



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**14.04.2010 Bulletin 2010/15**

(51) Int Cl.:  
**B65D 5/42 (2006.01)**

(21) Application number: **09171287.7**

(22) Date of filing: **24.09.2009**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR**  
Designated Extension States:  
**AL BA RS**

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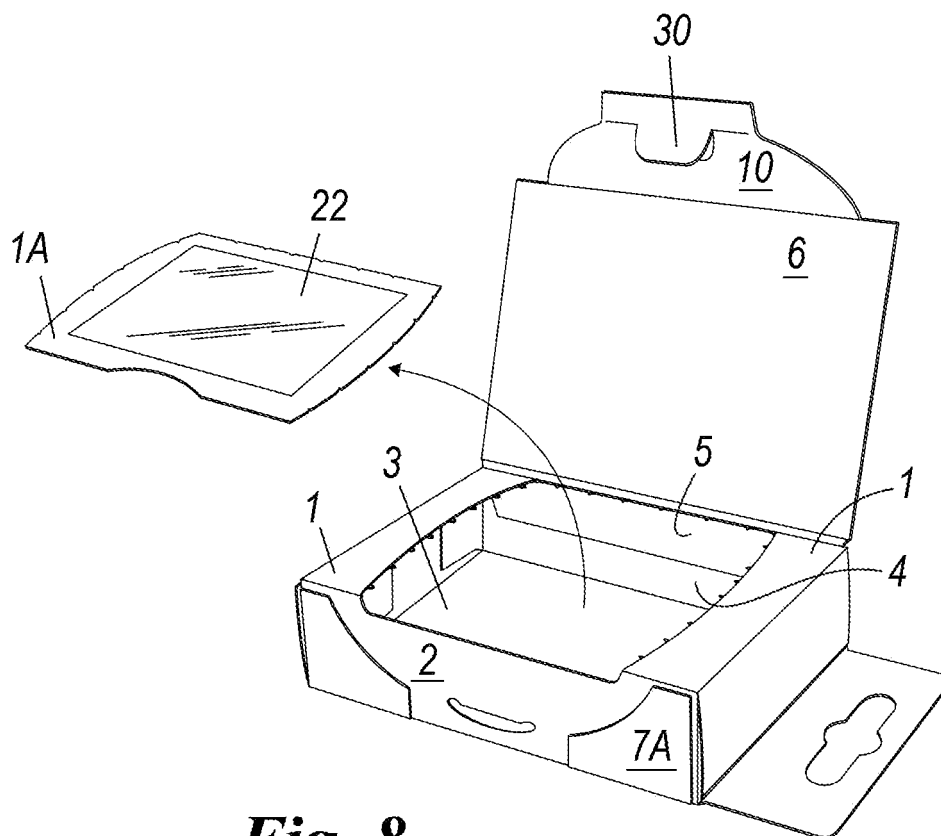
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(30) Priority: **02.10.2008 IT MI20081755**

(54) **Cardboard box, with a removable part having a mirrored surface**

(57) A box formed from a single cardboard piece, having a breakable knurling (20) bounding a portion (1A) removable from the box and having a mirrored surface. The box can be used to contain plasters or pharmaceu-

tical or cosmetic products applicable to the face of a user who is able to use said mirrored portion (1A) extracted from the box to clearly view that point of the face on which the plasters or products are to be applied by the user.



**Fig. 8**

## Description

**[0001]** A box formed from a single piece of punched, crease-lined and knurled cardboard sheet, intended to contain plasters or pharmaceutical or cosmetic products or the like applicable to a user's face. The box has a portion bounded by a knurling which can be broken to allow extraction and removal of a portion having a mirror surface on at least a part thereof to enable the user to clearly view that facial portion on which the plaster or the pharmaceutical or cosmetic product is to be applied.

