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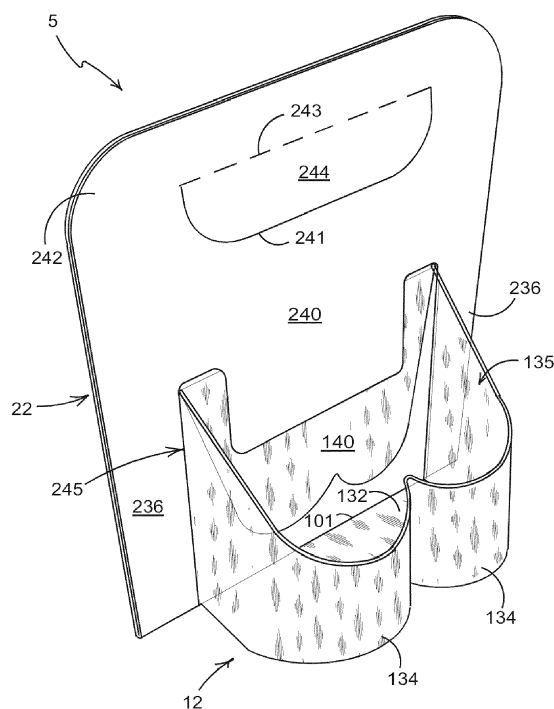
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Remarks:

This application was filed on 12-07-2012 as a divisional application to the application mentioned under INID code 62.

(54) **Composite article carrier and method for forming same**

(57) The invention relates to an article housing for forming an article holder for use in a composite article carrier. The composite article carrier comprises an article holder having one or more compartments for receiving, in a top-loaded fashion one or more articles. The article holder may be attached, by means of flanged portions and/or a detachable compartment top panel, to a complementary panel.



**FIGURE 1**

**Description****TECHNICAL FIELD**

[0001] This invention relates to article carriers, and more particularly, the invention relates to a composite article carrier comprising a preformed article holder having a compartment for at least one article and a complementary panel attached to the article holder around a periphery of the compartment.

**BACKGROUND OF THE INVENTION**

[0002] In retail it is required to provide groups of articles in single packages and to display such articles for advertising and sales purposes. The style and appearance of a package can play an important role in the sale of goods. Nevertheless it is a foremost concern that a package provide a safe way of transporting articles; protects those packaged articles; and is manufactured in a cost effective and economically responsible way. It is therefore prudent to minimise the amount of material used and maximize the amount of recyclable material without compromising on structural robustness and aesthetic properties.

[0003] The present invention seeks to provide an improvement in the field of article packaging.

**SUMMARY OF INVENTION**

[0004] The invention relates to an article housing for forming an article holder for use in a composite article carrier. The composite article carrier comprises an article holder having one or more compartments for receiving, in a top-loaded fashion one or more articles. The article holder may be attached, by means of flanged portions and/or a detachable compartment top panel, to a complementary panel.

[0005] According to an aspect of the invention for which protection is sought, the invention provides an article housing for forming an article holder for use in a composite article carrier optionally according to any of the relevant preceding paragraphs, the article housing comprising opposing first and second housing regions each comprising: a substantially planar base for supporting at least one article; at least one substantially-upstanding wall extending from said base and defining at least one compartment; and at least one lateral flange member extending from at least one region of said upstanding wall, the first and second housing regions opposing one another and being foldably joined to one another along a fold line disposed between the bases of the first and second housing regions.

[0006] Optionally, the article housing is preformed of any one of the following materials: PVC, PET, PP, PLA or paperboard. Optionally, the article housing is preformed by vacuum molding.

[0007] Optionally, the first housing region and the second housing region are mirror images of each other.

[0008] According to yet another aspect, the invention may provide a composite carrier comprising:

an article holder comprising

a base adapted for support,  
at least one substantially-upstanding wall extending from said base and defining at least one compartment and an opening thereto, and  
at least one flange member extending from at least one region of said upstanding wall; and

a complementary panel affixed to said at least one flange member, at least part of said complementary panel being disposed in substantially co-planar relationship with respect to said at least one flange member.

[0009] Preferably, wherein said base, said at least one substantially-upstanding wall and said flange are integrally formed with one another. Optionally as a blow-moulded or vacuum moulded plastics portion.

[0010] Preferably, said base is substantially planar so that articles received in the article holder are supported.

[0011] Preferably, said at least one substantially-upstanding wall is contoured to match an outer surface shape of one or more articles to be received in the article holder so that the articles are securely held within the article holder.

[0012] Optionally, said at least one flange member comprises an elongated flange member extending substantially along a length of said at least one substantially-upstanding wall.

[0013] Optionally, said at least one flange member comprises an elongated flange member extending substantially across a length of said opening to said at least one compartment.

[0014] Preferably, said at least one flange member comprises:

a first elongated flange member extending from at least one lateral edge of said at least one substantially-upstanding wall; and

a second elongated flange member extending across a length of said opening to said at least one compartment and adjoining said first elongated flange member. Optionally, said first elongated flange member comprises a pair of opposing first elongated flange members extending from respective lateral edges of said at least one substantially-upstanding wall.

[0015] Preferably, said article holder may further comprise a partition flap at least partially defining said compartment. The partition flap maybe formed as part of the integrally formed article holder and formed so that it is detachable from the side walls to provide the opening and coupled to an elongate flange member extending

substantially across a length of the opening. Preferably the partition flap is affixed to a partition panel of the complementary panel. In this way the article holder is secured to the complementary panel using only material from which the article holder was first formed and a partition or partial partition structure between front and back compartments of the carrier is also formed, again using only material from which the article holder was first formed.

**[0016]** Optionally, said complementary panel further comprises a handle region. Said handle region preferably comprises a hand hole.

**[0017]** Preferably, the complementary panel comprises spaced apart interconnected lateral strips defining a compartment aperture for receiving said at least one compartment.

**[0018]** Preferably, said complementary panel further comprises a partition panel at least partially defining said at least one compartment.

**[0019]** According to a further aspect, the invention may provide a method of forming a composite carrier comprising:

providing

at least one a housing having

a base adapted for support,  
at least one substantially-upstanding wall  
extending from said base and defining at  
least one compartment and an opening  
thereto,  
a flange extending from said upstanding  
wall; and

at least one blank comprising complementary  
panel defining an aperture for receiving said  
compartment; and

conjoining said at least one housing and said at least  
one blank by inserting said compartment through  
said aperture and affixing said flange to at least por-  
tions of said at least one blank.

**[0020]** According to yet a further aspect, the invention provides a kit of parts for forming a composite carrier, the kit of parts comprising a blank having at least one flange member and a fold line about which the blank is foldable such that a first part of the at least one flange member can be overlaid with a second part of that at least one flange member for forming a complementary panel; and the kit of parts comprising an article holder structured to receive and support one or more articles, the article holder having at least one flange member adaptable to be sandwiched between said first and second overlaid parts of the at least one flange member of the blank for forming a composite carrier.

**[0021]** Preferably, the article holder of the kit of parts may comprise a compartment top wall severably con-

nected to an upstanding wall of the article holder and coupled to an elongate flange member, the top wall being separable from the upstanding wall and foldable into flat face contacting relationship with said elongate flange member to thereby create a partition structure, which partition structure is affixable to a partition flap of the complementary panel to thereby secure the article holder and a complementary panel.

**[0022]** According to an even further aspect, the invention may provide a composite article carrier comprising a main panel and an article holder; the article holder having a compartment, a portion of which compartment is separable from the main body of the compartment thereby to create an opening through which articles can be loaded into the article holder; said separable portion being affixed to the main panel thereby to secure the main panel and article housing together and whereby forming at least a partial back portion of partition panel for the compartment.

