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(54) Cartons with extra panel

(57) A cardboard carton, comprising a tubular structure made from a row of hingedly interconnected panels (1 to 4), for forming the side walls of the carton, and including an extra panel (7,8) for bearing printed instructions connected to said tubular structure and having a closed position in which it overlies one of the side wall panels.

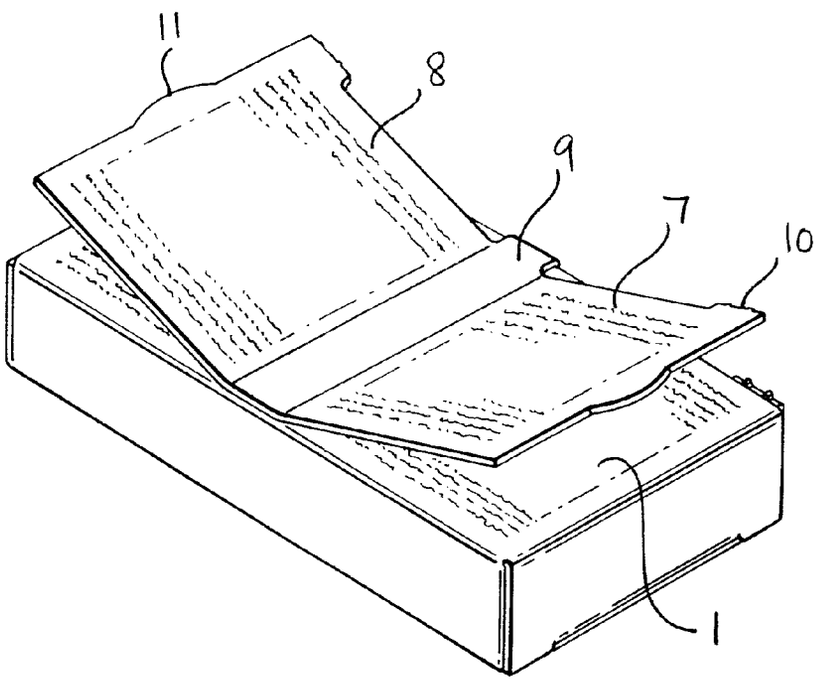

FIG. 4.

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Description

This invention relates to cartons made of cardboard, paperboard and similar lightweight foldable sheet material.

It is often necessary to enclose a leaflet or the like in such a carton, bearing for example instructions or other information concerning a product which the carton contains. This is particularly the case with cartons for containing tablets, e.g. on a blister card, or other pharmaceutical products, which must essentially be accompanied by instructions as to their manner of use. Comparatively brief and simple instructions can of course be printed on the carton itself, in addition to the titular or advertising material which is already applied to it, but often there is not enough space for all of this and an internal leaflet is then necessary, which may sometimes be of such a size that it needs to be folded one or more times before being inserted in the carton.

The necessity to print such a leaflet, separately from other printing on the carton itself, and then to fold it and insert it, at the same time as inserting the product, is inconvenient and time-consuming.

Viewed from one aspect the present invention provides a carton made of cardboard, paperboard or similar lightweight foldable sheet material, comprising a tubular structure made from a row of hingedly interconnected panels forming the side walls of the carton, and including at least one extra panel hingedly connected to said tubular structure and having a closed position in which it overlies one of said side wall panels, the said hinged connection of the said extra panel being to a portion of the blank which overlies and is secured to the said side wall panel which the extra panel overlies, the connecting hinge extending substantially at right angles to the length of the said tubular structure.

Such an extra panel or panels may be printed on one or both sides with any desired subject matter, such as instructions for the use of tablets or other pharmaceuticals in the carton, thus making it unnecessary to provide a leaflet in the carton.

Preferably the said portion of the blank is a strip which extends across the underlying side wall panel and is hingedly connected at one end to a terminal one of said row of wall panels, the said underlying panel being at the other end of the row.

The said strip could be located at one end of the length of the said tubular structure, with the extra panel extending all the way to the other end.

Preferably, however, it is located centrally of the length of the said tubular structure, and two of said extra panels are provided, hinged to the opposite sides of the strip.

Viewed from another aspect the invention provides a carton made of cardboard, paperboard or similar lightweight foldable sheet material, comprising a tubular structure made from a row of hingedly interconnected panels forming the side walls of the carton, and including a first extra panel hingedly connected to said tubular structure and having a closed position in which it overlies one of said side wall panels, and a second extra panel hingedly connected to the said underlying side wall panel, about a hinge line substantially coincident with that of the first extra panel, the said second extra panel being folded back to overlie the same underlying panel, underneath the first extra panel, in its closed position.

