

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

0 269 761
A1

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **86116753.4**(51) Int. Cl.4: **B65D 5/50**, **B65D 71/00**(22) Date of filing: **02.12.86**

The title of the invention has been amended
(Guidelines for Examination in the EPO, A-III,
7.3).

(43) Date of publication of application:
08.06.88 Bulletin 88/23

(84) Designated Contracting States:
AT BE CH DE ES FR GB GR LI LU NL SE

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(54) **Self-fastening display container.**

(57) A self-assembling display container for products packed in tubes, jars, cones and beakers having cone, cylindrical, tubular, truncated-cone shape, etc. comprising a boxlike structure obtained by means of a single sheet (1) suitably folded.

The boxlike structure includes an upper layer (5), a base (2), connected by peripheric borders (4) and (11), and a lower layer (7) intermediate and parallel to the upper layer (5) and to the base (2).

The borders (9) and (9') separate the lower layer (7) from the base (2).

On the upper layer (5) and the lower one (7) are made slots, notches or holes (6) and (8), aligned vertically between each other. These slots, notches or holes (6) and (8) are meant to hold firmly the products to be packed and also serve for display and transport purposes.

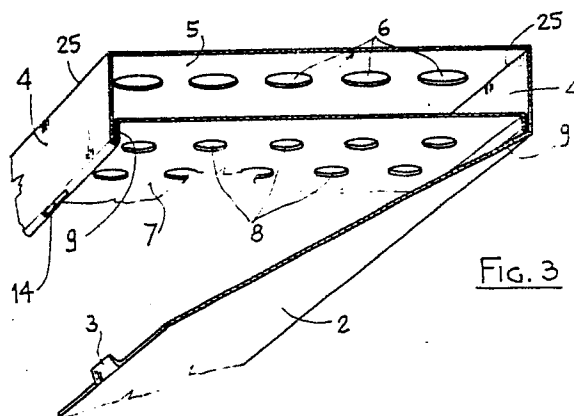


FIG. 3

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"SELF-ASSEMBLING DISPLAY-CONTAINER"

The present invention relates to a self-assembling display-container.

To be more precise, the present invention relates to a self-assembling display container, specifically made for packing, supporting, transport and display of products packed in tubes, jars, cones, beakers and the like having cylindrical, tubular, conic, truncated cone, trapezoidal shape or similar, with or without rods, canes, sticks or the like. As is known, toothpaste, preserves, soaps, creams and the like are normally fitted into beehive-shaped packs, which usually comprise cardboard sheets, on which are made some partial equidistant cuts arranged perpendicularly between each other in such a way as to form parallelepiped compartments in which the products are inserted.

Though these cardboard boxes are excellent from certain points of view, i.e., economical cost, need for very little space to stock and transport them, facility in making up the packages, nonetheless, they do have certain drawbacks, or; to be more precise, they lack certain properties which today are specifically required for special types of packaging.

One drawback lies in the fact that the beehives made with the above-mentioned cartons must nonetheless be inserted in external container cases such as, for example, cardboard boxes.

Moreover, the beehive packaging to our knowledge may not be used to display the products contained in it.

The present invention solves the above mentioned drawbacks by means of a display container for products packed in tubes, jars, cones, beakers and the like, having cylindrical, conic, truncated cone shapes or similar, comprising a box-like structure obtained from a single sheet, preformed, precut and folded along preset folding lines, including an upper layer, a base and a lower layer, set between said upper layer and the base, in which :

a) the upper and lower layer and the base are parallel between each other;

b) the upper layer is connected to the lower one and to the base by means of a peripheral border;

c) the lower layer is separated from the base by means of folded edges, and

d) the upper and lower layer are provided with a plurality of holes, slits and notches; the holes, slits and notches of the upper layer being aligned vertically with the corresponding ones of the lower layer.

In the display container of the present invention, the holes, slots and notches relative to the two superimposed layers, may have the same size and

shape, or may have the same shape but different size, or may be different in both shape and size, according to the external aspect of the packed products to be held, packed, displayed or transported.