## BRIEF DESCRIPTION OF THE DRAWINGS

**[0023]**

FIG. 1 is an isometric illustration of a composite article carrier according to a first exemplary embodiment of the present invention.

FIG. 2 is an isometric illustration of an article housing for forming article holders according to the first exemplary embodiment of the present invention.

FIG. 3 is an isometric illustration of the article housing of FIG. 2 illustrating a top wall detached from an upstanding wall according to an exemplary embodiment of the present invention.

FIG. 4 is a plan view of a blank for forming complementary panels for forming the composite article carrier of Fig. 1.

FIG. 5 is a plan view vantage point illustration of the composite article carrier according to the first exemplary embodiment of the present invention consistent with the composite article carrier of Fig. 1.

FIG. 6 is an isometric illustration of a composite article carrier according to an exemplary embodiment of the present invention consistent with the article carrier of Fig. 1 loaded with articles.

FIG. 7 is a side elevation view point illustration of the article carrier of Fig. 1 loaded with articles.

FIG. 8 is an isometric illustration of a composite article carrier according to a second exemplary embodiment of the present invention.

FIG. 9 is an isometric illustration of the composite article carrier of Fig. 8 when loaded with articles from an end elevation view point.

FIG. 10 is an isometric illustration of the composite article carrier of the second embodiment when loaded with articles from an elevation view point.

## DETAILED DESCRIPTION

**[0024]** Detailed embodiments of the present invention are disclosed herein. It must be understood that the disclosed embodiments are merely exemplary of the invention that may be embodied in various and alternative forms, and combinations thereof. As used herein, the word "exemplary" is used expansively to refer to embodiments that serve as illustrations, specimens, models, or patterns. The figures are not necessarily to scale and some features may be exaggerated or minimized to show details of particular components more clearly. In other instances, well-known components, systems, materials, or methods have not been described in detail in order to avoid obscuring the present invention. Therefore, specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention.

**[0025]** As an overview, the invention provides a composite article carrier comprising an article holder having a compartment for at least one article and a complementary panel attached around a periphery of the article housing. In the convention used herein to describe the invention, the primary components of the erected composite carrier 5 are referred to in Fig. 1 as an article holder 12 and a complementary panel 22. The article holder 12 is formed from an article housing and the complementary panel 22 is formed from a blank of foldable sheet material, such as paperboard. In the exemplary embodiment illustrated, the article housing is a double housing formed of two identical housing regions and the blank is a double blank formed of two identical blank regions. The double article housing and double blank are suitable for forming a composite article carrier having opposing article holders 10, 12 and compartments.

**[0026]** In an exemplary embodiment, the article housing comprises a base and at least one substantially-upstanding wall extending from the base defining a compartment, and a flange extending from at least a portion of the upstanding wall. In a further exemplary embodiment, the article housing is preformed. The composite article carrier taught by the invention provides an extremely durable and ornate receptacle for one or more articles and a display area for graphic and/or written indicia.

**[0027]** Referring now to the drawings, wherein like numerals indicate like elements throughout the several views, the drawings illustrate certain of the various aspects of exemplary embodiments of a composite article carrier.

**[0028]** Fig. 1 illustrates a composite article carrier 5 according to an exemplary embodiment of the present invention. The composite article carrier 5 comprises an article holder 12 having a compartment 135 and complementary panel 22 attached to the article holder substantially around a periphery of the compartment. The article holder comprises a base 132 and at least one substan-

tially-upstanding wall 134 together substantially defining a compartment 135. A partitioning panel 140 at least partially defines a rear wall of the compartment 135. The substantially-upstanding wall 134 may be contoured or sculpted as shown to accommodate at least one cylindrical article and up to two cylindrical articles. A complementary panel 22 has opposing lateral strips 236 and a partial partition panel 240 defining a compartment aperture 245 through which the substantially-upstanding wall 134 and the compartment 135 defined thereby extend. A panel handle region 242 includes a hand-hole aperture defined by a cut line 241 and a flap fold line 243 along which a hand-hole flap 244 is foldably adjoined to the panel handle region 242.

**[0029]** Referring simultaneously to both Figs. 2 and 3, an article housing 100 according to an exemplary embodiment of the present invention is suitable for forming article holders 10, 12 (more clearly delineated in Fig. 5) for use in the composite article carrier 5 of Fig. 1. The article housing 100 is shown in a primary stage in Fig. 2 prior to employment in a composite article carrier 5 and, in Fig. 3, in a later stage of preparation for use in a composite article carrier 5. Although the invention teaches and is applicable to an article housing defining a single compartment, the exemplary embodiment of Figs. 2 and 3 particularly teach an article housing 100 comprising opposing first and second housing regions 110, 130 that will ultimately form opposing article holders and article compartments. The first housing region 110 and the second housing region 130 are mirror images of each other and are foldably adjoined to one another along fold line 101 disposed between the bases 112 and 132. Although the first housing region 110 and the second housing region 132 are shown foldably connected to one another along a fold line 101 disposed between the bases 112, 132, the invention teaches and contemplates joinder along any appropriate region such as but not limited to lateral flanges 116, 136 or connecting flanges 118, 138.

**[0030]** Each housing region 110, 130 has a base 112, 132 and at least one substantially-upstanding wall 114, 134 extending from the base 112, 132. The substantially-upstanding wall 114, 134 may be considered a single wall, multiple walls, or a single wall comprising multiple parts without departing from the scope, spirit and teachings of the present invention. A flange generally extends from the periphery of the substantially-upstanding wall 114, 134. Lateral flanges 116, 136 extend from lateral regions of the substantially-upstanding wall 114, 134. A connecting flange 118, 138 extends between the peripheral flanges 116, 136. In the exemplary embodiment illustrated, the flanges 116, 136, 118, 138 extend substantially along an entire length of the wall 114, 134 region that it abuts, however, the invention teaches and contemplates a single flange or multiple flange members of any length including but not limited to flanges or flange members of shorter lengths. A top wall 120, 140 extends between the substantially-upstanding wall 114, 134 and the connecting flange 118, 138. The base 112, 132, the

substantially-upstanding wall 114, 134 and the top wall 120, 140 define a concavity that ultimately becomes an article compartment 115, 135 (which article compartment is primarily shown in Fig. 3 and is discussed in greater detail below). The difference between Fig. 2 and Fig. 3 pertains to the stage of the formation of the compartment 115, 135. The outer, substantially-convex portion of the concavity is shown in both Figs. 2 and 3.

**[0031]** Referring now particularly to Fig. 2, the top wall 120, 140 is adjoined to the substantially-upstanding wall 114, 134 along a line of severance 119, 139. The line of severance 119, 139 may be a perforated line, an interrupted cut line or any other frangible line of joinder.

**[0032]** Referring now particularly to Fig. 3, when the top wall 120, 140 is detached from the substantially-upstanding wall 114, 134 the top wall 120, 140 may be pivoted with respect to the connecting flange 118, 138 to convert the concavity into an article compartment 115, 135 having an opening created by removal of the top wall 120, 140. The pivoted top wall 120, 140 also serves as at least a partial partition panel that helps define each respective compartment 115, 135 formed when the article housing 100 is erected for use.

