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(12) # EUROPEAN PATENT APPLICATION

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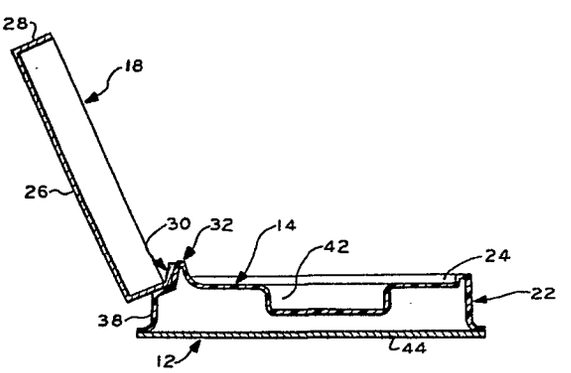
(54) **Display package.**

(57) A package for the storage and display of merchandise has a base 12 with a display area 14 and a cover 18 having a broad top panel and at least one downwardly depending wall 28. The package includes a hinge assembly that permits the cover to remain in the open, display position with respect to the base. The hinge assembly comprises a ridge 32 extending upward from the base, a downwardly canted land that extends from the lower margin of the ridge, to support the cover in the open display position, and a pivoting flap 30 extending from a lower edge of one of the depending walls of the cover. The flap may be adhesively attached to a surface of the ridge, and the cover may pivot about the fold line between the flap and the depending wall, from the open to the closed position. The provision of a downward slant of the land permits the cover to reside in the open display position without springs or other ancillary devices.

The cover may be prepared as a «setup box» construction, or may be assembled from a blank. The blank utilizes parallel exterior and interior top panels that lie in spaced apart relation to each other, to permit side wall locking panels to secure the side walls of the cover in fixed position abutting each other.

The display package is of simplified construction, and facilitates, by its simplicity, bulk shipping and assembly at the site of use.



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"DISPLAY PACKAGE"

Field of the Invention.

The present invention relates to a package for the display of goods, and more particularly to a package of simple construction, having a cover capable of remaining in the open, display position.

Description of the Prior Art.

Display packages for the combined purposes of shipping and displaying merchandise, such as cameras, cosmetics and the like are well known, and a variety of package constructions have been used for many years. In particular, U.S.Patents Nos:3,352,478, 3,799,332, and 4,209,090 illustrate display packages having covers capable of remaining open for display purposes. In this connection, other display packages with covers biased to remain either in the open or closed position are also known, as illustrated by U.S.Patent No:2,524,191 and U.S.Patent No:4,170,327 (equivalent to EP-A-0009650).

While all of the foregoing packages serve the purpose of permitting the cover of a display package to remain in the open, display position, they also involve the fabrication and assembly of intricate, specially formed components, that naturally adds to the cost of their production. Even the least intricate of these constructions, from the standpoint of manufacture, requires the performance of several steps during assembly, which naturally adds to the cost of the package. Additionally, the complexity of construction and assembly of certain of the prior art packages makes it difficult to ship those packages unassembled for the purpose of reducing package shipping costs, and manufacture of the packages must take place in the geographical location of the customer, to accomplish cost reduction. The need therefore exists for a package construction and method of assembly that provides the desired display

capability at reduced manufacturing and assembling costs.

Accordingly, it is a principal object of the present invention to provide a display package with a base and a cover, where the cover may be releasably maintained in the open, display position.

It is a further object of the present invention to provide a display package as aforesaid, that is of simple and inexpensive construction.

It is a yet further object of the present invention to provide a display package as aforesaid that is prepared from a minimum of components, and which may be easily shipped and assembled.

It is a still further object of the present invention to provide a display package as aforesaid, that may utilize a thermo-formed base and a cardboard cover.

It is a yet further object of the present invention to provide a blank for assembly into a cover for use in the present display package, which is of simple construction and permits rapid assembly.

Summary of the Invention.

In accordance with the present invention, a display package is disclosed that comprises a base defining a display area, a surrounding perimeter, an upstanding wall extending along at least a portion of said perimeter, and a cover forming a hingeable connection with the base adjacent the perimeter, and capable of residence in the open, display position. The cover includes a broad top panel and at least one depending wall extending from the edge of the top panel.

The base and the cover cooperate to define a hinge assembly. The hinge assembly includes a ridge located inboard of the base perimeter, that extends upward and defines an essentially vertical outboard surface facing in the direction of the perimeter. A downwardly canted land extends from the lower margin of the outboard surface, toward the perimeter of the base, to support the cover in the open, display position. A

mating flap extends from the lower edge of a portion of the downwardly depending wall of the cover, and is adhesively attached to the outboard surface of the ridge. Thus, when the cover is disposed in the open, display position, an outer surface of a depending wall rests on the land at an angle to the vertical that ensures its stability in that position.

The base preferably includes a rim defined by a portion of the upstanding wall of the base to receive a portion of the downwardly depending wall of the cover, when the package is in the closed position.

The display package of the invention may utilize a variety of covers, including the rigid "setup box" cover construction, as well as a cover assembled from a cover blank configuration. The present invention also includes a blank designed for simple and rapid assembly into a cover for use in the package of the present invention.

The blank comprises an exterior panel and an interior panel adapted, when the blank is fully assembled, to reside in spaced apart parallel relation to each other. A plurality of side walls are attached to the exterior panel and are connected by a corresponding number of collapsible web members. Glue flaps are provided on parallel edges of the interior panel, to secure the interior panel between corresponding opposed side walls when the blank is assembled. Paired locking flaps are attached to the opposed side walls lying intermediate the side walls between which the interior panel is suspended, and are adapted to fold inward in final assembly of the blank and to retain the inwardly collapsed web members in position against their adjacent side walls, to maintain the structural integrity of the cover. A free flap is disposed on the outer edge of one of the side walls so that, in final assembly, the cover may be suitably mounted on the base in accor-

dance with the present invention.

