

[54] **PACKAGING DEVICE FOR
DISPLAYING AND TRANSPORTING
CONTAINERS**

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220/110, 112-116; 294/87.2, 87.26

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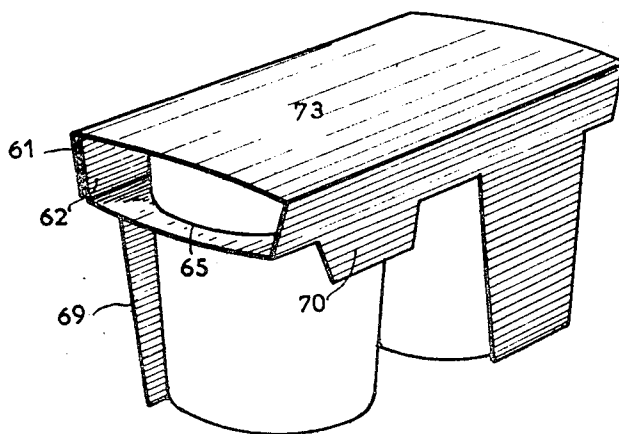
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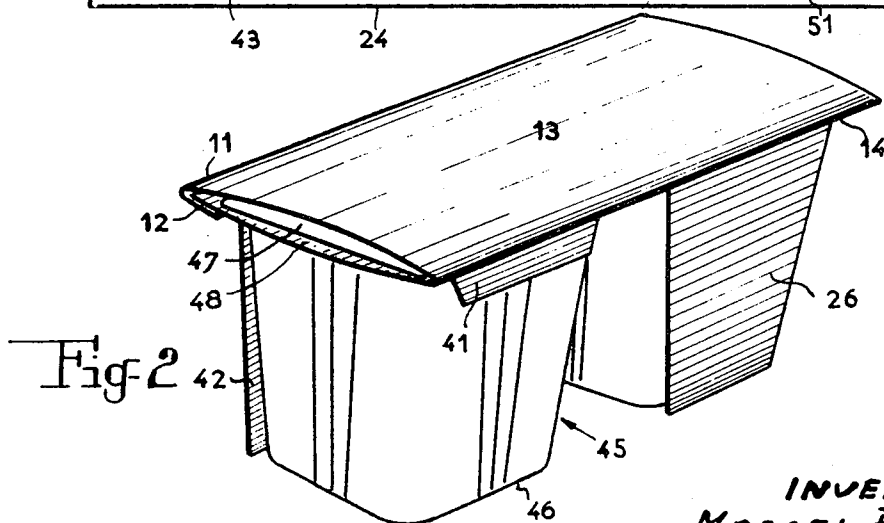
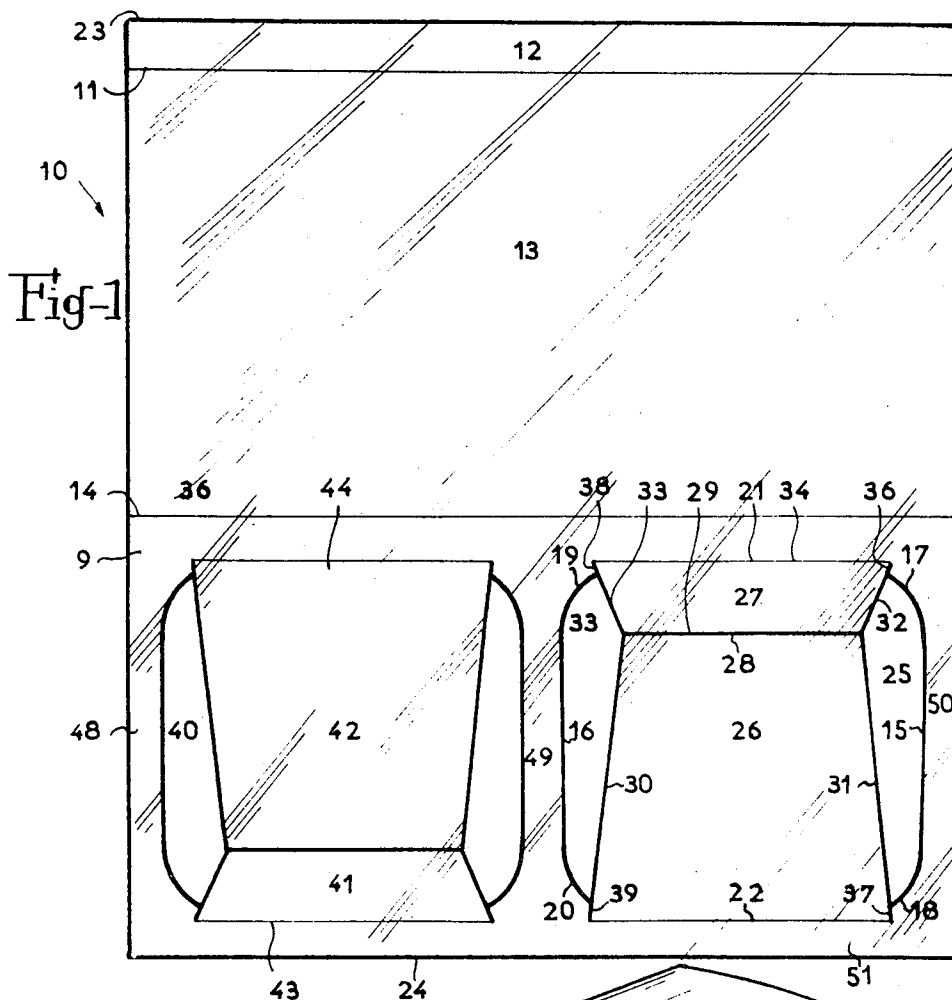
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[57] **ABSTRACT**

