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(54) Title: PACKAGE, CARTON AND BLANK THEREFOR

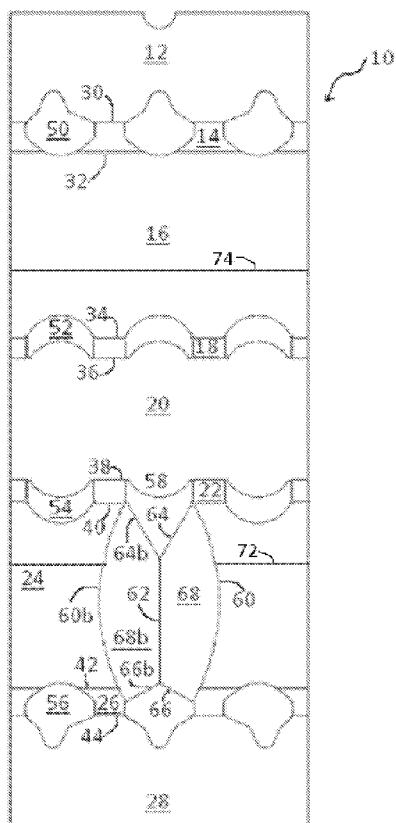


FIGURE 1

(57) Abstract: A carton for containing one or more articles, the carton comprising a series of walls for retaining said one or more articles within the carton, wherein a presentation and retention means is incorporated within one of said walls. The presentation and retention means comprises a displaceable tab (62, 68) connected to the wall (24) in which the presentation and retention means is incorporated such that once displaced to create a window for displaying an article the displaceable tab is biased to return to its original position and 10 thereby retains the displayed article within the carton. Optionally, the biasing is achieved by virtue of the connection of the displaceable tab being about a non linear hinge line. Additionally, or alternatively, this biasing is achieved by the displaceable tab being connected a hinge line (60b, 60) coextensive with the extent of the displaceable tab

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PACKAGE, CARTON AND BLANK THEREFOR

FIELD OF THE INVENTION

The invention relates to a carton having a presentation and retention window a blank for
5 forming the carton and a package comprising the carton and one or more articles.

BACKGROUND OF THE INVENTION

In the field of packaging it is often required to provide consumers with a grouped array of
articles sold for convenience as a multipack. This is desirable for the consumer who can
10 easily select and carry a number of similar items and often purchasing multi-packs is more
economical than purchasing a similar number of individual items. However such multipacks
must be provided with means for securely retaining the articles because failure of the
package can cause damage and spoiling of the goods inside.

15 It is known to inscribe packaging made of suitable material with advertising graphics and
promotional material relating to the products they contain. It is advantageous in the field of
advertising and marketing to promote goods with branding and decoration appealing to
consumers.

The present invention provides a new package with desirable benefits compared to known
20 packages, in which a presentation and retention means comprises a displaceable tab
connected to a wall in which the presentation and retention means is incorporated in such a
way that once displaced to create a window for displaying an article the displaceable tab is
biased to return to its original position and thereby retains the displayed article within the
carton.

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SUMMARY OF INVENTION

According to a first aspect, the invention provides a carton for containing one or more
articles, the carton comprising a series of walls for retaining said one or more articles within
the carton, wherein a presentation and retention means is incorporated within one of said
30 walls, said presentation and retention means comprising a displaceable tab formed from
and connected to the one wall in which the presentation and retention means is
incorporated about a connection structured and arranged such that once displaced from an
original position in which the displaceable tab lies in a plane of the one wall, a window is

created in the one wall to display an article in the window and the displaceable tab is biased to return to the original position to retain the displayed article within the carton.

5 Preferably, said connection is formed by non-linear hinge line. Optionally, the non-linear hinge line is arcuate or curved in shape.

Additionally or alternatively, the displaceable tab is connected to the wall in which the presentation and retention means is incorporated about a hinge line co-extensive with the extent of the displaceable tab

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Preferably, the connection of the displaceable tab is shaped and arranged such that once displaced, the displaceable tab provides a frame around at least a portion of the displayed article.