The present package may be of two-piece construction with the base prepared from thermo-formed plastics, and the cover fashioned from a single piece of cardboard folded and appropriately scored to serve as the blank described above. Alternatively, the cover may comprise a conventional "setup box" construction wherein a sheet or web of material secures a plurality of cardboard panels in integral relation to each other.

The package of the invention may be easily assembled, simply by disposing a line of glue against the ridge on the base, and thereafter applying the cover to the glue line, by attaching the flap thereto, along its outer surface.

The rim disposed along the upstanding wall may be configured to provide a frictional fit along the peripheral edges of the cover, to secure the cover in the closed position. In one embodiment, the rim may extend about the majority of the upstanding wall, with the exception of the portion of the upstanding wall defining the hinge.

The invention will be further described with reference to the accompanying drawings, which illustrate both a package and a cover blank in accordance therewith.

Brief Description of the Drawings.

Figure 1 is a perspective view of a display package of the present invention in the open, display position.

Figure 2 is a top plan view of the base of the display package of Figure 1.

Figure 3 is a side sectional view taken through line 3-3 of Figure 2.

Figure 4 is a perspective view of a cover in accordance with the present invention.

Figure 5 is a side sectional view taken through line 5-5 of Figure 1.

Figure 6 is an enlarged fragmentary view showing the detail of the hinge in the package of Figure 1.

Figure 7 is a side sectional view similar to Figure 5 showing the package with the cover in the closed position.

Figure 8 is a plan view of a blank for assembly into a cover useful in the present invention.

Figures 9-13 illustrate the steps of assembly of the blank of Figure 8 into a cover.

Detailed Description.

In accordance with the present invention, a display package 10 is illustrated in perspective in Figure 1, and comprises a base 12 providing a display area 14 to retain merchandise for storage and display, and a perimeter 16 that defines the periphery of the base. A cover 18 is connected to base 12 by a hinge assembly generally designated 20 herein. Base 12 includes upstanding walls 22 that cooperate with display area 14 to define the three-dimensional structure of the base. Upstanding walls 22 may extend the majority of perimeter 16, and are adapted to accommodate hinge assembly 20. The portion of upstanding walls 22 not in proximity to hinge assembly 20 includes a rim 24 that extends along at least a portion of the upstanding wall to receive the cover 18 in the closed position, as illustrated in Figure 7 and discussed later on herein.

Cover 18 comprises a broad top panel 26 and at least one downwardly depending wall 28 that extends therefrom. Referring to Figure 4, cover 18 may be rectangular in shape, and downwardly depending wall 28 may comprise four planar wall panels, connected to each other, to form the rim of a box top. Cover 18 may be of the rigid "setup box" construction well known in the packaging art, or may be fashioned from a foldable blank construction such as that disclosed later on herein. Cover 18 includes a flap 30 that is pivotally attached to a lower edge of a downwardly depending wall 28, and serves as the point of hingeable attachment of

the cover to base 12. Hinge assembly 20 connects base 12 and cover 18, and permits cover 18 to rest in the open, display position, as shown in Figures 1 and 5. Hinge assembly 20 comprises a ridge 32 that extends upward from base 12 adjacent perimeter 16, and provides an outboard surface 34 that faces perimeter 16 and provides the point of attachment of cover 18 to base 12. Outboard surface 34 may be either directly vertical, or at a slight incline with respect to the vertical, within the scope of the present invention.

Hinge assembly 20 further includes a downwardly canted land 36 that extends from the lower margin of outboard surface 34, downward toward perimeter 16. Land 36, as illustrated in Figure 3, may terminate at a reduced height upstanding wall portion 38 provided to accommodate the ridge 32 and land 36 as shown. Land 36 can be seen in Figures 5 and 6 to provide support for the outer surface of a downwardly depending wall 28 of cover 18, so that cover 18 remains stably in the open display position as shown.

The exact angle of decline of downwardly canted land 36 is not critical, and may comprise only a few degrees determined with respect to the plane containing perimeter 16. Preferably, both outboard surface 34 and downwardly canted land 36 are planar as illustrated, and may define in cross-section an obtuse angle. Such angle illustrated in Figure 3 and designated α, may vary, for example from slightly greater than 90° to as large as 120° in arc. The exact angle is not critical, so long as an obtuse angle is subtended, and downwardly canted land 36 provides sufficient angulation so that cover 18 may rest securely thereon, without springing forward into the closed position during periods of display.

Hinge assembly 20 also includes flap 30, discussed earlier with reference to cover 18. As mentioned, flap

30 is capable of pivoting with respect to the adjacent downwardly depending wall with which it communicates. Flap 30 may likewise preferably be planar, as shown in Figure 4, may be of variant length, and need only extend along a portion of the length of a given downwardly depending wall segment as illustrated in Figure 4. Flap 30 is attached to ridge 32 along outboard surface 34, as best shown in Figure 6, by the adhesive attachment of an outer broad surface 40. Thus, in attachment and assembly, flap 30 is rotated toward the interior of cover 18, and, for example, a quantity of packaging adhesive 41 may be applied across either outer broad surface 40 or outboard surface 34, after which the mating surfaces may be held together momentarily to achieve attachment.

As shown in Figures 5-7, the opening and closing of cover 18 with respect to base 12, comprises the pivoting of flap 30 from a position totally within cover 18 and against the inner surface of adjacent depending wall 28, as illustrated in Figure 7, to a position shown in Figures 5 and 6, of direction away from cover 18.