**[0033]** Referring now to Fig. 4, a blank 200 according to an exemplary embodiment of the present invention suitable for forming complementary panel portions 20, 22 (more clearly delineated in Fig. 5) of the composite article carrier of Fig. 1 comprises a first blank region 210 and a second blank region 230. The first blank region 210 and the second blank region 230 are mirror images of one another and are adjoined to one another along fold lines 201. Each blank region 210, 230 has lateral strips 216, 236 and a partition flap 220, 240 that define an aperture 225, 245 for receiving the substantially convex, substantially-upstanding walls 114, 134 of the article housing 100. The partition flaps 220, 240 may have many different configurations suitable for use with the invention, but the substantially U-shaped configuration that is spaced apart from the lateral strips 216, 236 in the exemplary embodiment form slots 219, 239 that facilitate mating of the article housing with the complementary panel. Each partition flap 220, 240 also helps serve as at least a partial partition that is placed in face-contacting relationship with respect to respective pivoted top walls 120, 140 of the article housing 100 in the erected carrier 5. The opposing, adjoining apertures 225, 245 form a combined aperture corresponding to the opposing concavities of the article housing 100. A handle in the form of a hand-hole with cushioning flap 224, 244 is formed in respective distal regions, that is, panel handle regions 222, 242, of the blank 200. Each handle aperture (not numbered) and accompanying flap 224, 244 is defined by a cut line 221, 241 and a fold line 223, 243.

**[0034]** Referring now to Fig. 5, a composite article carrier 5, consistent with the article carrier depicted in Fig. 1, suitably constructed from the article housing 100 of Figs. 2 and 3, and the blank of Fig. 4 is shown from a plan type view point. Features previously discussed and

enumerated will not be particularly described at this point but features not previously described will be discussed. Opposing compartments 115 and 135 that have been formed in respective opposing, erected article holders 10, 12 can be seen. The article holders 10, 12 are captured between opposing complementary panels 20, 22.

**[0035]** Referring now to Figs. 6 and 7, a composite article carrier 5 in accordance with an exemplary embodiment of the invention as constructed from the housing 100 and blank 200 is shown loaded with articles in the form of bottles B. The features previously described herein will not be described.

**[0036]** In an exemplary embodiment, the article carrier may be formed by steps that include detaching the top wall 120, 140 from the substantially-upstanding upstanding wall 114, 134; folding the first and second housing regions 110, 130 about fold line 101 such that the flanges 116/118, 135/138 of the two housing regions 110, 130 are placed in substantial face-contacting relationship with one another; aligning the fold lines 201 of the blank 200 adjacent the fold line 101 of the article housing 100; folding the first and second blank regions 210, 230 about fold lines 201 so that the substantially-upstanding walls 114, 134 of the article housing 100 protrude through the respective apertures 225, 245 of the blank 200; placing the lateral strips 216, 236 and panel handle regions 222, 242 into substantial face-contacting relationship with respective housing flanges 116/118, 136/138 and securing the blank 200 with respect to face-contacting regions of the housing 100. The order in which the above steps are performed may be modified while not departing from the scope and teachings of the present invention.

**[0037]** Referring now to Fig. 8, therein is shown a composite article carrier 7 according to another exemplary embodiment of the present invention. The exemplary embodiment of Fig. 8 is distinguished from the previously-described exemplary embodiment of Figs. 1-7 in that the exemplary embodiment of Fig. 8 is adapted for receiving a single article in a compartment 335 rather than multiple articles. The features of the composite article carrier 7 of Fig. 8 have been enumerated in the same numbering scheme as the features of the exemplary embodiment of Figs. 1-7 differing only in that the numbering scheme for the article holder(s) 32 has been increased to a "300" series rather than the "100" series of Figs. 1-7 and the numbering scheme for the complementary panel(s) 42 has been increased to a "400" series rather than the "200" series of Figs. 1-7.

**[0038]** Referring now to Figs. 9 and 10, the composite article carrier of Fig. 8 is shown loaded with bottles B.

**[0039]** The blank 200 may be formed of printable substrate such as but not limited to paperboard or planar plastic material.

**[0040]** The invention teaches both a composite article carrier having a single article compartment and a composite article carrier having opposing compartments formable from the article housing 100 of Figs. 2 and 3 and the blank 200 of Fig. 4. The illustration of Fig. 1 de-

picts a single side of an exemplary embodiment of a composite article carrier 5 that is consistent with a single compartment or opposing compartments.

**[0041]** The exemplary embodiments taught herein are directed to contoured or sculpted, substantially-upstanding walls adapted for receiving a single article (composite article carrier 5 and 7) and for receiving two articles (composite article carrier 5); however, the invention contemplates and also teaches substantially-upstanding walls adapted for receiving other multiples of articles such as three or more articles. In addition, although the invention is illustrated as having substantially-upstanding walls adapted for receiving substantially cylindrical articles, the invention contemplates and teaches substantially-upstanding walls adapted for receiving articles having other configurations and cross-sections.

**[0042]** The article housing 100 of the present invention may be preformed of materials such as but not limited to various plastic materials (e.g., PVC, PET, PP, PLA, etc.), paperboard or other formable materials by known processes such but not limited to vacuum molding processes. The invention teaches, and the illustrations depict, transparent housings such as clear plastic material. Transparent housings help display aesthetic components of articles placed in the compartments formed. However, in other envisaged embodiments the housings are printed or have affixed these to graphics and/or other display and advertising indicia.

**[0043]** The invention provides a basket carrier that is strong, durable, functional, aesthetically pleasing in and of itself and helps highlight aesthetical elements of the articles it is designed to hold.

**[0044]** As used herein, the terms "fold line" and "cut line" refer to all manner of lines indicating optimal respective fold or cut locations. A fold line is typically a scored line, an embossed line or a debossed line. A cut line as used herein is optimally a full cut or slit in the material of which the blank is formed. Cut lines, and sometimes fold lines, may be frangible or otherwise weakened lines, perforations, a line of perforations, a line of short slits, a line of half-cuts, or a single half-cut. Fold lines and cut lines may also be some combination of the above lines, and the like, that produce the effect of a fold line or cut line as described herein.

upstanding wall, the first and second housing regions opposing one another and being foldably joined to one another along a fold line (101) disposed between the bases (112, 132) of the first and second housing regions.

2. An article housing (100) according to claim 1 preformed of any one of the following materials: PVC, PET, PP, PLA or paperboard.
3. An article housing according to claim 1 or 2 preformed by vacuum molding.
4. An article housing according to any of claims 1 to 3 wherein the first housing region (110) and the second housing region (130) are mirror images of each other.
5. An article holder formed from the article housing (100) of any of claims 1 to 4.

## Claims

1. An article housing (100) for forming an article holder for use in a composite article carrier (5; 7), the article housing (100) comprising opposing first and second housing regions (110, 130) each comprising: a substantially planar base (112, 132; 312, 322) for supporting at least one article; at least one substantially-upstanding wall (114, 134; 314, 334) extending from said base and defining at least one compartment (115, 135); and at least one lateral flange member (116, 136) extending from at least one region of said

