(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 037 683**
A1

(12) # EUROPEAN PATENT APPLICATION

(21) Application number: **81301303.4**

(22) Date of filing: **26.03.81**

(51) Int. Cl.³: **B 65 D 71/00**

(30) Priority: **07.04.80 US 137909**

(43) Date of publication of application:
14.10.81 Bulletin 81/41

(84) Designated Contracting States:
BE DE FR GB IT LU NL SE

(71) Applicant: **THE MEAD CORPORATION**
Mead World Headquarters Courthouse Square Plaza N.E
Dayton, Ohio 45463(US)

(72) Inventor: **Leib, Russell W. Jr.**
387 Cochran Drive
North West Atlanta Georgia 30327(US)

(74) Representative: **Hepworth, John**
J.M. Hepworth & Co. Furnival House 14/18 High Holborn
London, WC1V 6DE(GB)

(54) **Bottle carrier and blank therefor.**

(57) A carrier for use in connection with bottles comprises a bottom wall (1), a plurality of neck receiving apertures formed in the bottom wall a pair of upwardly converging composite side walls (5,9) joined to the side edges of the bottom wall, a plurality of top receiving apertures formed in the side walls and disposed in alignment with respective ones of the corresponding neck receiving apertures, a side wall extension panel (41) extending generally downwardly from one of the side walls, and a cushioning panel (43) joined to the side wall extension panel and disposed substantially perpendicular thereto.

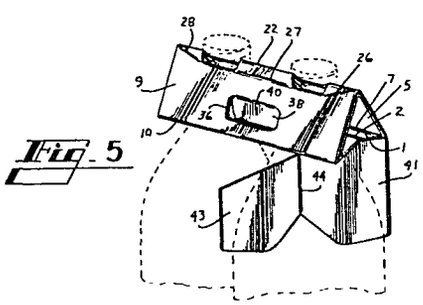

Fig. 5

EP 0 037 683 A1

BOTTLE CARRIER & BLANK THEREFOR

This invention relates to a bottle carrier of the top gripping variety which includes cushioning means provided between the packaged bottles and to a blank for forming the carrier.

Article carriers of the top gripping elongate type especially adapted for use in conjunction with bottles are known in the art as evidenced by U.S. Patents 3,387,879; 3,528,697; 3,640,563; 3,860,281 and 4,180,191 all of which are owned by the applicant for this invention. This general category of carrier is extremely economical to produce and is highly reliable as a carrying means for multiple bottles although historically one drawback to carriers of this type has been the lack of adequate and convenient cushioning means between the shoulder portions of the bottles.

According to this invention, a carrier of elongated configuration is provided and includes a bottom wall with a plurality of neck receiving apertures formed therein, side

wall means joined to the bottom wall, a plurality of top receiving apertures formed in the side wall means and disposed in alignment respectively with the corresponding neck receiving apertures, a side wall extension panel joined to the side wall means and extending downwardly therefrom, and a cushioning panel joined to the side wall extension panel and extending inwardly therefrom.

One 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 from which the bottle carrier is formed according to this invention,
Figure 2 and 3 depict intermediate stages through which the blank of Figure 1 is manipulated and glued in order to form the complete and collapsed carrier as shown in Figure 4, and
Figure 5 is an isometric view of the carrier disposed in erected condition.

In the drawings, the numeral 1 designates the bottom wall of the carrier in which medial fold line 2 and a pair of neck receiving apertures 3 and 4 are formed.

Inner side wall means in the form of inner side wall panels 5 and 6 is joined to a side edge of bottom wall 1 along fold line 7. To the opposite side edge of bottom wall 1, outer side wall means in the form of outer side wall panels 8 and 9 is joined along fold line 10.

In order to receive portions of the packaged bottles, top receiving apertures 11 and 12 are formed in the inner side wall means and, in similar fashion, top receiving apertures 13 and 14 are formed in the outer side wall means.

At one end of the blank, inner side wall panel 6 is foldably joined to inner side wall panel 5 along interrupted fold line 15. Also bend lines 16, 17 and 18 are formed in inner side wall panel 5 and, likewise, bend lines 19, 20 and 21 are formed in inner side wall panel 6. Similar structure is disposed on the opposite side of bottom wall 1 in that outer side wall panel 8 is joined to outer side wall panel 9 along interrupted fold line 22. Additionally, bend lines 23, 24 and 25 are formed in outer side wall panel 8 and bend lines 26, 27 and 28 are formed in outer side wall panel 9.