Base 12 defines a further feature of the present invention, by the provision of a rim 24, noted earlier, that extends along the upper edge of the upstanding wall 22.

Referring now to Figure 7, package 10 is illustrated with cover 18 in the closed position. In the instance where rim 24, as illustrated in Figure 3, extends substantially about the perimeter of base 12, rim 24 offers an aesthetic shroud for the edge of cover 18 that gives the package as illustrated a modern, attractive appearance. Also rim 24 may be dimensioned to provide slight frictional abutment with the outer surface of downwardly depending walls 28, so as to provide a latching engagement of cover 18 in the closed position.

While rim 24 is illustrated extending about the majority of the perimeter of base 12, it is to be understood that rim 24 may, like upstanding walls 22, extend for only a portion of perimeter 16 within the scope of the present invention.

Referring further to Figures 2 and 3, base 12 may be of rectangular shape as illustrated, or may assume other shapes, within the scope of the present invention. In general, broad display area 14 may be recessed below the level of rim 24 as shown, and discussed earlier. While display area 14 is illustrated herein with a cavity 42, it is to be understood that a variety of alternative configurations of display area 14 may be developed and used, to accommodate specific merchandise configurations and promotional objectives. Therefore, the present invention is not to be construed as limited to the illustration of the display area shown in the present Figures.

Preferably, and in accordance with the present invention, base 12 may be formed from a variety of plastics materials well known in the packaging art. Particularly, base 12 may be formed as a single unit from plastics material by the techniques of vacuum forming or thermo-forming, well known in the art. In such an instance, an appropriate die would be made, to define the shape of base 12, and a sheet of suitable plastics material would then be heated and shaped in conformity therewith. Suitable plastics materials include polyolefins and vinyl polymers such as polyvinyl chloride and polyvinyl acetate. Naturally, the foregoing materials are illustrative of materials useful in forming base 12, and the invention is accordingly not limited to these stated materials.

The structure formed by the molding process described above is hollow, and is desirably completed to form the final base 12 by the adhesive attachment of a bottom 44 illustrated specifically in Figures 3, 5

and 7. Preferably, bottom 44 is made from a sheet of cardboard, and adds aesthetic completeness to the resulting package. Naturally, bottom 44 is not mandatory, and the package can be prepared with an open or hollow base. Also, in the instance where it is desired to assemble the package at or near the location of use the hollow base structures may be nested and shipped separately from the bottoms 44, to facilitate the shipping of greater quantities of the package with reduced bulk. The bottoms 44 may thereafter be adhesively applied at the point of destination.

As indicated earlier, the cover 18 may be formed as a rigid "setup box" construction, where a continuous web of facing material is disposed about segments of wall portions and panels, to form an integrated final structure. Alternatively, the cover 18 may be formed by the assembly of a preformed blank, illustrated herein in Figures 8-13 and described in detail below. Regardless of which construction is chosen for the provision of cover 18, the display capability of cover 18 renders it favorably amenable to the disposition of advertising indicia on both the inner and outer surfaces thereof. Thus, for example, differing indicia may be disposed on the outer and inner surfaces of cover 18, to provide a commercially versatile attractive appearance. In this connection, cover 18 may be provided with a cut out and corresponding window portion, not shown, to permit the buyer to view the goods with the cover closed. The employment of various advertising indicia, and the inclusion of a window, are contemplated within the scope of the present invention.

Cover Blank Construction.

Referring now to Figures 8-13, cover 18 may be formed from a preformed blank generally designated 46. Blank 46 comprises an exterior top panel 48 that may, as illustrated, be essentially rectangular in shape. An interior top panel 50 is disposed in communication with

exterior top panel 48, and is seen to be essentially similar in shape and dimensions. A plurality of regularly spaced exterior side walls 52 are disposed about the edge of exterior top panel 48, and are adapted for pivotal movement from the position of Figure 8 to that of the assembled box by fold lines 53.

Referring further to Figure 8, a first interior side wall panel 54 extends from one of the exterior side wall panels 52 as shown. The panel 54 may pivot in relation to adjacent panel 52, and may fold thereagainst, as illustrated in Figure 10. Panel 54 extends into pivotal contact on its opposed edge with interior top panel 50, and is movable in relation to panel 50, by means of working score line 56. A second interior side wall panel 58 extends from interior top panel 50 and is disposed essentially parallel to panel 54, so that panel 50 is straddled thereby. Panels 50, 54 and 58 fold within panels 48 and 52, as shown in Figure 10, to define the majority of the interior surfaces of the assembled cover.

Referring further to Figure 8, a plurality of web members 60 extend between the lateral edges of adjacent exterior side wall panels 52. Web members 60 are collapsible, and comprise paired wing tabs 62 separated by working score lines 64. As shown in Figures 11 and 12, web members 60 fold upon themselves, so that wing tabs 62 lie against each other and bring panels 52 into position for final assembly of the cover.

Blank 46 also includes paired locking interior side wall panels 66 that extend from the opposed exterior side wall panels 52 that flank the exterior side wall panel 52 to which first interior side wall panel 54 is attached. As will be discussed in detail later on, side wall panels 66 secure the final assembly of the cover, by retaining folded web members 60 in position as shown in Figure 12, and by engaging the lateral margins 70 of interior top panel 50 to remain in assembled

position.

A description of the assembly of blank 46 into a completed cover 18' is given below.

Assembly.

Referring now to Figure 8, assembly of blank 46 into cover 18' proceeds, initially, by the flexing of panels 52 with respect to panel 48, at fold lines 53, so that panels 52 may be moved upward in relation to the drawing. Likewise, fold line 55, working score line 56 and fold line 57, separating second interior side wall panel 58 from interior top panel 50, should be flexed in anticipation of assembly.