With such an arrangement, the said tubular structure may be held together by a tab released from the said second extra panel adjacent the connecting hinge thereof and secured to the first extra panel.

The principles of the present invention may be applied to both hand erected cartons and machine erected cartons. In the latter case the or each said extra panel is preferably secured in its said closed position to enable the partially erected carton to be passed through erecting machinery, but being readily releasable and hingedly openable by an end user.

Two embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

Fig. 1 is a plan view of a flat blank for making a carton according to a first embodiment of the invention;
Fig. 2 is a perspective view of the blank of Fig. 1 in the course of being erected;
Fig. 3 is a perspective view of the partially erected blank;
Fig. 4 is a perspective view of the erected carton; and
Figs. 5 to 8 are similar views of a second embodiment.

Referring first to Fig. 1, a flat blank of paperboard is provided for making a carton which is particularly intended to contain a blister pack of pharmaceutical tablets. The blank comprises a row of four hingedly connected panels 1 to 4, for forming the side walls of a four-sided box-like carton. Arrays of flaps and tabs for forming end closures of the carton are indicated at 5 and will not be further described as they are entirely conventional. A gluing flap is provided at 6.

Hingedly connected to the edge of the terminal panel 4 of the row of side wall panels is an extra panel structure comprising two extra panels 7 and 8 each hingedly connected to a strip 9 itself hinged to the wall panel 4. Each of the extra panels 7 and 8 is also connected to the panel 4 by a line of tearable perforations 10.

Prior to the erecting steps now to be described, both sides of the extra panels 7 and 8, and the outside of the wall panel 1 if desired, are printed with information concerning the contents, such as dosing instructions for pharmaceutical tablets, as indicated in Fig. 4.

Referring now to Fig. 2, the blank is first folded into a tubular form about the hinge lines between the wall panels, and glued in that condition by means of the glu-

ing strip 6. Glue is applied to the strip 9 and the extra panel structure is then pressed onto the side wall panel 1 as shown in Fig. 3. The extra panel structure thus becomes secured to the panel 1 and the carton blank thus reaches its partially erected condition, as prepared by the manufacturer, ready for subsequent complete erection and filling.

The partially erected blank is supplied to the customer, or filler, in this condition and it is then passed through filling and erecting machinery by means of which the tubular carton structure is erected, one end of the carton is closed, and the contents are inserted before closing the other end. Alternatively, of course, the carton may be manually erected.

Fig. 4 shows the filled carton in use by an end user, who is able to detach the extra panels 7 and 8 from the underlying wall panel 1 by tearing along the lines of perforations 10 and then folding them up about their hinge lines to reveal the printing on the underside of the extra panels and on the wall panel 1 beneath them. Small extensions 11 are provided on the ends of the panels 7 and 8 to assist this operation.

Referring now to the second embodiment of the invention illustrated in Figs. 5 to 8, and referring first to Fig. 5, a flat blank for forming a carton comprises a row of four side wall forming panels 12 to 15 and end closure forming flaps and tabs 16 which are again of a conventional nature. In this embodiment an extra panel is provided at each end of the row of wall panels, as indicated at 17 and 18. When the carton is partially erected by the manufacturer to form a flat tubular structure, the side wall panels 12 to 15 are first folded relative to each other to form such a structure, as illustrated in Fig. 6. A tab 19 released from the extra panel 18 is then glued to the extra panel 17 to hold the tubular structure together. Following that both of the extra panels 17 and 18 are folded down to overlie the wall panel 15, as shown in Fig. 7, and are secured in their closed position by way of a tear tab structure 20 extending from the free edge of the extra panel 17, being glued to the side wall panel 14 by way of tab 21. The blank is now in its partially erected condition, ready to be supplied to the filler.

After the carton has been erected and filled by the filler, and referring now to Fig. 8, an end user is able to release the extra panels 17 and 18 from their attachment to the body of the carton by tearing along lines of perforations 22 in the tab structure 20, to reach the condition illustrated in Fig. 8 in which printing on both sides of the extra panels and on the outside surface of the wall panel 15 is revealed.

Claims

1. A carton made of cardboard, paperboard or similar lightweight foldable sheet material, comprising a tubular structure made from a row of hingedly interconnected panels (1-4) forming the side walls of the carton, and including at least one extra panel (7, 8) hingedly connected to said tubular structure and having a closed position in which it overlies one of said side wall panels (1), the said hinged connection of the said extra panel being to a portion (9) of the blank which overlies and is secured to the said side wall panel which the extra panel overlies, the connecting hinge extending substantially at right angles to the length of the said tubular structure.

