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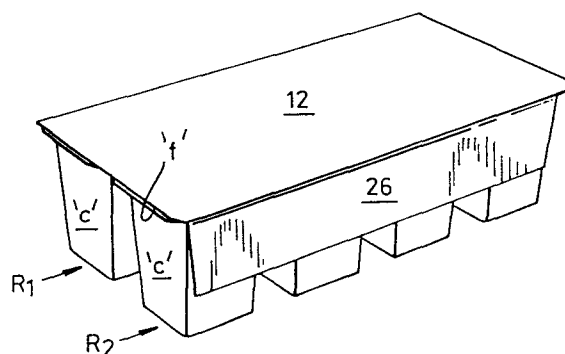
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54 **Multipacks for flanged containers.**

57 A package incorporating a group of flanged containers (c) arranged in one or more rows and in at least one tier (t), which package comprises a top panel (12) overlying the tops of the containers in the or each row of containers or of the uppermost tier of containers, side panels means (22, 26) flanking the outermost sides of the containers in each row and wherein the side panel means each include a portion (14, 16) secured to the undersides of the flanges (f) of the containers in each row thereof or at least to each row of containers in the lowermost tier (t²) of containers where more than one tier of containers is present.



-1-

MULTIPACKS FOR FLANGED CONTAINERS

This invention relates to packages each incorporating a group of flanged containers and to blanks for forming such packages.

5 One aspect of the invention provides a package incorporating a group of flanged containers arranged in at least one row, which package comprises a top panel overlying the tops of the containers in each row and side panel means flanking the exposed sides of the containers in each row, characterised in that said side panel means each include portions secured to
10 the undersides of the container flanges in each row thereof.

Another aspect of the invention provides a package incorporating a group of flanged containers arranged in at least one row and in at least one tier, which package comprises a top
15 panel overlying the tops of the containers in each row of the uppermost tier of containers, side panel means flanking the outermost sides of the containers in each row and wherein the side panel means each include portions secured to the undersides of the flanges of the containers in each row of
20 containers at least in the uppermost tier thereof where more than one tier of containers is present.

A number of packages and blanks embodying the invention will now be described by way of example with reference to the
25 accompanying drawings, in which:-

FIGURE 1 is a plan view of a blank from which a first package according to the invention is formed;

FIGURE 2 is a perspective view of the first package;

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FIGURE 3 is a schematic end view of a further package showing the means by which a blank is secured to the containers;

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FIGURE 4 is a plan view of a modified blank for forming another package according to the invention;

FIGURE 5 is a perspective view of a package formed from the blank shown in FIGURE 4;

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FIGURE 6 is a plan view of a further blank for forming a twin-tier package;

FIGURE 7 is a perspective view of a package formed from the blank shown in FIGURE 6;

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FIGURE 8 is a plan view of a modified version of the blank shown in FIGURE 6;

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FIGURE 9 is a perspective view of a package formed from the blank shown in FIGURE 8;

FIGURE 10 is a plan view of a further blank for forming a twin-tier package;

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FIGURE 11 is a perspective view of a package formed from the blank shown in FIGURE 10;

FIGURE 12 is a plan view of a still further blank for forming a twin-tier package, and

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FIGURES 13 and 14 are perspective views of a package formed from the blank shown in FIGURE 12.

Referring first to FIGURES 1 and 2 of the drawings, FIGURE 1 shows an elongate blank 10 formed from paperboard or similar foldable sheet material and which comprises a top panel 12 to each of the longitudinal edges of which is hinged integral glue strips 14 and 16 along fold lines 18 and 20, respectively. A side panel 22 is hinged to glue strip 14 along fold line 24 and a side panel 26 is hinged to glue strip 16 along fold line 28.

To form the completed package illustrated in FIGURE 2 of the drawings, the blank is applied to a group of containers 'C', which, as in this case, may each be connected to an adjacent container by its flange 'f', so that the top panel 12 lies on the tops of the containers in the group. The glue strips 14 and 16 are then brought into abutment with and secured to (as by gluing) the underfaces of the flanges 'f' of the containers in each of the rows R^1, R^2 by folding the blank along fold lines 18, 24 and 20, 28. This folding operation also brings each of the side panels 22 and 26 into abutment with the exposed faces of the adjacent containers.