15 Optionally, the structural wall in which the presentation and retention means is incorporated provides a side wall of the carton and said connection extends between a top edge and a bottom edge of that side wall.

20 Preferably, the presentation and retention means comprises two displaceable tabs disposed in mirrored positions such that a retaining force is imparted onto opposite sides of a displayed article. Additionally, said two displaceable tabs provide a symmetrical frame around said displayed article.

Optionally a free edge of each of the two displaceable tabs is defined by a common cut line.

25

Optionally, the presentation and retention window comprises two displaceable tabs disposed back to back between two adjacent articles such that when displaced, one of said displaceable tabs provides a retaining frame around part of one of the adjacent articles and the other of said displaceable tabs provides a retaining frame around part of the other of
30 the adjacent articles.

Preferably the non-linear hinge line is defined by a series of folded portions interrupted by a series of half-depth cut portions.

According to a third aspect, the invention provides a blank for forming a carton in accordance with the preceding paragraphs.

5

BRIEF DESCRIPTION OF THE DRAWINGS

An exemplary embodiment of the invention will now be described with reference to the accompanying drawings, in which:

- Fig. 1 shows a plan view of a blank for forming a carton according to a first embodiment of the invention;
- Fig. 2 shows a package formed from the carton formed from the blank of Figure 1 loaded with articles; and
- Fig. 3 shows a plan view of a blank for forming a carton according to a second embodiment of the invention.

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DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

The invention relates to a presentation and retention window formed within a structural wall of a carton. Figures 1 and 2 illustrate an exemplary application of the invention to a paperboard blank for forming a carton known as a wraparound carrier. Wraparound carriers of the type depicted are wrapped around a collated group of articles and secured usually at the top or bottom of the carrier, thus forming a package. It should be understood that the invention is applicable to a wide range of types of carton and may be formed from any suitable foldable sheet material.

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Turning specifically to Figure 1, there is shown a blank 10 comprising a series of main panels for forming the structural walls of the carton 70 depicted in Figure 2. The main panels include a first bottom panel 28, first side panel 24, top panel 20, second side panel 16 and second bottom panel 12. The main panels are hinged together along fold lines 30, 36, 38 and 42. The main panels are interrupted by optional fold lines 32, 34, 40, & 44 forming bevel portions 14, 18, 22 and 26.

20

The blank shown is prepared for holding six articles (B) disposed in two rows of three articles (A) each. As such, three similar heel apertures 56, 50 are provided in each of the first and second bottom panels respectively. Likewise, three similar top apertures 52, 54 are provided on either side of the top panel 20. It is known in the art to provide such heel and top apertures 56, 50, 52, 54 in order to enable the articles (A) to be securely received within and retained by the carrier 70.

25

The fold lines 32, 34, 40, & 44 are provided in the vicinity of the heel and top apertures 50, 52, 54 and 56 respectively. The bevel portions 14, 18, 22 and 26 are provided to enable the blank 10 as it is wrapped around a group of articles (A) to closely follow the contour of the articles, specifically around the article necks and heels. This feature is optional and it is envisaged in other embodiments these fold lines 30, 32, 34, 36, 38, 40, 42, 44 and/or bevelled panels will not be included. In this embodiment additional optional horizontal fold lines 72, 74 are provided to encourage the wrap around carton 70 to follow the contour of the shoulder portion of the contained articles. These lines are optional and may be omitted or may be differently positioned according to the shape and dimension of a contained article. In the present embodiment the optional fold lines 32, 34, 40, 42 create a carton 70 having a hexagonal cross-sectional shape. This shape, particularly in relation to the first side wall 24 and upper and lower bevelled panels 22, 26 can assist in the creation of tension when the displaceable tab 68, 68b is folded inwardly of the plane of the first side wall 24. It is envisaged that in other embodiments only the cross-sectional shape of structural wall in which the presentation and retention means is formed is shaped to enhance the tension created when the displaceable tab 68, 68b is folded inwardly.

