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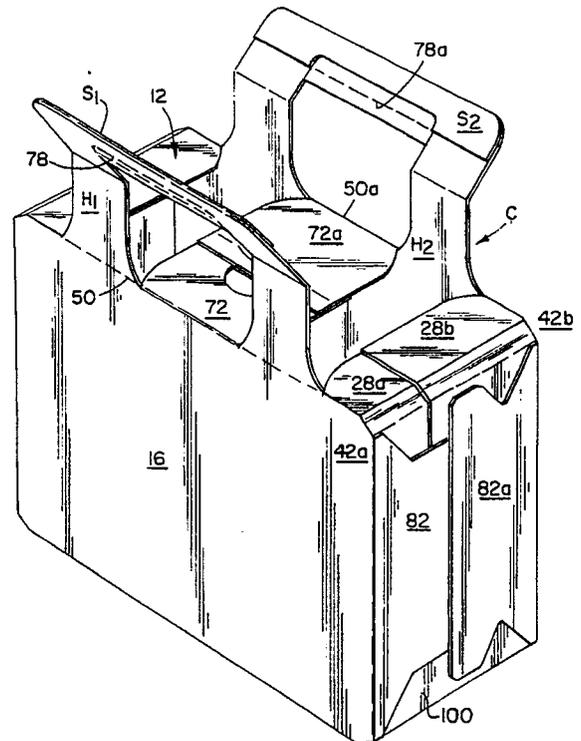
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54 **Carton with divisible carrying handle for providing access to the carton contents.**

57 A carton has one wall (12, 12X) which comprises security panel means (72, 72a) which can be opened to gain access to the contents of the carton and a handle panel assembly (H1, ha, S1, H2, hb, S2) which can be manipulated from a flat stowed position in which it overlies the security panel means to an upright position relative to the security panel means for use in carrying the carton. Access to the security panel means is gained by separating one part of the handle panel assembly from an attached adjacent part.

FIG. 3.



EP 0 389 254 A1

CARTON WITH DIVISIBLE CARRYING HANDLE FOR PROVIDING ACCESS TO THE CARTON CONTENTS

This invention relates to a carton for beverage cans which incorporates a carrying handle which is adapted to be raised from a flat stowed position to an upright position by which the carton can be carried and by which access to the contents of the carton is facilitated. More particularly, the handle panel includes parts which are separable to give access to security panels means which is openable to create an opening to facilitate removal of the contents of the carton.

The invention provides a carton having a wall which comprises an openable panel means by which access to the contents of the carton can be gained said openable panel means comprising a handle panel construction and security panel means, wherein said handle panel construction can be manipulated from a flat stowed position in which the handle panel construction forms a part of said carton wall to an upright position for use in carrying the carton and wherein one part of said handle panel construction is separable from an attached adjacent part thereof to facilitate access to said security panel means said security panel means being openable to create an opening in said carton wall to facilitate removal of the contents of the carton.

According to a feature of the invention, said wall may be formed from a pair of overlapping top panels joined to opposed side walls of the carton.

According to another feature of the invention said security panel means may comprise a pair of reclosably interconnected flaps each forming a part of a respective one of said top panels and extending from said opposed side walls.

According to yet another feature of the invention said handle panel construction may comprise a pair of like handle panels joined together intermediate their ends, one of said handle panels overlying the other of said handle panels when the panels are in their flat stowed position and in that joined portions of each of said panels are raised for use in carrying the carton.

In constructions where the feature of the immediately preceding paragraph is adopted said one handle panel may be frangibly joined to parts of said one wall adjacent opposite ends of said security panel means at least a part of each of said frangible joints being broken in order to bring said handle panels out of said flat stowed position into said raised position.

Preferably, said joined portions of said handle panels are adapted to be broken so that the handle panels can be separated from one another thereby to give access to said security panel means.

An embodiment of the invention will now be

described, by way of example, with reference to the accompanying drawings, in which:

FIGURE 1 is a plan view of a blank having a handle and security panel means according to the invention;

FIGURE 2 is a perspective view of a fully enclosed carton for beverage cans formed from the blank shown in Figure 1 and shown with the carrying handle in a stowed position; and

FIGURE 3 is another perspective view of the same carton but in which the handle is raised to reveal an openable security panel means.