The packed products inserted in the above mentioned holes, slots or notches are overlapped in such a way that at least one part of them juts out from the upper part of the display container and remain in that position until they are removed manually.

The display container of the present invention may be displayed with all the packed articles inserted into it. Moreover, when packed for storing, transport and delivery, the display container of the present invention may be entirely covered with a lid which fits onto the peripheric edge and is easily fixed to it by means of normal taping or it may be covered by a layer of heat-shrinkable material.

To the purpose of better understanding the present invention, a description of said invention is disclosed hereunder in detail, with reference to the figures of the appended drawings, representing a preferred, illustrative and not limitative embodiment suitable for packing products contained in tubes, wherein :

Figure 1 shows a schematic view of the carton or similar material, preformed, precut, prefolded, and prepunched, before being folded and hinged to make the display-container of the present invention;

Figure 2 shows a perspective view of a part of the carton represented in figure 1, during the folding stage,

Figure 3 shows a perspective view of a part of the carton represented in figure 1, during another moment of the folding stage when the box is shaped and attached to the base, Figure 4 shows a schematic view of a transverse section of the assembled container, with corresponding lid, and Figure 5 shows a schematic view of certain types of products packed in the display container of the present invention.

The figures show a display container for products packed in tubes, either with a cone or truncated cone shape, basically consisting of a single sheet (1) of cardboard, or similar material, the peripheral borders of which are preshaped, precut and prepunched by means of a single shearing operation.

The cardboard (1) is shaped, in its entirety, in such a way as to include, from right to left in figure 1, the base (2) with hinging tabs (3) the first of the lengthwise edges (4), the upper layer (5) provided with a plurality of holes (6) with larger diameter, a

second lengthwise edge (4), the second lower layer (7) provided with a series of holes (8) with smaller diameter and peripheral small edges (9) and (9').

In correspondence to each loose transverse side (10) of the upper layer (5) are set perpendicularly the foldable transverse borders (11) and (11'), provided with hinging tabs (12).

In correspondence to the above mentioned transverse sides (10) of the upper layer (5) are made the slots (13) into which said tabs are inserted (12).

Similar slots (14) are made along the joining side (15) between the second lengthwise edge (4) and the small border of the lower layer (7); the tabs (3) are inserted into these slots (14) during assembly of the display container. The loose sides (16) of the lengthwise edges (4) are provided with (17) stiffened ends to square up the structure. The following operations must be conducted to make up the display container referred to in the present invention : the lengthwise edges (4) are folded along the jointing side (25) and at a right angle with the upper layer (5) and the ends (17) are folded along the transverse sides (16) in such a way as to be perpendicular to the upper layer (5) and the edges (4).

The transverse edges (11) and (11') are folded and turned over these edges (17), so as to insert the hinging tabs (12) into the slots (13).

In this manner the ends (17) are inserted between the edges (11) and (11') folded one over the other, thus stiffening and squaring up the so-formed boxlike structure.

The peripheral edges (9) and (9') are folded at a right angle with the lower layer (7) towards the outside, and the lower layer (7) is folded along the jointing side (15), turned over and inserted into the boxlike structure, in such a way as to be parallel to the above mentioned upper layer (5).

Subsequently, the base (2) is folded along the side (18) in such a way as to overlap and cover the lower layer (7); the tabs (3) are fitted into the slots (14).

In the end the obtained container may be seen as an upper layer (5) and a base (2) (see figure 3) connected between each other by means of lengthwise edges (4) and transverse edges (11) and (11'), whereas the lower layer (7) on the outside, is on a parallel with the layer (5) and the base (2), but separated from the latter by means of the spacer edges (9) and (9').

The holes (6) with larger diameter, made in the layer (5), and the holes (8) with smaller diameter, made in the layer (7), are aligned between each other and are sufficiently spaced to be able to hold, support and restrain products packed in tubes (19) or goods having cone, truncated-cone, trapezoidal or cylindrical shape as indicated by (20), (21), (22),

(23) in figure 5.