FIGURE 3 is a schematic end view of a single line package in which like parts of the blank referred to above are designated like reference numerals with the addition of suffix 'a'.

In a modified embodiment, illustrated in FIGURES 4 and 5 the blank 30 is of similar construction to that previously described but has side panels comprising a series of connected flaps. The blank 30 includes a top panel 32 to each of the longitudinal edges of which is hinged integral glue strips 34 and 36 along tear lines 38 and 40, respectively. A composite side panel 42 is hinged to the glue strip 34 along fold line 44 and a composite side panel 46 is hinged to glue strip 36 along fold line 48. The side panel 42 comprises a series of flaps 50-56 connected one to the next along frangible connections 58-62. Similarly, the side panel 46 comprises a series of flaps 64-70 connected one to the next along frangible connections 72-76.

The blank is applied to a group of containers in similar manner to that described with reference to the previous embodiment. As shown in FIGURE 5 the completed package is opened by tearing away the top panel 32 along the tear lines 38 and 40 whereafter individual containers can be separated one from the other by breaking the common flanged connection of adjacent containers and the frangible connection between adjacent side wall flaps. However, a similar package having side wall flaps but without a tearaway top panel is envisaged. In such a construction, the weakened lines 38 and 40 are substituted by continuous fold lines similar to fold lines 44 and 48.

A different blank 78 shown in FIGURE 6 of the drawings is suitable for use with the two tier package shown in FIGURE 7. Blank 78 comprises a top panel 80 to each of the longitudinal edges of which is hinged upper side panels 82 and 84 along fold lines 86 and 88 respectively. Glue strips 90 and 92 are hinged to outermost edges of respective ones of the upper side panels along fold lines 94, 96 and lower side walls 98, 100 are hinged to respective ones of the glue strips 90 and 92 along fold lines 102, 104. The blank is applied to the two tier group of containers so that the top panel 80 overlies the tops of the containers in the upper tier t^1 . The glue strips are then secured as previously described, to the underside of the container flanges in the lowermost tier t^2 . Thus, the upper side walls flank the sides of the containers in the upper tier and the lower side walls flank the sides of the containers in the lower tier whereby the containers of the two tiers are held together with the containers in the upper tier seated in registry with the containers in the lower tier.

The blank 78a in FIGURE 8 of the drawings is similar to that described with reference to FIGURE 6 and like parts are designated like reference numerals with the addition of suffix 'a'. In this modified arrangement each of the upper side panels 82a and 84a is provided with a tear away strip 106,

108 defined by tear lines 110,112;114,116 respectively. The
tear lines 112 and 116 have been substituted for the fold
lines 94 and 96 of the previous embodiment. It will be
appreciated that the tear strips 106 and 108 facilitate
5 opening the package as best seen in FIGURE 9.

A further modified blank suitable for forming a two-tier
package is shown in FIGURE 10 which also is similar to the
blank illustrated in FIGURE 6 and in which like parts are
10 designated like reference numerals with the addition of
suffix 'b'. In this modification the fold lines 86,88 of the
FIGURE 8 embodiment are replaced by additional glue strips
118 and 120 defined by fold lines 86_b,122 and 88_b,124 respec-
tively. These additional glue strips are secured to the
15 undersides of the flanges in the uppermost tier t'b of the
containers as shown in FIGURE 11.

Referring now to FIGURES 12 and 14 of the drawings, FIGURE 12
shows a blank 78c which is similar to that illustrated in
20 FIGURE 6 but is modified to include end panels and in which
like parts are designated like reference numerals with the
addition of suffix 'c'. End panels 126 and 128 are hinged
to the opposite ends of the top panel 80_c along fold lines
130,132, respectively. End panel 126 includes a glue strip
25 134 defined by fold lines 136,138 and end panel 128 includes
a glue strip 140 defined by fold lines 142 and 144. The
glue strips 90_c,92_c;134,140 are secured as previously
described in earlier embodiments to the undersides of the
flanges of the containers in the lower tier t²c, so that
30 upper side panels 82_c,84_c flank the exposed sides of the
containers in the upper tier and the end panels flank the
exposed sides of the endmost containers in the upper tier.

