

(19) AUSTRALIAN PATENT OFFICE

(54) Title
Multi-component package

(51)⁶ International Patent Classification(s)
B65D 5/35 (2006.01) 20060101AFI2007070
B65D 5/35 3BHAU

(21) Application No: 2007202712 (22) Application Date: 2007.06.13

(30) Priority Data

(31) Number (32) Date (33) Country
547917 2006.06.13 NZ

(43) Publication Date : 2008.01.03
(43) Publication Journal Date : 2008.01.03

(71) Applicant(s)
Amcor Packaging (New Zealand) Limited

(72) Inventor(s)
Pickering, Denis Peter; Porter, Grant Richard

(74) Agent/Attorney
Griffith Hack, 509 St Kilda Road, Melbourne, VIC, 3001

2007202712 13 Jun 2007

ABSTRACT

MULTI-COMPONENT PACKAGE

A multi-component package includes a blank (1) having a base (10) and fold lines (12) on either side of the base (10) to define a pair of opposed extensions (11). Each extension (11) is adapted to be secured to a face of a side panel insert (4).

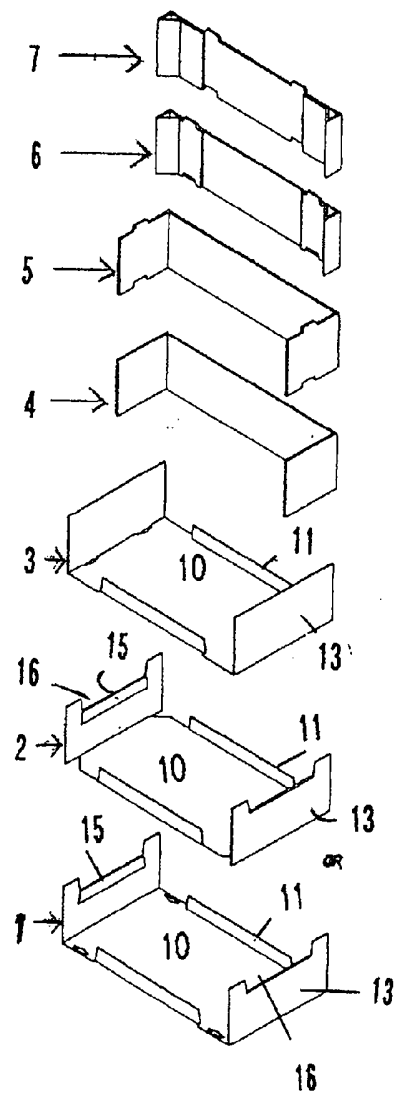


FIG 1

2007202712 13 Jun 2007

AUSTRALIA

Patents Act 1990

COMPLETE SPECIFICATION

Standard Patent

Applicant(s) :

Amtor Packaging (New Zealand) Limited

Invention Title:

Multi-component package

The following statement is a full description of this invention, including the best method for performing it known to me/us:

A MULTI-COMPONENT PACKAGE

5 The present invention relates to a multi-component package
and a machine system for the assembly of the package.

BACKGROUND TO THE INVENTION

10 To the present time numerous proposals have been put
forward for multi-component corrugated packaging whereby
typically the base and inserts can be combined to form a
resultant case having required characteristics of strength
and durability and possibly also interlocking
characteristics.

15 The present invention seeks to provide a multi-component
package, preferably of corrugated board, which will enable
multiple options in the construction of the package or
which at least will provide the public with a useful
20 choice.

Additionally or alternatively the present invention may
also provide a machine system for the assembly of a multi-
component package.

25 Further objects of this invention will become apparent
from the following description.

BRIEF SUMMARY OF THE INVENTION

30 According to a first aspect of the present invention a
multi-component package includes at least one blank
providing at least a base and fold lines either side to

define in use a pair of opposed extensions, each extension being adapted in use to be securable with a face of a side panel insert.

- 5 According to a second aspect of the present invention, there is provided a multi-component package including a blank having a base and a pair of opposed extensions extending upwardly from the base on opposite sides of the base and two side panel inserts, each side panel insert
10 being adapted to be secured to a respective extension.

According to a third aspect of the present invention a machine system for the assembly of multi-component packaging includes a means for supplying a plurality of
15 blanks, each blank providing a base and fold lines either side to define in use a pair of opposed extensions, and further includes a means for supplying a plurality of side panel inserts, each insert adapted in use to be securable with a face of a respective said insert.

20

- According to a fourth aspect of the present invention, there is provided a method of constructing a multi-component package including providing a blank having a base and two extension portions on opposite sides of the
25 base and two side panel inserts, the method including the steps of folding the extension portions so that they are upstanding from the base and securing a side panel insert to each extension portion to form the package.