2. A carton as claimed in claim 1, wherein the said portion of the blank is a strip (9) which extends across the underlying side wall panel (1) and is hingedly connected at one end to a terminal one (4) of said row of wall panels, the said underlying panel being at the other end of the row.

3. A carton as claimed in claim 1 or 2, wherein the said strip (9) is located substantially centrally of the length of the said tubular structure, and two of said extra panels (7, 8) are provided, hinged to the opposite sides of the strip.

4. A carton as claimed in any of claims 1 to 3, wherein the or each said extra panel (7, 8) is secured in its said closed position to enable the partially erected carton to be passed through erecting machinery, but being readily releasable and hingedly openable by an end user.

5. A carton as claimed in claim 4, wherein the or each said extra panel (7, 8) is secured in its closed position by being tearably connected to one of said wall panels (4), edge to edge.

6. A carton as claimed in claim 4, wherein the or each said extra panel (7, 8) is secured in its closed position by being spot glued to said underlying wall panel (1).

7. A flat blank for making a carton as claimed in any of claims 1 to 6.

8. A carton made of cardboard, paperboard or similar lightweight foldable sheet material, comprising a tubular structure made from a row of hingedly interconnected panels (12-15) forming the side walls of the carton, and including a first extra panel (17) hingedly connected to said tubular structure and having a closed position in which it overlies one of said side wall panels (15), and a second extra panel (18) hingedly connected to the said underlying side wall panel, about a hinge line substantially coincident with that of the first extra panel, the said second extra panel being folded back to overlie the same underlying panel, underneath the first extra panel, in its closed position.

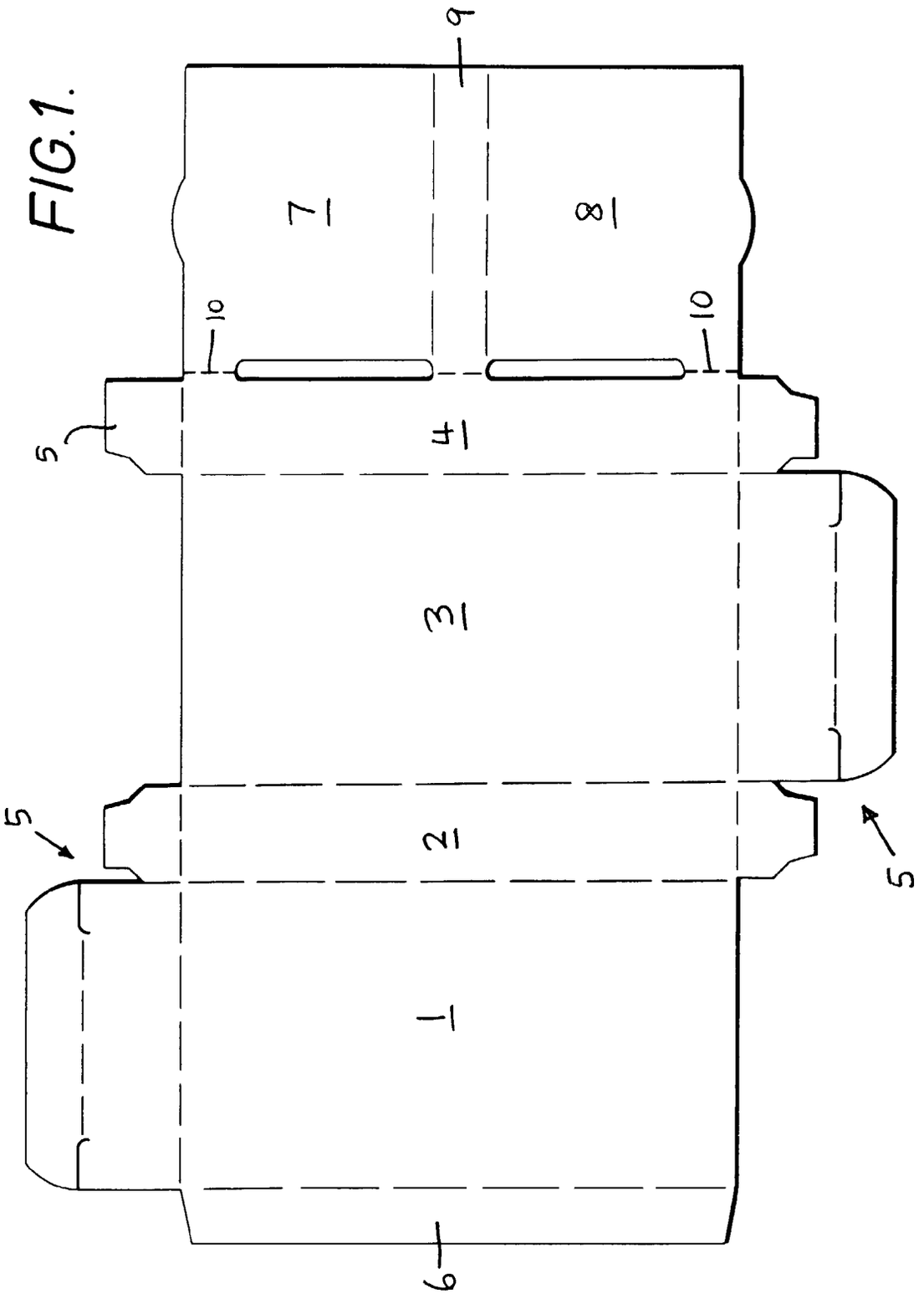
9. A carton as claimed in claim 8, wherein the said tubular structure is held together by a tab (19) released from the said second extra panel (18) adjacent the connecting hinge thereof and secured to the first extra panel (17).