The presentation and retention window of the present invention is incorporated within one of the structural walls, in this case first side wall 24 and comprises a displaceable tab or flap 68. The displaceable tab 68 is defined in this embodiment by a curved i.e. non-linear, non-straight hinge connection 60 and cut lines 64, 62, 66. A similar displaceable tab 68b is shown in a mirrored position opposite to displaceable tab 68. The displaceable tab 68b is defined by a curved i.e. non-linear, non-straight hinge connection 60b and cut lines 64, 62, 66. The use of two displaceable tabs 68, 68b, is optional.

The non-linear hinge line is shaped such that once the tab 68, 68b is displaced to display an article (A) as shown in Figure 2, the displaceable tab 68, 68b has a natural tendency to return to its original, not-folded, planar position. Thereby the biased displaced tab 68, 68b imparts a retaining force to retain the displayed article (A) within the carton (70). During the construction of the carton 70, the displaceable tab 68, 68a is folded inwardly of first side panel 24. The non-linear nature of the hinge line causes a state of tension to be created, especially as rigid articles (A), such as bottles, brace between the top 20 and composite bottom wall formed by first and second bottom panels 28, 12. The biased tab 68, 68b provides for the secure retention of the displayed article. The hinge line can be any shape that creates such biasing to retain the displayed article and optionally is not a perfect arc or smooth curve (though such a shape for presentation purposes is preferred). Optionally the connection of the displaceable tab 68, 68b to the first side wall 24 is formed by two angle straight lines forming a shallow "<" shape. Preferably the hinge line extends between a top edge of the structural wall in which the presentation and retention window is incorporated and a bottom edge of that panel, in this embodiment between fold lines 40 and 42. Preferably, the displaceable tab 68, 68b is connected to the first side wall 24 about a hinge

connection that is co-extensive with the extent of the displaceable tab. Such a continuous connection assists in biasing the tab to return to its natural unfolded position.

Turning to the construction of a carton 70 from the blank 10 as illustrated in Figure 2, the top panel 20 is placed upon an arranged group or articles (A). Displaceable tabs 28, 28b are folded inwardly of the first side wall panel 24 about hinge line 60, 60a by mechanical means. First and second side walls 24, 16 are folded about fold lines 36, 38 into a substantially parallel relationship alongside a row of articles (A). As the open presentation window mates with an article (A), this article (A) protrudes into the presentation window. As the mechanical means releases the displaceable tabs 68, 68b, the tabs have a tendency to revert to their unfolded position and push against the displayed article thereby closing in the opening created and securely retaining the displayed article. The displaced tab provides a frame or edge around the displayed article, thus highlighting or emphasizing the product containing within the carton and presenting. First and second bottom panels 28, 12 are folded beneath the grouped articles (a) and secured together to form a composite bottom wall and thus securing the articles within the carrier 70.

It is envisaged that the carton 70 can be formed by a series of sequential folding operations in a straight line machine so that the carton is not required to be rotated or inverted to complete its construction. The folding process is not limited to that described above and may be altered according to particular manufacturing requirements.

It can be appreciated that various changes may be made within the scope of the present invention, for example, the display and retaining window comprises only one tab in some embodiments. In other embodiments, the size and shape of the displaceable tab and presentation window created is adjusted to accommodate articles of differing size or shape. In other embodiments of the invention it is envisaged that two displaceable tabs are provided back to back and each frames, retains and allows to be displayed a different article. Such an embodiment is illustrated by Figure 3, wherein a plan view of a blank for forming a carton according to a second embodiment of the invention is illustrated. In Figure 3, reference numerals similar to those used in Figure 1 have been used to denote like features, albeit the reference numerals have been raised by a factor '100' in order to highlight that they are features of the second embodiment. The back-to-back displaceable tabs are denoted by reference numeral 168 and 168b respectively. Each displaceable tab 168, 168b is defined by cut lines 162a, 162b, 164, 164b and 166, 166b and an arcuate hinged connection. Optionally, the arcuate hinge connection is defined by a series of folds 160a/160b interrupted by a series of half-depth cut lines 160c/160d. By incorporating an increased weakening of the paperboard material along the arcuate hinge connection, the displaceable tabs 168, 168b are more easily foldable. In both the first and second embodiments, the first side wall 24, 124 in which the display and retention window is formed may be caused to curve or bend convexly, as viewed from outside of the carton due to the inward folding of the displaceable tab 68, 168/168b.

