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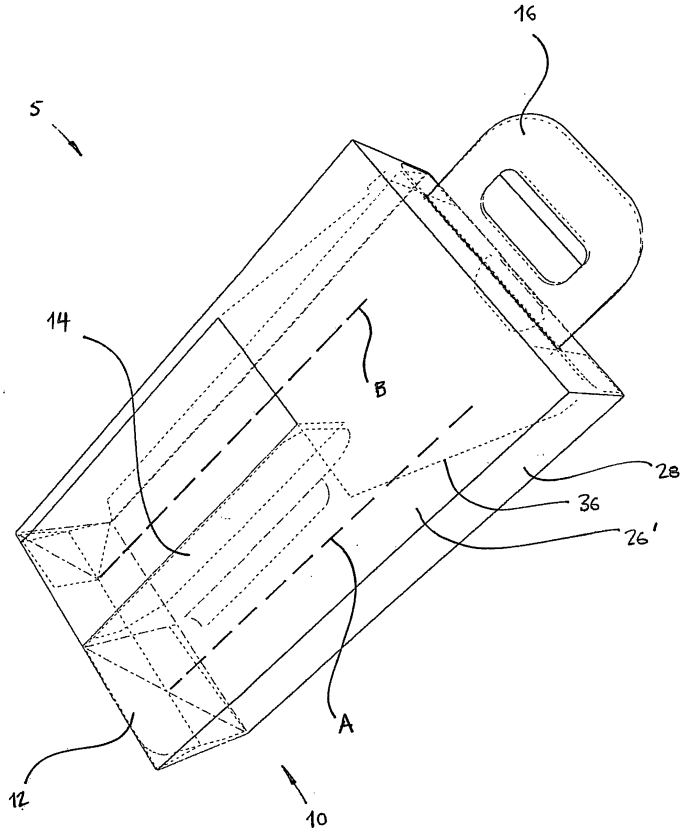
(54) Carrier

(57) A carrier (5) for a row of items such as bottles (A,B) comprises a first panel (18) having a handle (16) and being attached to a carrier base (12) adapted to support said items. A divider panel (14) adapted to separate two adjacent items in the row is attached to the carrier base (12). The first panel (18) is also fixed to the divider panel (14).

FIG.1



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Description

TECHNICAL FIELD

[0001] The present invention relates to a carrier for a row of items such as bottles.

BACKGROUND ART

[0002] US 4,403,690 discloses a carrier for beer bottles having a handle panel that is adhesively secured in an overlapping relationship to a longitudinal partition panel that serves to separate two rows of bottles within the carrier. The partition panel is provided at both ends with connecting flaps which are secured by adhesive to transverse end walls of the carrier. These latter connections require the end walls to be load bearing, which loads may lead to distortion of the exterior of the carrier. The present inventors have also established that such a construction reduces the scope for introducing apertures in those walls to allow the bottles within the carrier to be seen.

[0003] The present invention seeks to mitigate one or more of the above disadvantages.

DISCLOSURE OF INVENTION

[0004] According to the present invention, there is provided

a carrier for a row of items such as bottles, the carrier comprising:

a first panel having a handle and being attached to a carrier base adapted to support said items;
a divider panel adapted to separate two adjacent items in the row and attached to the carrier base;
the first panel being fixed to the divider panel.

[0005] Fixing the first (handle) panel to a divider panel, e.g. by adhesive such that there is substantially no relative movement of the two, allows loads to be transmitted substantially via the first handle and divider.

[0006] The carrier may comprise at least one external panel adapted to at least partially enclose said items, said external panel being attached to the carrier other than via said first panel. Such an external panel will not carry substantial loads and consequently may be provided with an aperture to allow an item to be viewed from outside the carrier. At least one external panel may be provided with a lid adapted to be releasably attached to said first panel.

[0007] The external panel may be attached to the carrier base. This base may itself comprise base panels attached to respective external panels, wherein alternate base panels are attached to a first panel or a divider panel which are in turn fixed to one another. The first or divider panel may be adapted to lie substantially parallel to the respective external panel and substantially perpendicular to that external panel adjacent the respective external panel.

[0008] The carrier may comprise four external panels each attached to a respective base panel and thence to a respective first or divider panel, wherein each first panel is fixed to only one divider panel. Alternatively, the carrier may comprise four external panels with only two adjacent panels respectively attached via a base panel to a first or divider panel.

BRIEF DESCRIPTION OF DRAWINGS

[0009] An embodiment of the invention will now be described by way of example with reference to the accompanying drawings, in which:

Figure 1 is a perspective view from the front of a first embodiment of a carrier according to the present invention;
Figure 2 is a partially-assembled perspective view of the net of the carrier of figure 1 as seen from the top;
Figure 3 shows the net of the carrier of figures 1 and 2;
Figure 4 is a perspective view from the top of a second embodiment of the carrier of the present invention;
Figure 5 is a partially-assembled perspective view of the net of the carrier of figure 4.
Figure 6 is a perspective view from the side of a third embodiment of the carrier of the present invention;
Figure 7 is a view from the top of the embodiment of figure 6.

DETAILED DESCRIPTION OF SPECIFIC EMBODIMENTS

[0010] Figure 1 is a perspective view from the front of a first embodiment of a carrier 5 according to the present invention, with internal detail being shown by dashed lines. A row 10 of two bottles (indicated by lines A and B) is supported by a carrier base 12, with the two bottles being separated by a divider panel 14. The top of the carrier 5 is provided with a handle 16.