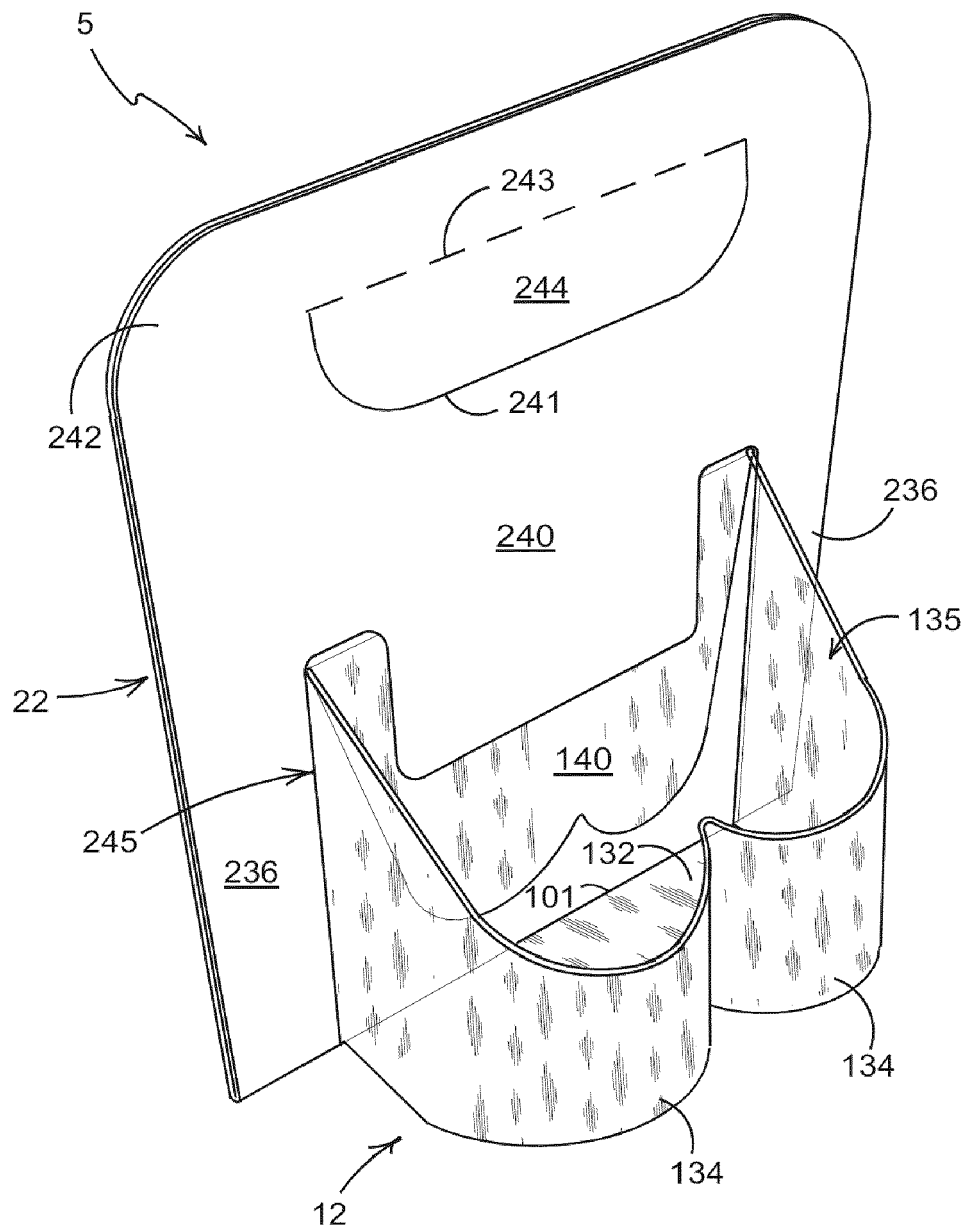


FIGURE 1

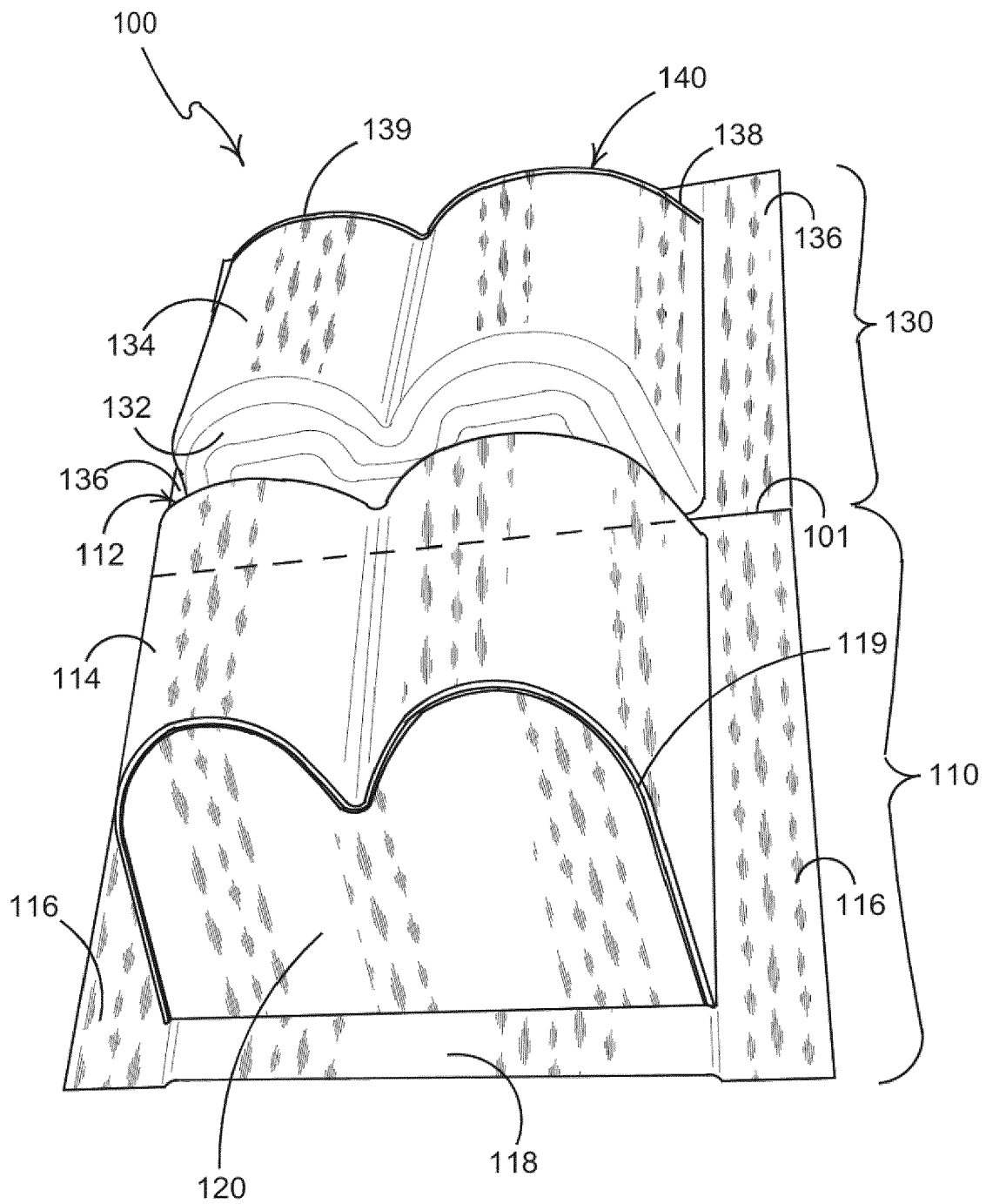


FIGURE 2



