

Filed Feb. 3, 1960 4 Sheets-Sheet 1

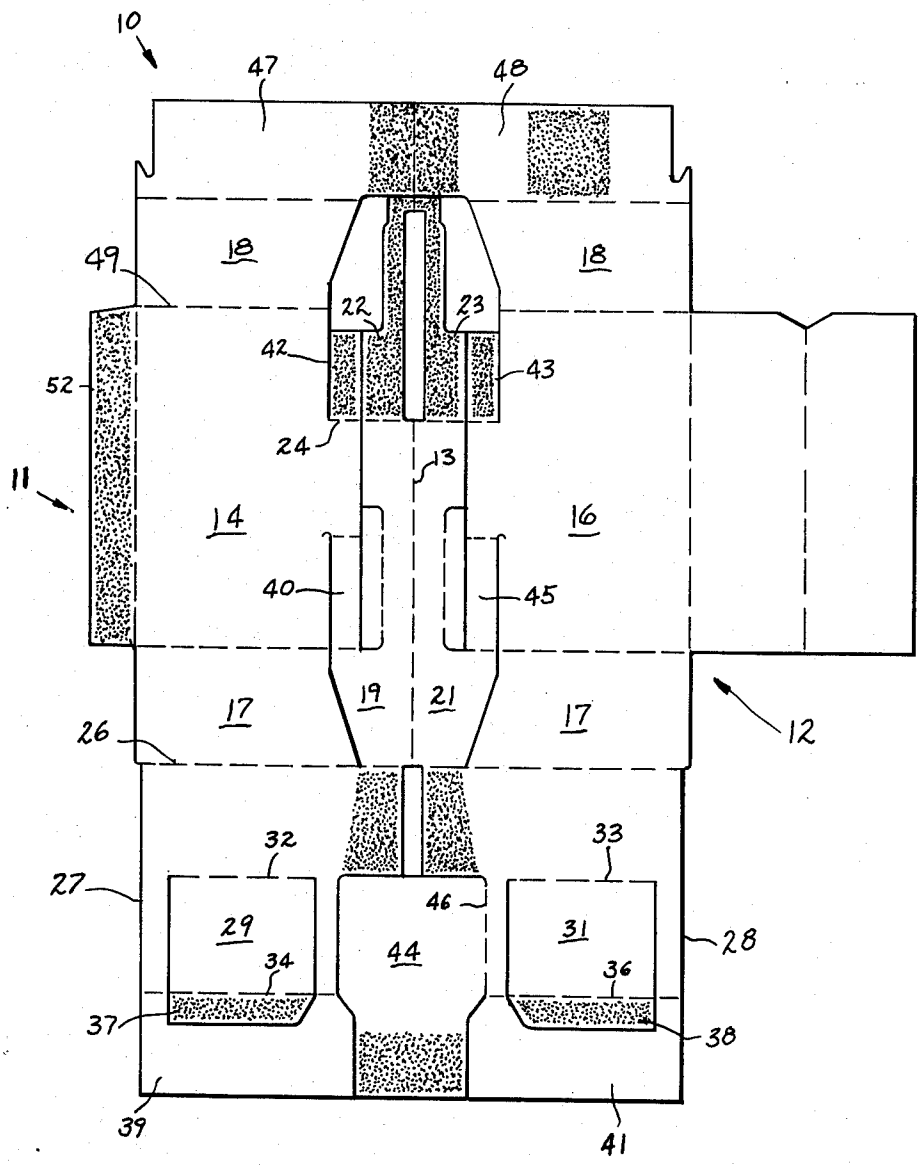


FIG - 1

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Oct. 30, 1962 R. A. COTE 3,061,142