[0011] Figure 2 is a partially-assembled perspective view of the net of the carrier 5 of figure 1 as seen from the top. Handle 16 is formed at the top edge 20 of a substantially planar first panel 18 which is also attached at its bottom edge 22 to the carrier base 12. In accordance with the invention, first panel 18 also has a connection tab 24 which is fixed, e.g. by means of adhesive, to the divider panel 14 which in turn is also attached to the carrier base 12. Such fixing substantially prevents relative movement of the divider and first panel and allows the weight of the carried items to be transferred via the divider and first panel from the base to the handle.

[0012] The carrier has one or more external panels (front and rear panels 26, 26', end panels 28, 28') adapted to at least partially enclose the items to be carried. Panels

26,26',28,28' may be attached to the carrier base12 but are not attached to the first panel 18 and as such carry little or no weight. Consequently, they all hold their shape under load, allowing for a proper visual pack with no distortion. The absence of significant loading also means that they can be provided with one or more very large apertures (indicated by dashed line 55 in figure 3 referred to below) to allow an item to be viewed from outside the carrier.

[0013] The carrier may be provided with a top lid 30 having a centrally-located handle slot 32. In order for handle 16 to pass through the slot, it will be evident that the upper region 36 of the first panel 18 may be angled, as shown more clearly in figure 1. For balance, a second handle 16' may also be provided on an angled flap 38 at the top edge of the front panel 26. For extra strength, this handle may have a two-ply construction as shown more clearly in figure 3. To keep the lid closed, it may be provided with a tab 34 which engages with a slot 40 in the top edge of the front panel.

[0014] A tab 44 may also be provided on the divider 14 to engage with a vertical slot in the front panel 26 and thereby hold the divider in place relative to the front panel. Alternatively, tab 44 may be adhered to the rear of panel 26. In the embodiment shown, there are no other direct connections between the load-bearing elements 14,18 and the external carrier walls which simply wrap around and are secured by tab 54.

[0015] Figure 3 illustrates the net of the carrier of figures 1 and 2, from which it is evident that the carrier base may be made up of panels 46, 48, 50 and 52 which are integral with the sides, as is conventional. To allow the carrier to be collapsed when not in use, base panels 46 and 50 are fixed to respective adjacent base panels 48 and 52 by means of adhesive applied as indicated at '*' to respective corner regions 46' and 50' which can fold relative to the main panels 46 and 50 thanks to fold lines 47 and 51.

[0016] Advantageously, some of the adhesive locations for the base and divider panels are substantially in line during manufacture, allowing them to be applied by a single adhesive gun. Thus a single gun can be used to apply the adhesive for attaching panel 24 to panel 14 and for attaching panel 46 to panel 48. A second gun can be used to apply the adhesive for attaching panel 50 to panel 52 (and, in the second embodiment described below, for attaching panel D to panel D1). Tab 54 may be glued to panel 28' either by a glue wheel or gun.

[0017] Figure 4 is a perspective view from the top of a second embodiment of the carrier of the present invention for carrying two rows 10,10' of two bottles (indicated at A,B and A',B' respectively). Figure 5 is a perspective exploded view of the carrier of figure 4.

[0018] As in the first embodiment, the bottles in each row 10,10' are separated by a divider panel 14,14' which is attached to the carrier base 12. Each divider panel 14,14' is also fixed - e.g. by adhesive - to the connection tab 24,24' of a respective first panel 18,18'.

[0019] As shown in figure 5, the carrier base 12 comprises base panels 80,82,84,86 attached to respective external panels 70,72,74,76, wherein alternate base panels 82,86; 80,84 are attached to a first panel 18,18' or a divider panel 14,14'. These are in turn fixed to one another, 'C' being glued to 'C1' and 'D' being glued to 'D1'. It will be noted, however, that each first panel is fixed to only one divider panel so that C or C1 are not fixed to D or D1.

[0020] Each first panel 18,18' is attached to the carrier base 12 and has a handle 16,16' at its top edge. When assembled, first panels 18,18' with their respective handles 16,16' lie back to back as shown in figure 4. It will be seen that each first panel 18, 18' or divider panel lies substantially parallel to its respective external panel and substantially perpendicular to that external panel adjacent the respective external panel. This is to be contrasted with the first embodiment where only two adjacent external panels 26,28 are respectively attached via a base panel 46,48 to a first panel 18 or divider panel 14, the other external panel 26 wrapping behind the first handle panel 18.

[0021] A flap 60 in the handle aperture 62 of panel 18 can then be folded through the handle aperture 62' of panel 18' to help secure the two panels 18,18' together. As in the first embodiment, the weight of the bottles or other items in carrier is transferred from the carrier base 12, via the glued and fixed dividers 14,14' and first panels 18,18' to the handles 16,16'.

[0022] As shown in figure 5, dividers 14,14' and first panels 18,18' are respectively formed integrally via fold lines with panels 80,82,84 and 86 which, when assembled, form the load-bearing base 12 of the carrier. Base panel glue locations and fold lines may be chosen to permit the carrier to be collapsed, as in the first embodiment described above. Also formed integrally via fold lines with these base panels are external panels 70,72,74 and 76 which wrap around the central load-bearing assembly of dividers and first panels and are secured e.g. by adhesive using tab 78. At the top of the external panels 72 and 76 are arranged, via flaps 90 and 92, additional handles which can be folded to lie alongside handles 16 and 16'.