- 30 Typically, the blank is formed from corrugated card or board. However, it could be formed from any other suitable packaging material, which may or may not be corrugated.

Typically, the panel inserts are formed from corrugated card or board. However, they could be formed from any other suitable packaging material, which may or may not be corrugated.

Further aspects of the invention which should be considered in all its novel aspects will become apparent from the following description.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1 Shows examples of possible inserts and main blanks using possible embodiments of the present invention;

Figure 2 Shows in greater detail the main blanks of figure 1;

Figure 3 Shows blanks for use in the inserts of figure 1.

BRIEF DESCRIPTION OF POSSIBLE EMBODIMENTS OF THE INVENTION

Referring firstly to figures 1 and figure 2, reference arrows 1, 2 and 3 show diagrammatically examples of base wraps or main blanks which may be used in the present invention. The blanks 1, 2, 3 are typically formed from corrugated card or board.

Each blank 1, 2, 3 is shown provided with a base 10 with extensions 11 defined by crease scoring along two sides of the base 10 so that when folded the extensions 11 define upwardly extending edges which can be secured, preferably

glued, to a face, suitably the inside face, of separate
sidewall panels which form a load bearing wall.

The blanks 1, 2, 3 are also shown with various alternative
5 designs of bases 10 and end panels 13.

The blank 1 is shown with crease lines 14 to provide
folded over portions 15 defining recesses 16. An
equivalent design is also shown in the blank 2.

10 The blanks 1 and 3 also have cut-outs 17 to co-operate
with interlocking lock lug extensions on adjacent
containers and in order to provide interlocking stability
between a stacked column of containers by entrapping the
15 interlocking lug extension.

The blank 2 is also shown with a cut-away corner 18 to
provide recesses also for interlocking with adjacent
containers in a stack.

20 Referring then to the inserts of figures 1 and 3,
referenced generally by arrows 4, 5, 6 and 7, it is seen
that these may be provided with various options to be
folded or shaped and thereby form various triangulated or
25 other corner post configurations to improve load bearing
capability. The inserts 4, 5, 6, 7 are typically formed
from corrugated card or board.

Thus in the insert 4, fold lines 19 are able to provide
30 flat extensions folded into the container on the side
panels.

In the insert 5 the extensions 20 are shown provided with respective top lugs 21 and bottom recesses 22 in order to provide an interlocking stability. In an alternative embodiment of insert 7 a plurality of fold lines 23 at each end are able to provide a triangulated corner post configuration and a pair of lugs and recesses 21, 22 are provided for the top and bottom edges of the insert 6. Then in insert 6 a recess 24 and lug 25 may be provided as shown at each end of the insert 6 so that when folded over as shown in figure 1 it will provide both a triangulated corner post configuration and the interlocking lug extensions and lug sockets.

It will be appreciated that the configuration of the side panel inserts may provide the beneficial feature of four clean sidewall outer panel faces which enhance the printed graphics on these faces.

Also the feature of the base panels in their various embodiments attaching to the inside face of the sidewall panels also allows to an extent loading of the side panels end flute to end flute with a minimum of compressed horizontal corrugated fluting.

In the further aspect of the present invention a machine system is provided for the assembly of a container according to any of the embodiments of the invention.

It is envisaged that the machine system may provide cartridges, or other holders, of alternative embodiments of base wraps or main blanks which can be selectively retrieved and assembled with selected inserts also

provided in appropriate cartridges or holders depending on the required characteristics of the resultant container.

Where in the foregoing description, reference has been made to specific components or integers of the invention having known equivalents then such equivalents are herein incorporated as if individually set forth.

Although this invention has been described by way of example and with reference to possible embodiments thereof, it is to be understood that modifications or improvements may be made thereto without departing from the scope or spirit of the invention.

In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprise" or variations such as "comprises" or "comprising" is used in an inclusive sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

It is to be understood that, if any prior art publication is referred to herein, such reference does not constitute an admission that the publication forms a part of the common general knowledge in the art, in Australia or any other country.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A multi-component package including at least one
5 blank providing at least a base and fold lines either
side to define in use a pair of opposed extensions,
each extension being adapted in use to be securable
with a face of a side panel insert.
- 10 2. A multi-component package including a blank having a
base and a pair of opposed extensions extending
upwardly from the base on opposite sides of the base
and two side panel inserts, each side panel insert
being adapted to be secured to a respective
15 extension.
3. A package according to claim 1 or claim 2, wherein
each extension is adapted to be secured to an inner
face of the respective insert.
- 20 4. A package according to any of the preceding claims,
wherein the extensions are secured to the respective
panel insert by an adhesive.
- 25 5. A package according to any of the preceding claims,
wherein the blank also includes two end panels, the
end panels being located on opposite sides of the
blank adjacent to the sides on which the extensions
are located.
- 30 6. A package according to any of the preceding claims,
wherein each insert has two end portions located at
opposite ends of the panel insert.