In other embodiments more than one presentation and retention window is formed. Alternatively, the presentation and retention window may be formed from two displaceable tabs positioned on the same side of the carton and/or the displaceable tab may have a
5 shaped edge to accommodate a particular shape of article and/or to provide a particular shape of display window.

It will be recognised that as used herein, directional references such as "top", "bottom", "front", "back", "end", "side", "inner", "outer", "upper" and "lower" do not limit the
10 respective panels to such orientation, but merely serve to distinguish these panels from one another. Any reference to hinged connection should not be construed as necessarily referring to a single fold line only; indeed it is envisaged that hinged connection can be formed from one or more of the following, a series of short slits, a frangible line, a fold line or a fold line interrupted by a series of substantially half depth cuts (meaning incisions made into the thickness of the paperboard) without departing from the scope of the invention.

15

CLAIMS

1. A carton for containing one or more articles, the carton comprising a series of walls for retaining said one or more articles within the carton, wherein a presentation and retention means is incorporated within one of said walls, said presentation and retention means comprising a displaceable tab formed from and connected to the one wall in which the presentation and retention means is incorporated about a connection structured and arranged such that once displaced from an original position in which the displaceable tab lies in a plane of the one wall, a window is created in the one wall to display an article in the window and the displaceable tab is biased to return to the original position to retain the displayed article within the carton.
2. A carton according to claim 1 wherein said connection is formed by non-linear hinge line.
3. A carton according to claim 2 wherein the non-linear hinge line is arcuate or curved in shape.
4. A carton according to claim 1 wherein the displaceable tab is connected to the wall in which the presentation and retention means is incorporated about a hinge line co-extensive with the extent of the displaceable tab
5. A carton according to claim 1 wherein the connection of the displaceable tab is shaped and arranged such that once displaced from the original position, the displaceable tab provides a frame around at least a portion of the displayed article.
6. A carton according to claim 5 wherein the one wall in which the presentation and retention means is incorporated provides a side wall of the carton and said connection extends between top and bottom opposed edges of the one wall.
7. A carton according to claim 1 wherein the presentation and retention means comprises two displaceable tabs disposed in mirrored positions such that a retaining force is imparted onto opposite sides of a displayed article.
8. A carton according to claim 6 wherein said two displaceable tabs provide a symmetrical frame around said displayed article.
9. A carton according to either claim 7 wherein a free edge of each of the two displaceable tabs is defined by a common cut line.

10. A carton according to claim 1 wherein the presentation and retention means comprises two displaceable tabs disposed back to back between two adjacent articles such that when displaced, one of said displaceable tabs provides a retaining frame around part of one of the adjacent articles and the other of said displaceable tabs provides a retaining frame around part of the other of the adjacent articles.
11. A carton according to claim 1 wherein the non-linear hinge line is defined by a series of folded portions interrupted by a series of half-depth cut portions.