**[0002]** WO 00/20289 and EP1493676A describe boxes made from a single cardboard sheet and in which one of the main box panels is faced by and adjacent to a supplementary panel (to form a pair of parallel adjacent panels) which is spaced from said main panel with which it defines a pocket to house a leaflet illustrating the product contained in the box: in the box described in EP 1493676A, the more outer of the two adjacent panels presents a breakable part enabling it to be raised to expose the other adjacent panel or an illustrative leaflet resting on it.

**[0003]** FR-A-2823719 describes a box to contain cosmetic products 10 housed between a lower wall 22 and an intermediate wall 3 of the box, these two walls being parallel. The box also comprises an upper wall 4 acting as a box lid and rotatable about a folding line 42 on the cardboard sheet with which the box is made: when the box is in its closed position this upper wall (or lid) 4 is superposed and rests on the intermediate wall 3 from which the upper wall is raised by rotation about said folding line 42 joining the upper wall to the remaining portion of the box.

**[0004]** In the intermediate wall 3 a breakable knurling 32 is provided in the form of a closed ring which defines a removable central portion 30, the surface 300 (facing the product 10 contained in the box) of which is a mirror. As clearly and repeatedly stated in said French patent (for example the last three lines of page 4) a glue layer 40 must be provided between the lid 4 and the removable portion 30 of the box to firmly join the portion 30 to the lid, such that when the lid is opened the glue 40 drags the portion 30 to hence break the knurling 32. In this manner the portion 30 (having the mirrored surface 300) remains securely fixed to the box lid 4.

**[0005]** The box described in FR-A-2823719 has the serious drawback that (when the box has been opened to enable the contained product to be used), the cardboard portion 30 with its mirrored surface 300 remains fixed (glued), see also paragraph b of claim 1) on the lid 4, so that the person wishing to view any facial region for applying the product 10 has to move the edge of the open box towards or against the face, making it difficult or even impossible to view that facial region through the mirrored surface 300.

**[0006]** Again, as the intermediate wall portion 30 can be detached (by breaking the knurling 32) from the intermediate wall 3 only by the pulling action exerted on it by

the lid 4 (which is of flexible cardboard), it is very probable that this lid becomes and remains deformed during box opening, which could then not be perfectly closed, with the risk that part of the product 10 emerges, as the lid 4 is unable to be returned to its closed position in which it adheres to the adjacent surface of the intermediate wall 3.

**[0007]** The main object of the present invention is to provide a box of the aforesaid type but in which that panel of the pair of panels which is positioned inwards in the box has a portion removable and extractable from the box, this panel portion having a surface which is mirrored finished to enable the box user to clearly view that facial part on which the product contained in the box is to be applied.

**[0008]** Another object is to provide a box of simple and economical production and use.

**[0009]** These and other objects are attained by a box having the structure and characteristics specified in claim 1 of the present description.

**[0010]** Preferably the box has the characteristics indicated in the ensuing claims from 2 to 4.

**[0011]** A preferred but non-limiting embodiment of the box is represented in the accompanying drawings, in which:

Figure 1 is a plan view of a piece of punched, crease-lined and knurled cardboard sheet seen from that side which is to remain in the box interior;

Figures from 2 to 4 show the cardboard piece of Figure 1 in its various successive folding steps to form the box;

Figure 5 is a perspective view of the finished and closed box;

Figures 6 and 7 show the box with its outer upper panel open and, respectively, with a portion of that panel below the outer panel shown raised upwards after partial breakage of the knurling which separates it from the panel in which that portion is provided;

Figure 8 is a perspective view showing the completely open box, in the step following that of Figure 7, in which the said panel portion has been removed;

Figure 9 shows the box of Figure 8, but with its outer upper panel lowered onto the box, which is hence closed after its prior use; and

Figures from 10 to 13 show, in different stages of use, a structural variant of the removable panel portion underlying the box outer panel.

**[0012]** With specific reference to Figure 1, this shows in extended plan view a piece of punched, crease-lined cardboard, seen from that side which is to face the interior of the box to be formed from this cardboard piece.