BOTTLE CARRIER

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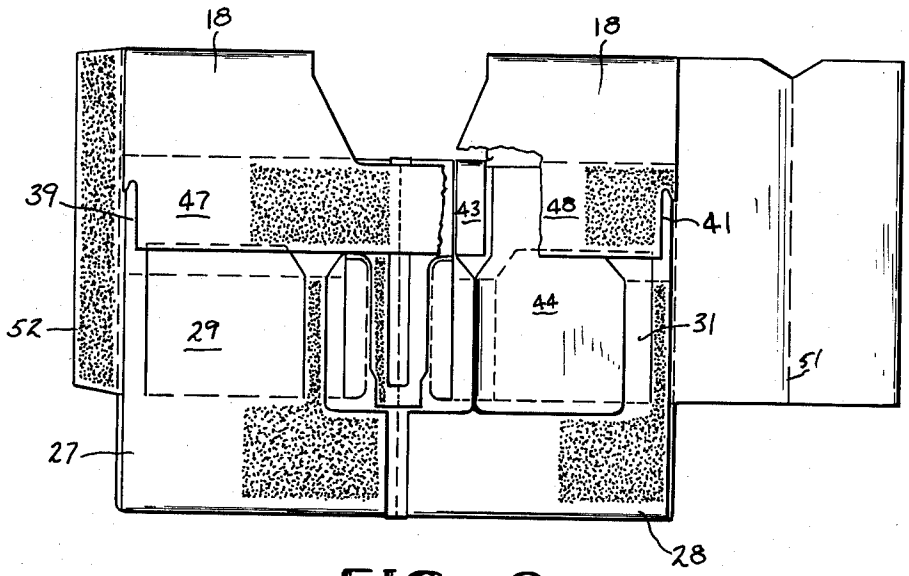


FIG - 2

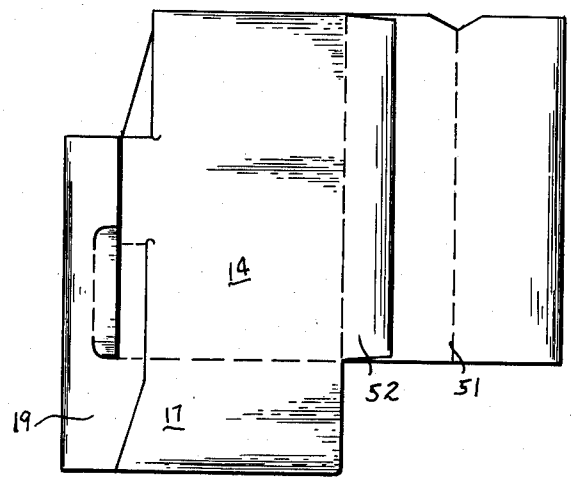


FIG - 3

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Oct. 30, 1962 R. A. COTE 3,061,142

BOTTLE CARRIER

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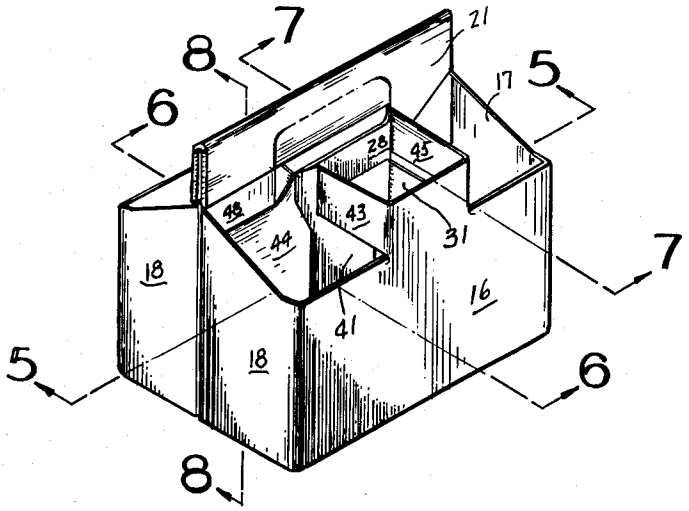


