

12 **EUROPEAN PATENT APPLICATION**

21 Application number: 81305071.3

51 Int. Cl.³: **B 65 D 5/42**
//B65D85/50

22 Date of filing: 27.10.81

30 Priority: 27.10.80 GB 8034461

43 Date of publication of application:
05.05.82 Bulletin 82/18

84 Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

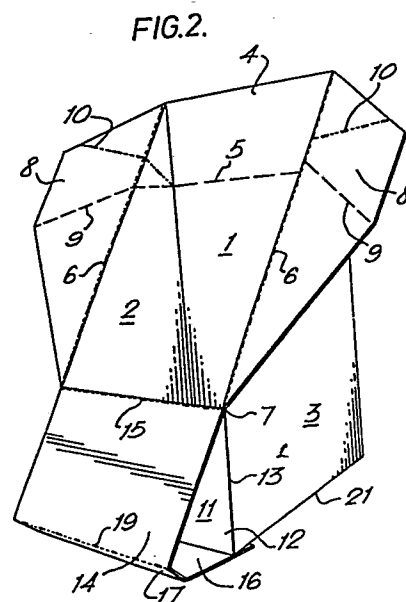
71 Applicant: **WALPOLE FRUIT PACKERS LIMITED**
Broadend Road Walsoken
Wisbech Cambridgeshire(GB)

72 Inventor: **Wilkes-Chase, Kenneth**
"Beit-Shalom" Sandringham Avenue
Wisbech Cambridgeshire(GB)

74 Representative: **Thomson, Roger Bruce et al,**
POLLAK MERCER & TENCH High Holborn House 52-54
High Holborn
London WC1V 6RY(GB)

54 **Display box and blank therefor.**

57 A box particularly for the transportation and display of flowers and plants, is made from a blank, preferably a one-piece blank, so that it can be changed from a first state in which it forms a closed cuboidal transportation container to a second, illustrated state in which the box is opened up by the outward folding of flaps (8,8,4,14) which then define display surfaces for decorative or advertising material for example. These flaps (8,8,4,14) all form part of the box wall structure in the closed state with no internally protruding flaps, edges or corners. The side flaps (8,8) are preferably trapezoidal.



- 1 -

DISPLAY BOX AND BLANK THEREFORSPECIFICATION

5 This invention relates to a display box or carton which is designed particularly, although not exclusively, for use in the horticultural industry, and also to a blank for the aforesaid display box.

 Particularly in the packing and sale of flowers
10 and plants, there is a need for a box or carton (hereinafter referred to as a box) which can fulfil a dual purpose. On the one hand, the box should be capable of housing the flowers or plants safely during transportation, and on the other hand the box should also
15 be capable of being adapted, at the display or sales outlet, into a form where it can be used as a display box for the products.

 It is therefore one object of the present invention to provide a display box and a blank therefor
20 which can fulfil this dual function in a simple manner, yet in a way which provides both strength and security when performing its transportation role and attractiveness when performing its display role.

 The display box of the present invention is
25 preferably made from a unitary, i.e. one-piece blank.

- 2 -

The box is also preferably made in a manner which enables it to be supplied in "knocked-down", i.e. generally flattened, form, so that the user can easily construct or make up the box merely by erecting the
5 knocked-down box and folding the flaps appropriately.

Corrugated cardboard is the preferred material for making the box, but other materials having similar properties of rigidity may be used as desired.

In accordance with the invention there is
10 provided a blank for a display box, the blank comprising a first portion which constitutes a front panel, a second portion which constitutes a rear panel, a third portion which constitutes one side panel, and a fourth portion which constitutes another, opposite side
15 panel, characterised in that the blank is cut and/or scored and/or creased to define an area of each of said third and fourth portions which when the blank is formed into an open box are folded outwards to constitute display areas which lie outside the space
20 defined by the box when closed.

Preferably the areas extend obliquely across said third and fourth portions whereby they lie in a common plane inclined at an angle to the horizontal when folded out to constitute display areas.

25 In accordance with the invention there is also provided a box which is adaptable between a first condition in which it forms a closed transportation container, and a second condition in which the box is opened up by the outward folding of a flap or flaps to provide at least one
30 display surface utilising a face of the or each flap, said face or faces being internal to the box when the box is in said first condition, and the flap or flaps when the box is in said second condition being positioned outside the space defined by the box when closed.