Referring then to the drawings, a fully enclosed carton 'C' is formed from a paperboard blank 10 or blank of like foldable sheet material and comprises a top wall 12, bottom wall 14, side walls 16, 18 and end walls formed by panels 80, 80a and 82, 82a referred to later.

The top wall 12 is of two ply construction comprising inner top wall panel 12a and an outer handle panel assembly 12b which are disposed in overlapping relationship when the blank from which the carton is formed is put into the form of a sleeve. Normally, the sleeve would be furnished to a beverage manufacturer in flat folded condition whereafter the flat sleeve would be erected and loaded from one or both of its open ends and the end panels then closed to complete the carton.

Referring now more particularly to Figure 1, the inner top wall panel 12a comprises a central handle panel H1 to each of the opposite ends of which is attached an inner end panel portion 26a and 28a by means of cut and score lines 30 and 32, respectively. Inner end panel portion 26a is hinged to inner top end closure panel 34a by means of spaced fold lines 36 and 38 and openings 40 are formed therebetween to facilitate folding. Likewise, inner end panel portion 28a is hinged to inner top end closure panel 42a by means of spaced fold lines 44 and 46 and openings 48 are formed therealong to facilitate folding.

The central handle panel H1 and each of the end panel portions 26a, 28a, has of its ends hinged to side wall panel 16 along a common fold line 50.

Elongate reinforcing panel 52 is hinged along the unattached transverse edge of inner end panel 26a along transverse fold line 54 and terminates in end tab 56 secured to panel 52 along fold line 58. Likewise, elongate reinforcing panel 62 is hinged along the unattached transverse edge of inner end panel 28a, along transverse fold line 64 and terminates in end tab 66 secured to panel 62 along fold line 68.

The handle panel H1 includes a reinforcing top strip S1 foldably joined to an upper portion ha of

the handle panel by transverse fold line 70. A male locking panel 72 is struck centrally from handle panel H1 which is hinged along fold line 50 to side panel 16 and includes a protruding locking tab 74 foldably joined to panel 72 along fold line 76. Handle panel H1 also includes hand cushioning flap 78 disposed adjacent the free end of locking tab 74.

Inner top end closure panels 34a and 42a are hinged to side end closure panels 80 and 82 by means of foldable gusset panels 84 and 86 respectively. The side end closure panels 80, 82 are hinged to opposite ends of the side wall panel 16 along fold lines 88 and 90 respectively.

At the opposite end of the blank shown in Figure 1, the outer handle panel assembly 12b comprises a central handle panel H2 to each of the opposite ends of which is attached an outer end panel portion 26b and 28b by means of cut and score lines 30a and 32a respectively. Outer end panel portion 26b is hinged to inner top end closure panel 34b by means of spaced fold lines 36a and 38a. Likewise, outer end panel portion 28b is hinged to outer top end closure panel 42b by means of spaced fold lines 44a and 46a.

The central handle panel H2 and each of the end panel portions 26b, 28b has one of its ends hinged to side wall panel 18 along a common fold line 50a.

Outer top end closure panels 34b and 42b are hinged to side end closure panels 80a and 82b by means of foldable gusset panels 84a and 86a respectively. The side end closure panels 80a, 82a are hinged to opposite ends of side wall panel 18 along fold lines 88a and 90a respectively.

Elongate reinforcing panel 52a is hinged along the unattached transverse edge of inner end panel 26b along transverse fold line 54a and terminates in end tab 56a secured to panel 52a along fold line 58a.

Likewise, elongate reinforcing panel 62a is hinged along the unattached transverse edge of inner end panel 28b along transverse fold line 64a and terminates in end tab 66a secured to panel 62a along fold line 68a.

The handle panel H2 includes a reinforcing top strip S2 foldably joined to the handle panel by transverse fold line 70a. A female locking panel 72a is struck centrally from handle panel H2 which is hinged along fold line 50a to side panel 18 and includes a locking slit 92. Handle panel H2 also includes hand cushioning flap 78a disposed adjacent the locking slit 92.