Thereafter, the opposed panels 52, including the panel 52 to which interior top panel 50 is indirectly attached, should be flexed upward into parallel position, and perpendicular relation to panel 48. Thereafter, panel 54 should be rotated around into parallel abutment with adjacent panel 52, while panel 50 should be disposed in parallel spaced apart relation to panel 48, with panel 58 flexed so as to reside parallel to its adjacent panel 52, all as illustrated in Figures 9 and 10. Permanent assembly of the respective panels in this position can be achieved by applying a line of glue along the surfaces of panels 54 and 58, indicated by stippling in Figure 8, and identified herein as first glue line 74 and second glue line 76. The preliminarily-assembled cover blank 46 will appear as shown in Figures 9 and 10, with interior panels 54, 50 and 58 respectively disposed at positions adjacent corresponding exterior panels 52, 48 and 52 as shown.

It is apparent that interior top panel 50 is disposed in parallel spaced apart relation with exterior top panel 48, to facilitate final assembly discussed hereinafter. In this connection, Figure 10 shows that interior side panels 54 and 58 are of correspondingly reduced depth, with respect to panels 52, so that the parallel spaced apart disposition of panels 48 and 50

may be maintained. In this connection, panel 58 is affixed to adjacent exterior side panel 52 so that the leading edge of panel 58 coincides with the junction between flap 72 and panel 52.

The next sequence of assembly is illustrated in Figures 11-13. After the adhesive disposed between panels 52 and respective adjacent interior panels 54 and 58 has dried fully, working score lines 64 are flexed in the direction of panel 50, as shown in Figure 11, so that web members 60 may be collapsed and wing tabs 62 may fold over each other. This may be accomplished by applying gentle pressure against the exterior surfaces of the opposed exterior side wall panels 52, from which locking interior side wall panels 66 extend. Gentle pressure will cause the collapse of web members 60, into the position shown in Figure 12, and the resulting web members 60 will serve to bring the adjacent side panels 52 into end-to-end abutment with each other as shown. The next and final step of assembly comprises the folding of locking interior side wall panels 66 inward toward interior top panel 50, and past the lateral margins 70 of panel 50, so that the edges of panels 66 will be tucked thereunder, as shown in broken section in Figure 13. Thus, the lateral margins 70 retain the peripheral edges of locking interior side wall panels 66 so that panels 66 remain in position and, more importantly, retain folded web members 60 securely to assure that all adjacent exterior side walls 52 remain in fixed alignment with each other. The performance of this last operation constitutes the completion of the assembly of cover 18' from blank 46.

It is apparent from the foregoing description that blank 46 may be easily manufactured and manipulated, with a minimum number of steps, to form a cover suitable for use in the display package of the present invention. As indicated earlier, the specific size, shape and decora-

tion of the cover, whether prepared as a "setup box" or from blank 46, may vary, and may include the disposition of divergent advertising indicia as well as the provision of windows and the like for viewing of the displayed merchandise when the cover is closed. All such modifications are considered within the scope of the present invention.

Preferably, all covers, whether prepared in "setup" version or from the blank 46, are prepared from appropriate gauge cardboard stock. While other materials, suitable and known to the packaging industry may be utilized, cardboard stock is preferred.

It is to be understood that the invention is not limited to the illustrations described and shown herein, which are deemed to be merely illustrative of the best modes of carrying out the invention, and which are capable of modification of form, size, arrangement of parts and details of operation. The invention rather is intended to encompass all such modifications which are within the spirit and scope as defined by the claims.

CLAIMS

1. A package for the storage and display of merchandise comprising:

A. a base having a display area for said merchandise, and a surrounding perimeter;

B. a cover having a top panel and at least one downwardly depending wall extending therefrom;

C. a hinge assembly connecting said base and said cover, to permit said cover to rest in the open display position, said hinge assembly comprising,

i. a ridge extending upward from said base adjacent the perimeter thereof, for the pivotal attachment of said cover,

ii. a downwardly canted land extending from the lower margin of said ridge toward the perimeter of said base, to support said cover in said display position, and

iii. a pivotable flap extending from a portion of the lower edge of a downwardly depending wall of said cover, said flap having a surface attached to said ridge to enable said cover to pivot from said open display position to a closed position on said base.

2. A package according to claim 1 wherein said base includes an upstanding wall extending along at least a portion of said perimeter.

3. A package according to claim 2 wherein said upstanding wall defines a rim along a portion thereof, to receive a portion of the downwardly depending wall of said cover when said package is closed.

4. A package according to claim 2 or 3 wherein said upstanding wall extends along the entire perimeter of said base.

5. A package as claimed in any of claims 1 to 4 wherein said ridge is adjacent said upstanding wall and includes an outboard surface facing said perimeter for the attachment of said flap, and said land extends downward from the lower

margin of said outboard surface and toward said perimeter.

6. A package according to claim 5 wherein the angle between said ridge and said land is an obtuse angle.

7. A package according to any of claims 1 to 6 wherein said flap has an outer surface adjacent the outer surface of said downwardly depending wall, and said flap is attached to said ridge at said outer broad surface.

8. A package according to any of claims 1 to 7 wherein said downwardly depending wall extends about the entire perimeter of the top panel of said cover.

9. A package according to any of claims 1 to 8 wherein said base and said cover are rectangular, and said flap is a planar strip.