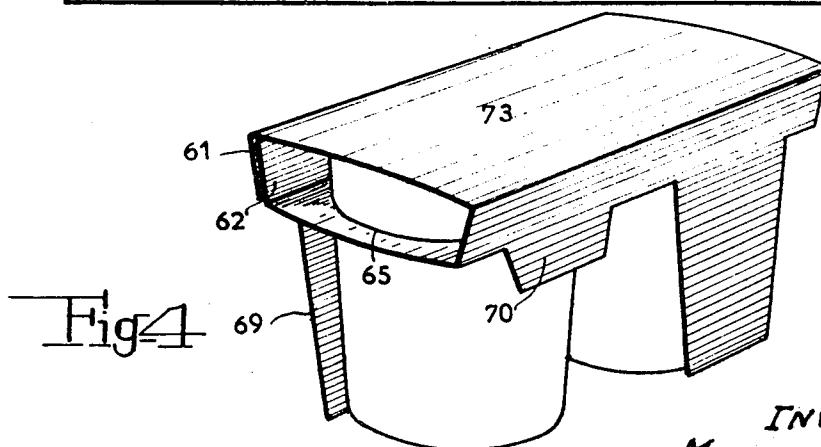
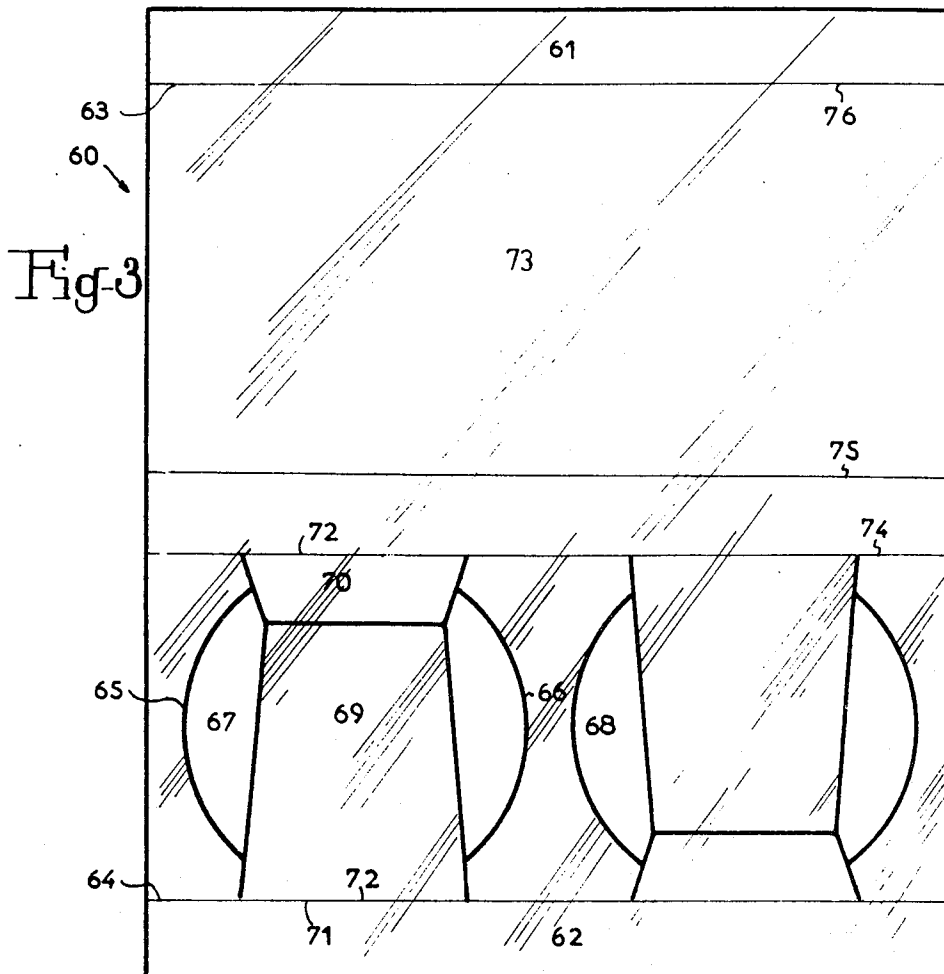
A carton blank is provided having a series of longitudinally adjacent panels connected to one another by score lines. One of the panels includes cut out portions for supporting articles such as yogurt containers therein. One of the other panels forms a protective panel which when in position is disposed above the panel with the cut outs. Flaps are formed by the portions cut out to cover the lateral surfaces of the articles to be displayed and supported therein. An additional group of articles can be superposed on the articles supported in the panel having the cut outs. An additional panel may be provided between the protective panel and the panel with the cut outs with portions for maintaining the additional group of articles in position. The assembled carton blank provides a displaying, holding and carrying device particularly useful for yogurt containers.