**[0013]** The cardboard piece comprises seven consecutive cardboard portions separated from one another by transverse folding lines, all indicated by the number 8, and defining in order a first flap 5, a first, a second, a third and respectively a fourth main panel (1, 2, 3 and 4 respectively), a supplementary panel 6 and a second flap

7. To form the box, these cardboard portions are folded about the respective folding lines 8. Firstly, the panel 1 (and with it the first flap 5) is rotated through 180°- about that folding line 8 which separates it from the panel 2, hence superposing the panel 1 and the flap 5 on the panels 2 and 3, as shown in Figure 2: in this position a glue layer (represented by dots) is applied to the surface of the flap 5, as shown in Figure 2.

**[0014]** The cardboard is then rotated about that folding line 8 which separates the panels 2 and 3, to superpose the panel 1 on the panel 6 and the first flap 5 on the panel 4, on which this flap 5 is fixed by the glue previously applied to it (Figure 3).

**[0015]** A glue layer (represented by dots in Figure 3) is then applied to the two ends 7A of the second flap 7, which are divided from the remaining portion of said second flap by breakable knurled lines 9 which separate them from the central portion 10 of said flap 7: the portion 10 is joined to the remaining part of the cardboard along the folding line 8 which separates it from the panel 6, and about which the flap 7 is finally rotated to superpose it and glue it onto the panel 2, as shown in Figure 4.

**[0016]** At this point the box formation by the cardboard box production firm is complete and the box can be made to assume its desired attitude ready for use, by simply exerting pressure (in the direction of the two arrows indicated by the letter A in Figure 4).

**[0017]** From the already described figures it can be noted that tabs (for simplicity not numbered) project from the opposing ends of the panels 2 and 4, and that from the opposing ends of the panels 1 and 3 there project lateral panels 11, 12 which are separated from the main panels (as are the aforesaid tabs) by longitudinal folding lines 13 (perpendicular to the transverse folding lines 8) about which these lateral panels (and the tabs) can be folded to close the box ends in known manner, as visible and deducible from Figures from 5 to 9.

**[0018]** Reference will now be again made to the accompanying drawings to understand the essential inventive characteristics of the present invention.

**[0019]** A breakable knurling 20 is provided in the first main panel 1 and bounds a panel portion 1 A which is separated from the panel 2 by an elongated hole 21. The panel portion 1 A can be gripped by two fingers (one finger can be inserted below this panel portion after passing the finger through the hole 21) for its separation from the box by breaking the knurling 20. A mirrored surface 22 (consisting for example of a thin reflecting 100 micron sheet of polyester fixed to the panel portion 1 A, or mirror silvering formed in known manner on the smooth outer surface of the said panel portion). It will now be assumed that the box has been formed and closed as shown in Figure 5; in this condition the supplementary panel 6 rests on the main panel 1 and on the panel portion 1 A, while the flap 7 is superposed on the panel 2, on which it is fixed by its two ends 7A glued onto the panel 2.

**[0020]** To open the box, the free end of the central portion 10 of the flap 7 is gripped and raised (in the di-

rection indicated by the arrow B in Figure 5) to break the knurling 9 and hence enable the supplementary panel 6 to be raised away from the underlying main panel 1 and from the panel portion 1 A (Figure 6).

**[0021]** At this point the end of a finger can be inserted into the hole 21 and the adjacent end of the panel portion 1A be gripped with two fingers to be hence raised upwards (in the direction indicated by the two arrows C), to break the knurling 20 (Figure 7) and hence cause complete detachment of the panel portion 1 A, which can be extracted from the box (Figure 8).

**[0022]** The panel portion 1 A with its mirrored surface 22 can thus be easily used by the box user to clearly view that facial portion on which the product contained in the box, for example a small plaster or a cosmetic or pharmaceutical cream or the like, is to be applied.