10. A carton as claimed in claim 8 or 9, wherein the said extra panels (17, 18) are secured in their closed positions to enable the partially erected carton to be passed through erecting machinery, but being readily releasable and hingedly openable by an end user.

11. A carton as claimed in claim 10, wherein the said extra panels are secured in their closed positions by a tear tab (21) extending from the free edge of the first extra panel (17) and glued to one of said wall panels.

12. A flat blank for making a carton as claimed in any of claims 8 to 11.

FIG.1.



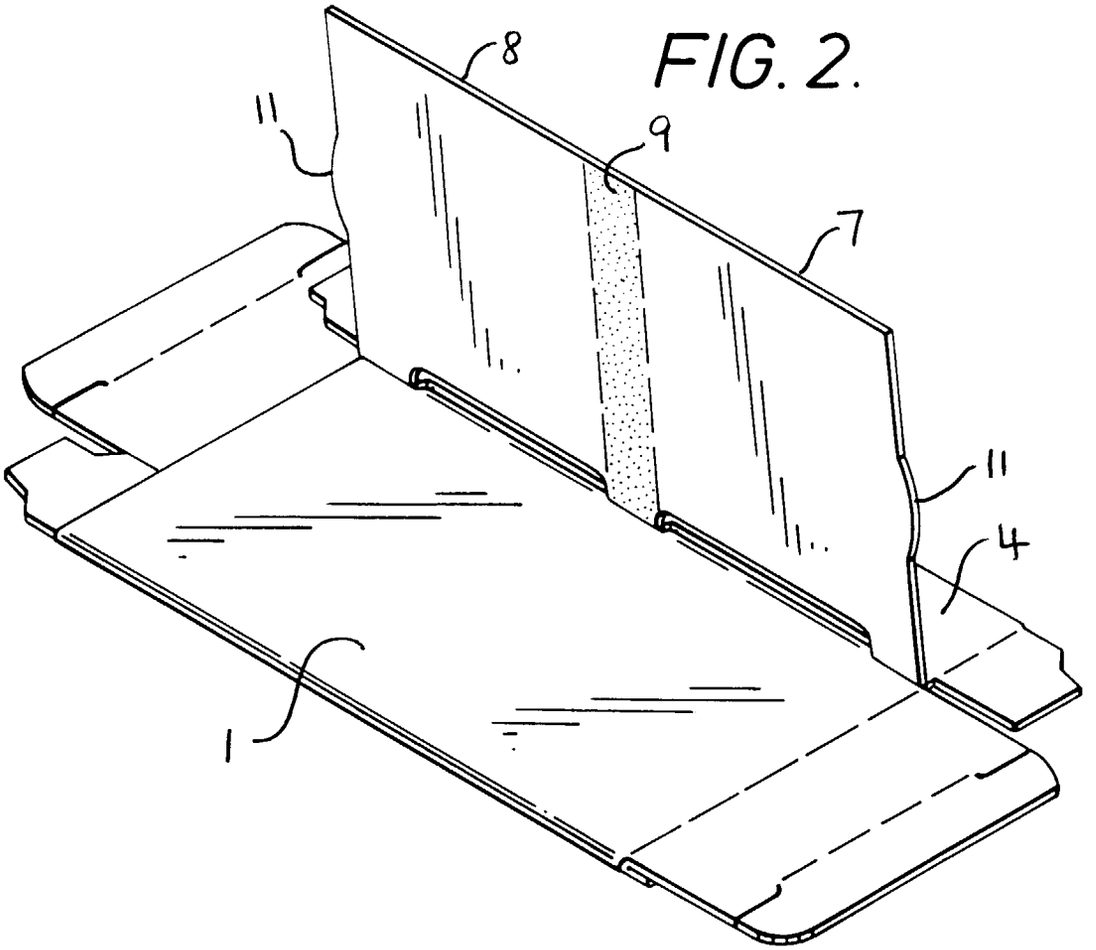


FIG. 2.