10. A package according to any of claims 1 to 9 wherein said cover is of rigid "setup box" construction.

11. A package according to any of claims 1 to 9 wherein said cover is prepared from a foldable blank.

12. A package according to any of claims 1 to 11 wherein said base is prepared from a plastics material.

13. A blank useful for assembly into a cover for a display package, comprising

A. an exterior top panel;

B. an interior top panel communicating therewith;

C. a plurality of regularly spaced exterior side wall panels disposed about said exterior top panel;

D. a first interior side wall panel extending from one of said exterior side wall panels, and connected to said interior top panel;

E. a second interior side wall panel extending from said interior top panel, and essentially parallel to said first interior side wall panel;

F. a plurality of web members connecting adjacent exterior side wall panels at their lateral edges;

G. paired locking interior side wall panels extending from opposed exterior side wall panels located in flanking relation to said first interior side wall panel; and

H. a flap for hingeable association with the base of said display package, extending from the exterior side wall panel opposed from said first interior side wall panel.

14. A blank according to claim 13 wherein said panels are all of rectangular shape.

15. A blank according to claim 13 or 14 wherein said first and second interior side wall panels are identical in shape.

16. A blank according to any of claims 13 to 15 wherein said interior top panel is adapted to reside in spaced apart parallel relation to said exterior top panel when said blank is fully assembled into said cover.

17. A blank according to any of claims 13 to 16 wherein said interior top panel defines parallel lateral margins along the free edges thereof, and said margins are positioned in the finally assembled cover to retain said locking interior side wall panels.

18. A blank according to any of claims 13 to 17 wherein said web members comprise paired wing tabs perforately attached to each other, said wing tabs being adapted to fold toward each other and into face-to-face abutment, and to reside between respective locking interior adjacent side wall panels and adjacent exterior side wall panels, when said blank is fully assembled into said cover.