Whereas the embodiments described herein refer to gluing of
35 the 'glue strips' to the flanges of the containers in order
to form the package, other means of securing the 'glue strips'
to the containers are envisaged. In particular it is
envisaged that the blanks may be secured to the container
flanges by way of ultra-sonic welding or by laser welding.

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-6-

In this event the paperboard may be suitably treated at least in the areas of the 'glue strips' so that the requisite weld between the blank and container flanges is achieved.

-7-

CLAIMS

1. A package incorporating a group of flanged containers arranged in at least one row, which package comprises a top panel overlying the tops of the containers in each row and side panel means flanking the exposed sides of the containers in each row, characterised in that said side panel means each include portions secured to the undersides of the container flanges in each row thereof.
2. A package according to claim 1, further characterised in that said securing portions comprise a strip of material hinged to opposed side edges of the top panel.
3. A package according to claim 1 or claim 2, further characterised in that said side panel means comprises a continuous panel flanking the exposed sides of the containers in each row.
4. A package according to claim 1 or claim 2, further characterised in that said side panel means comprises a series of flaps flanking the exposed sides of the containers in each row.

5. A package according to claim 4, further characterised in that said side panel flaps of each side panel means are connected one to the next by a frangible connection.

5 6. A package according to any of claims 2 to 5, further characterised in that said top panel detachably is connected to each of said securing strips.

10 7. A package according to claim 1, further characterised in that said package includes an upper tier of containers and a lower tier of containers, said top panel overlying the tops of the containers in the upper tier and said securing means being secured to the undersides of the containers in the lower tier.

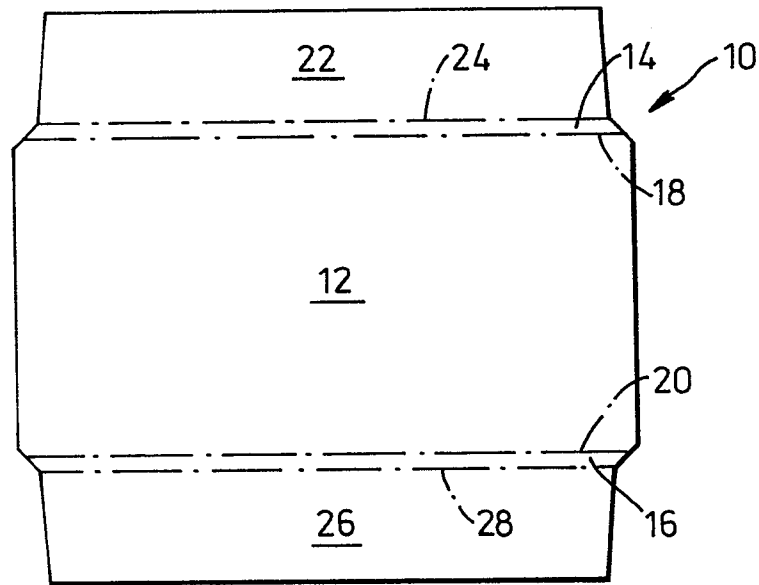
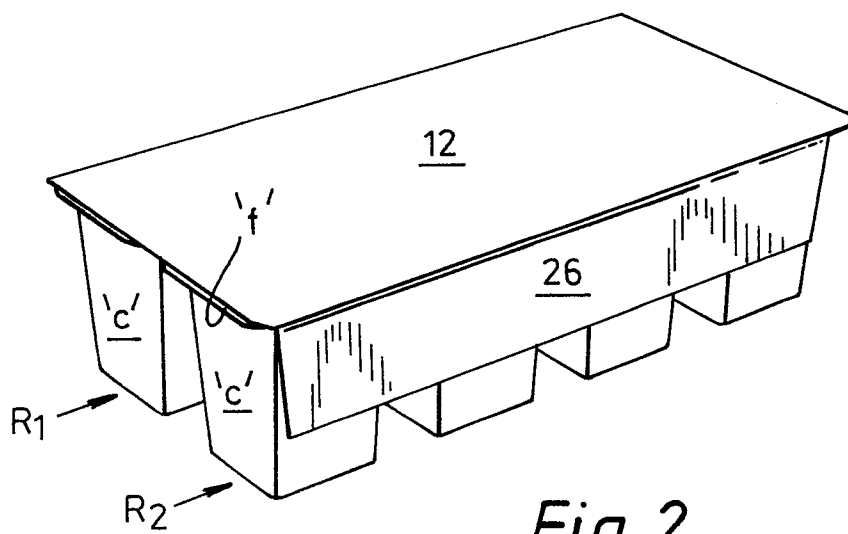
15 8. A package according to claim 7, further characterised in that said side panel means comprises upper side panels flanking the exposed sides of the containers in the upper tier and lower side panels flanking the exposed sides of the containers in the lower tier, said securing means comprising a strip of material hinged to the upper and lower side panels on each side of the package.