[0023] The alternate external panels 70,74 are provided with lids 30,30' which are in turn provided with slots 94 through which the handles pass when the lids are closed. It will be appreciated that, as in the first embodiment, these further handles and slotted lids allow the tops of the external walls to be releasably attached to the first (handle) panel, thereby holding those walls in place when the carrier is closed.

[0024] Moreover, since the external walls do not carry any substantial load, each wall can be provided with a large aperture (indicated e.g. by dashed lines at 96) to allow the items in the carrier to be viewed.

[0025] The second embodiment is advantageously made of 570 sus wback card and has a height of 300mm and width and depth each of 165mm, thus making it suitable for carrying wine bottles. However, the invention is

in no way restricted to such materials, dimensions or proportions. For example, the handle of the first panel may be a plastic construction attached e.g. to the top edge 20 of the first card panel 18 of the embodiment of figure 2.

[0026] Alternatively, a flexible cord handle may be used, the two ends of the cord being respectively attached to two holes 100 in the top of divider panel 14 as shown in figures 6 and 7. The cord may comprise inter alia rope, plastic, string, metal or carbon. Unlike the first embodiment described above, divider panel 14 reaches to near the top of the carrier 5 rather than midway.

[0027] The carrier of figures 5 and 6 also has two lids 30 and 130. Top lid 30 is formed with a top handle slot 32 comprising two holes 110 for the cord (not shown) linked by a slit 120 to allow the cord to be passed through the lid but without disturbing its aesthetics. Lower lid 130 is not visible when the carrier is assembled and can therefore be formed with a simpler rectangular handle slot 140. To keep the carrier closed, top lid 30 is provided with a tab 34 for engagement with a slot 40 at the intersection of the lower lid 130 and front panel 26

[0028] Whilst the transport of bottles has been described, the invention is equally applicable to the transport of other items including cans and boxes. Similarly, although the invention has been described with regard to two and four bottle carriers having one or two rows of two items respectively, it will be appreciated that the invention may be applicable to one or a plurality of rows of more than two items.

[0029] It should be understood that this invention has been described by way of examples only and that a wide variety of modifications can be made without departing from the scope of the invention.

Claims

1. Carrier for a row of items such as bottles, the carrier comprising:

   a first panel having a handle and being attached to a carrier base adapted to support said items;
   a divider panel adapted to separate two adjacent items in the row and attached to said carrier base;
   the first panel being fixed to the divider panel.

2. Carrier according to claim 1 and comprising at least one external panel adapted to at least partially enclose said items, said external panel being attached to the carrier other than via said first panel.

3. Carrier according to claim 2, wherein said external panel has an aperture to allow an item to be viewed from outside the carrier.

4. Carrier according to claim 2 or claim 3, wherein said external panel is attached to the carrier base.

5. Carrier according to claim 4, wherein the carrier base comprises base panels attached to respective external panels, wherein alternate base panels are attached to a first panel or a divider panel which are in turn fixed to one another.

6. Carrier according to claim 5, wherein the first or divider panel is adapted to lie substantially parallel to the respective external panel and substantially perpendicular to that external panel adjacent the respective external panel.

7. Carrier according to claim 6 and comprising four external panels each attached to a respective base panel and thence to a respective first or divider panel, wherein each first panel is fixed to only one divider panel.

8. Carrier according to claim 6 and comprising four external panels, wherein only two adjacent panels are respectively attached via a base panel to a first or divider panel.

9. Carrier according to any one of claims 2 to 8, wherein at least one external panel is provided with a lid adapted to be releasably attached to said first panel.