**[0023]** The box can then be again closed by folding the supplementary panel 6 onto the main panel 1 and inserting (as shown in Figure 9) a flexible appendix 30 (provided in the flap 7 by a profiled cut 31) into a window 32 provided in the panel 2. The box is hence reclosed: this system for reclosing the box outer panel after its opening is known per se and is represented in patent applications EP1493676A, EP1538090A and EP1783056A.

**[0024]** In Figures from 1 to 4 and from 6 to 8 the removable portion 1 A with the mirrored surface 22 consists of a flat uniform portion of the main panel 1.

**[0025]** Figures from 10 to 13 show a structural variant of said flat portion, this structural variant being shown by the reference numeral 1 B for clarity.

**[0026]** The panel portion 1 B is shown in plan in Figure 10: a folding line 40 is provided thereon which divides it into two substantially equal parts on which a mirrored surface 22A is provided. The mirrored surface 22A can be a single surface (in which case the folding line 40 extends through it) or can consist of two mutually adjacent separate mirrored portions: in all cases a folding line 40 is provided in the panel portion 1 B to define two separate panel portions (both identified in the drawings by the number 1 B) which are foldable or rotatable about this folding line 40 (Figures from 11 to 13) to enable them to be superposed one on the other (Figure 13).

**[0027]** As can be seen from all the Figures from 10 to 13, in each of the two separate panel portions 1 B, in a position spaced from the folding line 40, a cut is provided defining a projecting appendix 41 which is flexible and is engagable with its corresponding adjacent appendix 41 when the two panel portions 1 B are folded such that one is superposed on the other (Figure 13).

**[0028]** Between the two panel portions 1B, a few small plasters 50 can be inserted (Figures 11-13) after withdrawing them from the box of which the panel portion 1B formed part. In this manner the two panel portions 1B when in their folded and closed position (Figure 13) can be placed in and kept in a handbag or a coat pocket, to be easily used when required.

## Claims

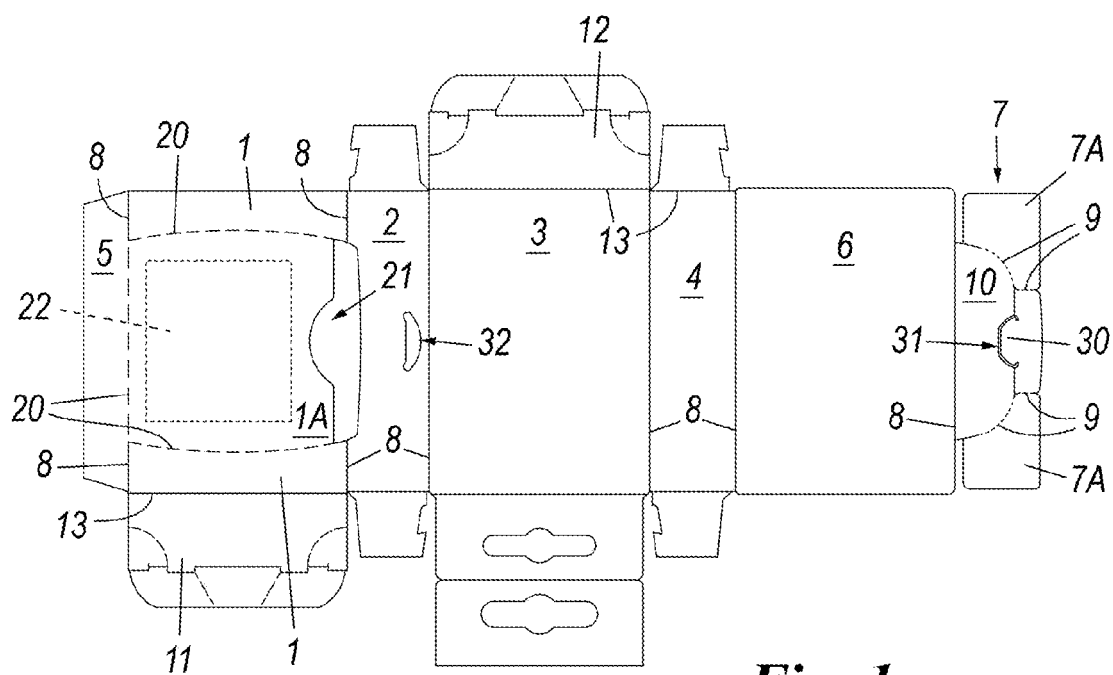
1. A box formed from a single cardboard piece, having a removable portion (1A) with a mirrored surface (22), and comprising seven consecutive cardboard portions (1-7) separated one from another by transverse parallel folding lines (8), and defining in order a first flap (5), a first, a second, a third and respectively a fourth main panel (1-4), a supplementary panel (6) and a second flap (7), these cardboard portions (1-7) being folded about the respective transverse folding lines (8), the first flap (5) being folded about that folding line (8) which separates it from the first main panel (1) and glued to the inner surface of the fourth main panel (4), said box supplementary panel (6) being folded about that folding line (8) which separates it from the fourth main panel (4) and said second flap (7) being superposed and glued on the outer surface of said second main panel (2), there also being provided lateral panels (11, 12) which project laterally from at least one end of at least one of said main panels (1-4) from which these lateral panels (11, 12) are separated by longitudinal folding lines (13) perpendicular to said transverse folding lines (8), the lateral panels (11, 12) being foldable to close the ends of said box, in said first main panel (1) a knurling (20) being provided bounding therein a panel portion (1A) which is mirrored, **characterised in that** said panel portion (1A) can be removed from the first panel (1) and extracted from the box by breaking said knurling (20) when the box is open with its supplementary panel (6) raised away from the first main panel (1).
 