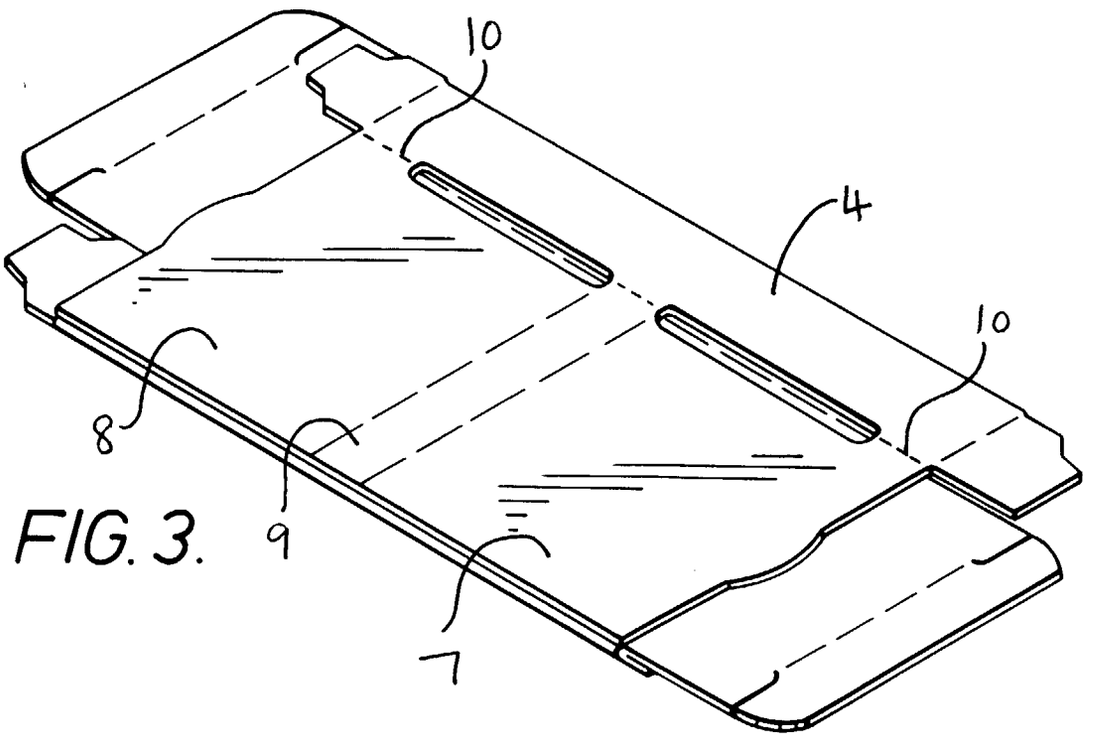


FIG. 3.