FIG - 4

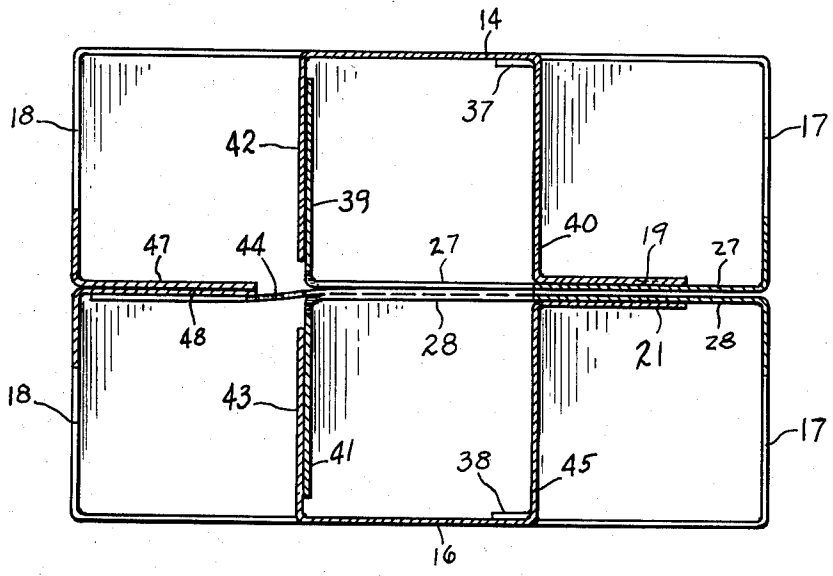


FIG - 5

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BOTTLE CARRIER

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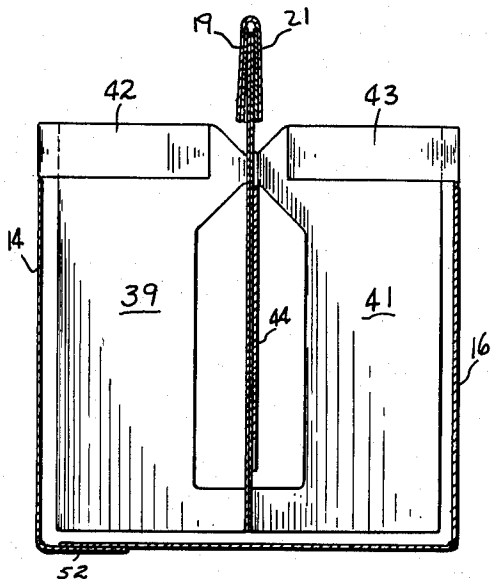


FIG -6

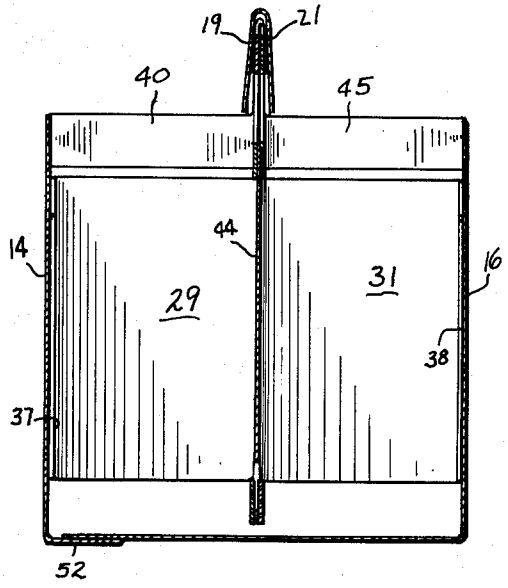


FIG - 7

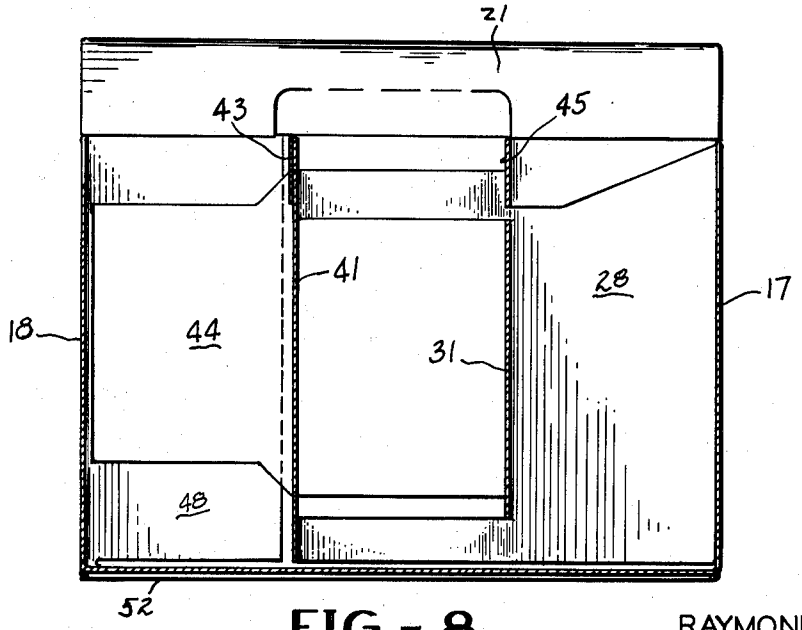


FIG - 8

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3,061,142

BOTTLE CARRIER

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Filed Feb. 3, 1960, Ser. No. 6,480
2 Claims. (Cl. 220—113)

The present invention relates to article carriers fabricated from a blank of paperboard.