2 Claims, 12 Drawing Figures





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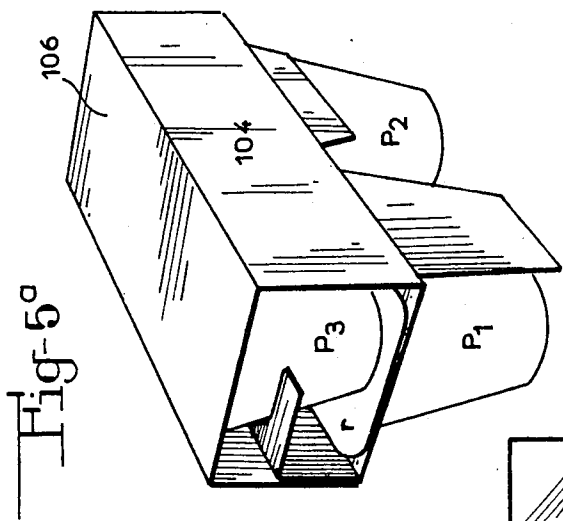
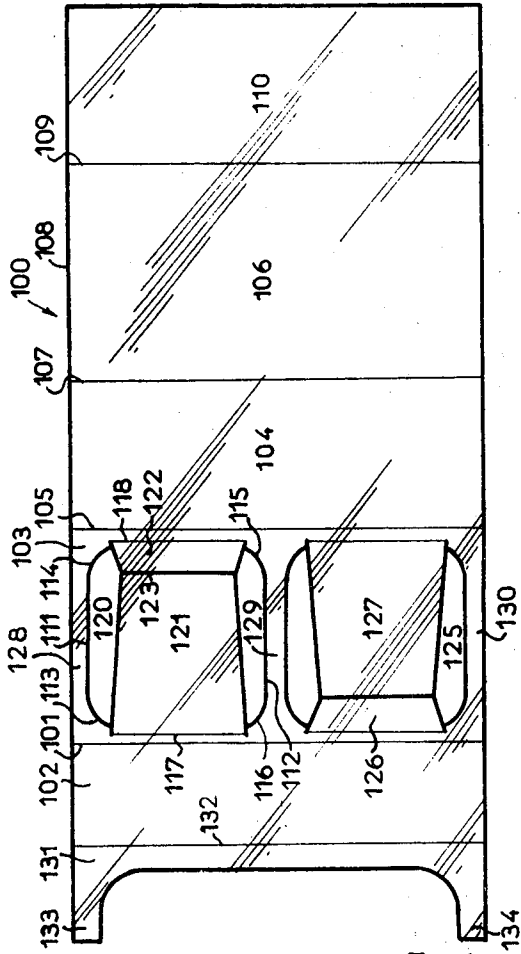
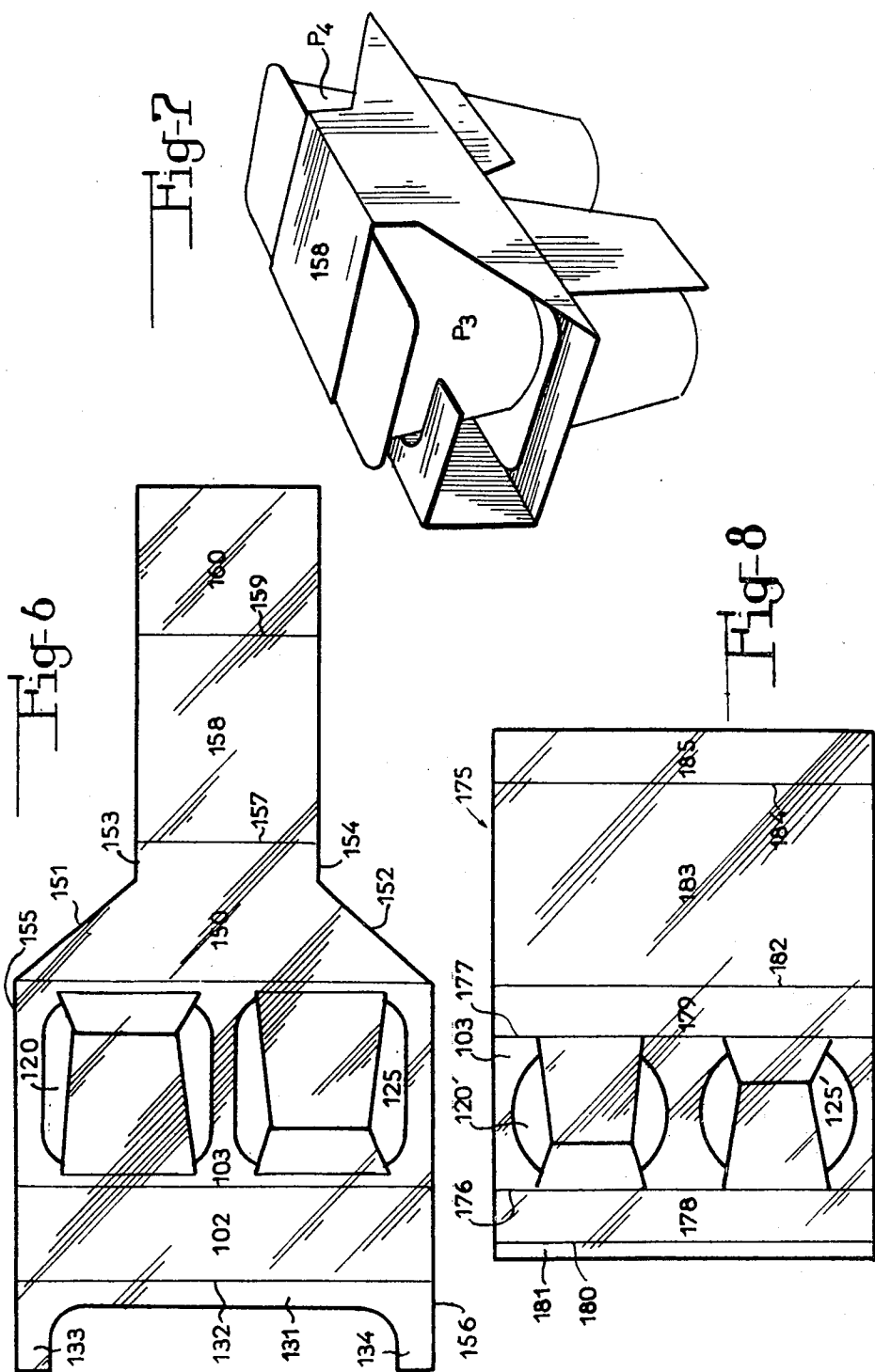