20 9. A package according to claim 8, further characterised in that each of said upper side panels comprises a tear away strip to allow the upper and lower tiers to be separated from one another.

30 10. A package according to claim 8, further characterised in that an end panel is hinged to opposed ends of said top panel and includes a securing strip secured to the undersides of the flanges of the endmost containers in the lower tier.

35 11. A package according to claim 8, further characterised by additional securing means comprising a strip of material hinged to opposed sides of said top panel and respective ones of said upper side panels, said additional securing strips being secured to the undersides of the flanges of the containers in the upper tier.

12. A package incorporating a group of flanged containers arranged in at least one row and in at least one tier, which package comprises a top panel overlying the tops of the containers in each row of the uppermost tier of containers, side panel means flanking the outermost sides of the containers in each row and wherein the side panel means each include portions secured to the undersides of the flanges of the containers in each row of containers at least in the lowermost tier thereof where more than one tier of containers is present.

*Fig. 1.**Fig. 2.*

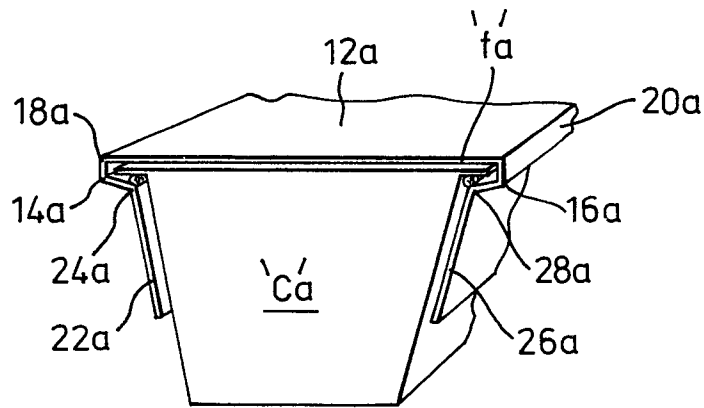


Fig. 3.