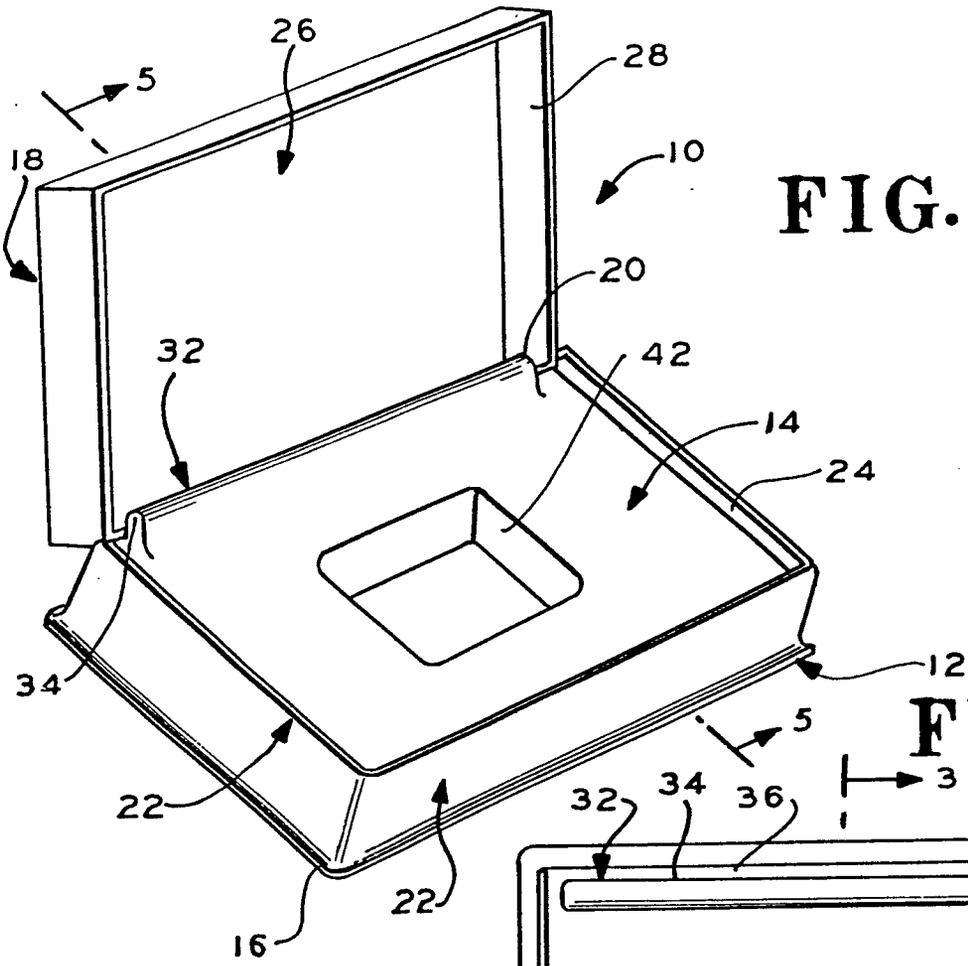


FIG. 1

FIG. 2

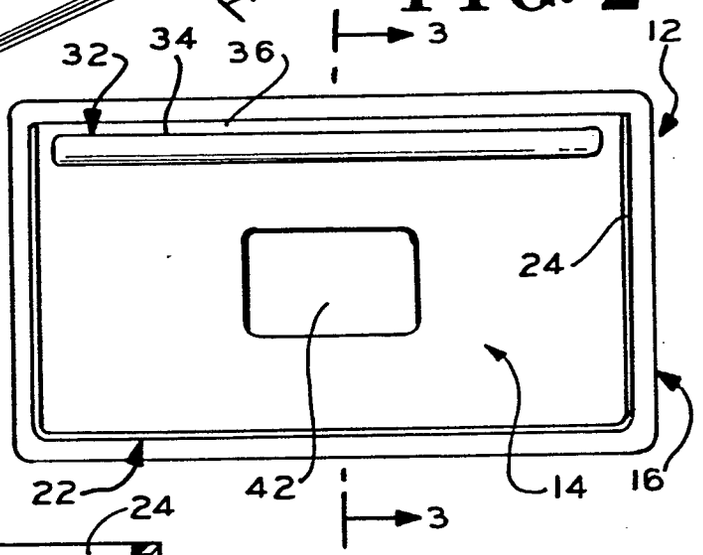


FIG. 3

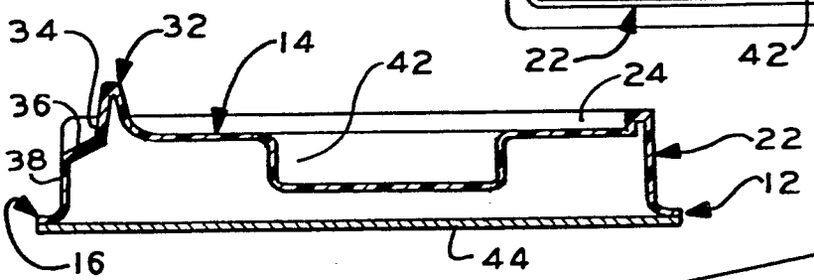


FIG. 4

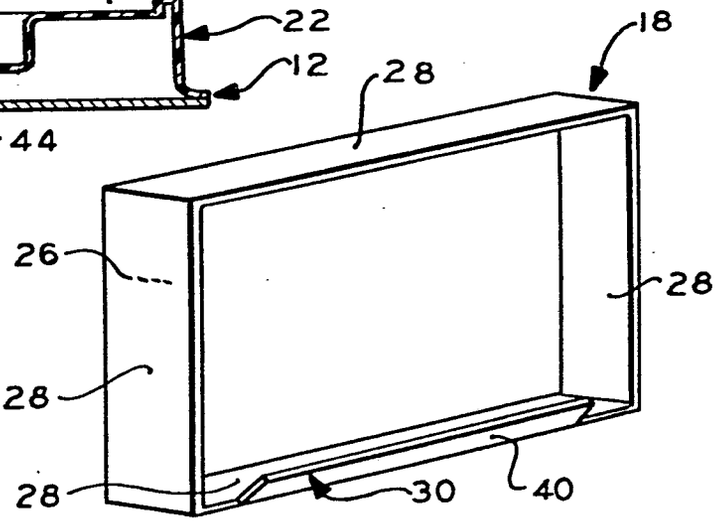