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2. A box as claimed in claim 1, **characterised in that** said portion (1A) removable from the first main panel (1) is separated from the adjacent second main panel (2) by an elongated hole (21) which interrupts said knurling (20) and defines an aperture (21) for the insertion of a finger of one hand below said panel portion (1 A), which can hence be gripped with two fingers to be removed from the box, after tearing said knurling (20).
 

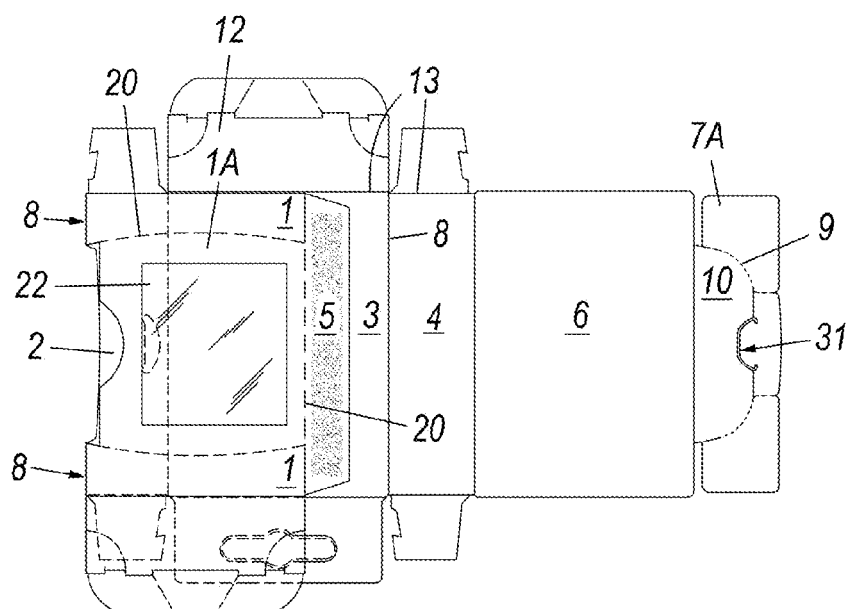
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3. A box as claimed in claims 1 and 2, **characterised in that** said elongated hole (21) extends both along the first main panel (1) and along the second main panel (2) of the box.
 