The remainder of the blank includes bottom wall 14 hinged to side wall 16 along fold line 94 and side wall panel 18 is hinged to bottom wall 14 along fold line 96. Bottom wall 14 has bottom end closure flaps 98, 100 hinged at opposite ends

thereof along fold lines 102, 104 respectively.

In order to bring the blank into a flat folded sleeve, reinforcing panels 52/56; 62/66 and S1 are given an application of glue and folded inwardly of the blank through 180 degrees and are secured to underlying portions of the blank and likewise reinforcing panels 52a/56a; 62a/66a and S2 also are given an application of glue, folded inwardly of the blank through 180 degrees and are secured to adjacent portions of the blank. Thus, a multi-ply thickness of material is present around the handle panels H1 and H2. Thereafter the whole blank assembly to the left side of fold line 50 is folded through 180 degrees towards the opposite end of the blank about fold line 50 into superposed relationship with side wall panel 16. Thereafter handle panel H1 is folded back upon itself to expose the reinforcing strip S1 which is thereby uppermost when the blank is viewed in plan. The opposite end of the blank to the right side of fold line 96 including handle panel H2 together with end portions 26b, 28b and upper end closure panels 34b, 42b are folded through 180 degrees about fold line 96 and the folded over reinforcing strip S2 of handle panel H2 is secured in the exposed reinforcing strip S1 of handle panel H1. Simultaneously, outer end panel portions 26b and 28b including their reinforcing panels are secured in superposed relationship to inner end panel portions 26a and 28a, respectively, while outer top end closure panels 34b and 42b are secured in superposed relationship to inner end closure panels 34a and 42a, respectively. Locking tab 74 of the locking panel 72 is inserted into locking slit 92 in panel 72a to detachably secure those panels together and thereby form a security panel extending between the carton sidewalls.

The flat sleeve thus formed can thereafter be erected, loaded and then closed by mutually securing its end closure flaps.

In order to lift and carry the carton, the composite handle thus formed is grasped by means of the registered hand gripping apertures (defined by the hand cushioning flaps as seen in the blank) and raised away from the top wall of the carton about fold line 'f' between upper and lower portions of the handle panel (Figures 2 & 3) but leaving the other portions of the handle panel H1 and H2 in position thereby forming a part of the top wall. In order to gain access to the security panel the frangible joints provided by cut and fold lines 30, 30a and 32, 32a are torn to separate the handle panels from the adjacent inner and outer end panel portions 26a, 26b and 28a, 28b whereafter the handle panels are separated from one another. In order to gain access to the contents of the carton through the top wall, the locking panels 72 and 72a are unlocked by disengaging the locking tab 74 from

the locking slit 92 and thus separating the handle panels. The handle panels can however be brought together again for use in carrying the carton again if desired.

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Claims

1. A carton having a wall which comprises an openable panel means by which access to the contents of the carton can be gained said openable panel means comprising a handle panel construction and security panel means, wherein said handle panel construction can be manipulated from a flat stowed position in which the handle panel construction forms a part of said carton wall to an upright position for use in carrying the carton, and wherein one part of said handle panel construction is separable from an attached adjacent part thereof to facilitate access to said security panel means said security panel means being openable to create an opening in said carton wall to facilitate removal of the contents of the carton.

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2. A carton according to claim 1, wherein said wall is formed from a pair of overlapping top panels joined to opposed side walls of the carton.

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3. A carton according to claim 2, wherein said security panel means comprises a pair of reclosably interconnected flaps each forming part of a respective one of said top panels and extending from said opposed side walls.

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4. A carton according to any of the preceding claims, wherein said handle panel construction comprises a pair of like handle panels joined together intermediate their ends, one of said handle panels overlying the other of said handle panels when the panels are in their flat stowed position and in that joined portions of each of said panels are raised for use in carrying the carton.

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5. A carton according to claim 4, wherein said one handle panel is frangibly joined to parts of said one wall adjacent opposite ends of said security panel means at least a part of each of said frangible joints being broken in order to bring said handle panels out of said flat stowed position into said raised position.