FIG. 7

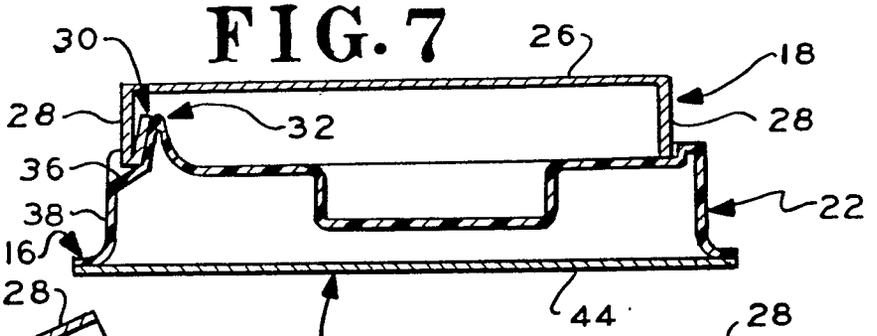


FIG. 6

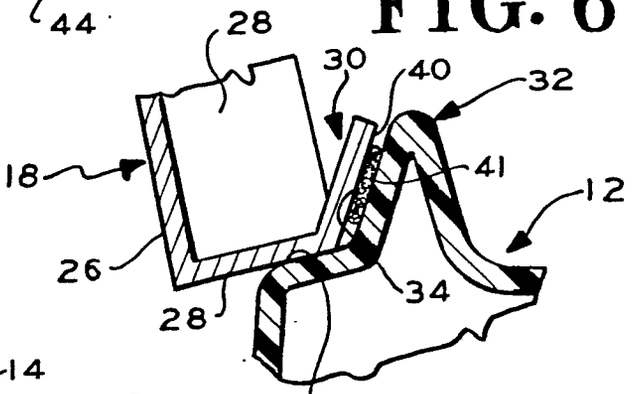


FIG. 5

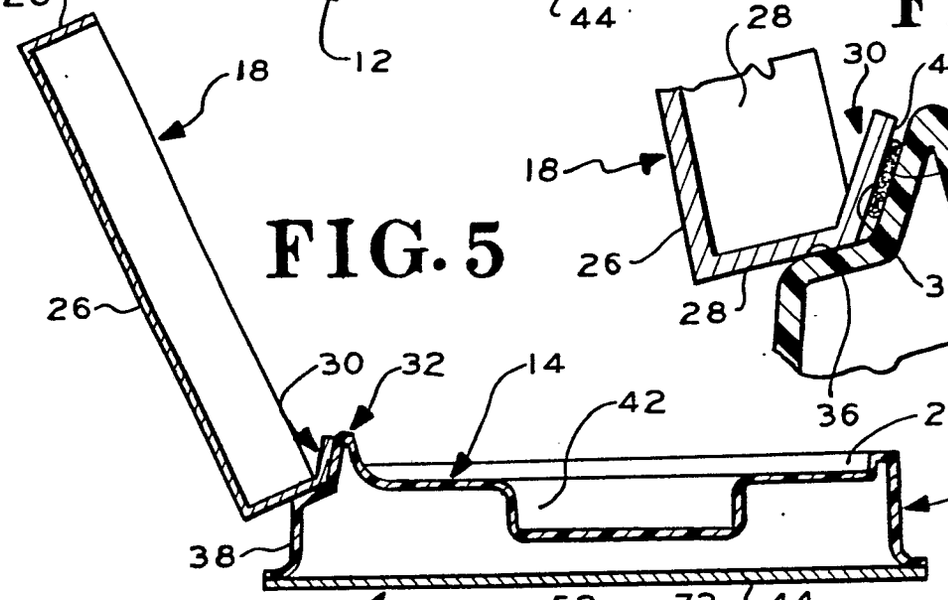
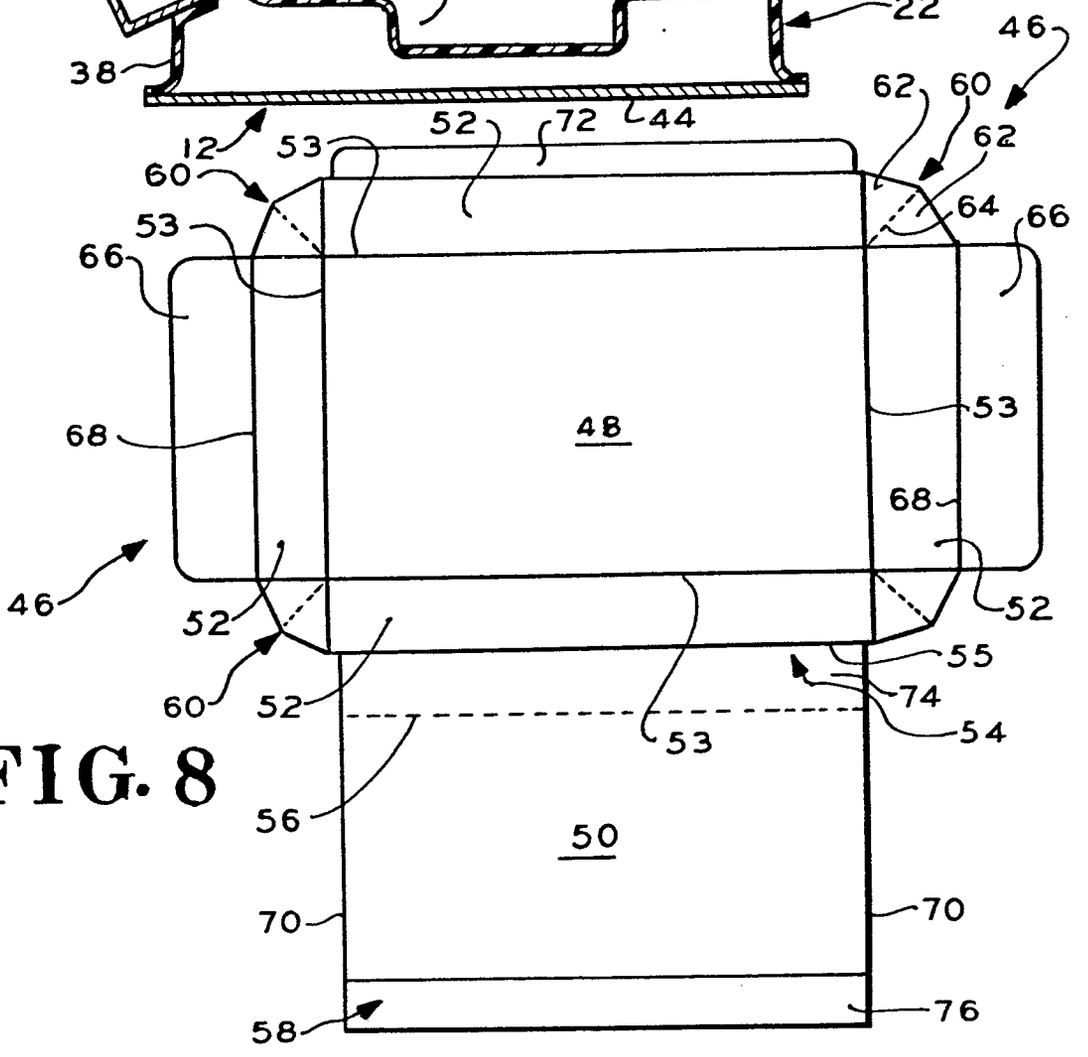