35 Preferably, portions of the sides of the box fold

- 3 -

outwards so that the internal faces of these display flaps when the box is in said first condition become forwardly facing display surfaces when the box is opened into said second condition.

5 In a preferred embodiment the display surfaces are inclined at an angle to the horizontal and the flaps which define them are foldable about respective lines extending upwardly and rearwardly from the front side edge of the box to the top rear corner of the box.

10 These side display panels may be trapezoidal in shape.

The top of the box preferably folds down upon itself to enable the box to be made secure for transportation purposes and the upper part of the back panel of the box can also be used to form a display surface when the box is opened.

15 The unitary blank from which the box can be made can be simply cut, scored and creased and then secured, as by glueing, down one rear corner of the box.

It is an important feature of the present invention that although the box comprises a number of openable flaps which
20 define the aforesaid display surfaces, none of these flaps protrude into the internal cuboidal volume of the box in the transportation mode, thereby leaving the whole of the internal volume of the box free for the flowers, plants or other articles to be transported. All the flaps open out from the box with no
25 internally protruding edges, corners or panels.

Although reference is made in the present specification to the particular use of this box for the transportation and display of flowers and plants, the box of the present invention is not limited to this particular purpose and can be used for any
30 other desired purpose where a box of this construction would find a use. In the most general terms, the box might find application to any situation where the display of articles for sale, or even just for display, is required.

In order that the invention may be fully understood,
35 one presently preferred embodiment of display box in

- 4 -

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

Fig. 1 is a plan of the blank from which the box is constructed, viewed from that surface which becomes the inside of the box when erected;

Fig. 2 is a perspective view of the box erected and substantially opened up for display purposes;

Fig. 3 is front perspective view from above showing the box in a partially opened condition and illustrating how the top flaps fold down; and,

Fig. 4 is a side view of the box, partially opened.

Referring to the drawings, it will be seen that the box comprises a back panel 1, a left-side panel 2, and a right-side panel 3. The back panel 1 includes a top flap 4 which is defined by a fold line 5. The two side panels have the same construction and the same reference numerals will therefore be used to describe the various elements of these two panels. Each side panel has a slit-score line 6 extending from the top rear corner of the box down to a point 7 approximately halfway down the front side edge of the box. Each side panel 2,3 includes a top flap 8 of trapezoidal shape and defined by a fold line 9. Each of these upper side panel flaps 8 is trapezoidal in shape by the provision of a triangular cut-out. A further slit-score line 10 is provided across each of the upper side panel flaps 8 substantially at right-angles to the longer slit-score line 6.

The front of the box consists of a front panel 11 which comprises a lower front portion 12 which is connected by vertical fold lines 13 to the side panels 2 and 3, a drop-down/fold up flap 14 which can be folded through 180° along the horizontal slit-score line 15, and an outer flap 16. The outer flap 16 is linked to flap 14 by a relatively narrow strip 17 which is bounded on one side by a fold line 18 and on the other side by

- 5 -

a slit-score line 19.

The base of the box is conventional and comprises four similar flaps 20 which are folded up along fold lines 21 to interlock and define a flat base for the box.

The unitary blank includes tabs 22 down the edge of one side panel 2 by means of which this edge can be glued to the adjacent edge of the back panel 1.

Fig. 2 shows the box almost wholly opened up for the display of articles therein. In this condition the relevant parts of the side panels 2,3 are folded back and out along the oblique slit-score lines 6 to form two trapezoidal display surfaces which are inclined so that they lie generally in the plane which also contains the two oblique lines 6. These surfaces can carry decorative material, informative material, etcetera. These two trapezoidal pieces of the blank lie outside the space defined by the closed box when thus folded out. The top flap 4 of the back panel 1 is vertically upright in this position and can also bear decorative, advertising, or other material. The front panel is folded down along the slit-score line 15 so that the face of the flap 14 which faces inwards when the box is closed now constitutes an outwardly facing display surface which again can carry decorative, advertising or other material. The outer flap 16 of the front panel folds down under the bottom of the box, as indicated in Fig. 2.