FIG.1

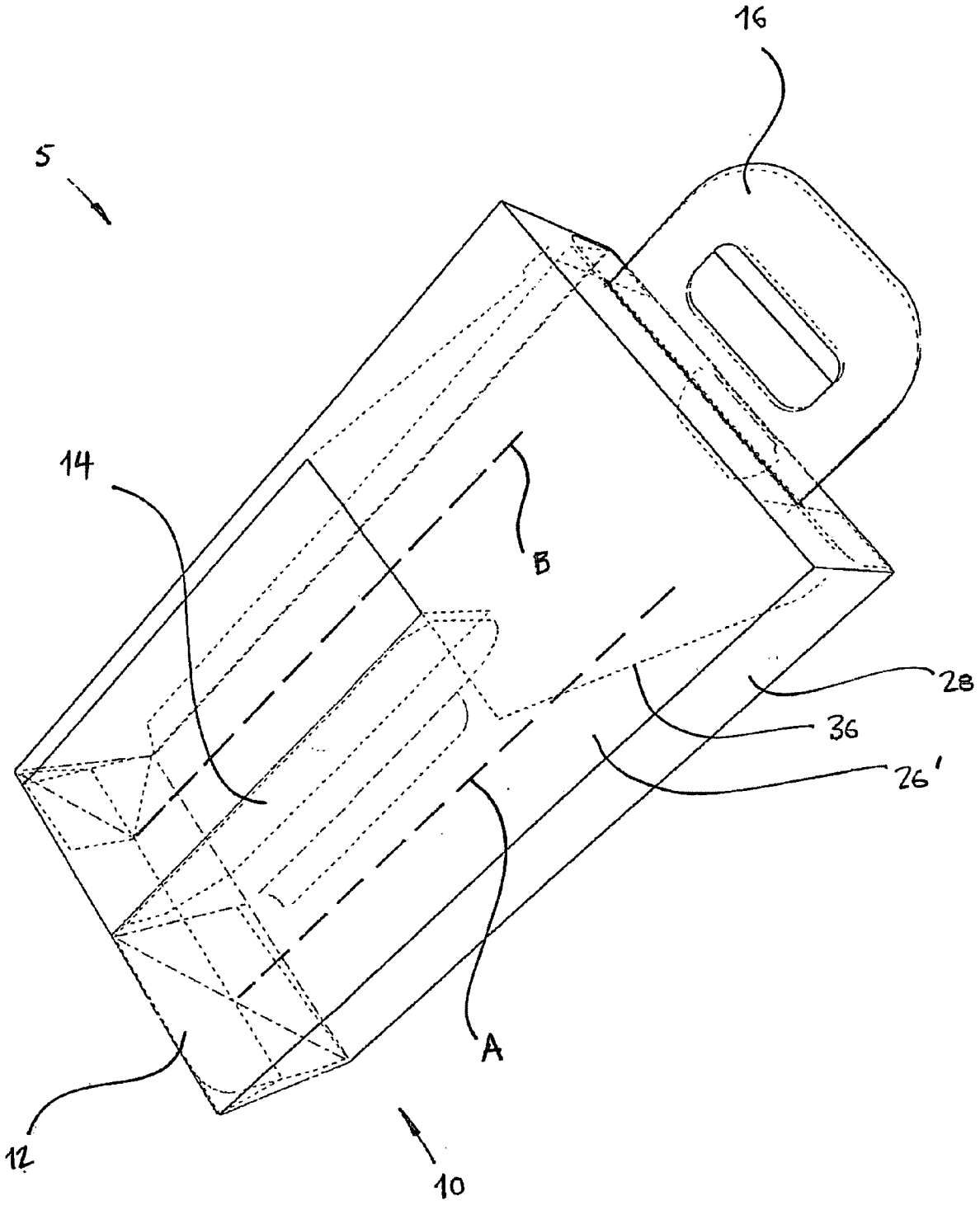

FIG. 2

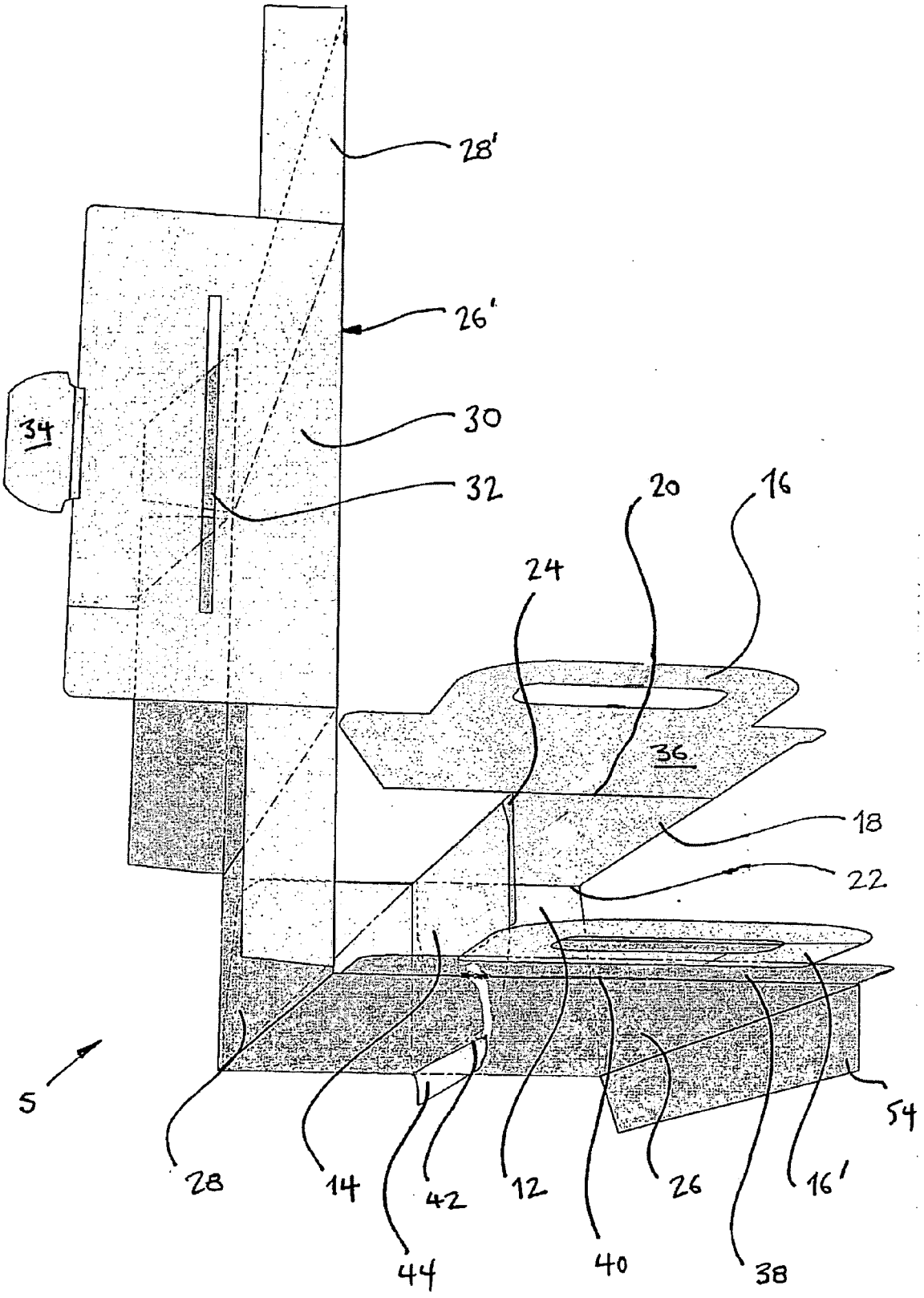

FIG. 3