For the purpose of transporting the carrier, hand gripping apertures 29 and 30 are formed respectively in inner side wall panels 5 and 6. Hand cushioning flaps 31 and 32 are joined respectively to inner side wall panels 5 and 6 along fold lines 33 and 34. In similar fashion, hand gripping apertures 35 and 36 are formed respectively in outer side wall panels 8 and 9 and hand cushioning flaps 37 and 38 are joined respectively thereto along fold lines 39 and 40.

According to a feature of this invention, side wall extension panel 41 is joined to the lower edge of outer side wall panel 8 along fold line 42. Additionally, cushioning panel 43 is joined to side wall extension panel 41 along fold line 44. As is apparent from Figure 1, fold line 44 is disposed perpendicular to fold line 42 and the length of cushioning panel 43 is approximately one half the length of side wall extension panel 41.

In order to form the carrier from the blank shown in Figure 1, initially it is necessary to fold inner side wall panel 6 upwardly along interrupted fold line 15 into the disposition shown in Figure 2. Then it is necessary to make

an application of glue to inner side wall 6 and outer side wall 9 as shown by stippling in Figure 2.

Thereafter the carrier inner side wall means in the form of inner side wall panels 5 and 6 together with one-half of bottom wall 1 are elevated and folded over along fold line 2 to occupy the positions as shown in Figure 3. By this operation inner side wall panel 6 is adhered to outer side wall panel 9.

Following this operation, an application of glue is made to inner side wall panel 5 and outer side wall panel 8 as shown by stippling in Figure 3. Following this the inner side wall means together with bottom wall 1 and outer side wall panel 9 are elevated along interrupted fold line 22 and folded over into face contacting glued relation with outer side wall panel 8. The blank then appears as shown in Figure 4 which represents the carrier in complete and collapsed condition.

In order to set up the collapsed carrier as shown in Figure 4, it is simply necessary to fold bottom wall 1 into a flat plane. By this operation one composite side wall in the form of inner side wall 5 and outer side wall 8 and the other composite side wall in the form of inner side wall 6 and outer side wall 9 assume an upwardly converging relationship from the respective sides of bottom wall 1. As the carrier is formed side wall extension panel 41 automatically extends downwardly from the composite side wall composed of inner side wall panel 6 and outer side wall panel 8. Following this, cushioning panel 43 is simply rotated inwardly along fold line 44 to a position substantially perpendicular to side wall extension panel 41. Then the carrier is simply pressed downwardly into locked relationship with the corresponding bottles to be

packaged as is well known. The carrier then appears as shown in Figure 5 with the cushioning panel 41 disposed between the shoulder portions of adjacent bottles.

While the invention is illustrated and described in connection with a carrier for two bottles in which a single cushioning panel is provided, it is apparent that a top gripping carrier for more than two bottles would include a plurality of cushioning panels so as to afford cushioning between each pair of adjacent bottles in a row of bottles.

By this invention an economical top gripping carrier is provided for the packaging of bottles which includes effective and convenient separation and cushioning means between the shoulder portions of the bottles.

BOTTLE CARRIER AND BLANK THEREFOR

CLAIMS

1. A bottle carrier comprising a bottom wall (1) having a plurality of neck receiving apertures (3, 4), a pair of side walls (5,8:6,9) joined respectively along their bottom edges to the side edges of said bottom wall, at least one side wall (5,8) being formed of inner (5) and outer (8) panels secured together in face contacting relation, a plurality of top receiving apertures (11-13) formed in the upper portions of said side walls and disposed respectively in aligned relationship with said neck receiving apertures, characterized by a side wall extension panel (41) joined to one of said side walls (5,8) and extending generally downwardly therefrom, and a cushioning panel (43) joined to said side wall extension panel and extending generally inwardly therefrom.

2. A bottle carrier according to claim 1, further characterized in that said cushioning panel (43) is joined to said side wall extension panel (41) along a fold line (44) disposed substantially perpendicular to the junction (42) between said side wall extension panel and said one side wall.

3. A bottle carrier according to claim 1 or claim 2 further characterized in that said cushioning panel (43) is disposed generally perpendicular to said side wall extension panel (41).

4. A bottle carrier according to any of the preceding claims, further characterized in that a medial fold line (2) is formed in said bottom wall (1).

5. A bottle carrier according to any of the preceding claims, further characterized in that a pair of hand gripping apertures (31,35: 30,36) are formed respectively in said pair of side walls.

6. A bottle carrier blank comprising a bottom wall (1) inner side wall means (5,6) foldably joined to a side edge of said bottom wall, outer side wall means (8,9) foldably joined to the opposite side edge of said bottom wall, characterized by a side wall extension panel (41) foldably joined to said outer side wall means (8) remote from said bottom wall, and a cushioning panel (43) foldably joined to said side wall extension panel.