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4. A box as claimed in claim 1, **characterised in that** in the removable panel portion (1 B) a folding line (40) is provided which divides this portion into two parts foldable one onto the other about said folding line, the free edge of each of said two panel portion parts (1 B) being provided with elements (41) which can be mutually engaged to retain the two parts (1 B) mutually superposed.
 

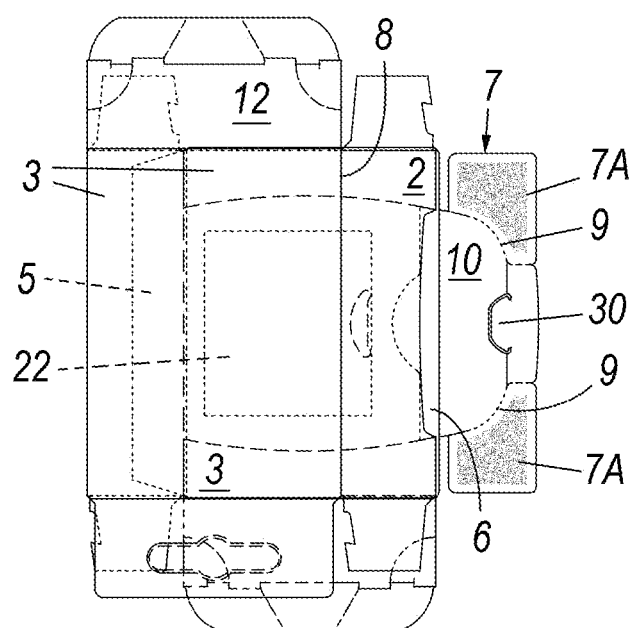
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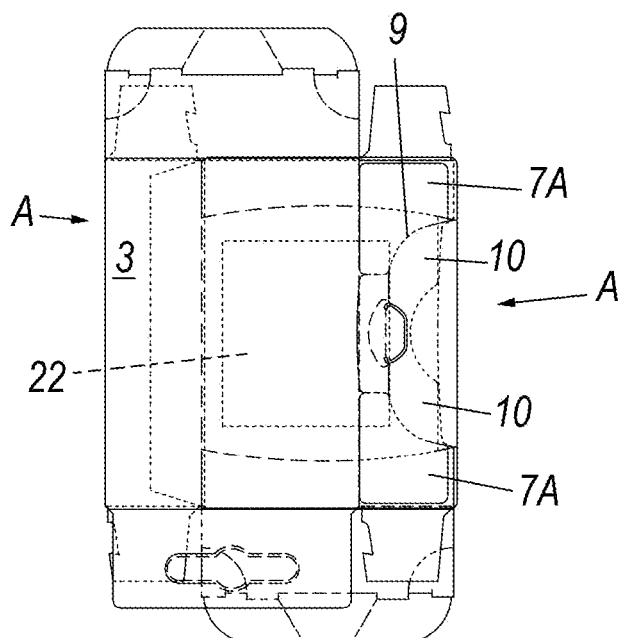
**Fig. 1**