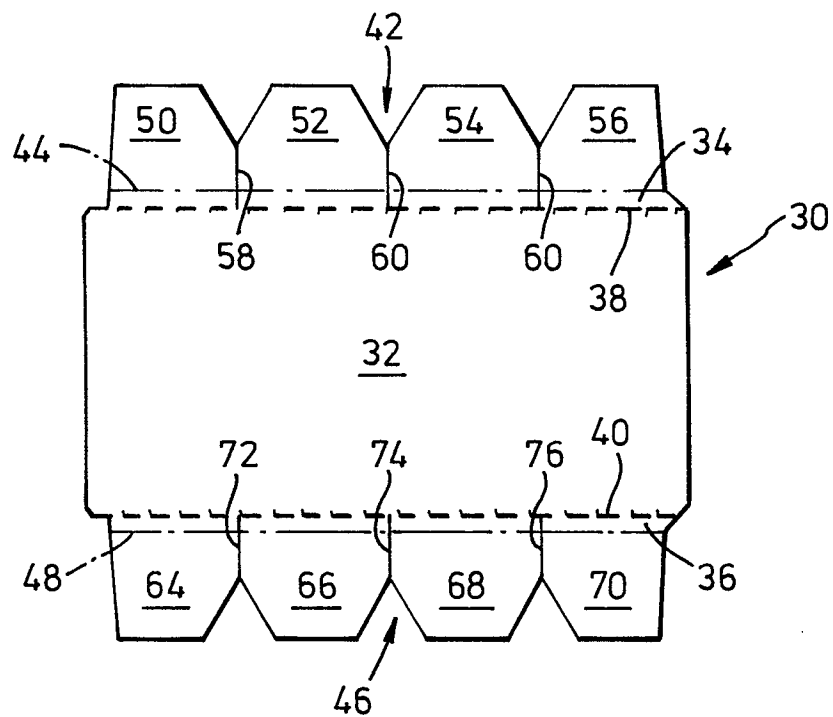


Fig. 4.

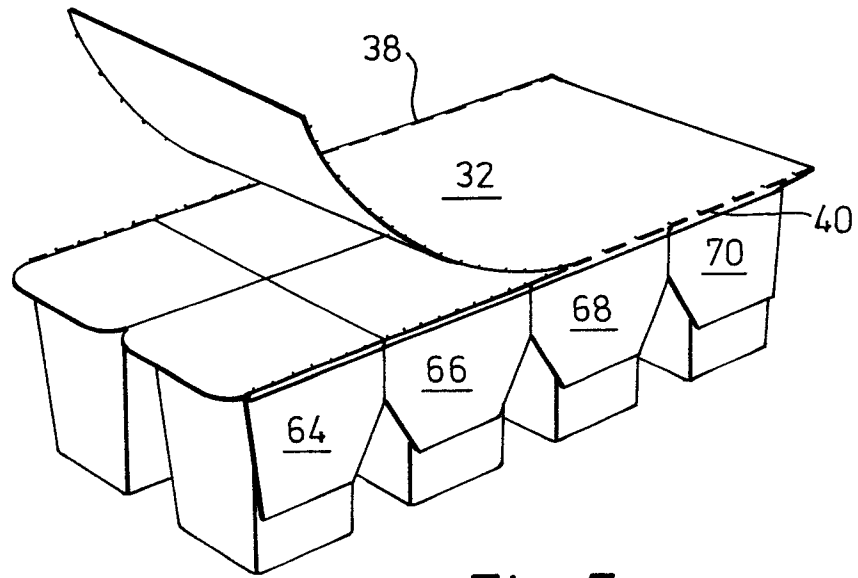


Fig. 5.