As may be seen, the above mentioned products are inserted by means of a slight pressure into the upper layer (5) so as to fit into the holes (6) and (8).

It goes without saying that these holes (6) and (8), which may possibly vary from the upper (5) to the lower (7) layer both as regards diameter and configuration (i.e. they may be shaped like a slot, a notch or some other type of cut) are devised to suit the shape and size of the products to be inserted.

When dealing with products packed in tubes (19), in diameter of the holes (6) matches that of the body, whereas the diameter of the holes (8) matches that of the cap (24). In the case of other uses, the diameters and shape of the holes (6) and (8) depend on the shape of the product to be packed.

At all events the display container, referred to in the present invention, permits packaging of products in tubes (19), products with cone or truncated-cone shape (20), (21) and/or products with varying shapes and sizes, in such a way as to ensure they are not damaged during packaging, transport and various shiftings between manufacture and marketing, and to enhance their display during retail sale.

It should be specified that the display container has been described here in its preferred form, i.e. with a rectangular shape; however, it is needless to say that the parts connected in sequence to the lengthwise (2) and transverse (10) sides of the upper layer (5) may have a completely different layout, bearing in mind that the most logical layout is that which makes the box-like structure more sturdy and avoids scrap when shearing the cartons.

It is most logical that its shape be developed to form a square.

The complete packing process of the above mentioned products includes an upper box-like covering (22) which fits onto the lengthwise (4) and transverse (11) peripheric edges of the display container.

The height of the cover (22) is preferably such as to keep the products contained in the package firmly in place and to cover all the peripheric edges (4) and (11) until it is aligned with the base (2).

Thanks to the simplicity and linearity of the external structure thus obtained, the fitting of the cover to the display container may be effected by using ordinary adhesive tape for display; it is sufficient to remove the cover (22) and show off the display container containing the products jutting out in part from the same.

Display of the above mentioned jutting parts is sufficient to permit identification of the type and brand of the various products.

In the case of other types of products, such as

cans, beakers, jars and the like, the cover (22) may be replaced by a layer of opaque or transparent heat-shrinkable material.

Claims

1. Display container for products packed in tubes, jars, cones and beakers with cone, cylindrical, tubular, truncated-cone shape and the like, having a boxlike structure characterized by the fact that it comprises a single sheet (1) preformed, precut and folded along preset folding lines, and which includes an upper layer (5), a base (2) and a lower layer (7), fixed between said upper layer (5) and the base (2), in which :

-the upper layer (5), the lower one (7) and the base (2) are on parallel lines ;

-the upper layer (5) is connected to the lower one (7) and to the base (2) by means of peripheric edges (4), (11) and (11') ;

- the lower layer (7) is separated from the base (2) by means of folded edges (9) and (9') ; and

-the upper (5) and lower (7) layers are provided with a series of holes (6) and (8) or notches, the holes or notches (6) of the upper layer (5) being aligned vertically with the corresponding holes or notches (8) of the lower layer (7).

2. Display container according to claim 1, characterized by the fact that the sheet (1) is subdivided by means of folding and cutting into : a base (2) provided with hinging tabs (3); a first lateral edge (4); an upper layer (5) provided with a series of slots, notches or holes, (6); a second lateral edge (4); a lower layer (7) provided with a series of slots, notches or holes (8) and peripheric edges (9) and (9') ; side edges (11) and (11') provided with hinging tabs (12) in correspondence with each loose side (10) of the upper layer (5); and ends (17) for stiffening and squaring up in correspondence to each loose side of the lateral edges (4).

3) Display container according to claims 1 or 2, characterized by the fact that the base (2) is extended from the folding line (18), as regards the first side edge (4), up to the folding line (15) between the second side edge (4) and the border (9); this base (2) is connected to the folding line (15) by means of tabs (3) inserted into slots (14).

4) Display container according to any of the claims from 1 to 3, characterized by the fact that the ends (17) are set at right angles to the side edges (4) and to the upper layer (5), and the side edges (11) and (11') are folded over said ends (17) and fixed to the folding line (10) of the upper layer (5) by means of tabs (12) inserted in the slots (13).