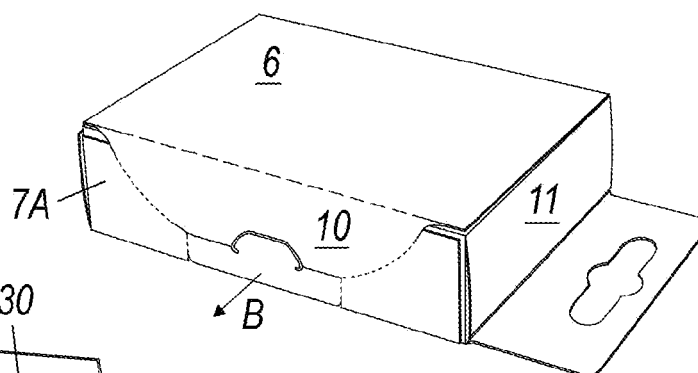
**Fig. 2**



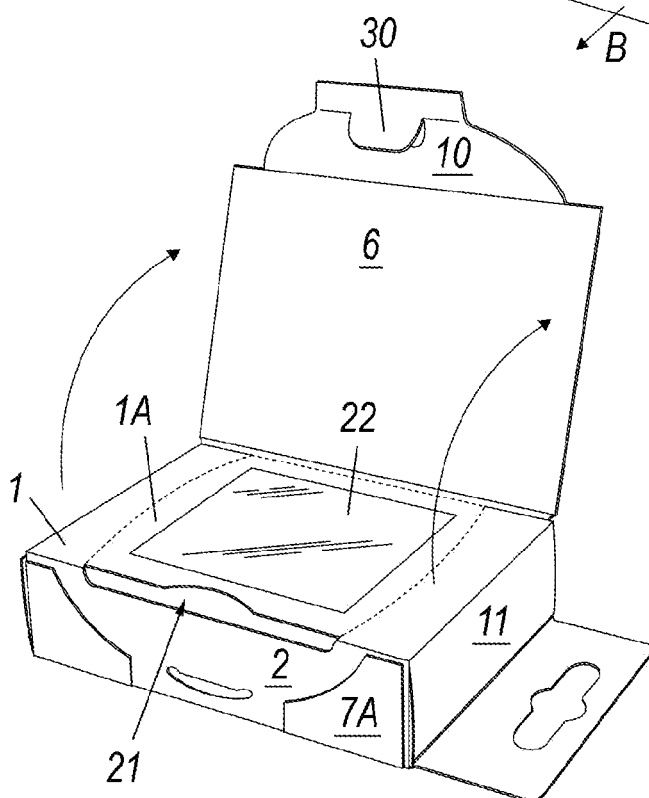
**Fig. 3**



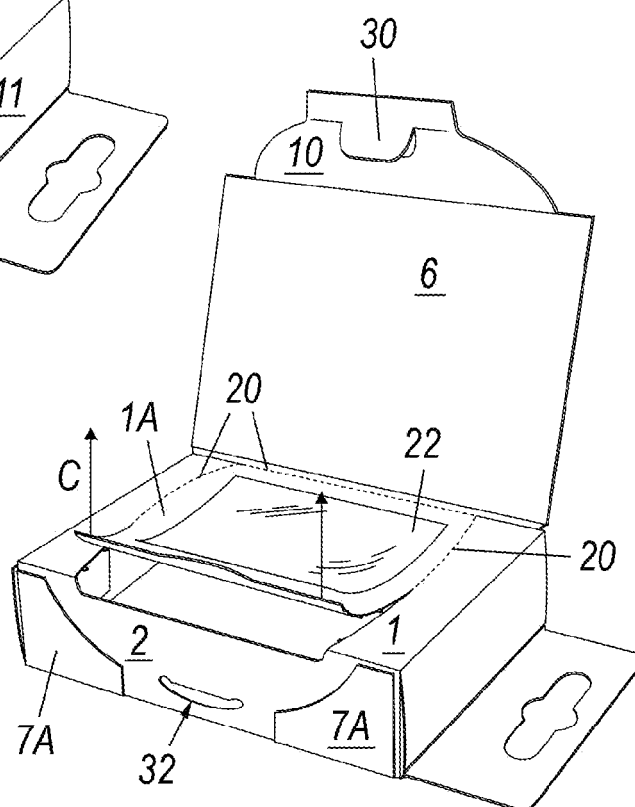