Fig-5

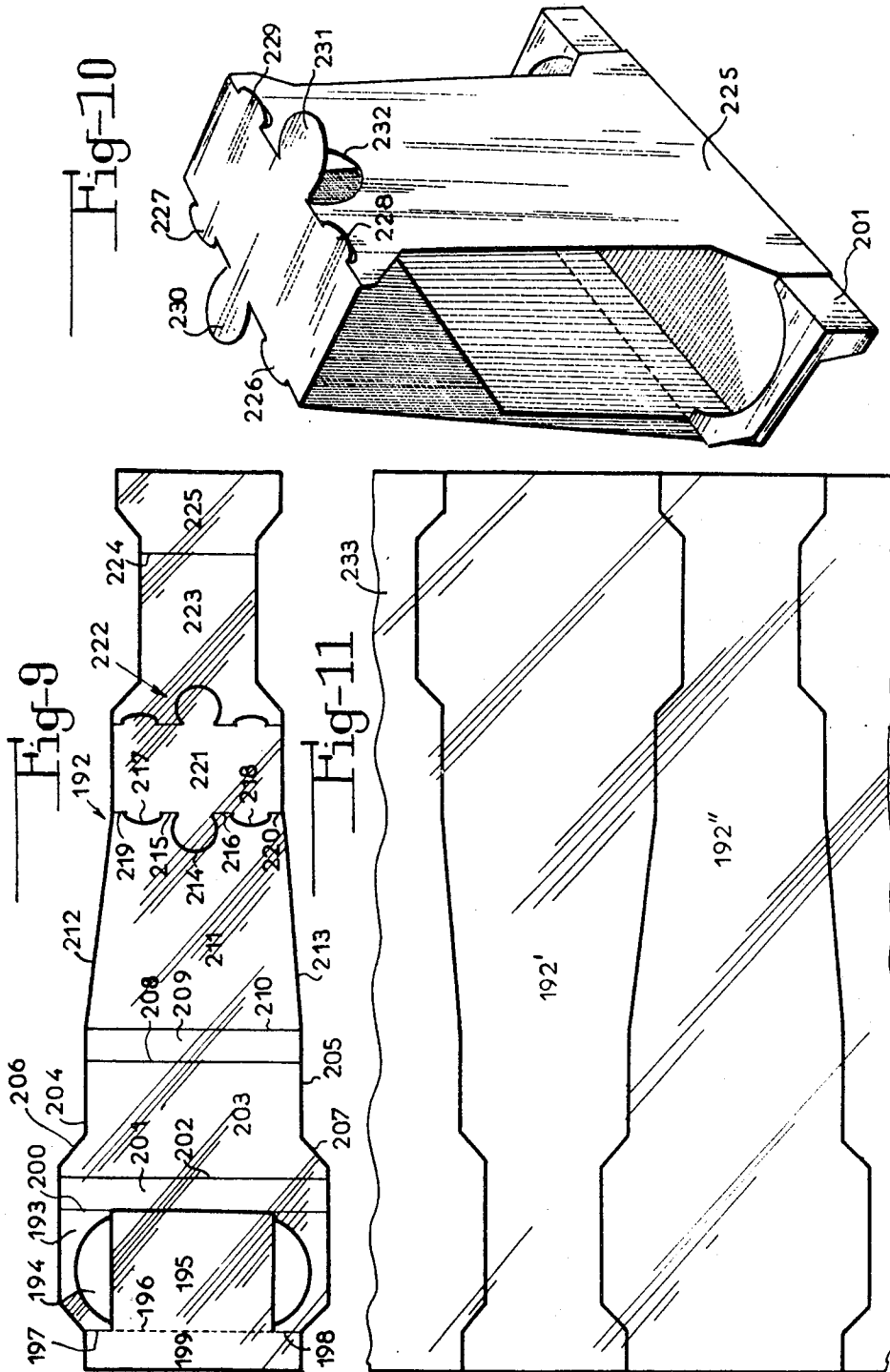


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PACKAGING DEVICE FOR DISPLAYING AND TRANSPORTING CONTAINERS

The invention relates to a device for displaying and transporting small articles such as containers, particularly yogurt containers, glasses or the like. Such a device comprises a generally elongate blank folded longitudinally in such a manner as to form a protective external wall and a sub-adjacent wall cut out in such a manner as to assure the holding of the articles; the two walls are connected together.

