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

(11) EP 0 780 320 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
25.06.1997 Bulletin 1997/26

(51) Int Cl.[6]: **B65D 71/46**

(21) Application number: **96308969.3**

(22) Date of filing: **10.12.1996**

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE

(30) Priority: **20.12.1995 GB 9526085**

(71) Applicant: **RIVERWOOD INTERNATIONAL CORPORATION**
Atlanta, Georgia 30339 (US)

(72) Inventor: **Negelen, Emanuel**
54338 Schweich (DE)

(74) Representative: **Marles, Alan David**
Stevens, Hewlett & Perkins
1 St Augustine's Place
Bristol BS1 4UD (GB)

(54) Device for retaining a plurality of bottles

(57) There is provided a paperboard clip device for retaining a plurality of bottles. The device has a first position in which it is folded substantially flat and a second position (11) in which it provides two spaced box sections (33) of a polygonal cross-section, formed by opening up outer side walls (15,16) hingedly connected to the top panel (14), base panels (18,19) hingedly connected to the respective outer side walls (15,16) and inner side walls (21,22) hingedly connected to the respective base walls (18,19). The top panel (14) and base panels (18,19) have a plurality of aligned receiving means for two rows of bottles spaced on either side of a lengthwise extending central portion of said top panel (14). Said top panel (14) incorporates finger holes (34) to enable the device (11) to be carried.

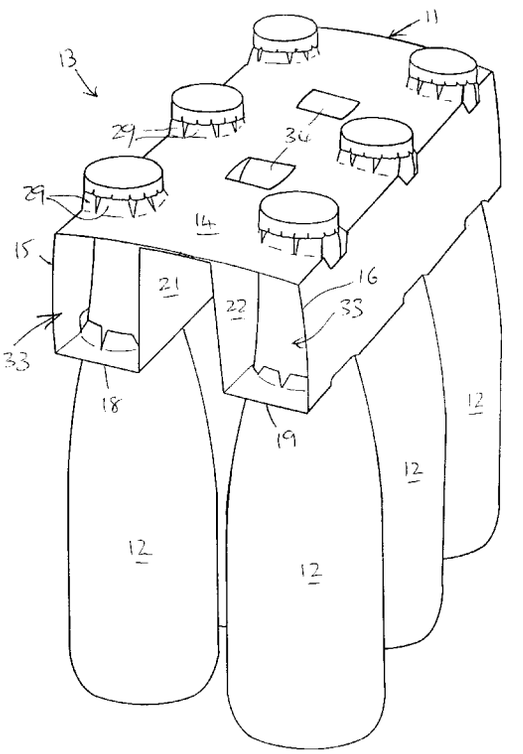

FIGURE 2.

EP 0 780 320 A1

Description

This invention relates to paperboard devices for retaining a plurality of bottles as a multipack. Each device is in the form of a pre-glued clip which is clipped on to the bottles and retained thereby.

According to the present invention there is provided a paperboard clip device for retaining a plurality of bottles, which clip comprises a top panel having a plurality of receiving means for two rows of bottles, one receiving means for each bottle, said two rows being spaced on either side of a lengthwise extending central portion of the top panel, further panels on each side of the central portion being hingedly connected to each other and extending from the top panel and including a glue section which is adhesively secured below the central portion of the top panel, the device being such that the dimensions and geometry of the further panels allow the device to have a first position in which it is folded substantially flat and a second position in which the further panels open up to form with the respective parts of the top panel on either side of the central portion two spaced box sections of polygonal cross-section, said further panels incorporating a further plurality of bottle receiving means, one further receiving means for each bottle.

Preferably when the device is in its first position no part of the device is more than a double thickness of paperboard. Conveniently the box sections are of rectangular cross-section.

In preferred arrangements each box section has an outer side wall hingedly connected to the top panel, a base panel hingedly connected to the outer side wall and an inner side wall hingedly connected to the base panel, the glue section comprising one or more panels hingedly connected to the inner side wall.

In further preferred arrangements the two glue sections do not overlap, but are both adhered directly to the underside of the top panel. With certain embodiments the panels of the glue sections abut along a central lengthwise line.

Ideally finger holes are provided in the central portion of the top panel with corresponding cut outs in the glue sections. Also at least two receiving means are provided on each side of the central portion.

A preferred feature is that each receiving means and further receiving means comprises apertures and/or paperboard formations such that the device retains the bottles.