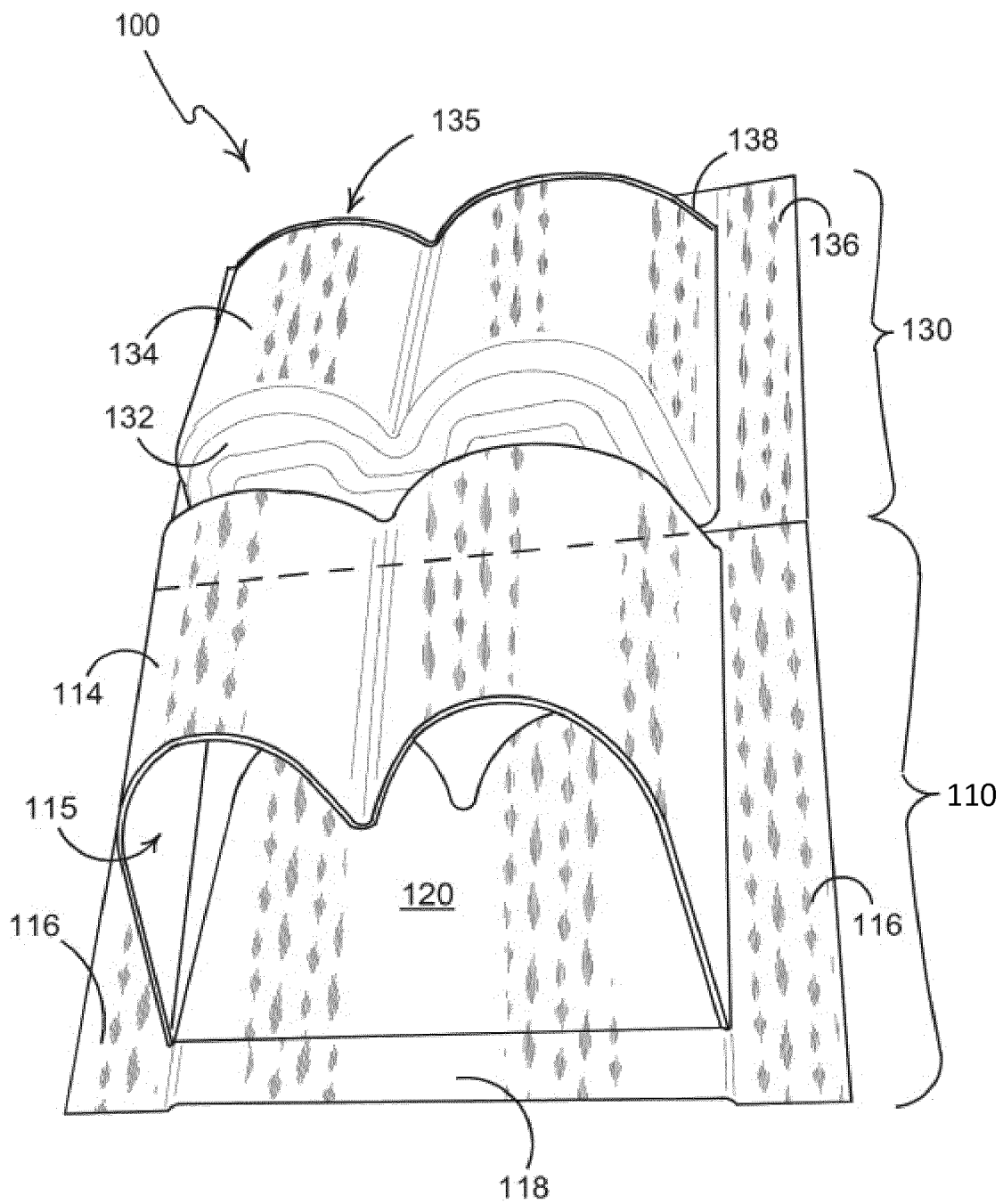


FIGURE 3

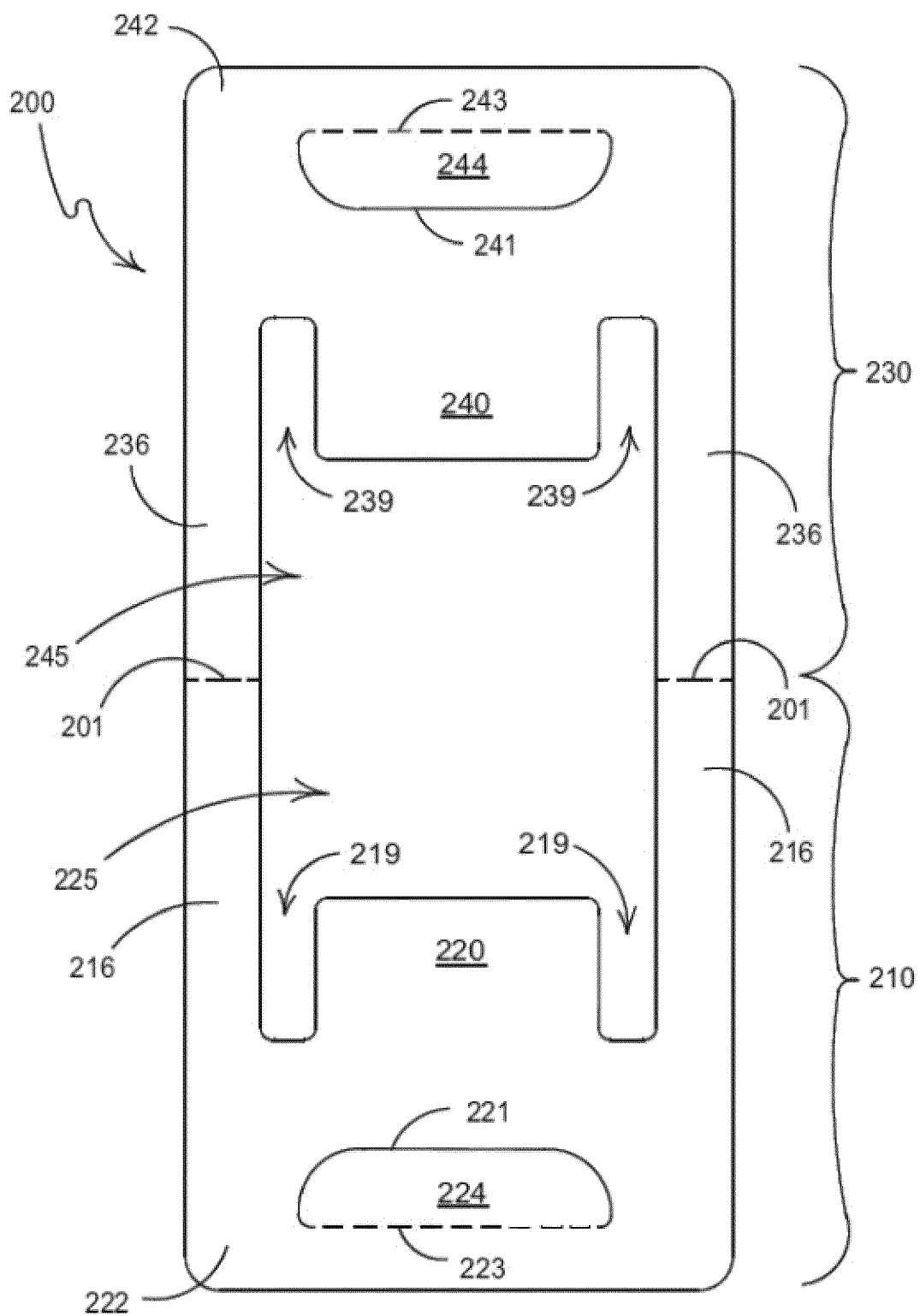
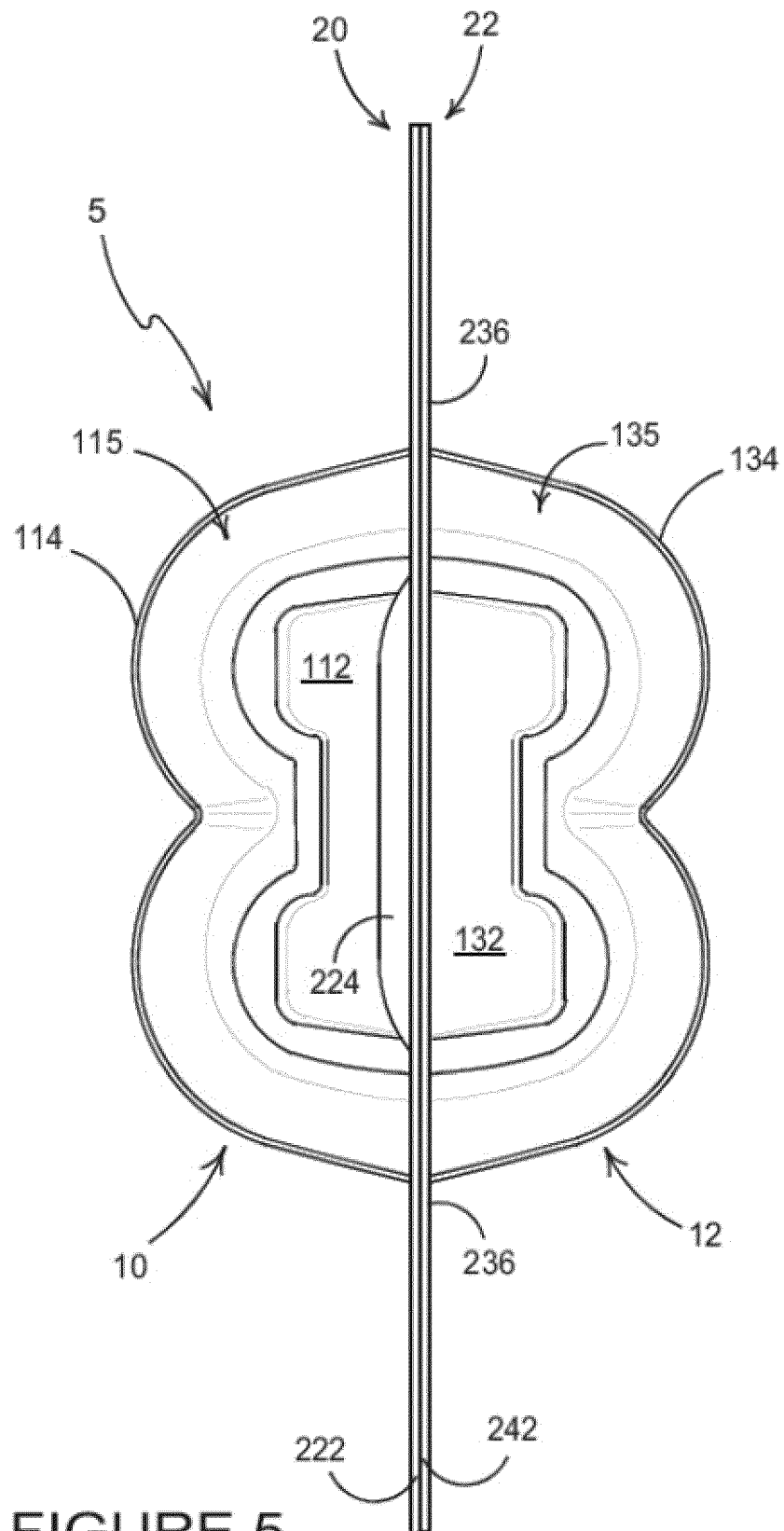