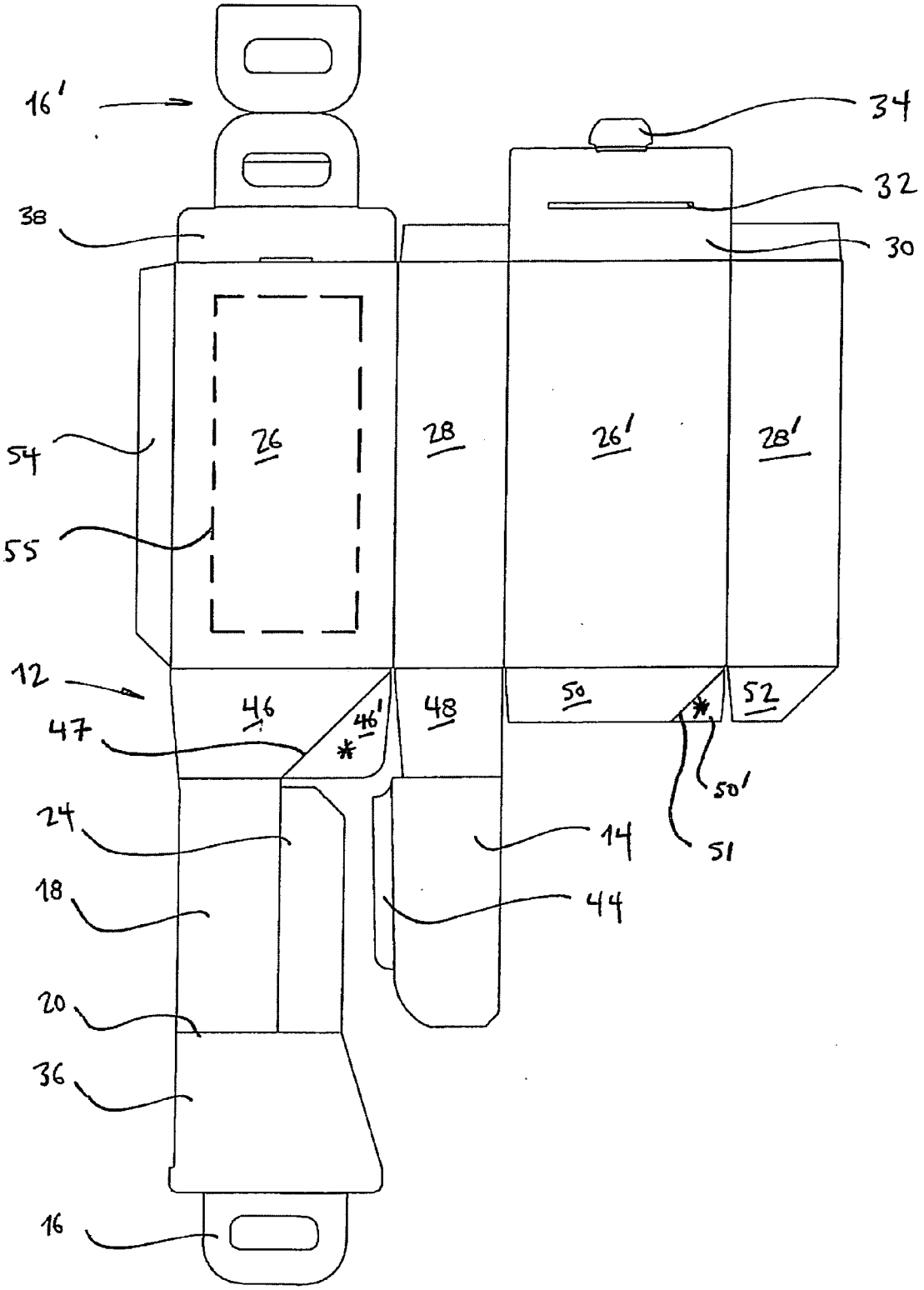
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FIG. 4