7. A package according to claim 6, wherein each end portion is securable to the blank.
- 5 8. A package according to claim 7, when dependent on claim 5 and claim 6, wherein each end portion is securable to a respective end panel.
9. A package according to any of claims 6 to 8, wherein
10 the end portions are in the form of a tubular post.
10. A package according to claim 9, wherein the tubular post is a triangular post.
- 15 11. A package according to claim 9 or claim 10, wherein the tubular post is adapted to form a corner post of the package when the panel insert is secured to the respective extension.
- 20 12. A package according to any of claims 6 to 8, wherein each end portion is substantially planar and is adapted to extend from an end of the panel insert towards the opposing panel insert when the panel inserts are secured to the extensions.
- 25 13. A package according to any of the preceding claims, wherein the package includes a lug means and a recess means, such that when another package is positioned on top of the package the lug on one of the packages
30 engages with the recess in the other package.
14. A package according to claim 13, wherein the lug and the recess are on the panel inserts.

15. A package according to claim 14, wherein a recess is also formed in the blank that corresponds with the recess on the panel insert when the panel insert is secured to the respective extension.
5
16. A package according to claim 13, wherein the lug and the recess are formed on the blank.
- 10 17. A package according to claim 13, wherein one of the lug and the recess is formed on the blank and the other of the lug and the recess is formed on the panel insert.
- 15 18. A package according to any of claims 13 to 17, wherein a number of lugs and recesses are provided on the package.
19. A package according to claim 18, wherein there are
20 four lugs and four recesses formed on the package.
20. A machine system for the assembly of multi-component packaging including a means for supplying a plurality of blanks, each blank providing a base and fold lines
25 either side to define in use a pair of opposed extensions, and further including a means for supplying a plurality of side panel inserts, each insert adapted in use to be securable with a face of a respective said insert.
30
21. A method of constructing a multi-component package including providing a blank having a base and two extension portions on opposite sides of the base and

- 5 two side panel inserts, the method including the steps of folding the extension portions so that they are upstanding from the base and securing a side panel insert to each extension portion to form the package.
- 10 22. A method according to claim 21, wherein the blank further includes end panels on opposite sides of the base adjacent to the extension portions and folding the end panel portions so that they are upstanding from the base to form end panels.
- 15 23. A method according to claim 22, wherein the ends of the side panel inserts are secured to the respective end panels.
- 20 24. A method according to any of claims 21 to 23, wherein each extension portion is secured to a face of a respective side panel insert so that in the finished package the extensions are secured to the inner faces of the side panel inserts
- 25 25. A multi-component package substantially as hereinbefore described with reference to any of the accompanying drawings.
- 30 26. A machine system for the assembly of a multi-component package substantially as hereinbefore described with reference to any one of the accompanying drawings.

2007202712 13 Jun 2007

- 12 -

27. A method of constructing a multi-component package substantially as hereinbefore described with reference to any one of the accompanying drawings.