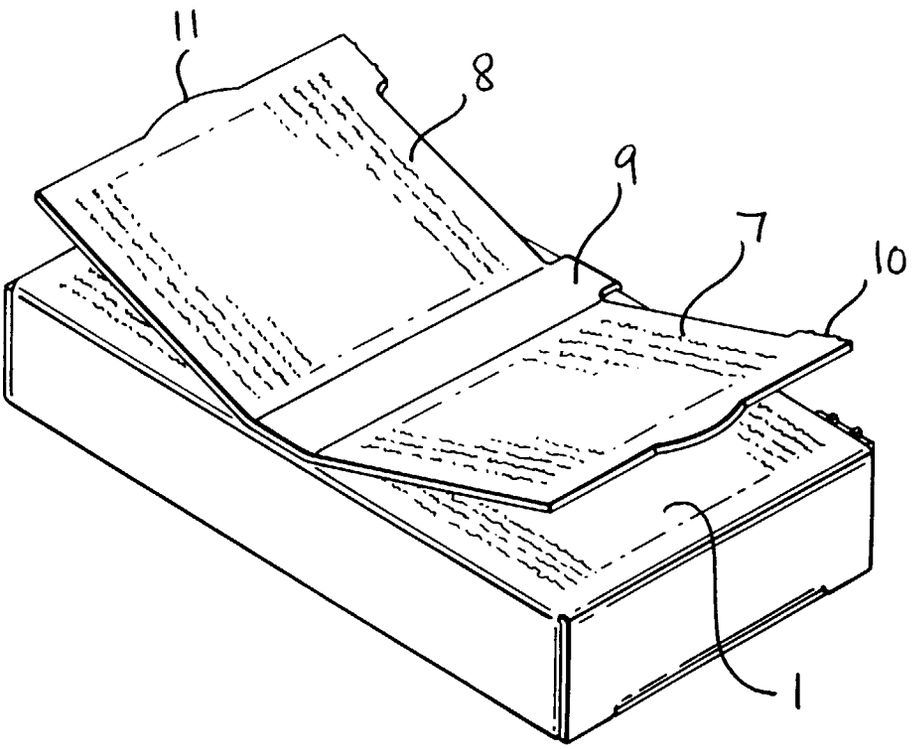


FIG. 4.