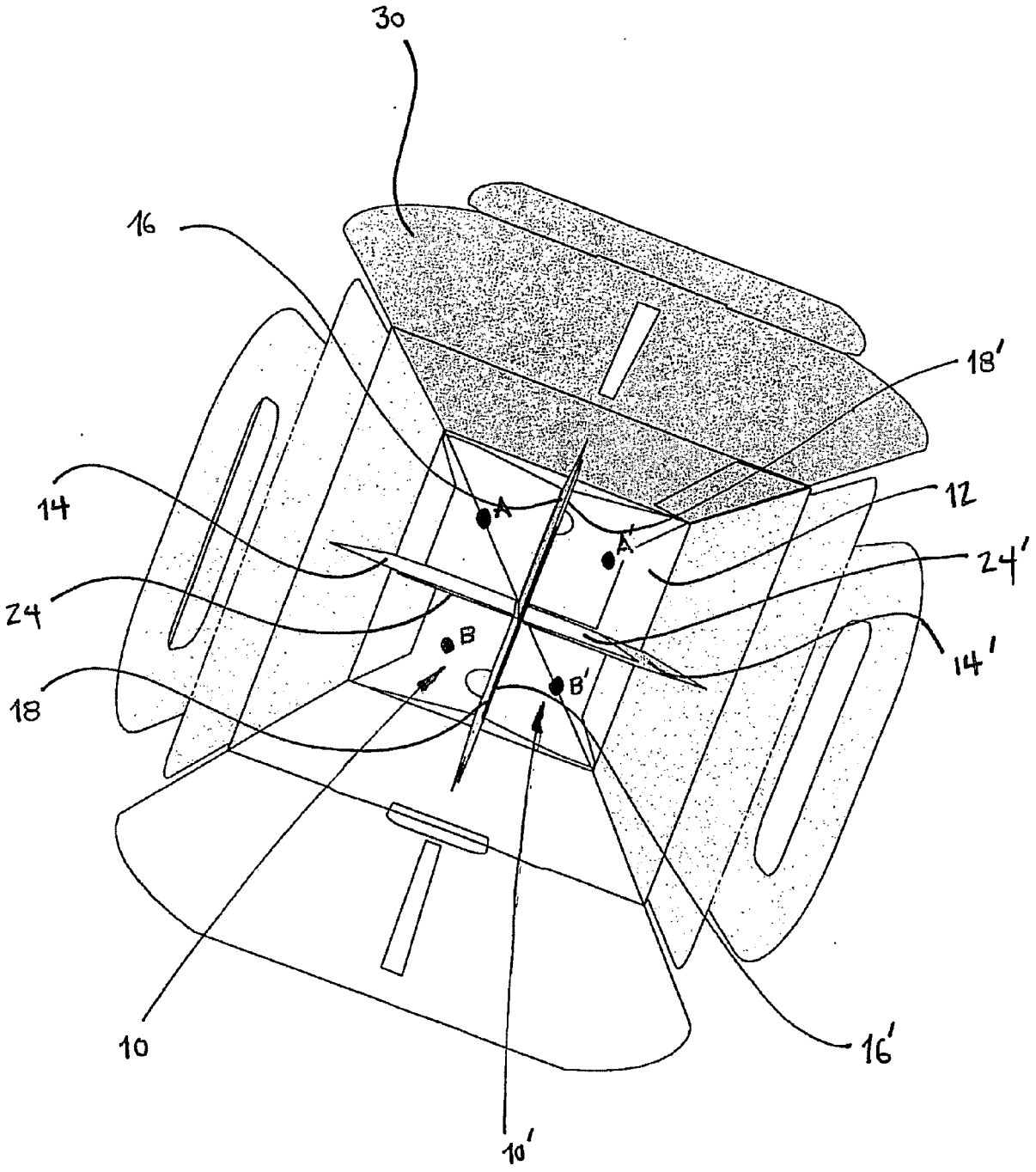

FIG. 5

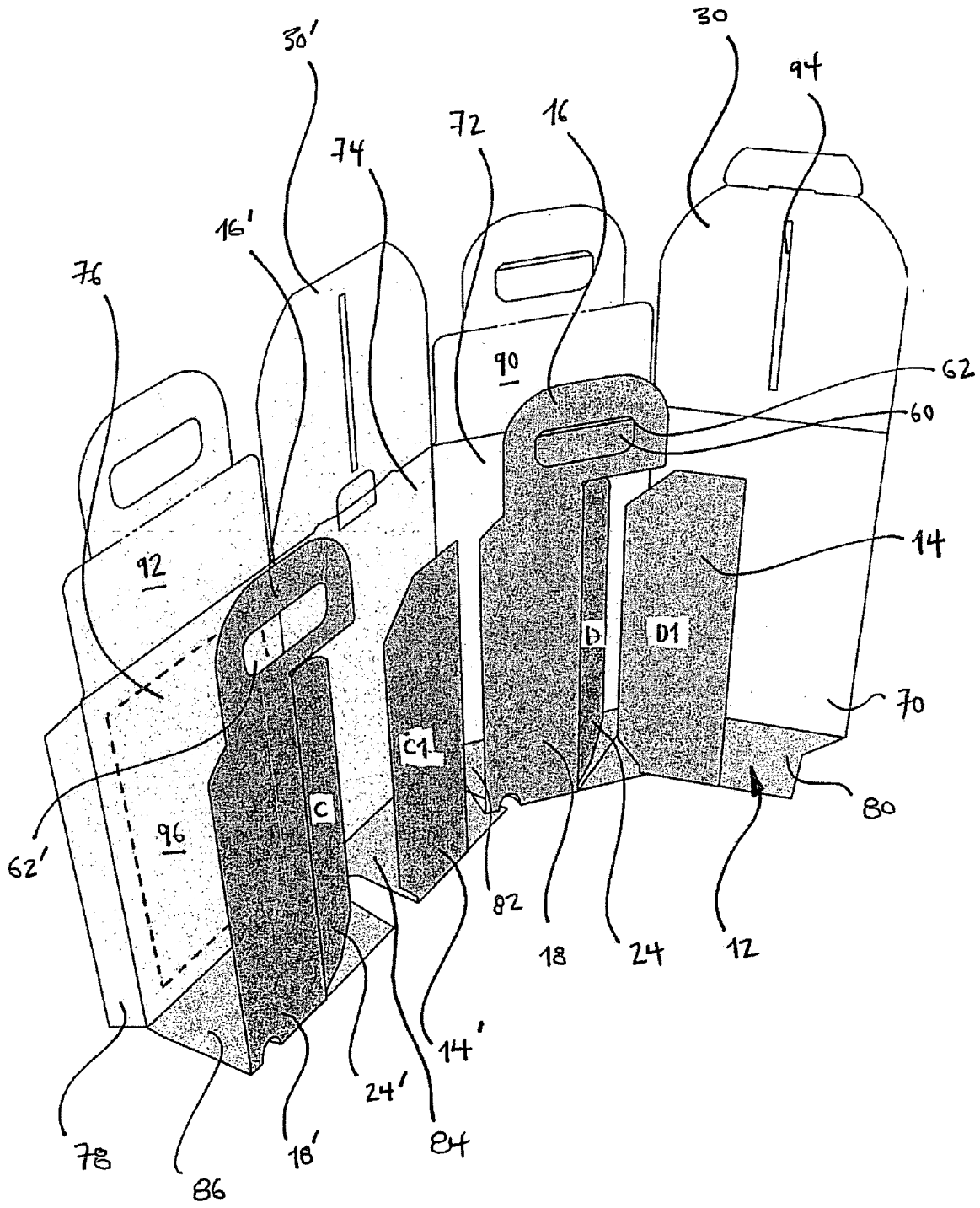
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FIG. 6