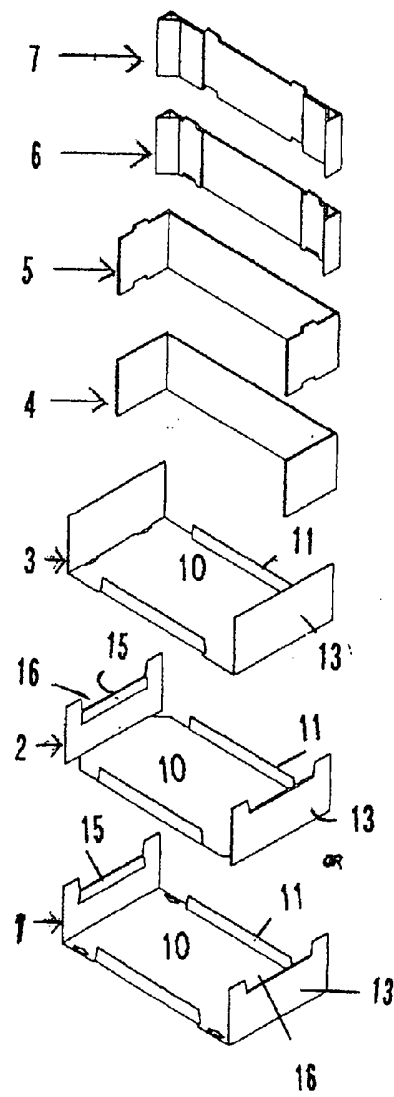
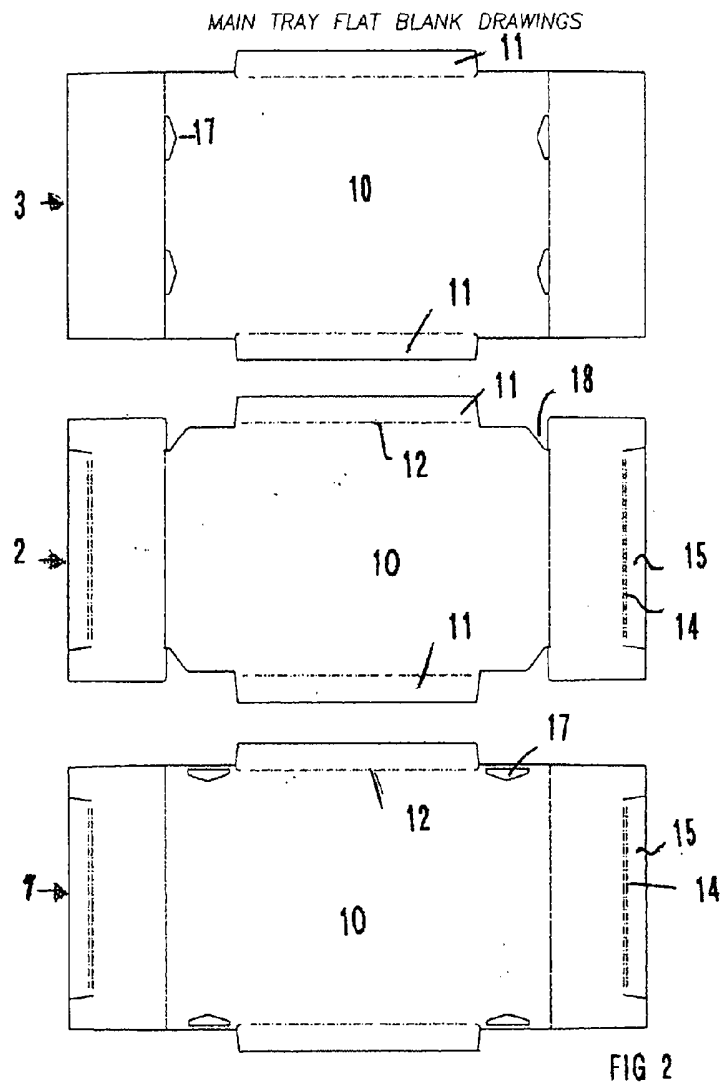


FIG 1



COMPONENT FLAT BLANK DRAWINGS

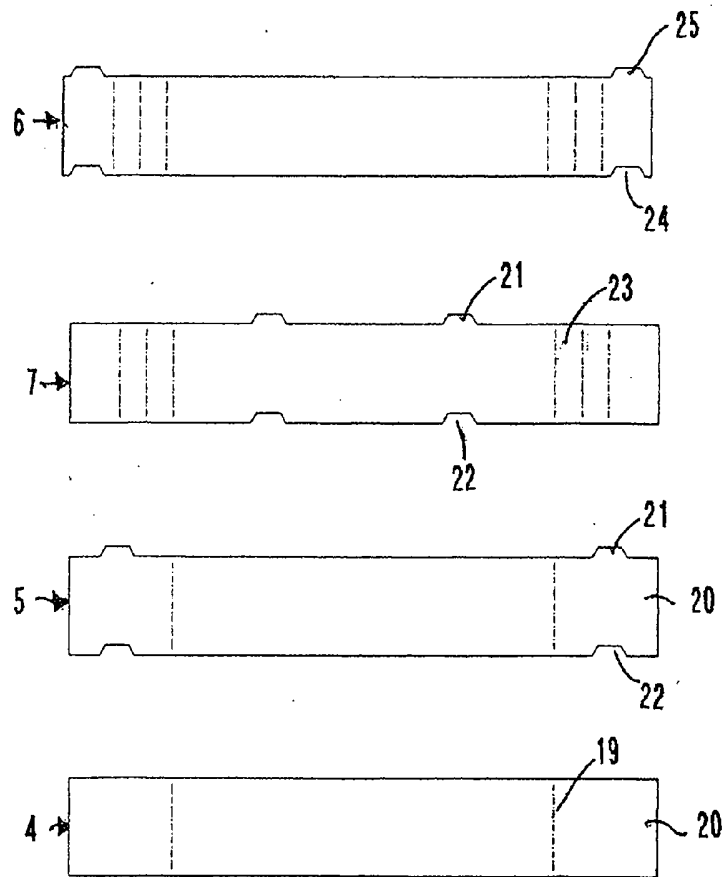


FIG 3