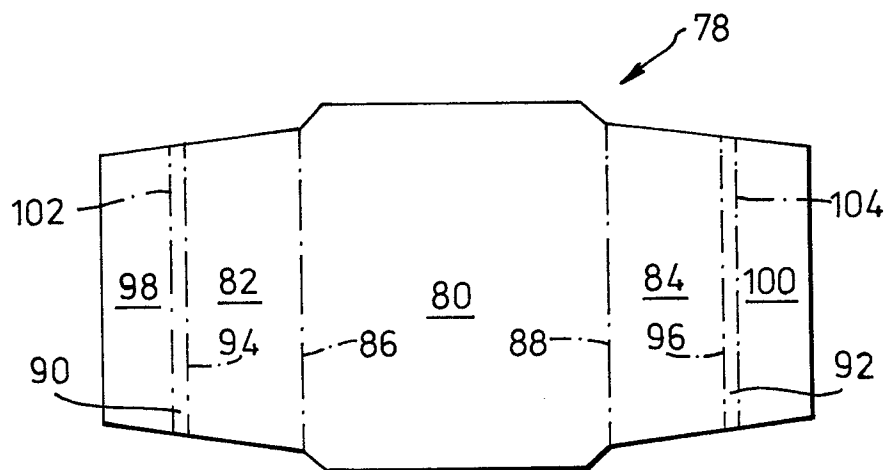
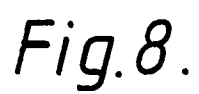
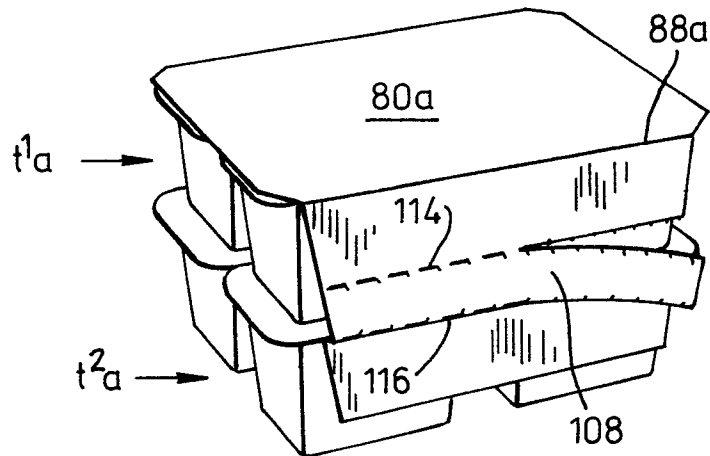
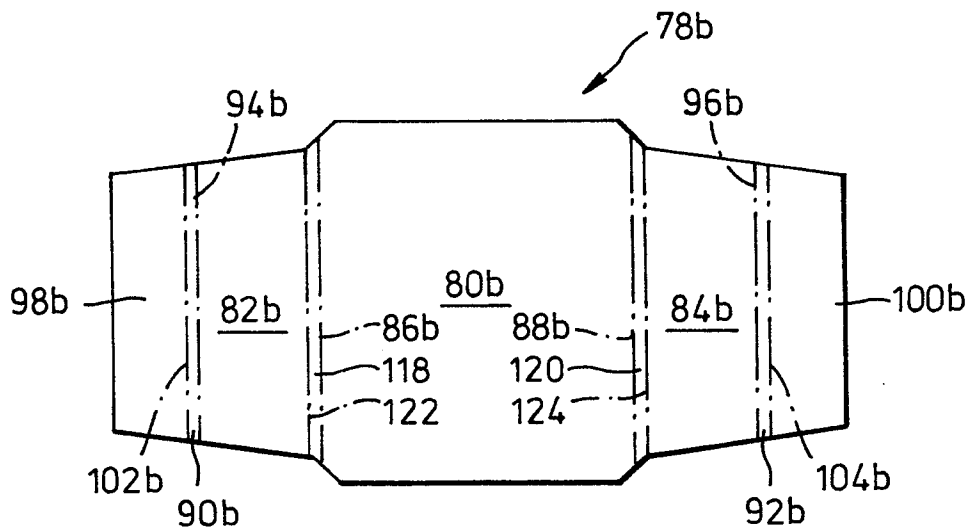


Fig. 6.



*Fig. 9.**Fig. 10.*

6/7

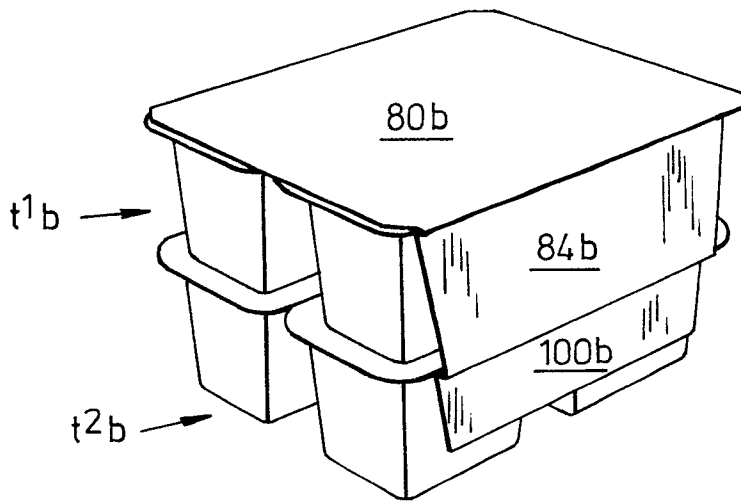


Fig. 11.