In particular, the invention relates to carriers of the above general class in which single units of bottled or canned goods are arranged in individual compartments or cells.

For example, a carrier belonging to the general class to which the present invention relates may comprise a generally box-like structure having an open top, a bottom wall, opposed sidewalls contiguous with opposed end walls and a central handle structure fastened to and projecting upwardly from the end walls.

In addition, the individual cells are arranged in rows; one row of three cells, for example, being arranged on one side of the handle structure with a corresponding row of three cells disposed on the opposite side of the handle structure.

A principal feature of the present invention, constituting an improvement in the above general class of carriers, is the provision of a carrier having a cell structure for the reception of an individual unit of goods where each unit is protected on all sides by a barrier or partition means to preclude physical contact between the units packaged.

An additional feature of the present invention is the provision of a carrier in which each unit of goods packaged is separated on all sides by a partition where the carrier contains no removable partitions and is fabricated from a single blank of board.

A further feature of the present invention is the convertibility of the carrier design from one in which the various cells in a given row are separated by a partial partition permitting contact between the articles in each cell to a carrier design of the same general type in which each article individual to a given cell is separated from all the other articles by partitions.

A carrier embracing certain features of the present invention may comprise a bottom wall, a pair of sidewalls and a pair of end walls integrally connected, each said sidewall having a transverse partition flap, a multi-ply handle member connected to the end walls, a central longitudinal partition member running generally parallel to the handle and operative to divide the carrier into two main sections, a first pair of transverse partition elements hinged to the partition member and operative to join the sidewalls, a second pair of transverse partition elements hinged to the partition member and operative individually to join a mating transverse flap, said first and second pairs of transverse partition elements being operative in cooperation with the central partition member to divide the carrier into two rows of article receiving, individual cells, said partition member, elements and flaps in cooperation with the sidewalls and end walls being further operative to preclude article to article contact from cell to cell.

Other features and advantages of the present invention will become more apparent from the succeeding specification when read in conjunction with the appended drawings, in which:

FIG. 1 is a plan view of a blank, cut and scored, from which a carrier embracing the principles of the present invention may be erected;

FIG. 2 is a view similar to the illustration of FIG. 1 wherein the blank has been partially folded;

FIG. 3 shows a further step in folding the blank;

FIG. 4 is a perspective view of the erected carton;

FIG. 5 is a sectional view across the body of the carrier as viewed in the plane 5—5;

FIGS. 6 and 7 are vertical sections showing transverse partition structure as viewed from the planes designated 6—6 and 7—7, respectively, observed in the direction of the arrows, and,

FIG. 8 is a longitudinal section of the carton in the plane of the line 8—8;

Referring now in detail to the drawings, there is shown a blank indicated generally by the reference numeral 10 wherein dotted lines indicate score lines or fold lines while solid lines denote bounds of the blank or through slots as is conventional in the art. Appropriate hatching is also utilized to designate those regions of the blank to which adhesive is applied.

The blank 10 is divided generally centrally to define a pair of panel sections 11 and 12 by a score line 13.

The blank further discloses sidewalls 14 and 16 and end walls 17 and 18.

The reference numerals 19 and 21 represent two plies of a multi-ply handle structure, joined to flap-like plies 22 and 23 respectively.

In well known fashion the plies 22 and 23 are foldable inwardly along score line 24 into a superposed position with respect to the plies 19 and 21.

When the carton is in the erected condition, as shown in FIG. 4, the handle structure is composed of four ply including panel sections 19 and 21 and their contiguous flaps 22 and 23.

Integrally hinged to the end wall 17 along score line 26 are a pair of flap sections 27 and 28 respectively. Each section includes a flap member 29 and 31, respectively, defining a first pair of transverse partition elements, hinged to the respective sections along score lines 32 and 33. Each flap member is further score at 34 and 36 to define glue tabs 37 and 38 ultimately operable to join sidewalls 14 and 16 respectively.