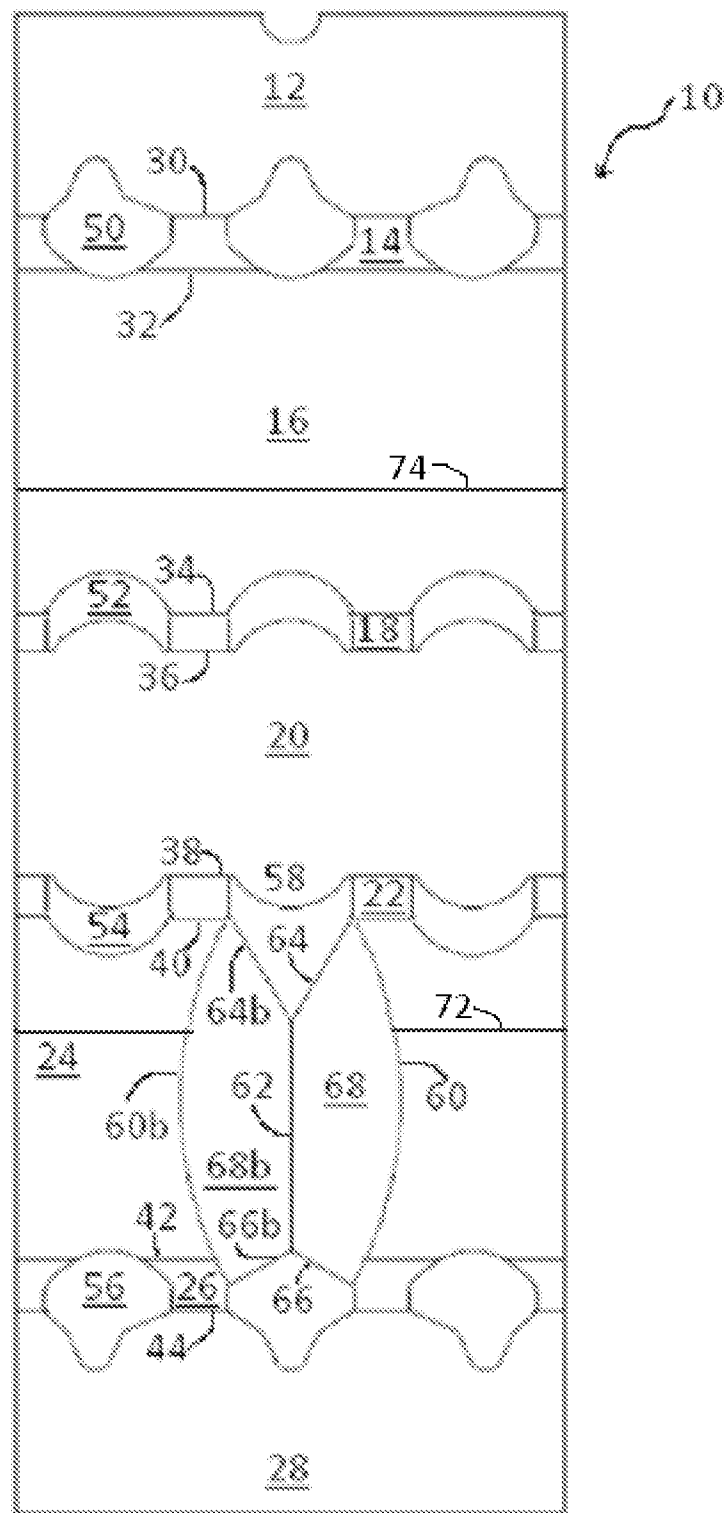


FIGURE 1

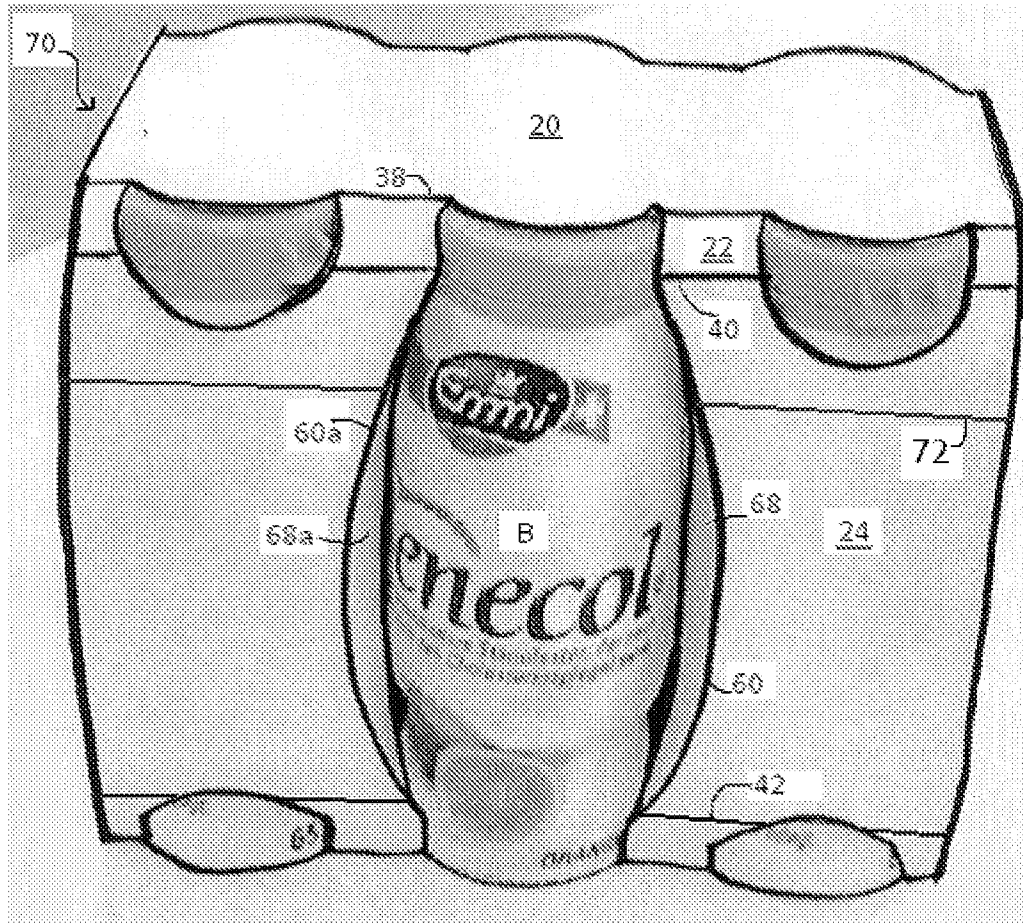


FIGURE 2

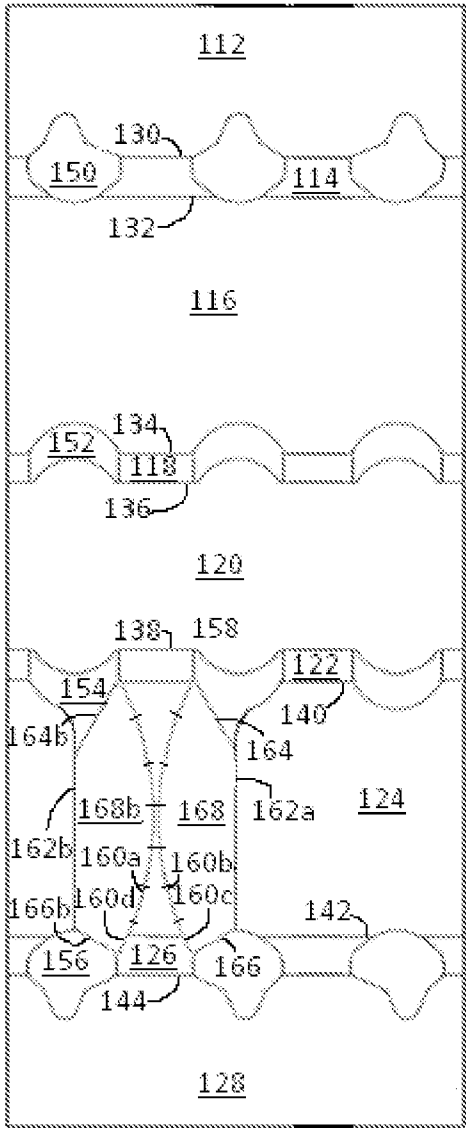


FIGURE 3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/031238

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D71/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/091193 A1 (DEBUSK PATRICK J [US] ET AL) 4 May 2006 (2006-05-04) paragraphs [0036], [0044] - paragraph [0047]; claims 1-6; figures 7,8 -----	1, 4, 5
A	EP 0 340 920 A (METAL BOX PLC [GB]) 8 November 1989 (1989-11-08) column 6, line 13 - line 45; claim 1; figures 1-3 -----	1-11
A	EP 1 533 246 A (MEADWESTVACO PACKAGING SYSTEMS [US]) 25 May 2005 (2005-05-25) paragraphs [0027], [0030] - paragraph [0034]; claims 1--5; figures 1-12 -----	1-11



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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EP 0340920	A	08-11-1989	GB 2217303 A	25-10-1989
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