An embodiment of the present invention will now be described in more detail. The description makes reference to the accompanying drawings in which:

Figure 1 shows a blank for producing a device according to the present invention,

Figure 2 is a perspective view of a device according to the present invention in use, and

Figure 3 is a view from below of a device according to the present invention in a folded flat condition.

In the figures there is shown a paperboard blank 10 for forming a device 11 for retaining in use a number of bottles 12 as a multipack 13. In this embodiment there are six bottles in two rows of three, but more or less bottles could be retained in each row. The blank 10 has a top panel 14, first and second outer side walls 15, 16 hingedly connected to the top panel 14 at lateral edges 17 thereof. First and second base panels 18, 19 hingedly connected to the respective outer side walls 15, 16 at folds 20 and first and second inner side walls 21, 22 hingedly connected to the respective base panels 18, 19 at folds 23. Glue sections 24 in the form of glue panels 25 are hingedly connected at folds 26 to the inner side walls 21, 22.

Bottle retaining means 27 in the form of apertures 28 and cooperating formations 29 are provided in the top panel 14 and complimentary retaining means 30 are formed in the base panels 18, 19. These types of bottle retaining means 27, 30 are well known and could be substituted with other types of retaining means.

To assemble the device 11 from the blank 10, two lines 31 of adhesive are applied to the top panel 14 on both sides of an imaginary centre line extending lengthwise along the top panel 14. The inner side walls 21, 22 and base panels 18, 19 are both folded underneath about the lines 20 so that the glue panels 25 engage the respective lines 31 of adhesive. In this arrangement the free edges 32 of the glue panels abut generally along the lengthwise centre line of the top panel 14.

In this position the device 11 is folded flat with no part of the device being thicker than a double thickness of paperboard. This makes the device 10 very well suited to compact packing ready for transportation to a point of use. At the same time, however, the attachment of the glue sections 24 under the central part of the top panel reinforces the device in an area where reinforcement is of considerable importance.

To apply the device 11 to a series of bottles, six in this case, the device is opened up such that the inner and outer side walls, base panels and top panel form a pair of spaced box sections 33 of generally rectangular cross-section. This is more clearly shown in figure 2. The sections 33 are separated by the central part of the top panel 14 which is reinforced by the glue sections 24 adhesively secured to the underside thereof. Finger holes 34 are also provided in the top panel 14 for enabling the device to be easily carried. The gaps between the glue panels 25 are aligned with these holes 34.

The device 11 can then be pressed down over the caps and necks of the bottles 12 because the upper retaining means 27 and the lower retaining means 30 are now aligned. The formations 29 engage below the caps of the bottles 12 in this particular arrangement. The result is a symmetrical multipack with good handling characteristics. A further advantage is that the fingers of the user cannot be engaged and possibly damaged by the necks of the bottles.

It will be appreciated that more than three bottles

can be incorporated in each row with minor re-design of the blank 10. Also it will be clear that the box sections 33 could be made of any polygonal cross-section as long as there is a suitable fold equivalent to fold 20 which is equidistant from the free edge 32 and the centre line of the top panel 14.

A further modification would be for the device to be made such that the glue sections 24 are continuous with the top panel 24 being cut along its centre line. Two halves of the top panel 14 would then be folded over and glued to the glue sections 24. The version with the continuous top panel may, however, be preferable as it provides a better top panel for advertising, information etc. There may also be strength advantages with the continuous top panel.

Claims

1. A paperboard clip device for retaining a plurality of bottles, which clip comprises a top panel having a plurality of receiving means for two rows of bottles, one receiving means for each bottle, said two rows being spaced on either side of a lengthwise extending central portion of the top panel, further panels on each side of the central portion being hingedly connected to each other and extending from the top panel and including a glue section which is adhesively secured below the central portion of the top panel, the device being such that the dimensions and geometry of the further panels allow the device to have a first position in which it is folded substantially flat and a second position in which the further panels open up to form with the respective parts of the top panel on either side of the central portion two spaced box sections of polygonal cross section, said further panels incorporating a further plurality of bottle receiving means, one further receiving means for each bottle.

2. A device as claimed in claim 1 wherein when the device is in its first position no part of the device is more than a double thickness of paperboard.

3. A device as claimed in claim 1 or 2 wherein the box sections are of rectangular cross-section.

4. A device as claimed in any one of claims 1 to 3, each box section has an outer side wall hingedly connected to the top panel, a base panel and an inner side wall, the glue section comprising one or more panels hingedly connected to the inner side wall.