An object of the invention is to provide such a displaying and transporting device for two or more articles which uses only a small surface of the blank while assuring an excellent maintenance of the articles transported.

Another object of the invention is to provide such a device which is adapted to be used with an automatic packaging machine.

The device according to the invention, for displaying, maintaining and transporting small articles such as containers, in particular yogurt containers, including a carton blank, initially flat, of a generally elongate configuration, cut out and scored in such a manner as to enable it to be folded longitudinally and to form an upper wall as well as a sub-adjacent wall cut out in order to assure the support of the containers or the like, comprising flaps formed from the cut outs which provide a covering for the lateral surfaces of the articles to be transported.

In an embodiment each of the cut outs provide two flaps of different dimensions being adjacent and having a common edge when the carton blank for the device is laid out flat.

According to another feature of the invention, the outer protective wall and the sub-adjacent wall are cut out so as to assure the holding of a first group of articles are connected to each other by panels having dimensions sufficient to house and maintain between themselves a second group of articles.

The invention will be fully understood from the description which follows of embodiments chosen by way of example. For the purpose of this description reference will be made to the accompanying drawings in which:

FIG. 1 shows a plan view of a blank laid out flat for the device according to the invention according to a first embodiment;

FIG. 2 shows a perspective view of the device adapted to carry two containers;

FIG. 3 shows a view analogous to that of FIG. 1 but for another embodiment;

FIG. 4 shows a perspective view of a device formed from the blank shown in FIG. 3 adapted to carry two articles such as glasses therein;

FIG. 5 shows a view analogous to that of FIG. 1 and 3 but for another embodiment;

FIG. 5a shows a perspective view of a device formed from the blank shown in FIG. 5;

FIG. 6 shows a analogous view to that shown in FIG. 5 but for a further embodiment;

FIG. 7 shows a perspective view of a device formed from the blank shown in FIG. 6;

FIG. 8 shows a plan view of a blank laid out flat for forming a device according to the invention for another embodiment;

FIG. 9 shows a plan view of a blank laid out flat for forming a device according to the invention according to another embodiment;

FIG. 10 shows a perspective view of a device formed by the blank shown in FIG. 9; and

FIG. 11 shows a schematic view illustrating the cutting out of blanks as shown in FIG. 9 from a sheet of cardboard.

Reference will first be made to FIGS. 1-2. In this embodiment, a blank 10 of cardboard having a generally rectangular shape and including a score line 11 defining an end panel 12. A wide panel 13 is disposed between the score line 11 and another score line 14 half way between the score line 11 and the opposite edge of the blank. The cut out lines 15 and 16 perpendicular to line 14 and rounded at their ends 17, 18 and 19, 20 delimit an aperture 25 on the wide panel 9 of the blank between the score line 14 and the edge 24 with the score lines 21 and 22 parallel to the score line 14 and the edges 23 and 24. This aperture when the blank is laid out flat is partially covered by the long flap 26 and the short flap 27 adjacent to their common edges 28 and 19 formed by cutting. The lateral edges 30 and 31 of the flap 26 and the lateral edges 32 and 33 of the flap 27 are oblique. The flaps 26 and 27 are hingedly mounted by the attaching score lines 21 and 22 connected to the cut out 15 by notches 36, 37 and connected to the cut out 16 by notches 38 and 39.

The arrangement of the adjacent aperture 40 is analogous to that of the aperture 25, but the positions of the flaps are reversed, i.e., if the large flap 26 is as shown near the edge 24, then the small flap 41 is nearest to the edge 24 and the large flap 42 is nearest to the score line 14 relative to aperture 40.

In the embodiment only two such apertures are shown, however, in other embodiments the number of apertures can be different.

For displaying and carrying yogurt containers with the aid of this device, it is simply necessary to fold the flaps 26, 27 and 41, 42 about their score lines of attachment 22, 21 and 43, 44 respectively in such a manner as to bring them perpendicular to the rest of the panel 9; then insert the pyramidal yogurt containers 45 in their bottoms 46 first until the flanges 47 come to rest against the narrow bands 48, 49 and 50 which remain in the panel 9; finally, folding over the panel 13 by pivoting it about the line 14, acting as a hinge, until the end panel 12 can be engaged under the edge 51 of the opposite end of the blank, an adhesive being used to maintain the position of the device thus assembled. The flaps, in particular to flaps of large dimensions 26 and 42 can be used to carry advertising material.