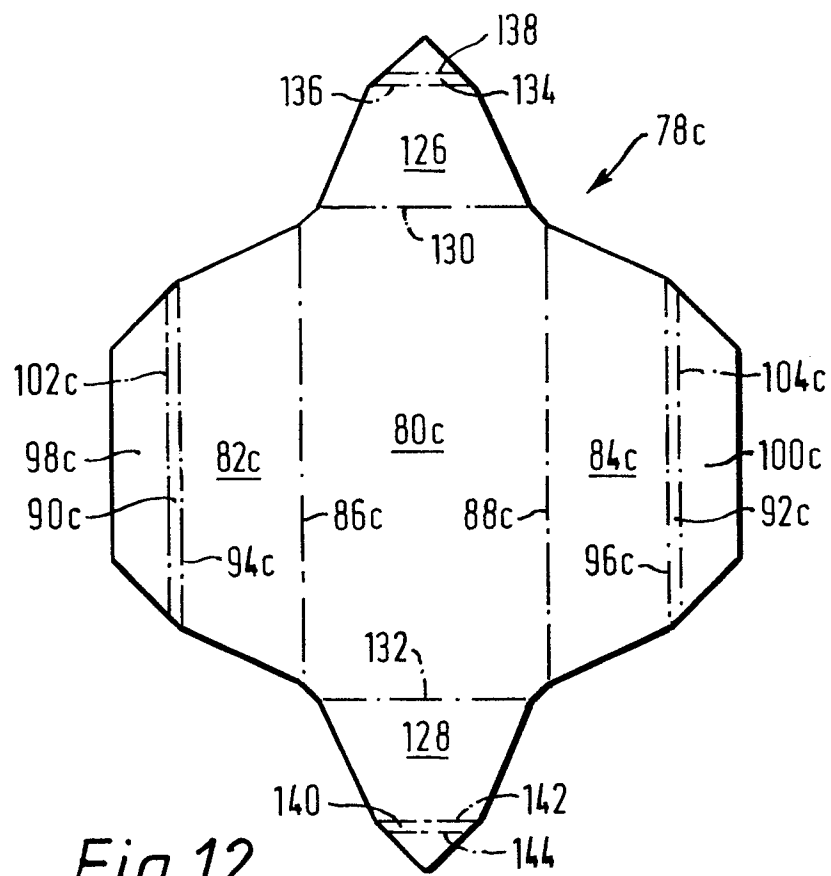
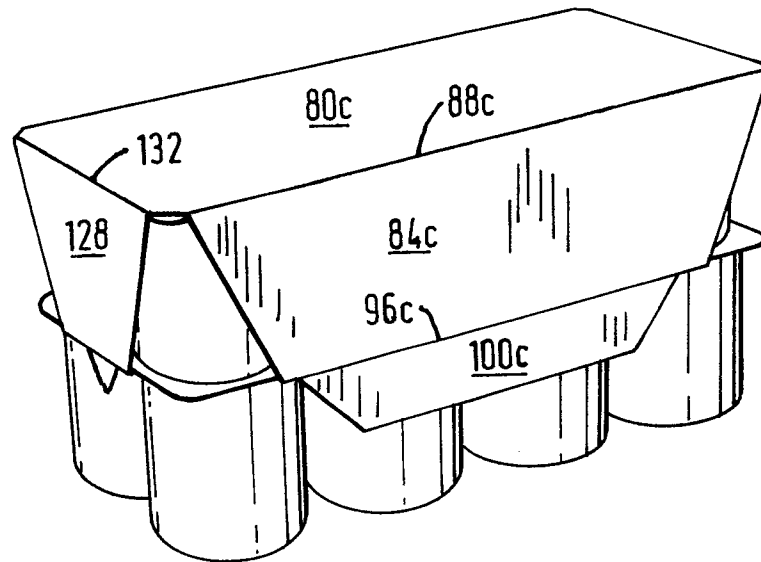


Fig. 12.

*Fig. 13.*