FIG. 8



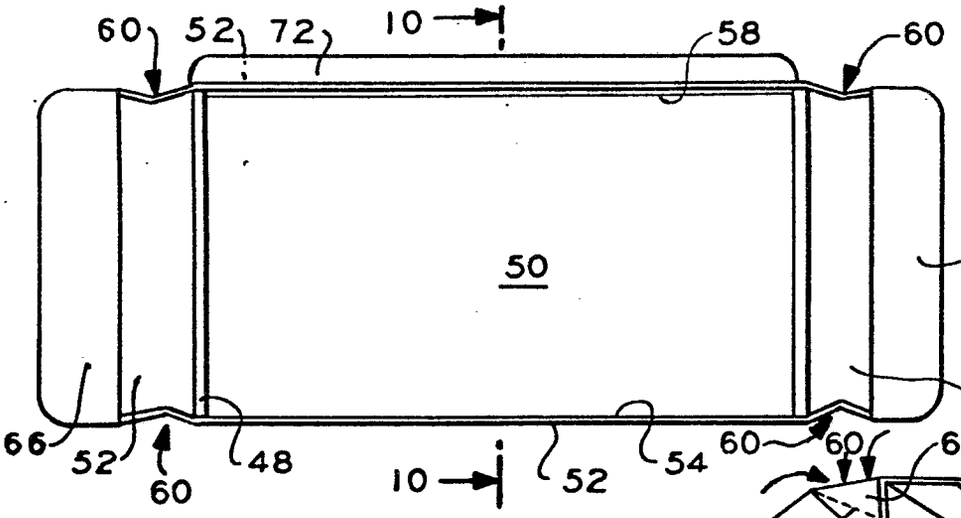


FIG. 9

FIG. 10

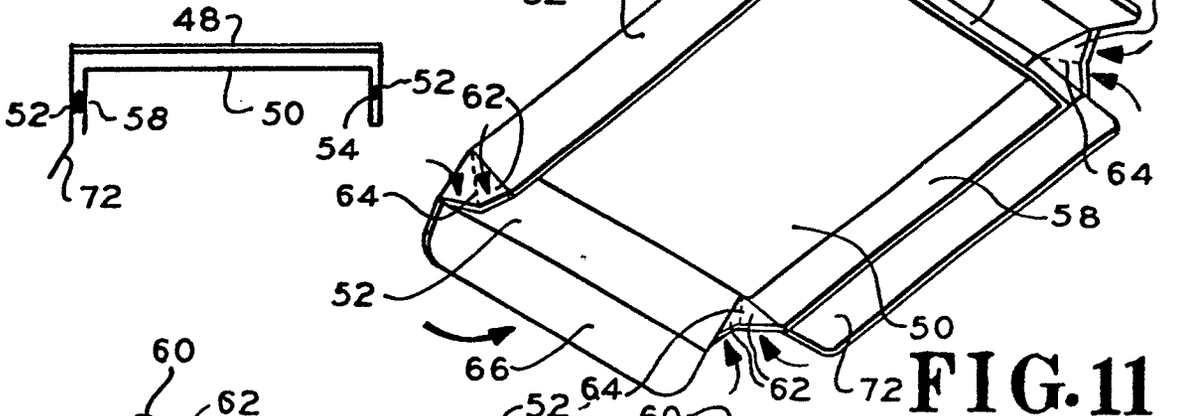


FIG. 11

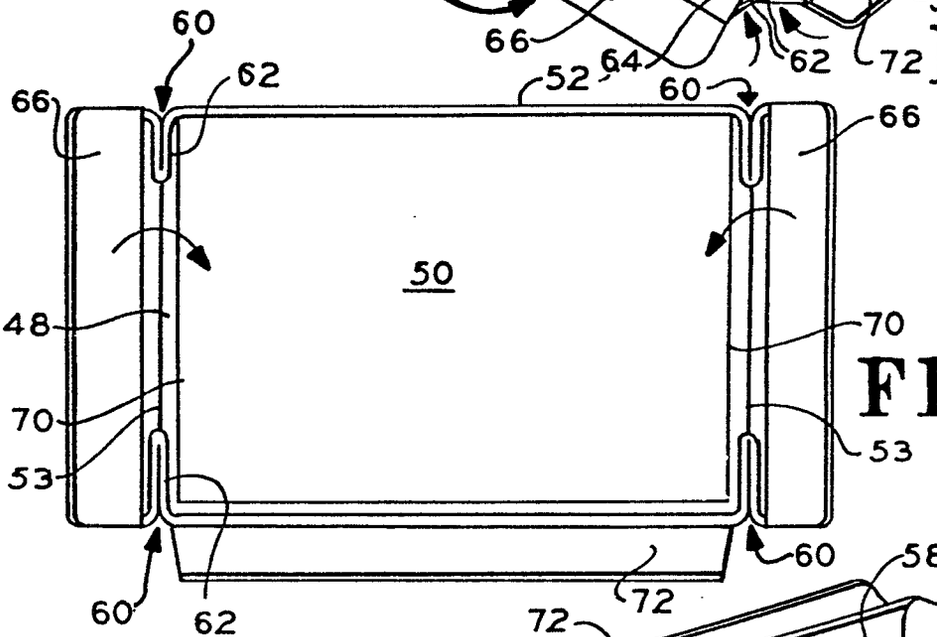


FIG. 12

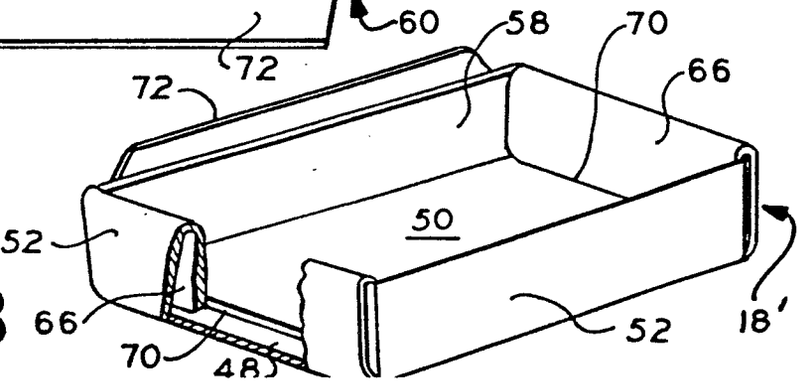


FIG. 13

European Patent Office

EUROPEAN SEARCH REPORT

Application number

EP 83 30 0667

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
D,X	EP-A-0 009 650 (BRUML) * Page 5, line 7 - page 9, line 6; figures 1-9 *	1,2,4, 5,7-9, 11-17	B 65 D 5/66
A	US-A-3 759 413 (ARDITO) * Column 2, lines 10-61; figures 1-5 *	1-4,8, 12	
A	FR-A-1 290 353 (FONTANIER) * Whole document *	1,8-10	

TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

B 65 D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18-05-1983	VANTOMME M.A.

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