In Fig. 3 the box is shown in a condition in which it has been partially closed from the open display position of Fig. 2. To reach this condition the front flap 14 is freed, the two trapezoidal side flaps which define the display surfaces are folded up into an upright vertical position in alignment with the rest of the side panels, and by pushing each upper side flap 8 inwards and

- 6 -

pulling forward the top back flap 4 the top of the box folds down along the fold and score lines, as illustrated in Fig. 3. When fully folded down the top flap 4 and the upper side panel flaps 8 extend horizontally to define the flat box top. The front flap 14 is then fully raised and the outer flap 16 turned over to complete the closure of the top of the box, which is then cuboidal.

Fig. 4 shows an intermediate stage in the movement of the flaps and panels from the opened display position to the closed transportation position. In Fig. 4 the side panels are shown as completely vertical and the front panel folded partly down.

The box is preferably fabricated from double-faced corrugated board. The lining material used on those surfaces of the blank which are visible from the front when the box is opened up for display purposes is preferably of a better quality than that used on the other surfaces of the blank. Although it is preferred to make the box from a unitary blank, it is of course possible to construct the box from more than one piece of material.

- 7 -

CLAIMS :

1. A blank for a display box, the blank comprising a first portion which constitutes a front
5 panel, a second portion which constitutes a rear panel, a third portion which constitutes one side panel, and a fourth portion which constitutes another, opposite side panel, characterised in that the blank is cut and/or scored and/or creased to define an area of each
10 of said third and fourth portions which when the blank is formed into an open box are folded outwards to constitute display areas which lie outside the space defined by the box when closed.
2. A blank as claimed in claim 1, characterised
15 in that the areas extend obliquely across said third and fourth portions whereby they lie in a common plane inclined at an angle to the horizontal when folded out to constitute display area.
3. A blank as claimed in claim 1 or 2, characterised
20 in that the display areas are trapezoidal in shape.
4. A blank as claimed in any preceding claim, characterised in that said first portion is cut and/or scored and/or creased to define three contiguous zones,
25 the first of which forms a static lower front portion of the box, the second of which forms a flap which when the blank is formed into an open box is folded outwards and downwards to overlies said lower front portion of the box and which when the blank is formed into a closed box
30 forms an upper front portion of the box, and the third of which forms a flap which when the blank is formed into an open box is folded under the base of the box and which when the blank is formed into a closed box defines a part of the top of the box.
- 35 5. A display box which is adaptable between a

- 8 -

first condition in which it forms a closed transportation container, and a second condition in which the box is opened up by the outward folding of a flap or flaps to provide at least one display surface utilising a face of the or each flap, said face or faces being internal to the box when the box is in said first condition, and the flap or flaps when the box is in said second condition being positioned outside the space defined by the box when closed.