The flap sections are further foldable along extensions of the score lines 34 and 36, respectively, to define a second pair of transverse partition elements 39 and 41 operable in the erected condition of the carton to join mating transverse partition elements 39 and 41 operable in the erected condition of the carton to join mating transverse partition flaps 42 and 43 hinged to the sidewalls 14 and 16 along score line 24. An additional partition element 44 is hinged to the section 28 along score line 46.

Note that in the erected condition of the carrier that partition flap 44 and flap sections 27 and 28 cooperate to define a multi-ply, centrally disposed, longitudinal partition structure operative to divide the carrier into two main sections.

Note further that the pairs of elements 29, 31, 39 and 41 cooperate with the sidewalls 14 and 16 to divide the carrier sections into cells, each operable to receive an article or unit of goods.

As is more apparent in FIGS. 4, 6, and 7, the transverse partitions effected by the elements 29, 31, 39 and 41 preclude physical contact between units.

In erecting the carton, glue is applied as shown by the hatching and the sections 27 and 28 are first folded inwardly upon the main body of the blank along score line 26. Thereafter partition element 44 is folded upon the section 28 along score line 46. Next the plies 22 and 23 are folded upon plies 19 and 21; the flaps 42 and 43 are folded and glued to their mating elements 39 and 41. The end wall 18, including its adjoining tongues 47 and 48, are folded inwardly upon the main body of the blank along score line 49 to the relationship shown in FIG. 2. At this point additional glue is applied as shown in FIG.

2. Thereafter the left section, as viewed in FIG. 2, is folded along central score line **13** upon the right section to the position shown in FIG. 3.

Next a portion of the bottom wall is folded along score line **51** and glued to flap **52**.

The carrier is then erected in well known fashion to the condition shown in FIG. 4 and a longitudinal partition develops, as shown in FIGS. 5 and 8, while a plurality of transverse partitions develop, as shown in FIGS. 5, 6 and 7.

Partition straps **40** and **45** hinged at opposed ends to the sidewalls **14** and **16** and handle plies **19** and **21**, respectively, erect in the normal fashion. These straps are disposed above and spaced from the partition elements **29** and **31**, respectively.

In the event that one chooses to convert the blank of FIG. 1 to one in which the article receiving cells are divided by partitions that do not preclude article to article contact, it is simply necessary to eliminate that portion of the blank of FIG. 1 falling below a line defined by extending the score lines **32** and **33** across the blank.

In making this conversion, it is also necessary to join the flaps **42** and **43** with their mating handle plies **22** and **23**, and a carrier is devised having a partition strip structure similar to that disclosed in U.S. Patent No. 2,692,700 and U.S. Patent No. 2,537,615.

For purposes of claiming the disclosed invention, it is intended to use the language "full cell" when referring to that carrier structure which provides a partition or barrier on all sides of a unit of goods within a given cell precluding unit to unit contact as distinct from the language "strap cell" intended to designate cells of the character disclosed in the aforesaid '700 and '615 patents.

It is anticipated that a wide variety of embodiments of the present invention may be devised without departing from the spirit and scope of the present invention.

What is claimed is:

1. A one piece blank which is foldable into a collapsible bottle carrier comprising a multi-ply handle panel including a first pair of handle plies creased along a longitudinal center line, a second pair of handle plies foldable into overlapping relation with said first pair of plies to define a four-ply handle structure, side wall panels positioned on opposite sides of said handle panel, a first pair of partition straps joining said side wall panels and said first pair of handle plies, a second pair of partition straps hingedly connected to said side wall panels and having a free end, end wall panels foldably connected to both ends of side wall panels, tongue panels foldably connected to one of said end wall panels, a pair of flap sections foldably connected to the other end wall panel along a first transverse crease line, said first pair of handle plies being foldably connected to said flap sections along said first transverse crease line, each of said flap sections including a generally rectangular first flap member cut from the flap section and hingedly connected thereto along one edge to define a first pair of transverse partitions when the carrier is in erected condition, said flap sections further including end portions foldable to provide a second pair of transverse partitions when the carrier is in erected condition, and a longitudinal partition member hingedly connected to one of said flap sections along a longitudinal crease line to provide a longitudinally extending central partition when the carton is in erected condition.

2. The blank of claim 1 in which said free end of said second pair of partition straps are adhesively secured to said end portions of the flap sections and said first flap members are adhesively secured along one edge to the respective sidewall panels during the folding of the blank.

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