7. A bottle carrier blank according to claim 6, further characterized in that said cushioning panel (43) is joined to said side wall extension panel (41) along a fold line (44) disposed generally perpendicular to the fold line (42) between said side wall extension panel and said outer side wall means (8).

8. A bottle carrier blank according to claim 6 or claim 7 further characterized in that the length of said cushioning panel (43) is approximately one half the length of said side wall extension panel (41).

9. A bottle carrier blank according to any of claims 6 to 8, further characterized in that a medial fold line (2) is formed in said bottom wall.

10. A carrier for an elongate flanged article such as a bottle, which carrier comprises a tubular structure having a bottom wall (1), side walls (9,8) hinged to said bottom wall, said side walls defining between them top wall means (24,22,27) remote from said bottom wall, said top wall means and bottom wall each having at least two sets of apertures (13,3:14,4) formed therein, said sets being spaced apart along the structure and the apertures of each set being aligned for receiving a part of an article within the structure such that each article has its flange engaged by respective ones (13, 14) of said top wall apertures so as to provide support for the articles, characterized in that one of said side walls (8) includes article separator means (43) hinged thereto for insertion between adjacent articles below said bottom wall.

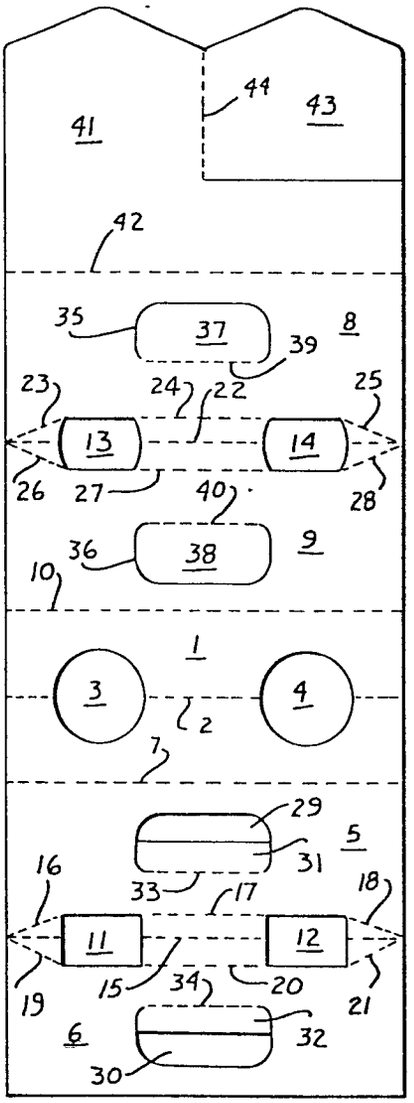
41
44
43
42
35
37
39
8
23
24
22
25
13
14
26
27
40
28
36
38
9
10
1
3
2
4
7
29
31
5
16
33
17
18
11
12
19
15
34
20
21
6
32
30

Fig. 1

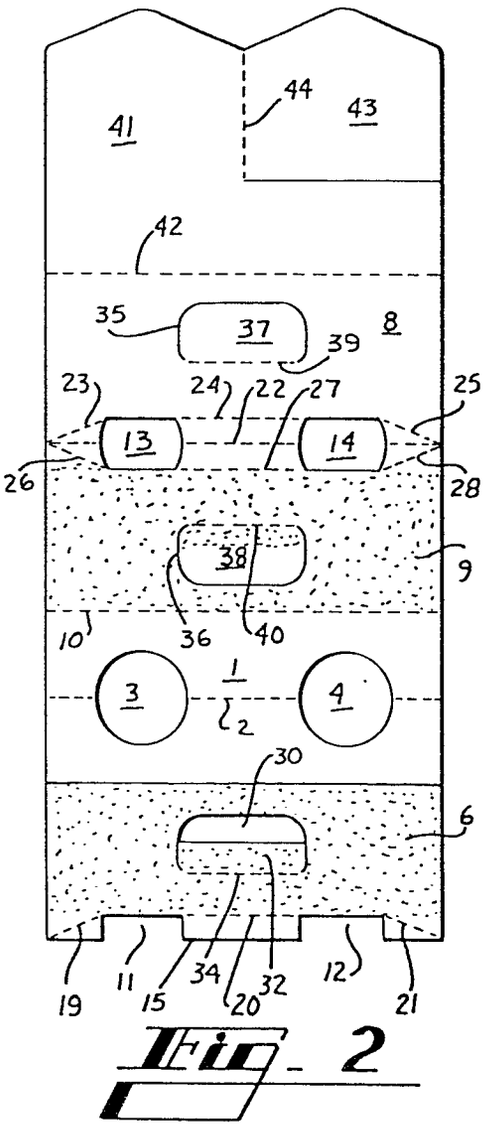
41
44
43
42
35
37
39
8
23
24
22
27
25
13
14
26
28
38
9
10
36
40
1
3
2
4
30
6
19
11
15
34
20
32
12
21