5. A device as claimed in any one of claims 1 to 4 wherein the two glue sections do not overlap.

6. A device as claimed in claim 5 wherein the panels of the glue sections abut along a central lengthwise line.

7. A device as claimed in claim 6 wherein finger holes are provided in the central portion of the top panel with corresponding cut outs in the glue sections.

8. A device as claimed in any one of claims 1 to 7 wherein each receiving means and further receiving means comprises apertures and/or paperboard formations such that the device retains the bottles.

9. A device as claimed in any one of claims 1 to 8 wherein at least two receiving means are provided on each side of the central portion.

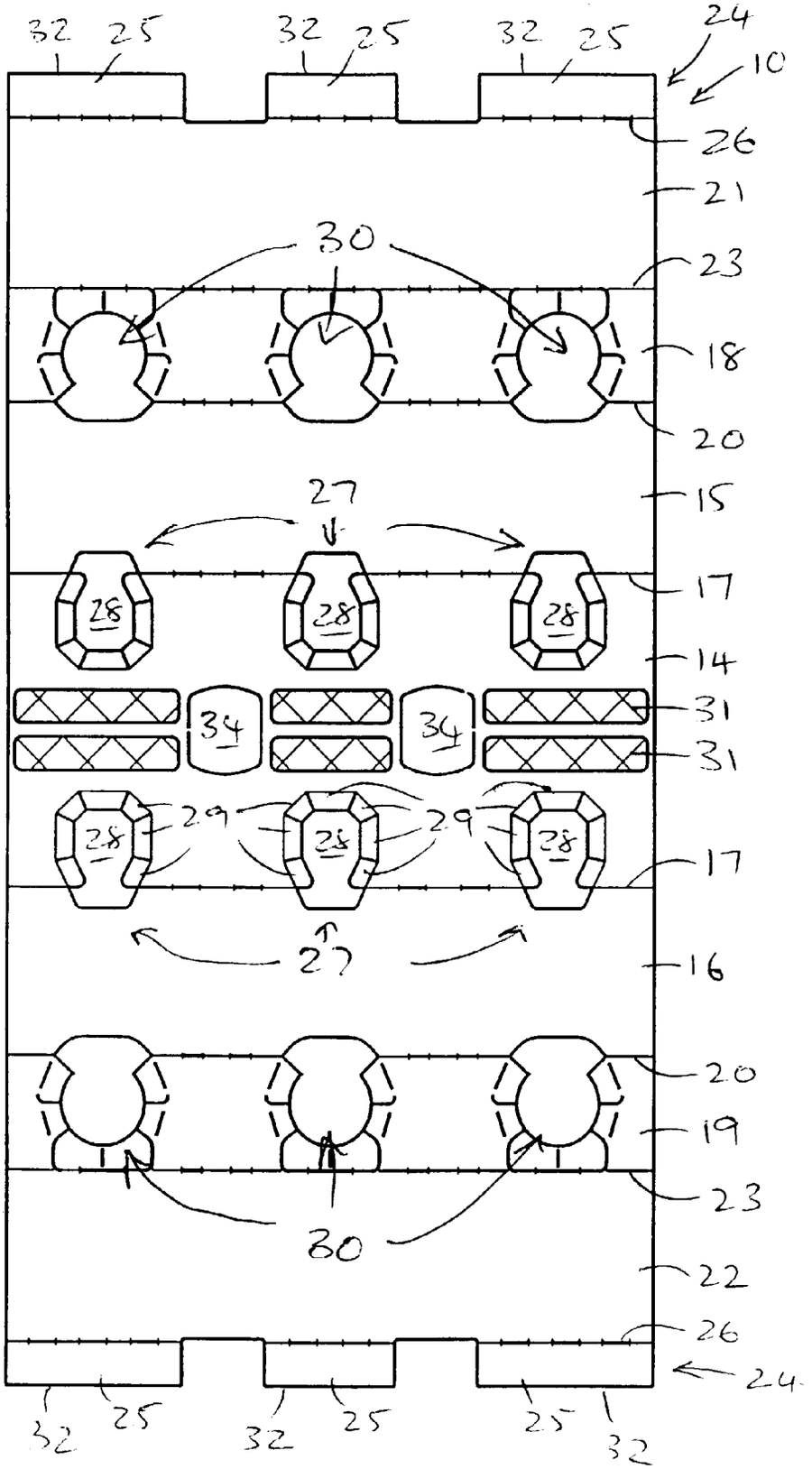
32
25
32
25
32
25
24
10
26
21
30
23
18
20
27
15
28
28
28
17
14
34
34
31
31
28
29
28
29
28
17
27
16
20
19
23
30
22
26
24
32
25
32
25
25
32