FIGURE 4



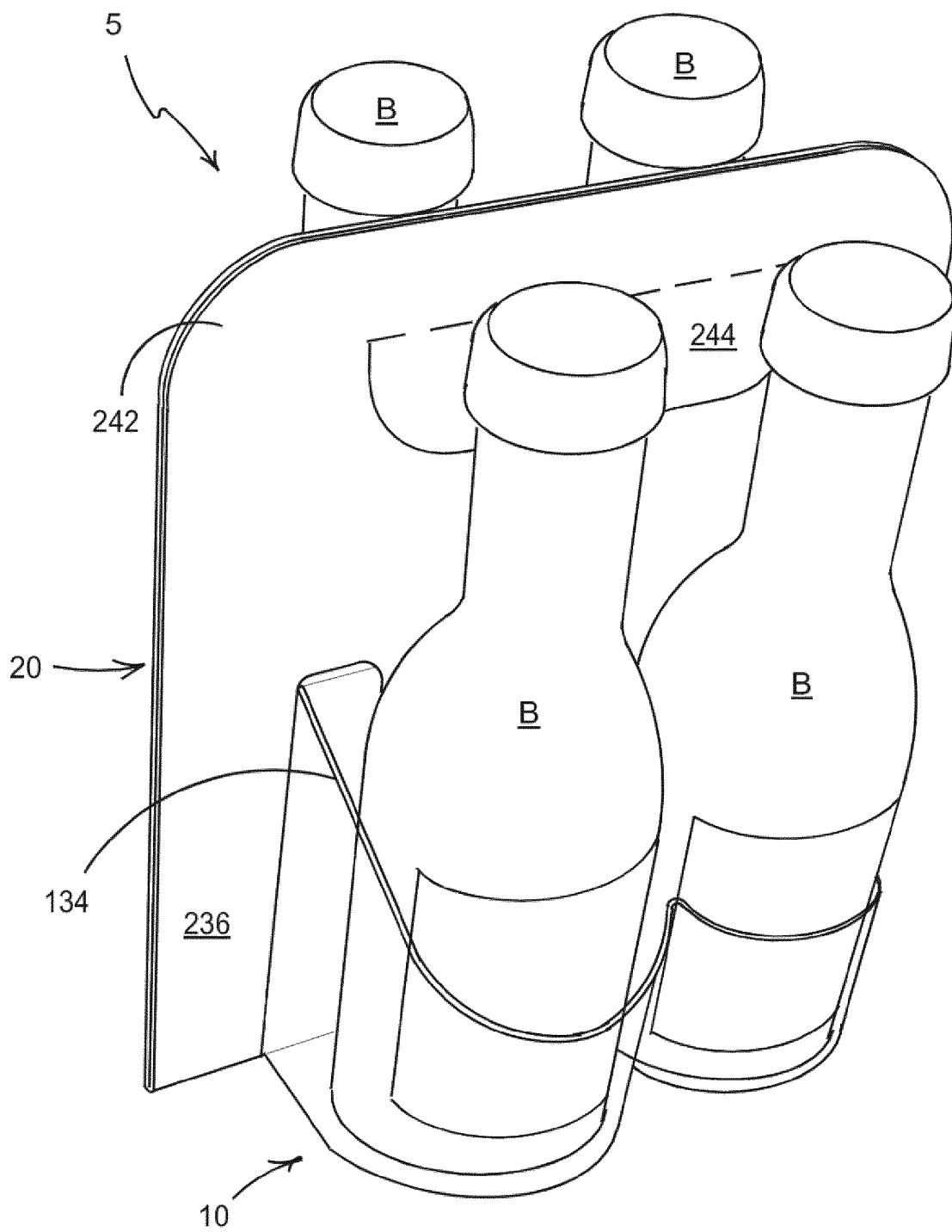


FIGURE 6

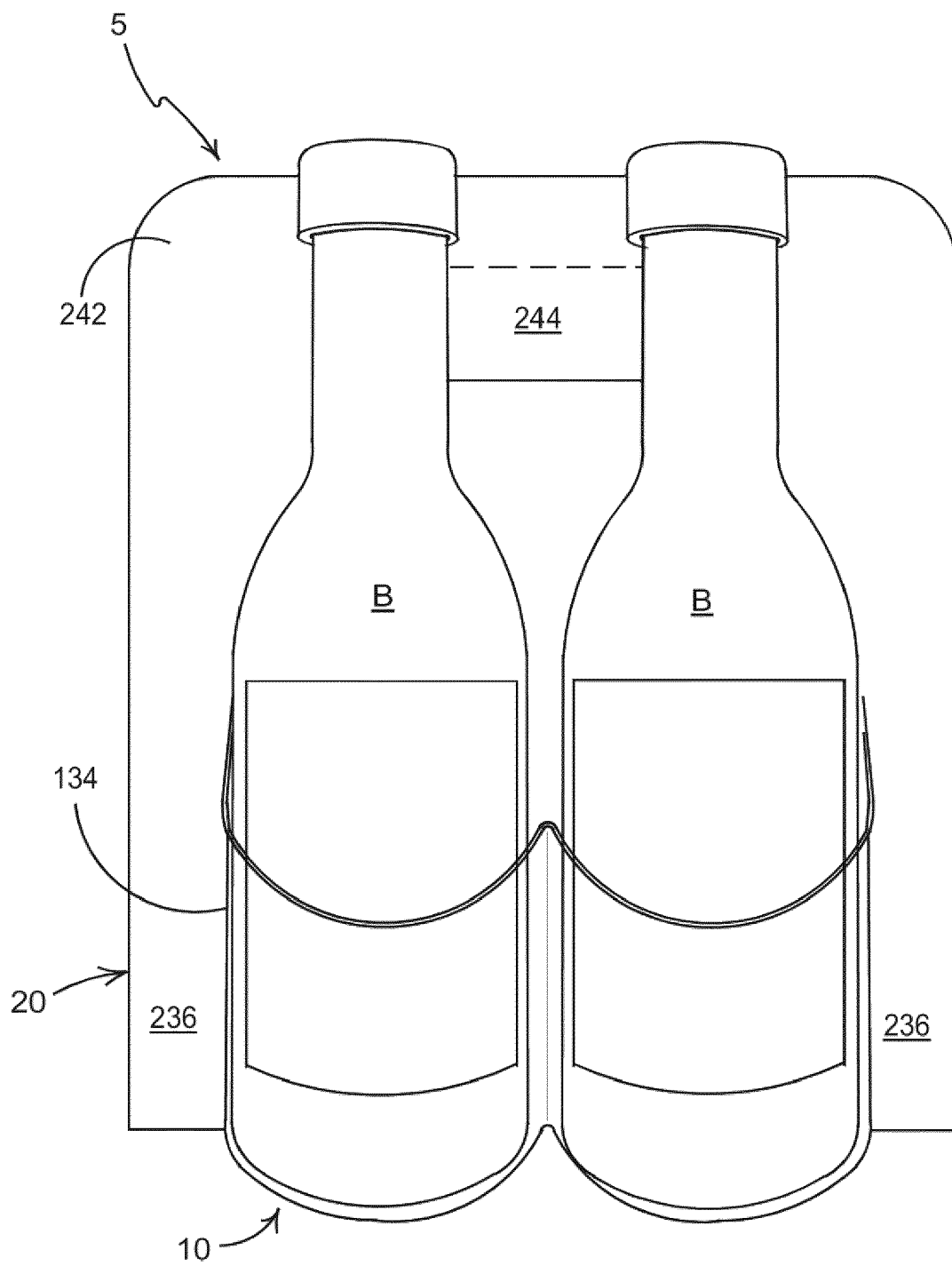


FIGURE 7

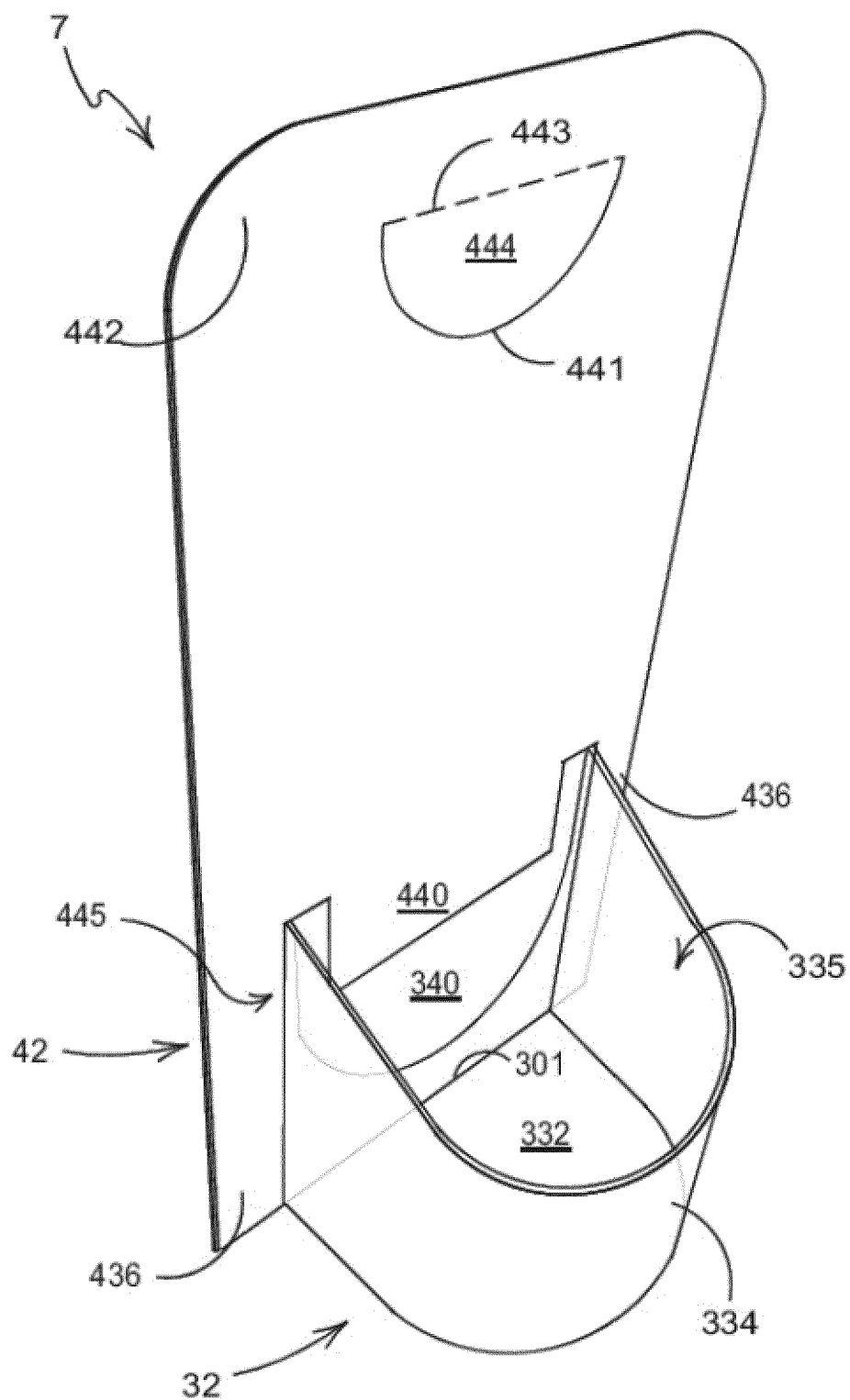


FIGURE 8

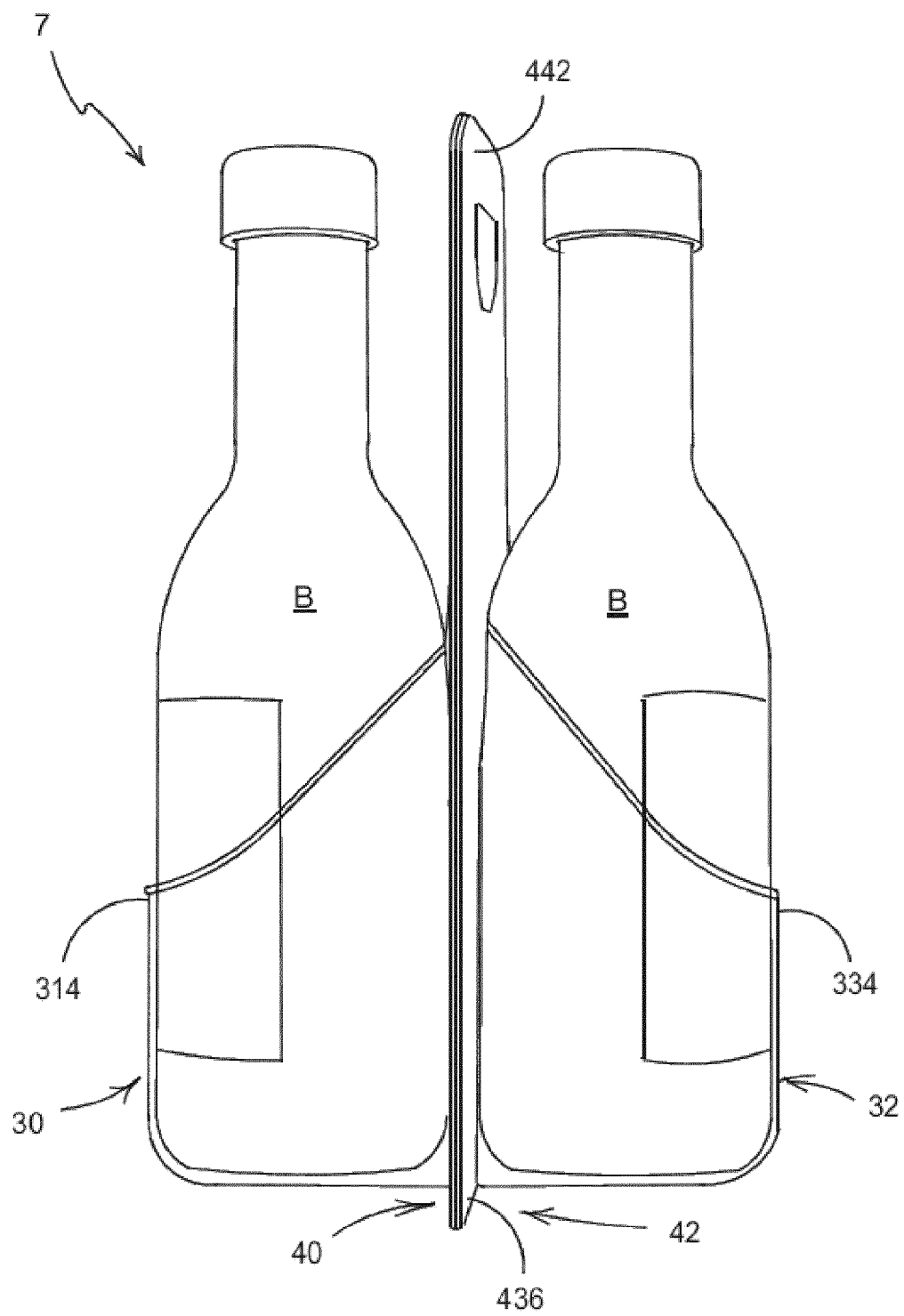


FIGURE 9

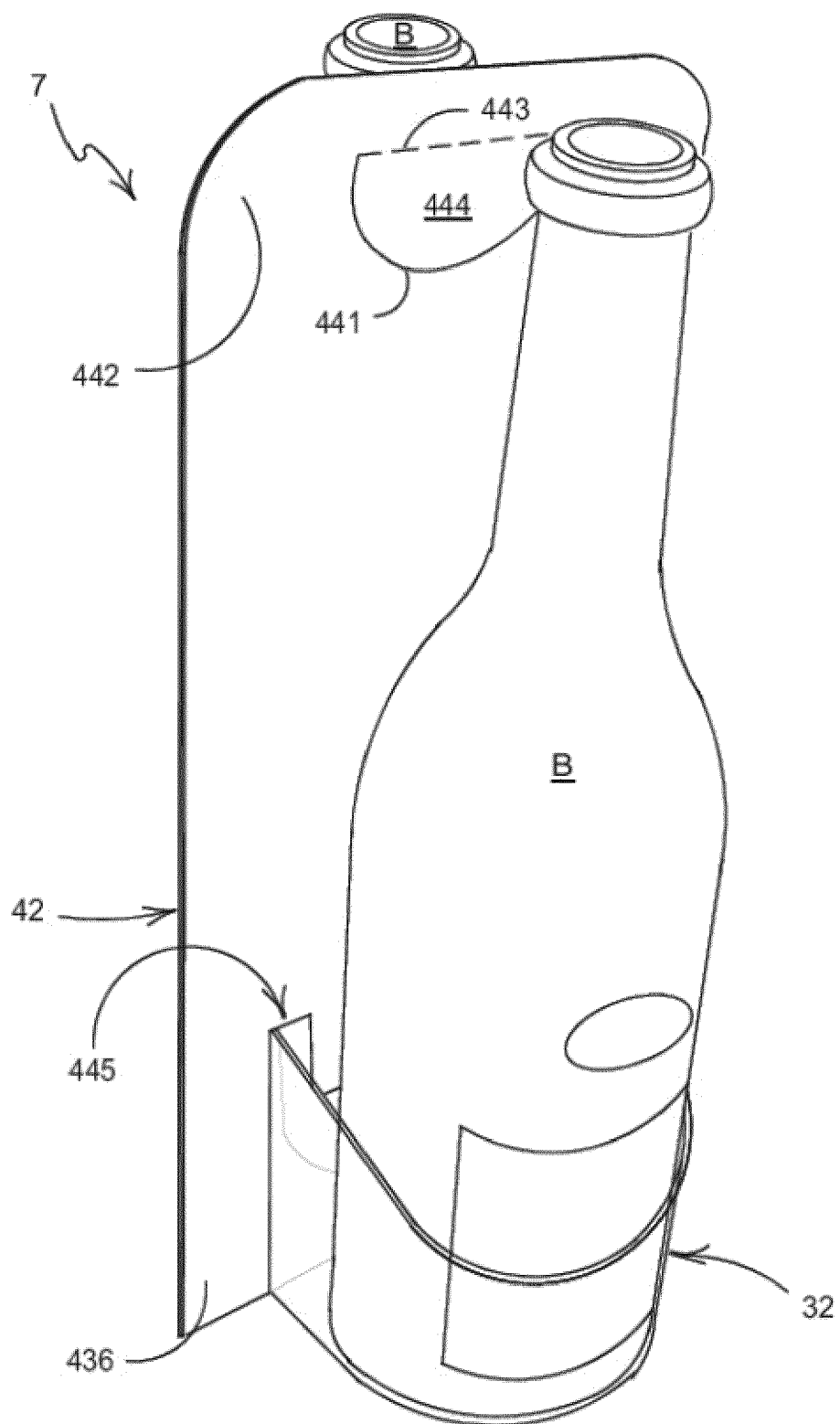


FIGURE 10





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Application Number  
EP 12 17 6224

DOCUMENTS CONSIDERED TO BE RELEVANT			
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 10 September 2012	Examiner Jervelund, Niels
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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 &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 12 17 6224

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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