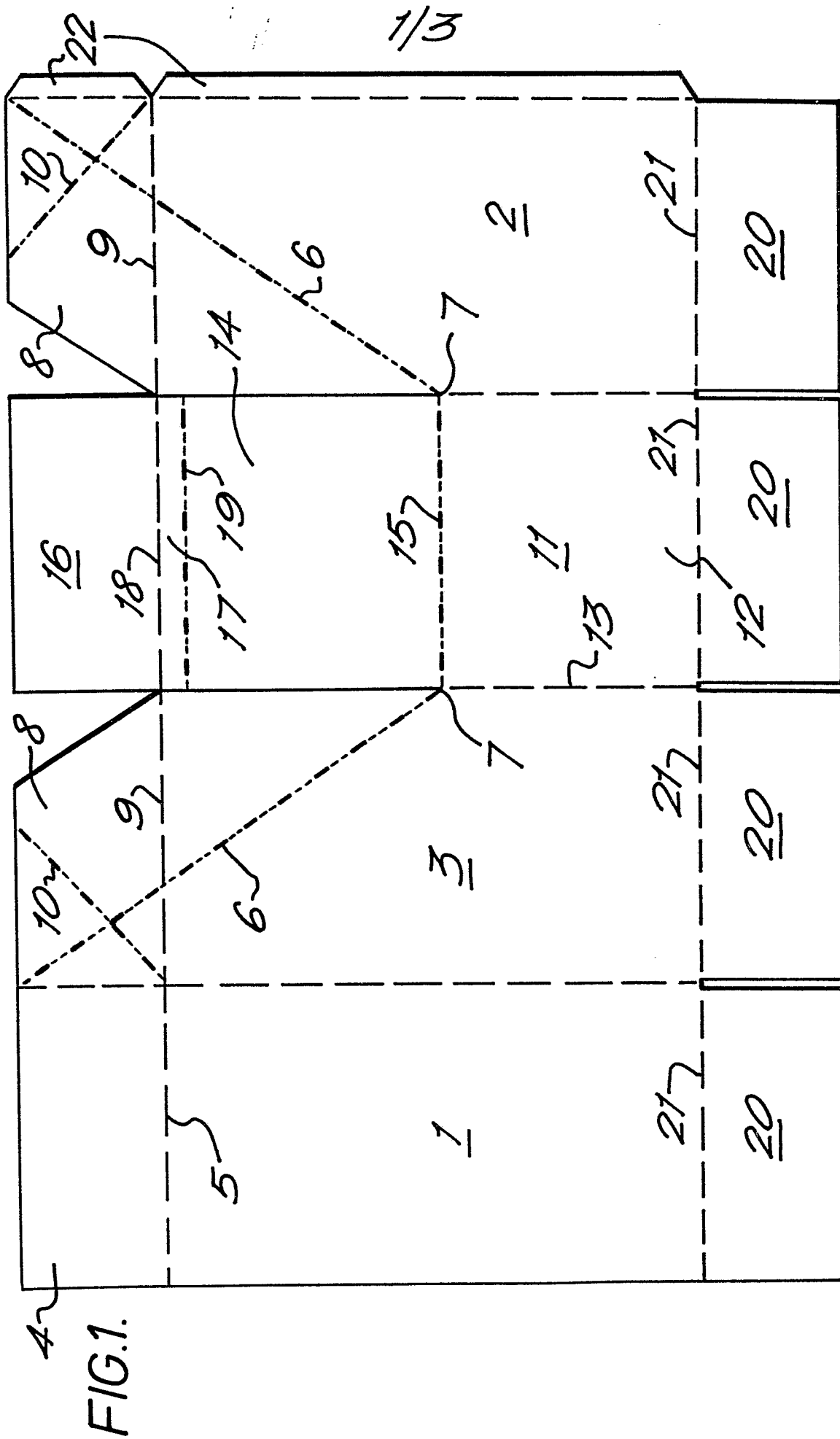
10 6. A box as claimed in claim 5, characterised in that portions of the sides of the box fold outwards so that the internal faces of these display flaps when the box is in said first condition become forwardly facing display surfaces when the box is opened into said
15 second condition.

 7. A box as claimed in claim 6, characterised in that said display surfaces are inclined at an angle to the horizontal and the flaps which define them are foldable about respective lines extending upwardly and
20 rearwardly from the front side edge of the box to the top rear corner of the box.