Fig. 2

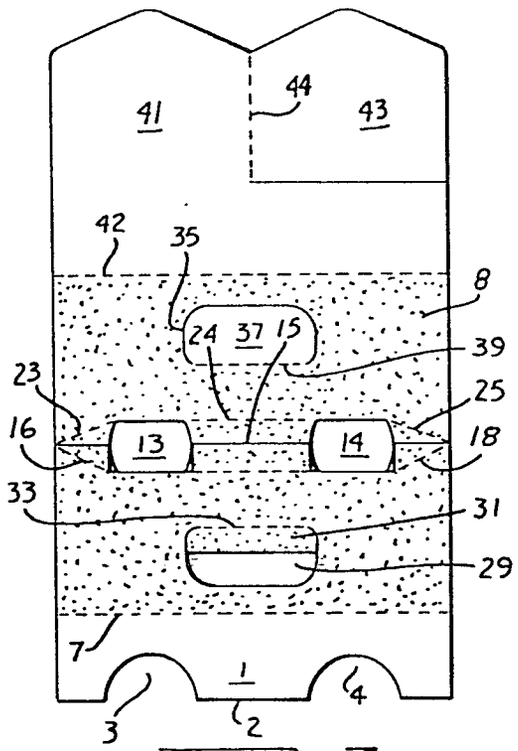

Fig. 3

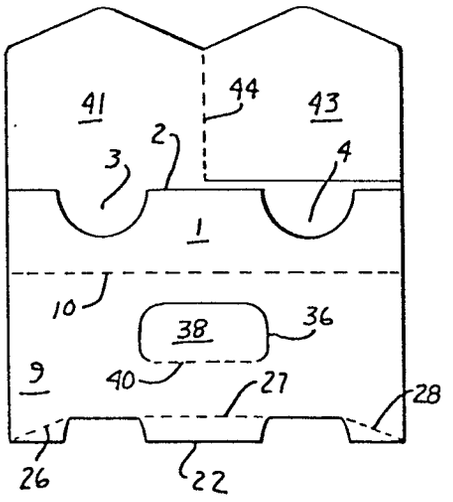

Fig. 4

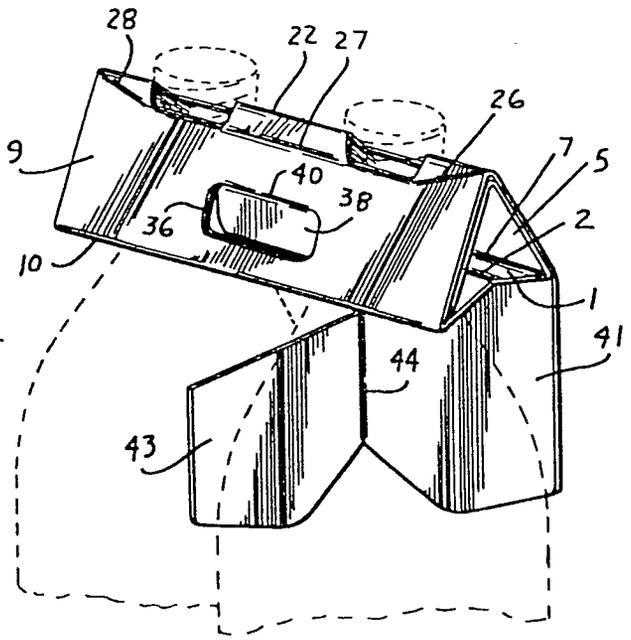

Fig. 5

0037683

European Patent Office

Application number

EP 81301303.4

EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
	US - A - 3 528 697 (WOOD) + Column 1, line 70,71; fig.1, 2 + --	1
	CH - A - 450 268 (SERAMETTA) + Fig.1 + --	1
A,D	US - A - 3 387 879 (WOOD) --	
A,D	US - A - 3 860 281 (WOOD) ----	

CLASSIFICATION OF THE APPLICATION (Int Cl ³)

B 65 D 71/00

TECHNICAL FIELDS SEARCHED (Int. Cl.³)

B 65 D 71/00
B 65 D 85/00

CATEGORY OF CITED DOCUMENTS

X: particularly relevant
A: technological background
O: non-written disclosure
P: intermediate document
T: theory or principle underlying the invention
E: conflicting application
D: document cited in the application
L: citation for other reasons

&: member of the same patent family, corresponding document

X The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	03-06-1981	JANC