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6. A carton according to claim 4 or claim 5 wherein said joined portions of said handle panels are adapted to be broken so that the handle panels can be separated from one another thereby to give access to said security panel means.

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FIG. 1.

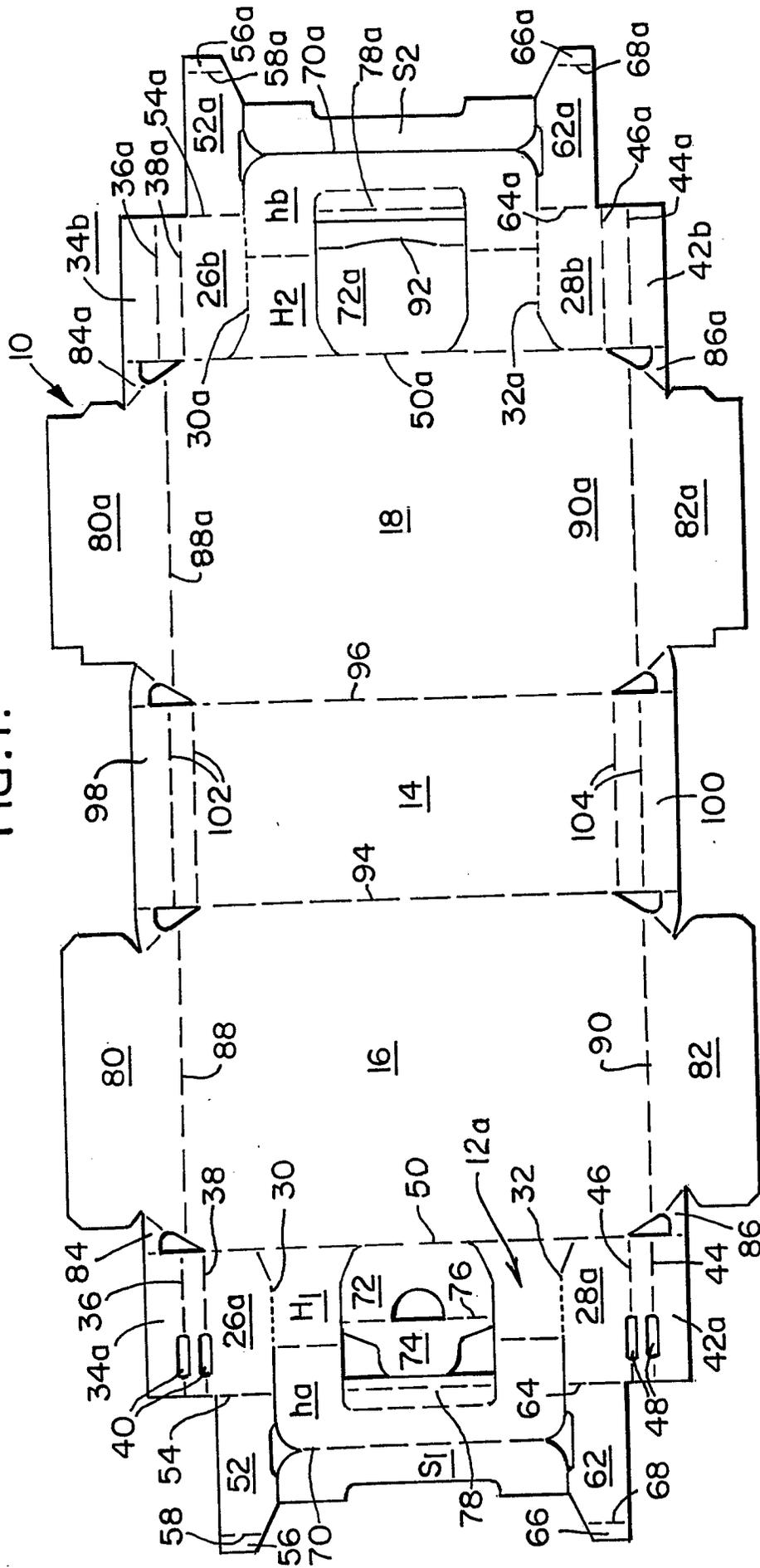


FIG. 2.