The combination including the device and the containers provide in the same manner on both of its lateral surfaces a series of alternately visible and covered containers.

Reference will now be made to FIGS. 3 and 4 relative to another embodiment of the invention. In this embodiment, the blank 60 of cardboard or the like is cut out and scored substantially in the same manner as in the preceding embodiment. However, it includes along each of its longitudinal edges panels 61 and 62 defined by the score lines 63 and 64 respectively. Further, the cut outs 65 and 66 are part circular.

The articles to display and carry in the example are glasses clearing the apertures 67 and 68 by folding the flaps 69 and 70 about their lines of attachment 71 and 72 respectively engaged in the said apertures until being wedged therein owing to the truncated conical shape of the glasses. After which the upper panel 73 is folded over by folding along the score lines 74, 75 and 76 thus forming a hollow parallelepiped. The assembly is completed by the gluing of the edge 61 against the edge 62 forming a tubular body of substantial rigidity in particular in cooperation with the articles that are carried therein.

The combination formed by the glasses and their device for display and carrying have the same appearance on both of its lateral surfaces.

Various surfaces on the carton can be provided with advertizing.

Reference will now be made to FIGS. 5 and 5a relative to another embodiment. In this embodiment a blank 100 of cardboard or the like of generally rectangular shape is provided with a score line 101 defining a panel 102, a panel 103 is adjacent to this panel and in turn is separated from a panel 104 by a score line 105. The panel 104 is followed by a panel 106 connected to an end panel 110 by a score line 109. A score line 107 separates panel 104 from panel 106. A panel 131 adjacent to the panel 102 is connected thereto by a score line 132 provided with the projecting portions extending in the longitudinal direction of the blank and the function of which will be specified hereinafter.

The edges 111 and 112 of the cut out parallel to the longitudinal edges 108, 108' of the blank, and the rounded corners 113, 114, 115 and 116 define an aperture 120 in the panel 103 with short score lines 117 and 118 perpendicular to the edges 108, 108'. When the blank is laid out flat the aperture 120 is partially covered by a large flap 121 and a small flap 122 of trapezoidal shape and adjacent to one another along their common edge 123. The flaps 121 and 122 are hinged mounted by the score lines 117 and 118. An aperture 125 is also provided in the panel 103 formed similar to that of aperture 120 and in which the position of the flaps 126 and 127 are reversed with respect to the position of the flaps 121 and 122 respectively, in other words, if in aperture 120 the small flap 122 is close to the score line 105 in the aperture 125 the large flap 127 is close to this line.

Although only two apertures have been shown, their number may, of course, be greater if desired.

For displaying and carrying containers such as yogurt containers with the aid of such a device, it is simply necessary to fold the flaps 121, 122, 126 and 127 about their hinge lines, such as 117 and 118, in such a manner that they are perpendicular to the rest of the panel 103. The containers are inserted as shown at P₁ and P₂ in the apertures 120 and 125 (FIG. 5a) until their flanges r come to rest on the narrow bands 128, 129 and 130 which remain after the apertures 120 and 125 are cut out of panel 103. After the containers P₁ and P₂ are put in place, other containers such as shown at P₃ are then placed thereon.

The panel 102 is then brought into the plane substantially perpendicular to that of the panel 103 by folding about the score line 101, the panel 131 being itself folded about the score line 132 in order to bring it into

a plane substantially parallel to that of panel 103. Then the panel 104 is folded by pivoting about the score line 105, the panel 106 is folded by pivoting about the score line 107, and finally the panel 110 is folded over by pivoting about the score line 109 in order to bring the end of the panel 110 on the panel 102. The panel 110 is then fixed on the panel 102 preferably by gluing or stapling or any other suitable means in order to assure the maintenance of the device as assembled.

The flaps 121, 122, 126 and 127, in particular the large flaps, can be used to carry advertizing material.

The panel 131 forms when the device is assembled an intermediary partition substantially parallel to the plane of the upper panel 106 and disposed between the said upper panel 106 and the panel 103. Such an arrangement enables an effective locking of the upper containers, such as P₃, inserted in the apertures 120 and 125.