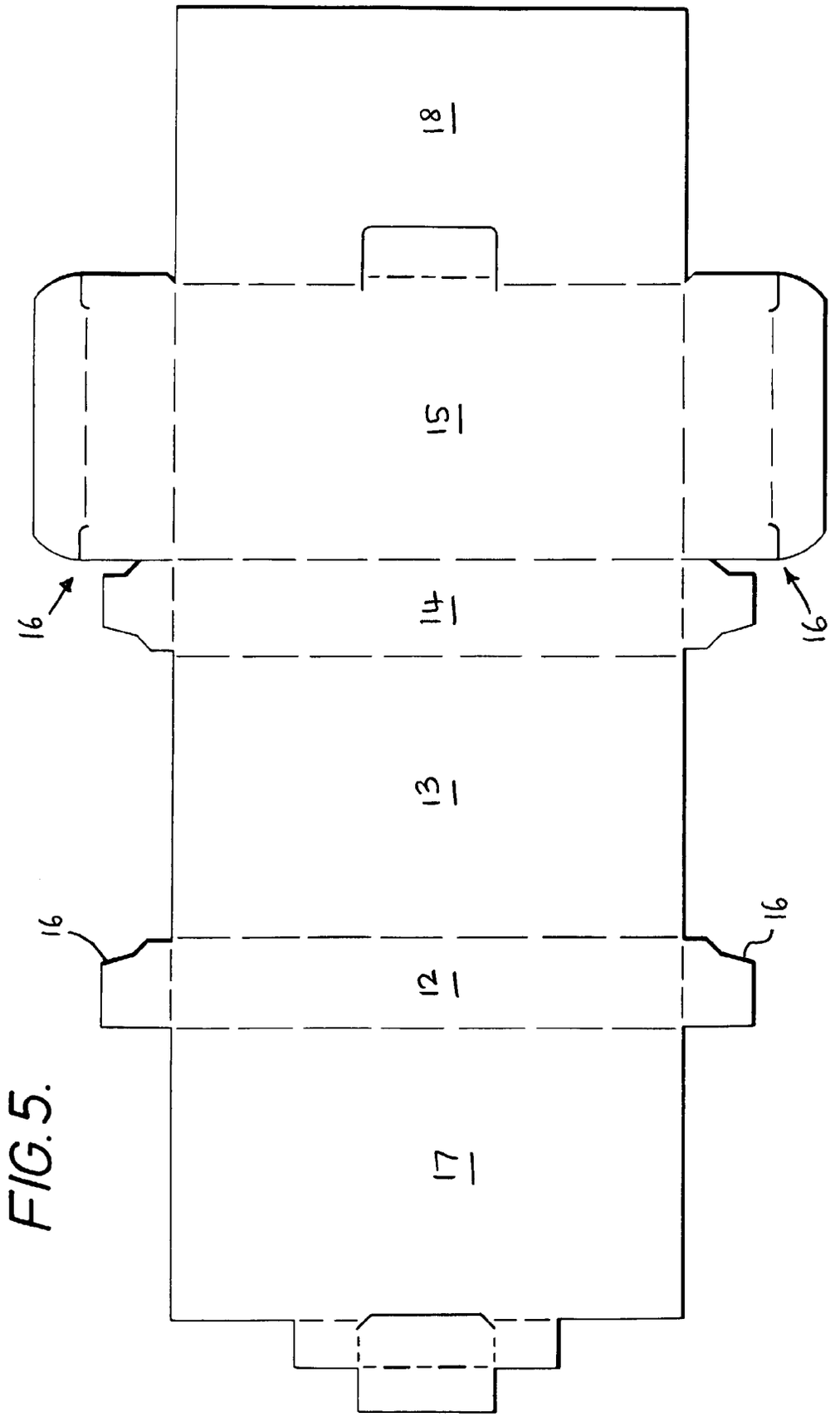
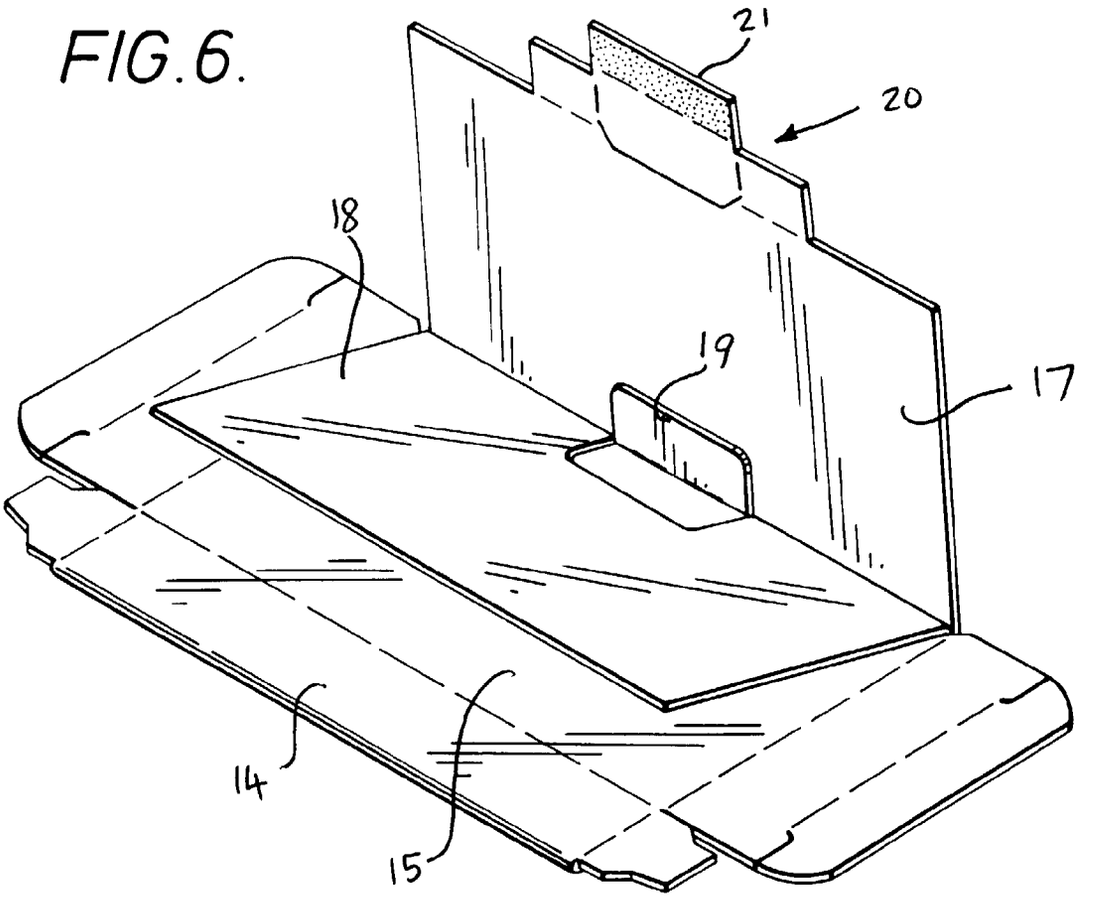


FIG. 5.

FIG.6.