 8. A box as claimed in any of claims 5 to 7, characterised in that the or each display surface is trapezoidal in shape.

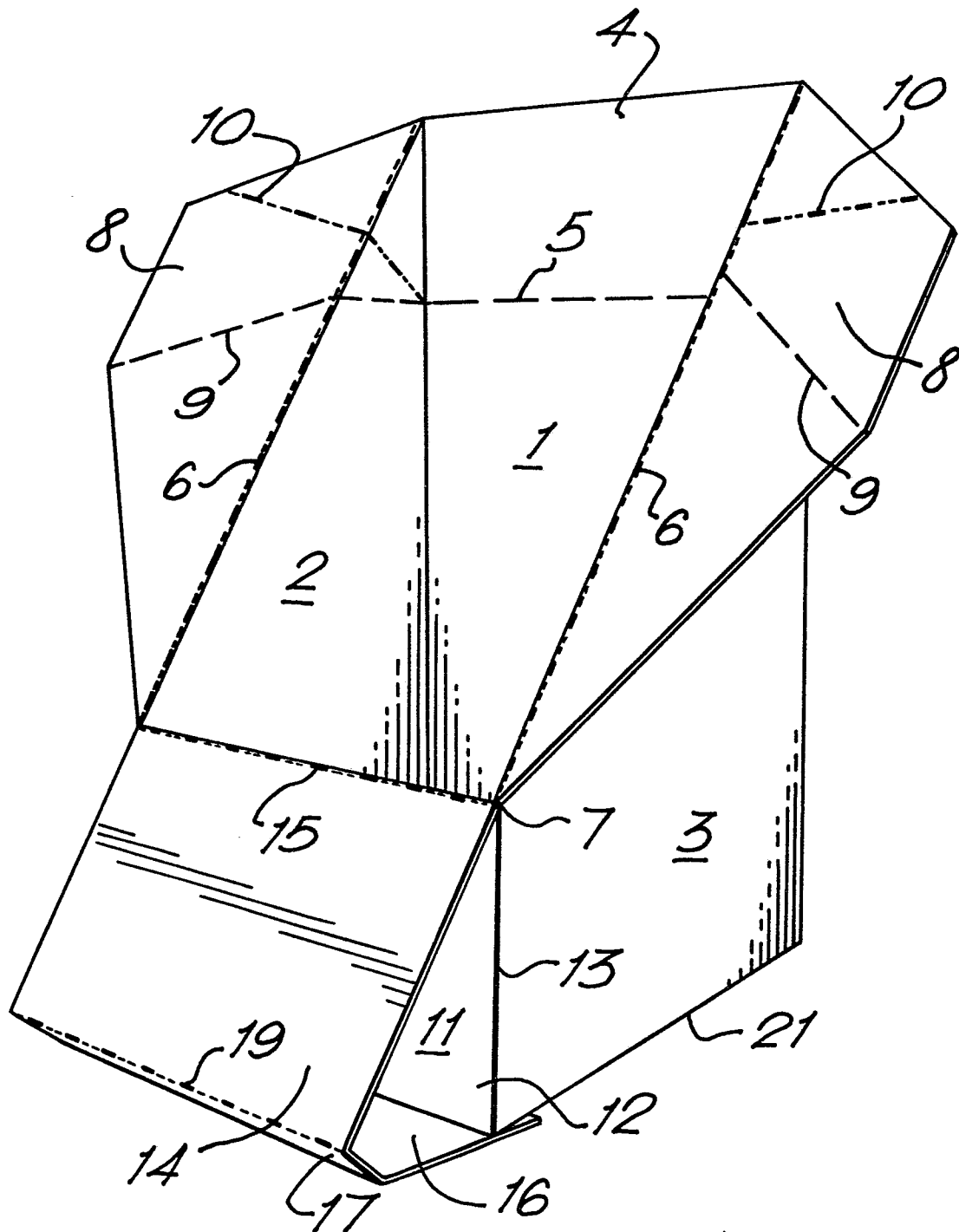
25 9. A box as claimed in any of claims 5 to 8, characterised by a front panel having at least three contiguous portions, one of which folds down to form a front display panel.

30 10. A box as claimed in any of claims 5 to 9, characterised in that it includes a rear panel which has a top flap which with the box in said first condition is folded down to lie horizontal and which with the box in said second condition is folded up to form
35 a vertical display surface.



2/3

FIG.2.