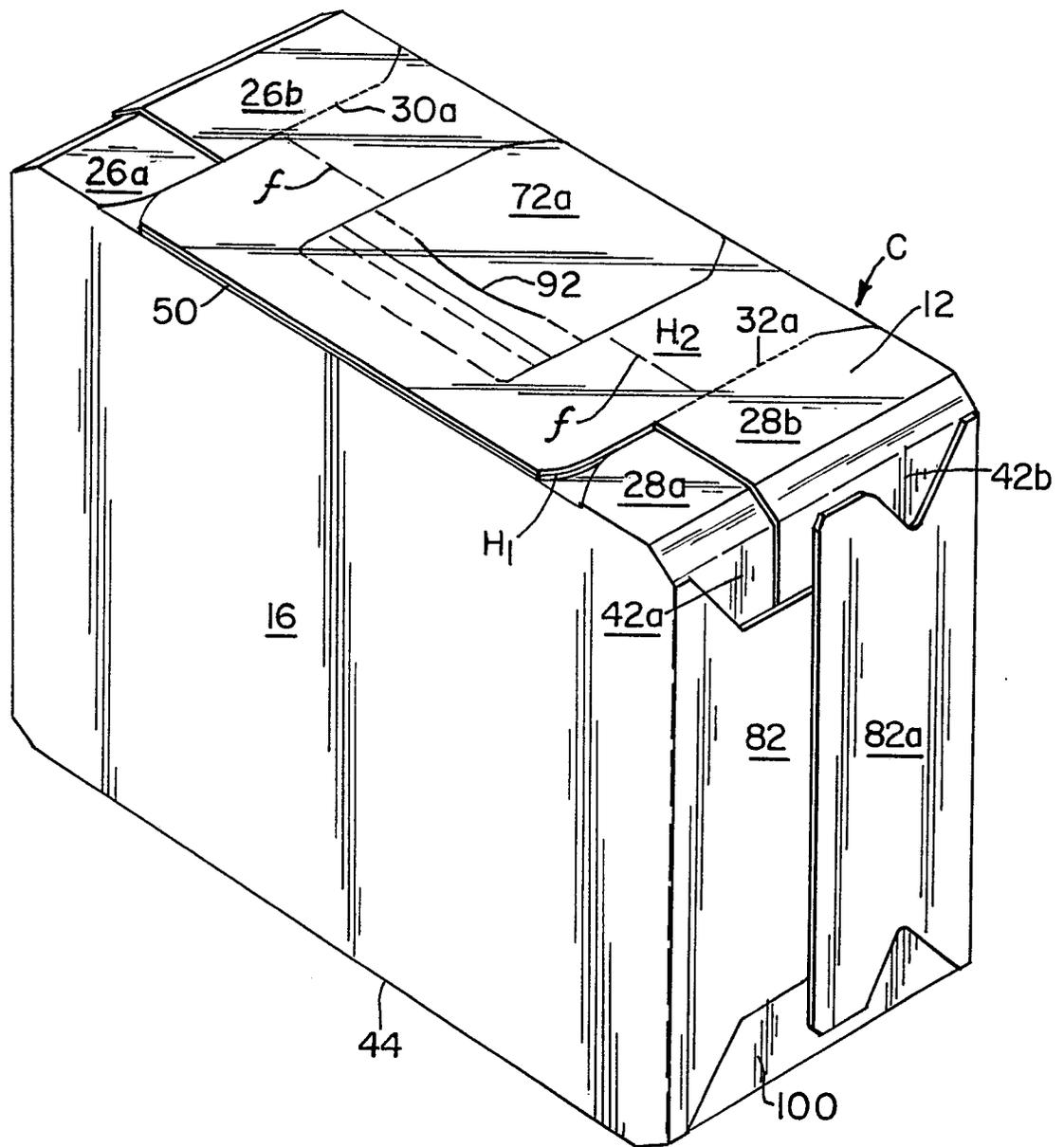
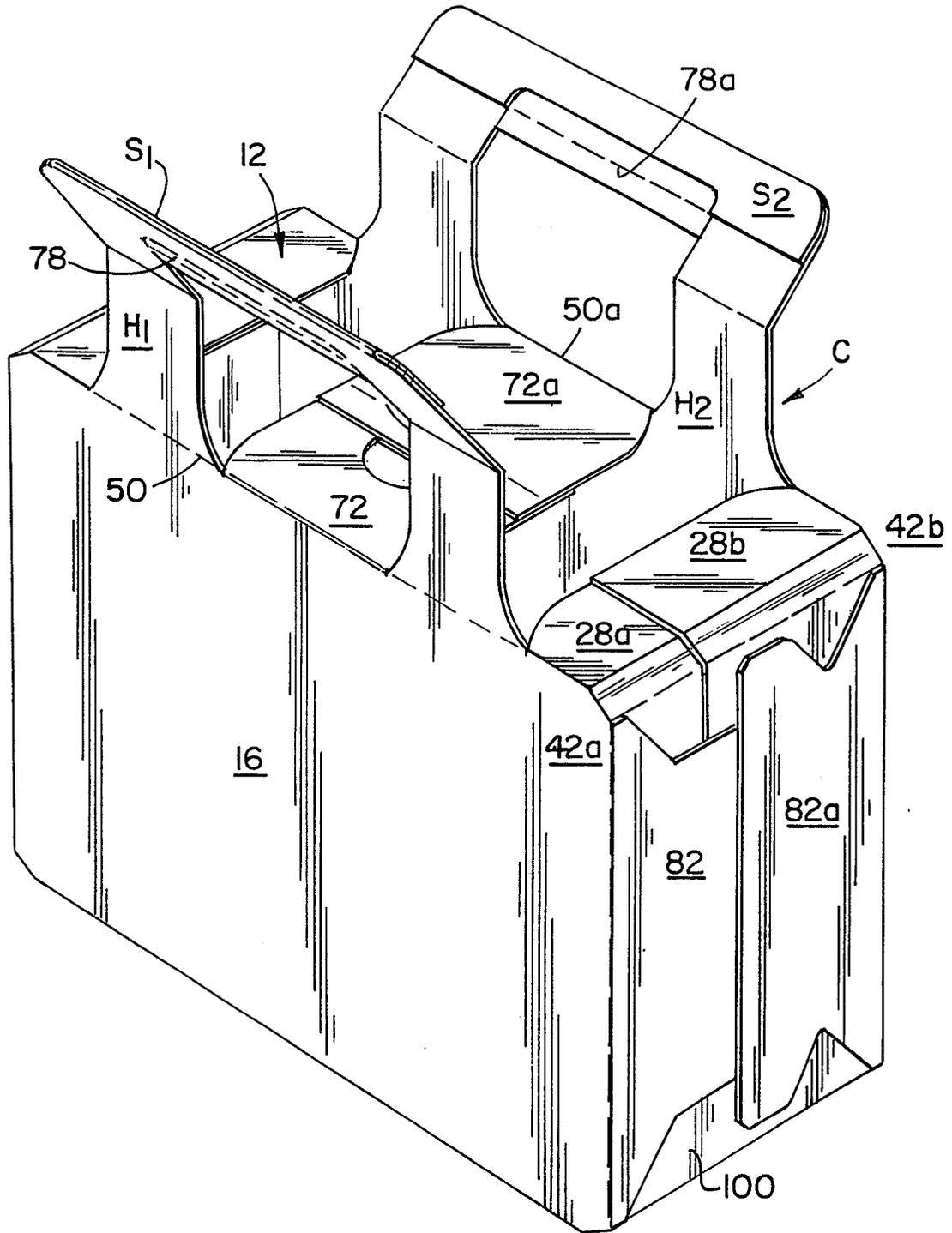


FIG. 3.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-1 852 527 (KING) * Page 1, line 79 - page 2, line 52; figures 2-4 * ---	1-3	B 65 D 5/46 B 65 D 5/54
A	FR-A-2 446 232 (COLGATE-PALMOLIVE) * Page 5, line 30 - page 6, line 7; figures 6-7 * -----	1-2,4-5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27-06-1990	Examiner BRIDAULT A.A.Y.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	