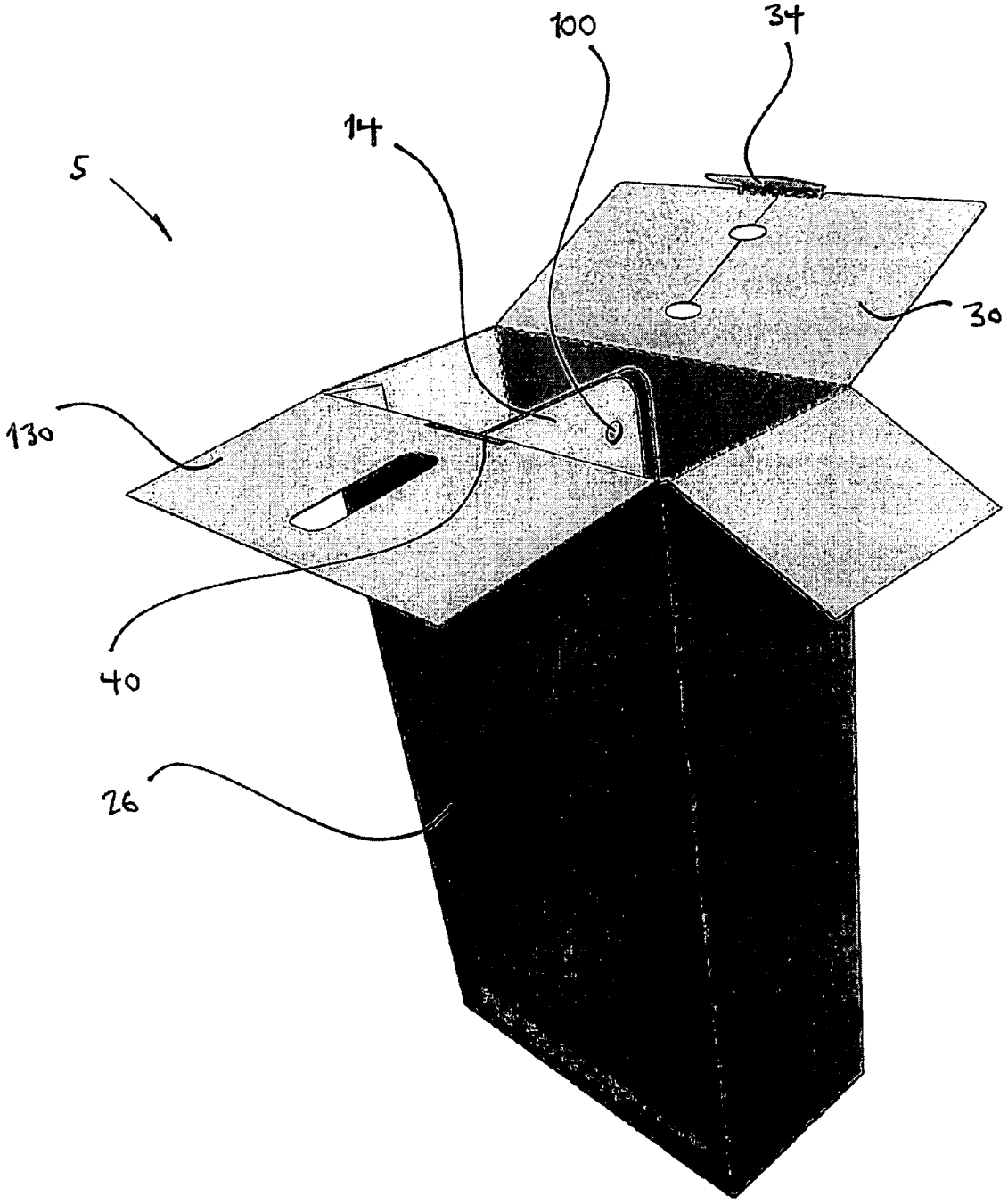
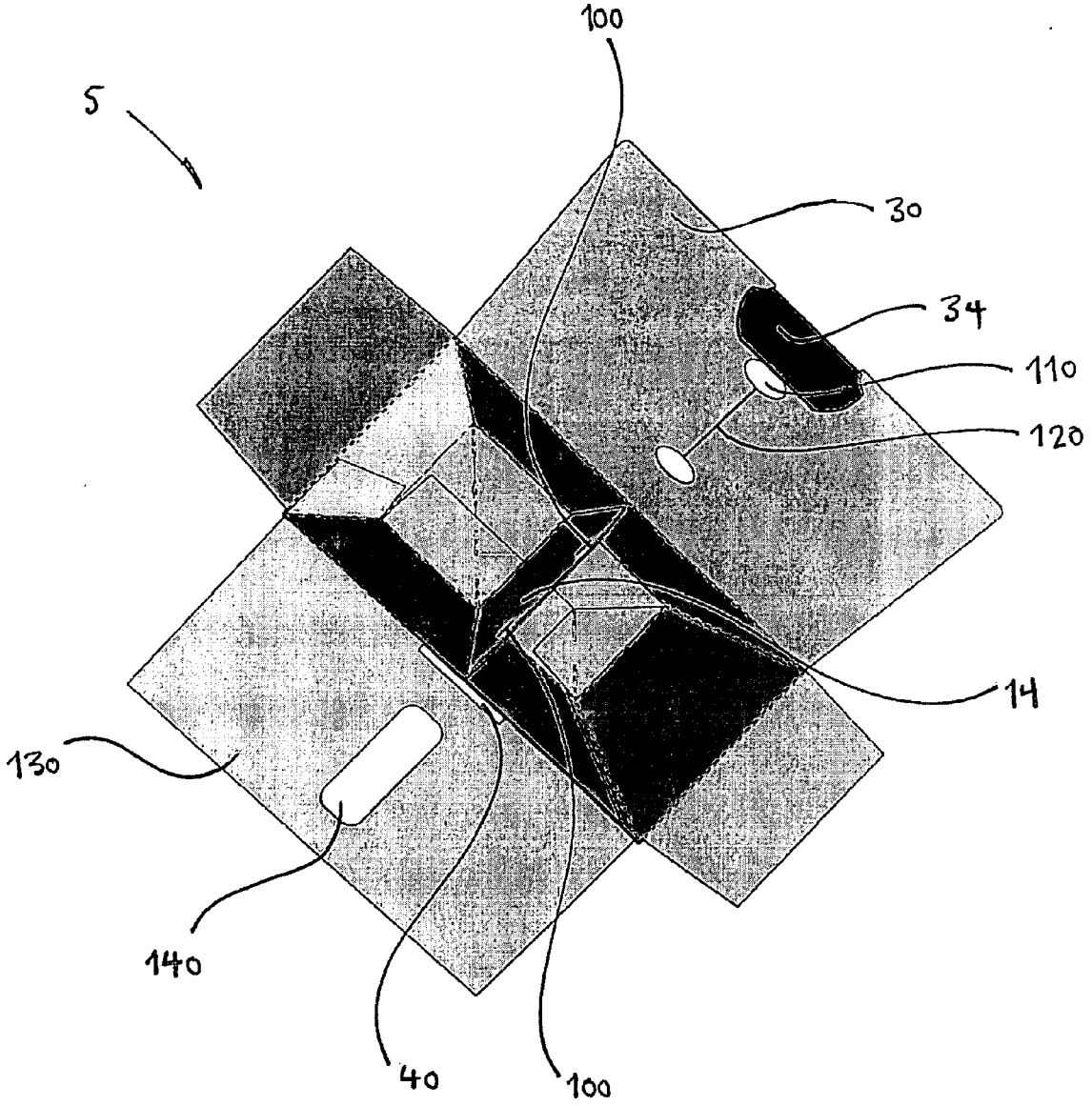