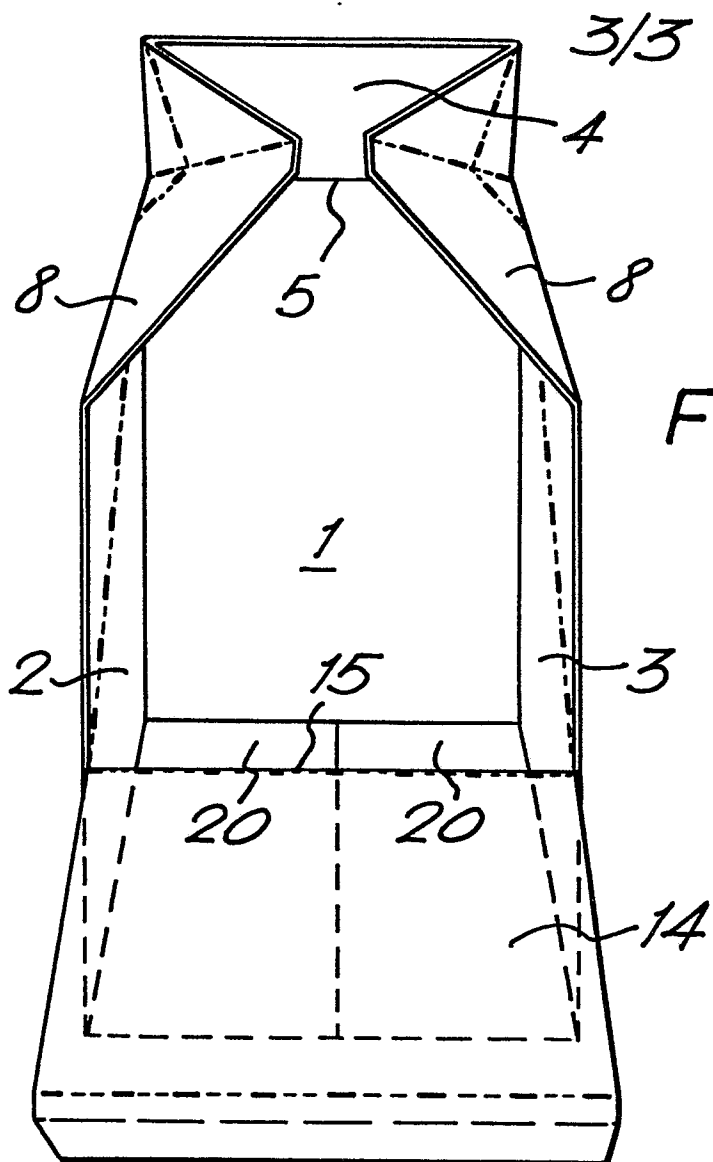


FIG. 3.

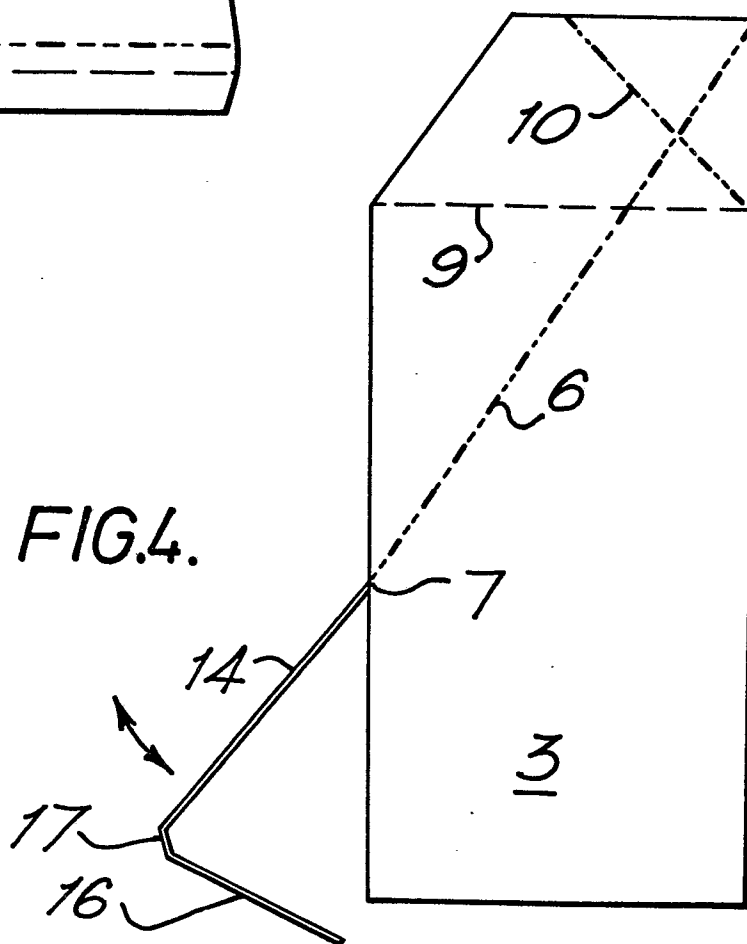


FIG. 4.



European Patent
Office

EUROPEAN SEARCH REPORT

0050991

Application number

EP 81305071.3

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl. ³)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	<u>US - A - 1 714 730</u> (RICE) * Totality * --	1-7,9,10	B 65 D 5/42// B 65 D 85/50
X	<u>US - A - 2 298 136</u> (LAVERE) * Totality * --	1-10	
X	<u>DE - A - 1 934 244</u> (HÄNSEL GMBH) * Totality * --	1-7,10	
	<u>US - A - 2 259 041</u> (LARKIN) * Fig. 2-4 * ----	4	TECHNICAL FIELDS SEARCHED (Int. Cl. ³) B 65 D 5/00 B 65 D 85/00
			CATEGORY OF CITED DOCUMENTS X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
X	The present search report has been drawn up for all claims		&: member of the same patent family, corresponding document
Place of search VIENNA		Date of completion of the search 27-01-1982	Examiner CZUBA