5) Display container according to any of the former claims from 1 to 4, characterized by the fact that the slots, notches or holes (6) of the upper layer (5) are of a larger size than that of the slots, notches or holes (8) present on the lower layer (7) and aligned with these.

6) Display container according to any of the former claims from 1 to 4 characterized by the fact that the slots, notches or holes (6) of the upper layer (5) have the same size as that of the slots, notches or holes (8) of the lower layer (7).

7) Display container according to any of the former claims from 1 to 4, characterized by the fact that the slots, notches or holes of the upper layer (5) have different shapes and sizes from the corresponding slots, notches or holes (8) of the lower layer (7), depending on the outer configuration of the products to be held.

8) Display container according to any of the former claims from 1 to 7, characterized by the fact that it includes a cover (22) fitted by means of pressure onto the peripheric edges (4) and (11), so as to align with the base (2).

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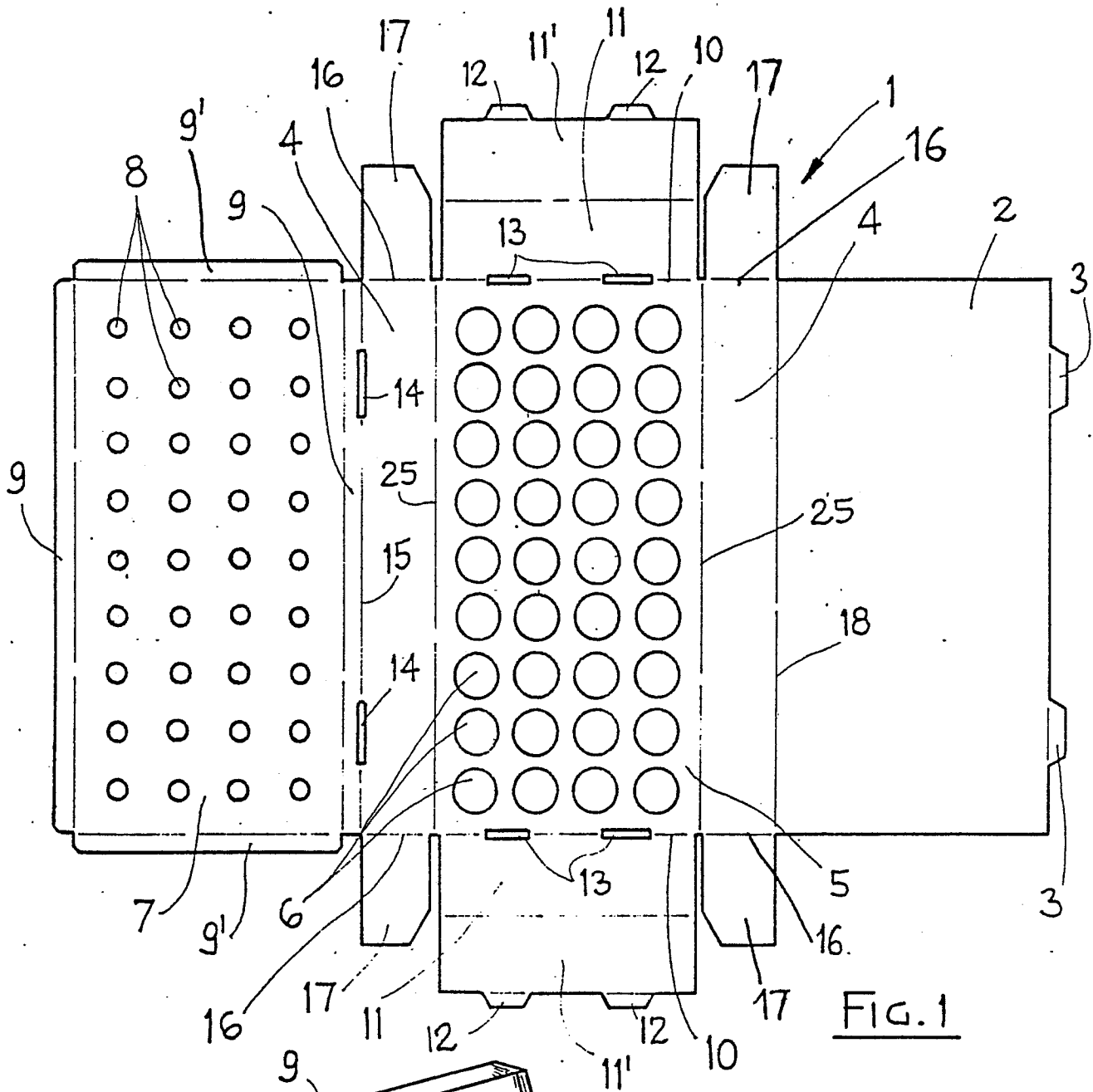
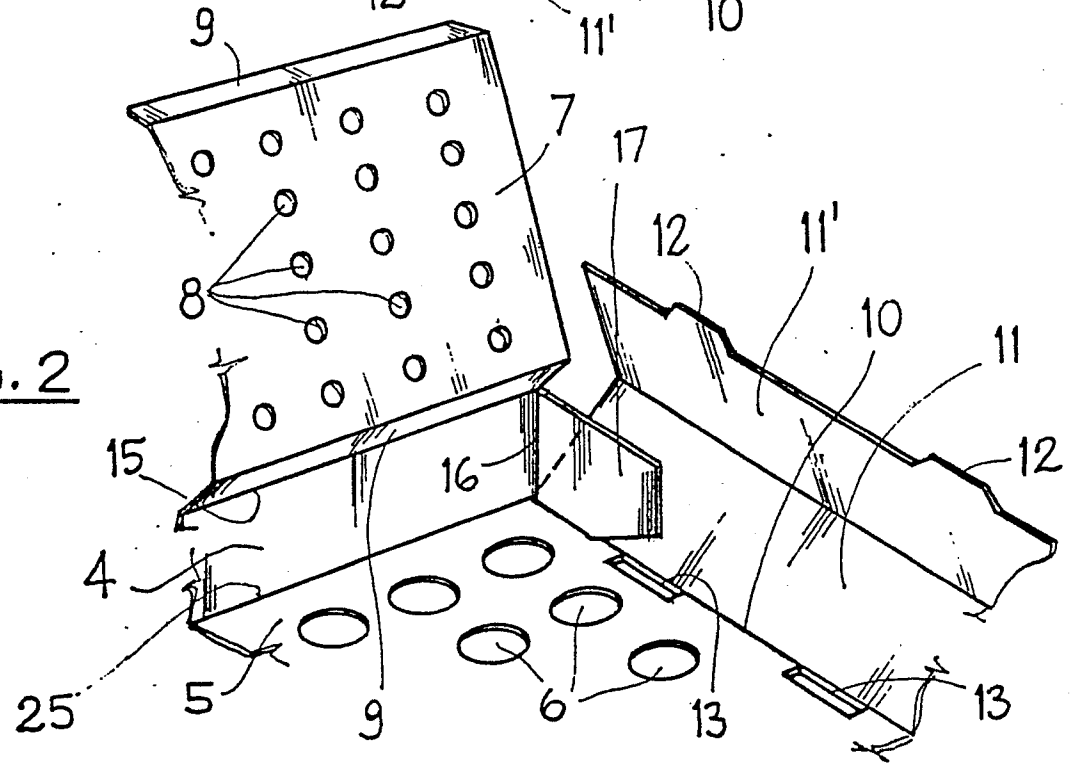
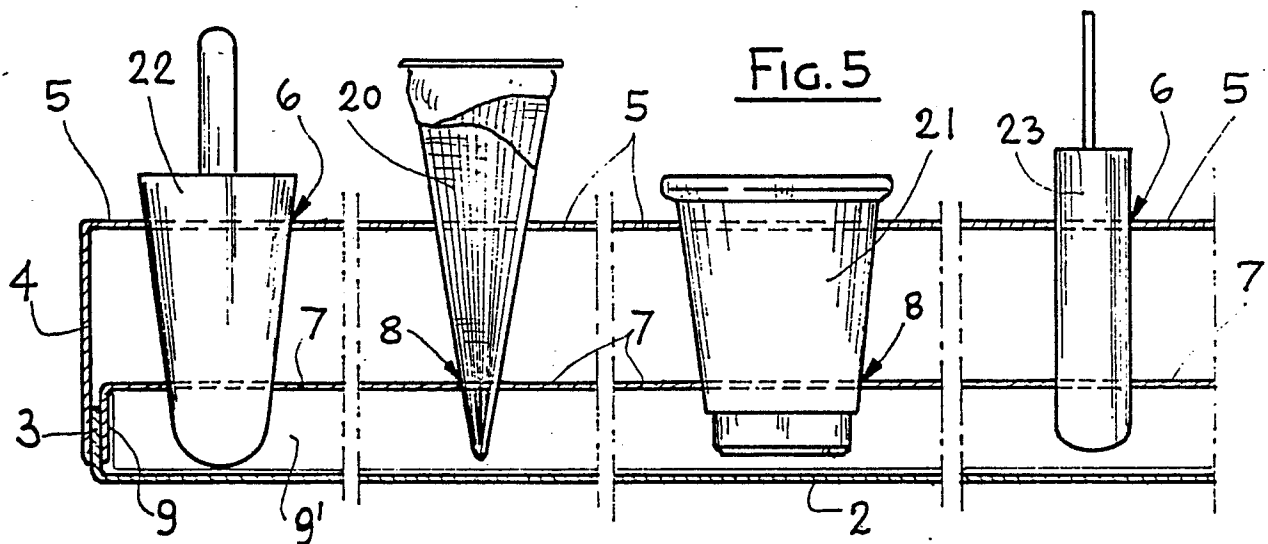
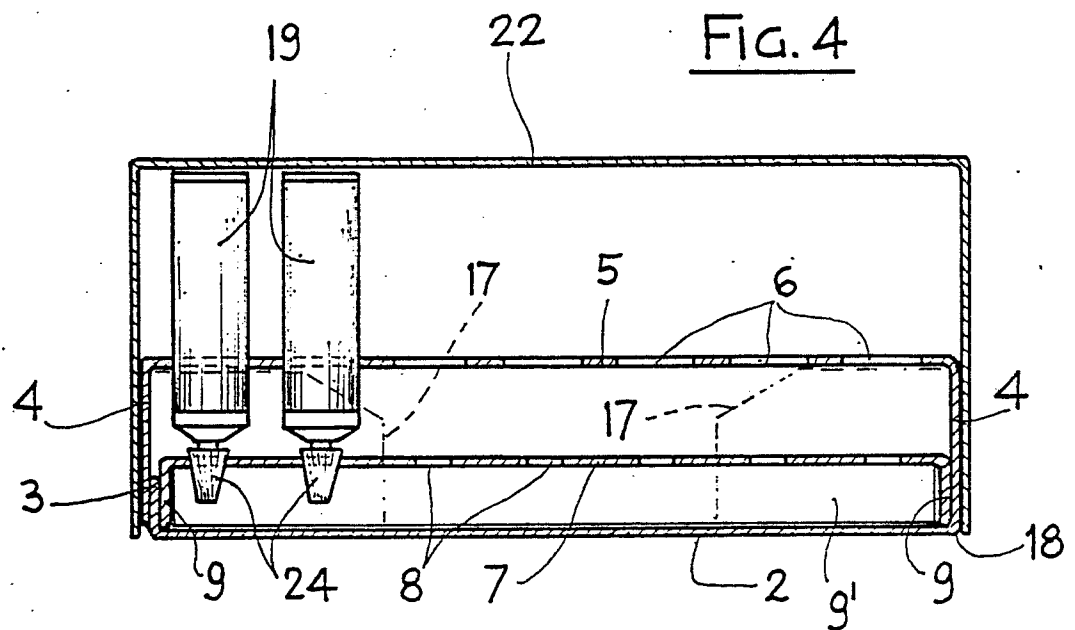
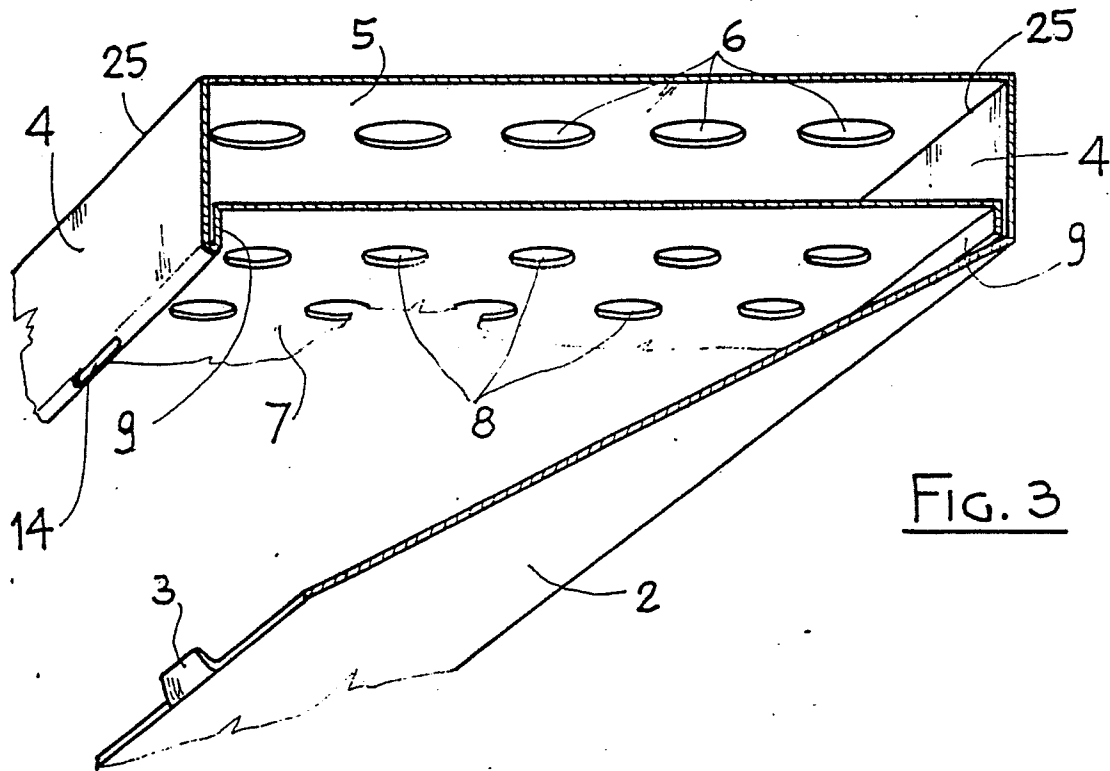


FIG. 1

FIG. 2







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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. 4)
X	US-A-3 390 783 (J.P.QUACKENBUSH) * Column 2, lines 9-35; column 2, line 66 - column 3, line 15; claim 1; figures 1-3 *	1,2	B 65 D 5/50 B 65 D 71/00
Y		8	
A		3,4-7	
X	FR-A-1 262 021 (M.JACQUOTTE) * Page 1, right-hand column, line 9 - page 2, left-hand column, line 6; page 2, right-hand column, lines 17-32; figures 1-3 *	1,2,5,6,7	
A		3,4	TECHNICAL FIELDS SEARCHED (Int. Cl. 4) B 65 D
Y	FR-A-2 571 336 (CARTONNERIES DE LA LYS-ONDULYS) * Page 3, lines 21-29; claim 3; figure 1 *	8	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 13-07-1987	Examiner NEWELL P.G.
CATEGORY OF CITED DOCUMENTS			
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		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 & : member of the same patent family, corresponding document	