FIG. 7



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EUROPEAN SEARCH REPORT

Application Number
EP 07 25 3184

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 318 470 A (MONTEALEGRE JAMES) 9 March 1982 (1982-03-09) * column 3, line 50 - column 7, paragraph 1; figures 1,2,8 *	1-9	INV. B65D71/00
A	FR 1 590 259 A (SIEMCO SOCIÉTÉ INDUSTRIELLE D'EMBALLAGE ET DE CONDITIONNEMENT) 13 April 1970 (1970-04-13) * page 2, line 23 - page 4, line 32; figures 1-4 *	1-9	
A	US 1 799 657 A (TINSLEY EDWARD O) 7 April 1931 (1931-04-07) * figures 1,2,4,10,11,14 *	1-9	
A,D	US 4 403 690 A (FISCHER DAVID [CA]) 13 September 1983 (1983-09-13) * abstract; figures 1,6 *	1-9	

TECHNICAL FIELDS SEARCHED (IPC)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	17 January 2008	Segerer, Heiko

CATEGORY OF CITED DOCUMENTS

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17-01-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4318470 A	09-03-1982	AU 6904481 A	15-10-1981
FR 1590259 A	13-04-1970	NONE	
US 1799657 A	07-04-1931	NONE	
US 4403690 A	13-09-1983	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4403690 A **[0002]**