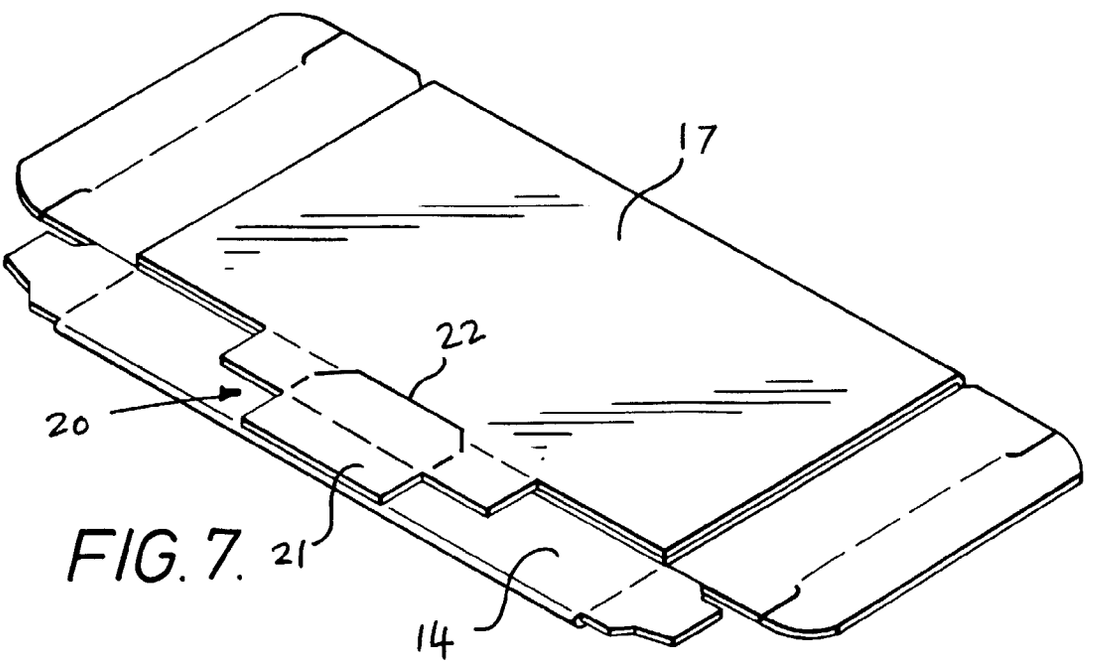


FIG.7.

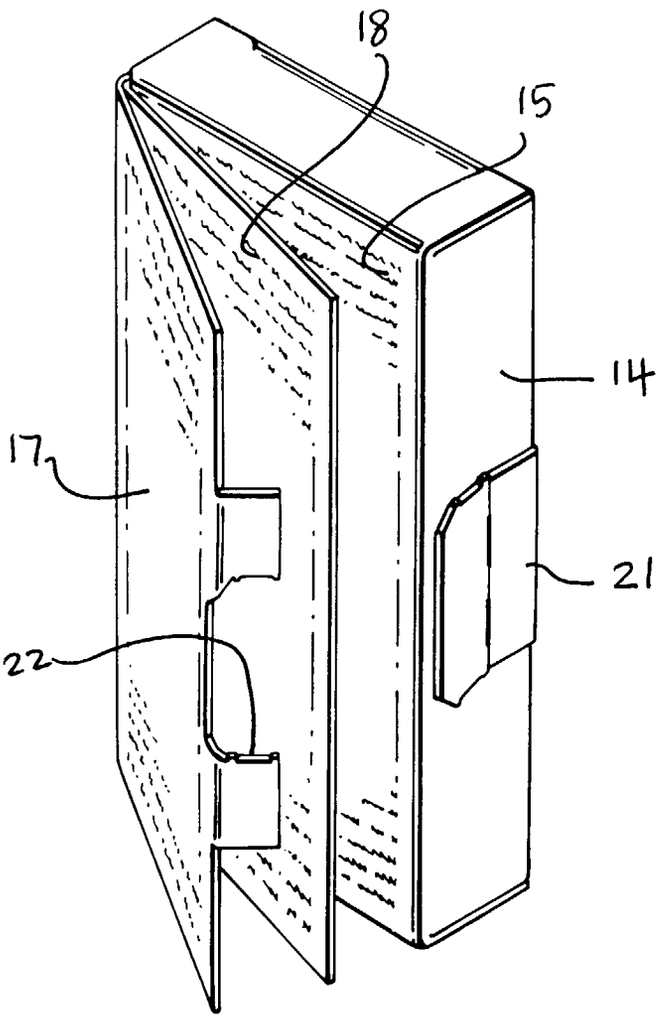


FIG.8.

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EUROPEAN SEARCH REPORT

Application Number
EP 97 30 6806

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.6)
X	US 3 099 381 A (MEYERS) * the whole document *	1,7	B65D5/42
X,P	US 5 575 384 A (SAYE) * the whole document *	8,12	
A	EP 0 455 048 A (GI.BI.EFFE.) * the whole document *	1,4-8, 11,12	
A	GB 2 116 949 A (MOUNTFORD) * abstract; figures *	8,12	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	17 November 1997	Gino, C

CATEGORY OF CITED DOCUMENTS

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