FIGURE 1

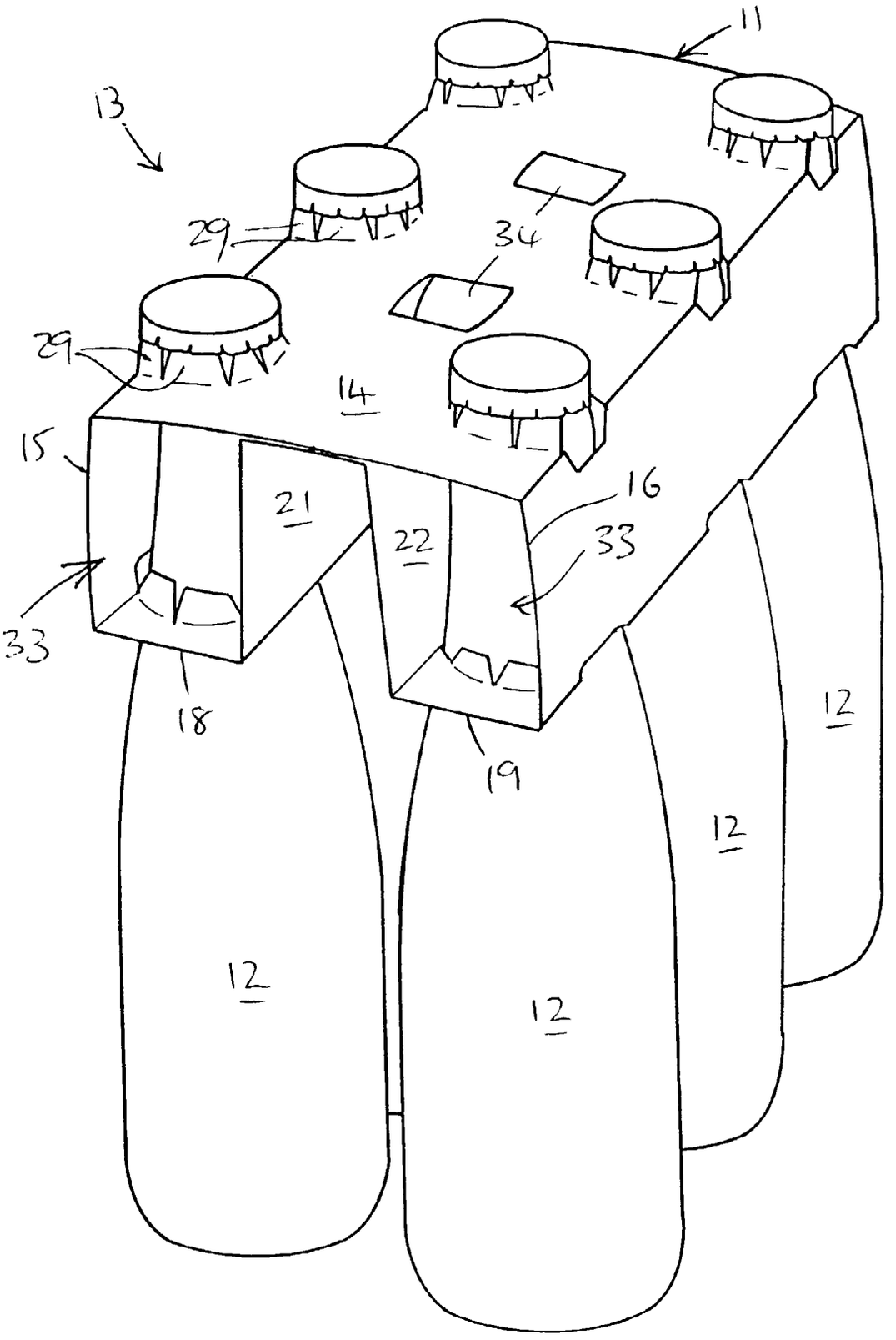

FIGURE 2

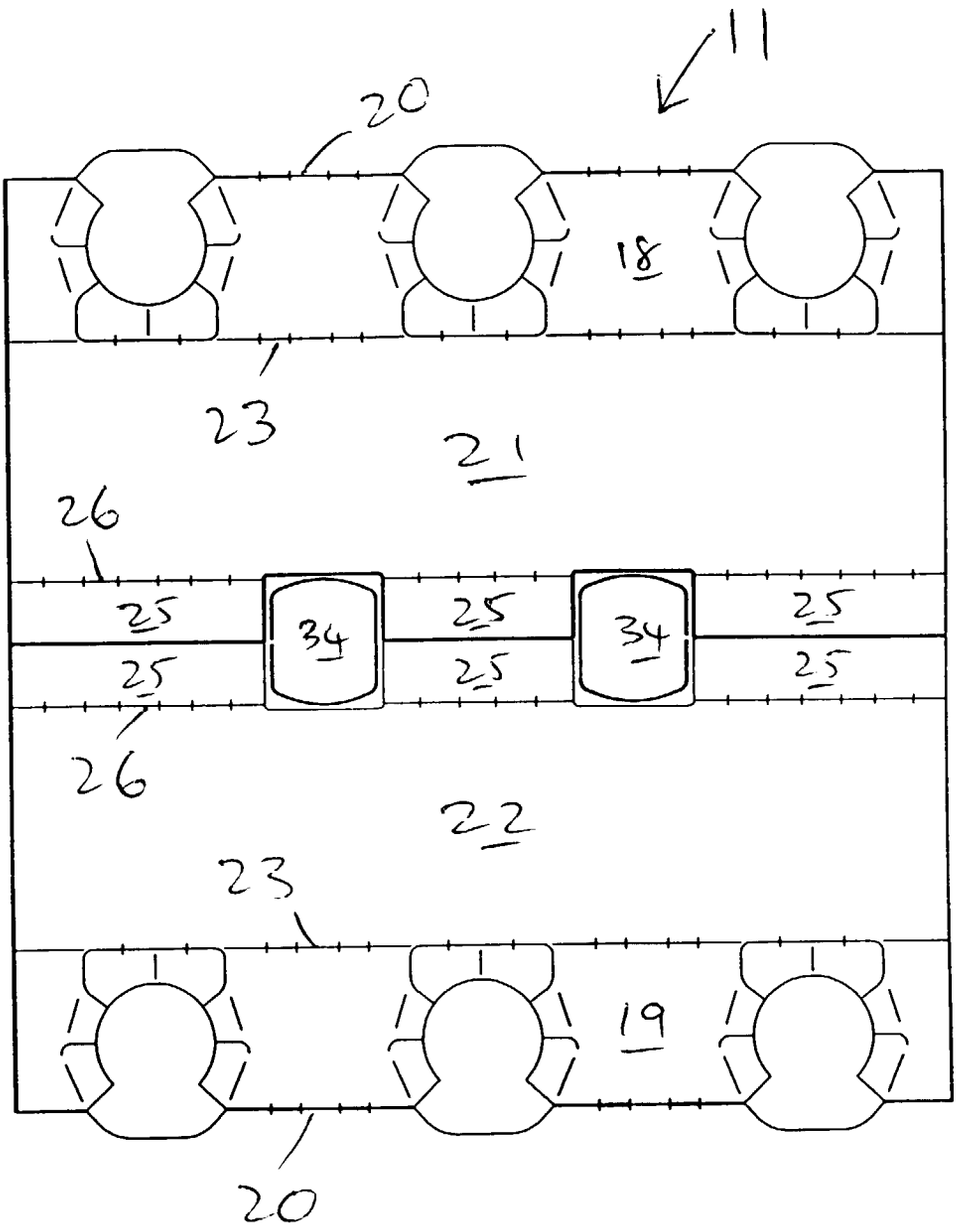

FIGURE 3

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 30 8969

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.6)
X Y	EP 0 188 327 A (MEAD CORP) 23 July 1986 * page 2, line 8 - page 3, line 22; figures * ---	1,2 3-9	B65D71/46
Y	WO 95 25691 A (MEAD CORP ;BAKX MARTINUS C M (NL)) 28 September 1995 * page 3, line 29 - page 5, line 16; figures * ---	3-9	
A	EP 0 352 589 A (UNILEVER NV ;UNILEVER PLC (GB)) 31 January 1990 * column 2, line 47 - column 4, line 7; figures * ---	1-9	
A	EP 0 189 328 A (MEAD CORP) 30 July 1986 * page 2, line 20 - line 66; figures * ---	1-9	
A	EP 0 256 496 A (UNILEVER NV ;UNILEVER PLC (GB)) 24 February 1988 * page 2, line 12 - line 55; figures * -----	1-9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	3 March 1997	Olsson, B

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

EPO FORM 1503 03.82 (P04C01)