In the embodiment of FIGS. 6 and 7, the surface of the cardboard or other material necessary for producing the package is further diminished with respect to the embodiment according to FIG. 5. The panel 103 in which are provided the apertures 120 and 125 on its side opposite the panel 102 is followed by a panel 150 delimited by two oblique sides 151 and 152 which are connected to the longitudinal edges 153 and 154 respectively. The longitudinal edges 153 and 154 are closer together than are the longitudinal edges 155 and 156 of the panels 102 and 103 or the longitudinal edges of the end panel 131. The panel 150 is connected by a score line 157 to a panel 158 having smaller dimensions than that of panel 106 corresponding to the embodiment of FIGS. 1 and 2. The panel 158 is itself connected by a score line 159 to an end panel 160.

The combination of the device and the containers are shown in use in FIG. 7. The upper containers P₃ P₄ are maintained by tongues 133, 134 of the panel 131 and the end panel 100 which after folding is secured to the panel 102 by gluing or stapling maintains the position of the device after assembly.

Reference will now be made to FIG. 8. In this embodiment the blank 175 of cardboard or the like is cut out and scored substantially in the same manner as in the embodiment according to FIGS. 3 and 4. The panel 103 in which are provided the part circular apertures 120' and 125' is connected by score lines 176 and 177 to the panels 178 and 179 respectively. The panel 178 in turn is connected by a score line 180 to the narrow band 181 assuring the smooth passage of the package on an automatic packaging machine. The panel 179 is connected by a score line 182 to a panel 183 which is in turn connected by a score line 184 to an end panel 185.

Reference will now be made to FIGS. 9-11. The cardboard blank 192 comprises a first panel 193 in which is provided an aperture 194 which in the present embodiment is partially obturated by a panel 195 which is hinged mounted about a perforate line 196 intended for example to carry advertizing material or the like. The panel 193 is connected by two fold lines 197 and 198 extending beyond the perforate line 196 to an end panel 199 and by a fold line 200 to a panel 201 which in turn is connected by a fold line 202 to a panel 203 delimited by two parallel edges 204 and 205 following in the direction of the longitudinal edges of the panel 201 by the inclined edges 206 and 207. The

panel 203 is connected by a score line 208 to a panel 209 in turn connected by a score line 210 to a panel 211 whose long sides 212 and 213 are inclined relative to the longitudinal direction of the blank and whose edge opposite line 21 is cut out along a part circular first portion connected to short straight fold line portions 215 and 216 to cut outs 217 and 218 having a curvilinear shape. These cut outs 217 and 218 extend to the edges 212 and 213 by fold lines 219 and 220. The cut out thus defined limits a panel 221 whose opposite side is provided with a cut out 222 which is a mirror image of that described hereinabove, the said cut out 222 forms one of the ends of a panel 223 connected by a fold line 224 to an end panel 225.

The display and carrying of containers such as yogurt containers with the aid of such a device is effected by inserting containers in the aperture 194 then folding about the score lines 208, 202, 200 and 196 in order to bring the panel 199 in contact with the panel 209 with which it is secured by gluing. Other containers are placed on the lower containers maintained by the edges of the cut out 194 and are maintained thereon by tightening the panel of the cardboard panel surround the said containers and also at their upper portions by tongues 226, 227, 228 and 229 (FIG. 10) formed by the cut outs such as 217 and 218. The device thus assembled is maintained by gluing or stapling the end panel 225 to the panel 201. The cut outs such as 214 provide tongues with circular shapes 230 and 231 at

the same time as gripping openings 232 for the fingers of the user.

FIG. 11 shows the arrangement of two identical blanks 192' and 192'' of the type shown in FIG. 9 head to foot along side one another, illustrating the use of a sheet of rectangular cardboard for obtaining without loss of material of multiplicity of such blanks 192.

What is claimed is:

1. Packaging and transporting device for aligned containers with bodies and bottoms produced by folding a blank along parallel lines comprising an upper covering wall and an underlying wall substantially parallel to said upper wall, a first longitudinal wall and a second longitudinal wall connected by fold lines along opposite sides of said underlying wall and being folded upwardly towards said covering wall, said first longitudinal wall being connected to a side of said upper wall a band extending along an edge of said upper wall and being affixed to said second longitudinal wall forming said packaging device, said underlying wall being provided with at least one cutout with one of said containers being supported in said cutout by its body, and flaps extending downwardly from said longitudinal walls and being formed from the region of the cutout of said underlying wall.

2. Device according to claim 1, in which the said flaps are integral with and continuously connected to said longitudinal walls.

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