**Fig. 4**



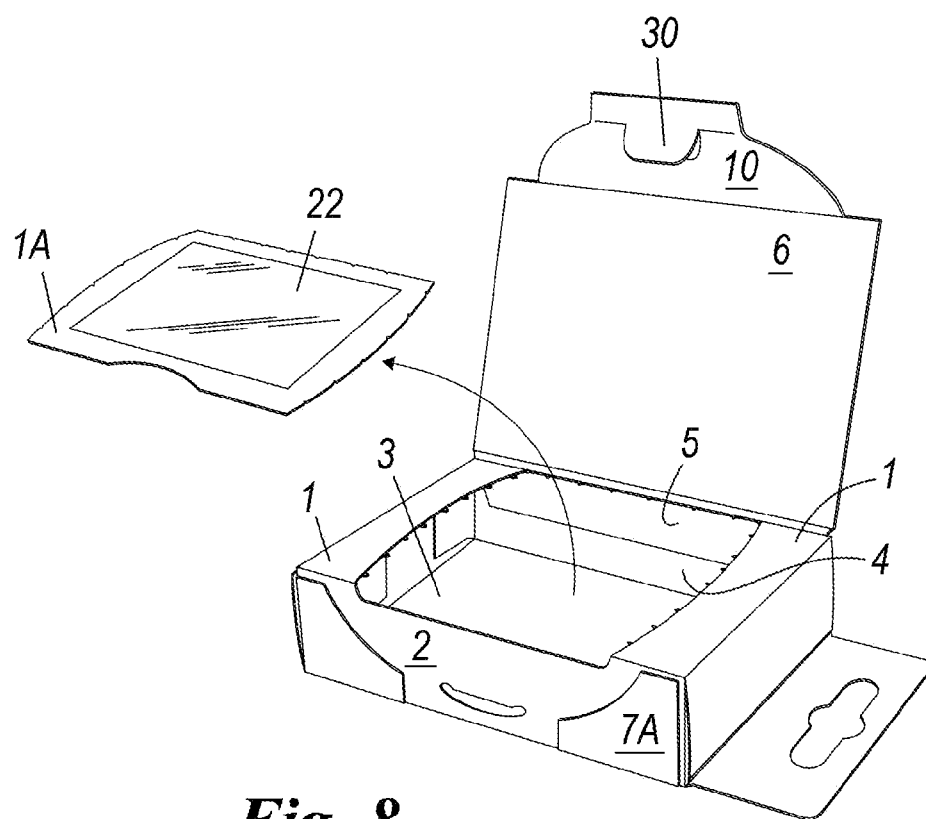
**Fig. 5**



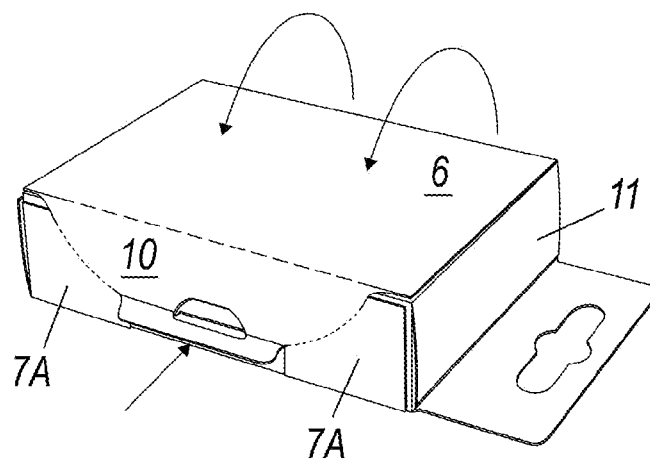
**Fig. 6**



**Fig. 7**

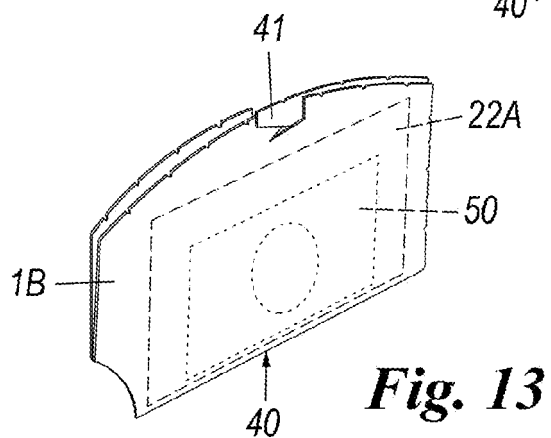
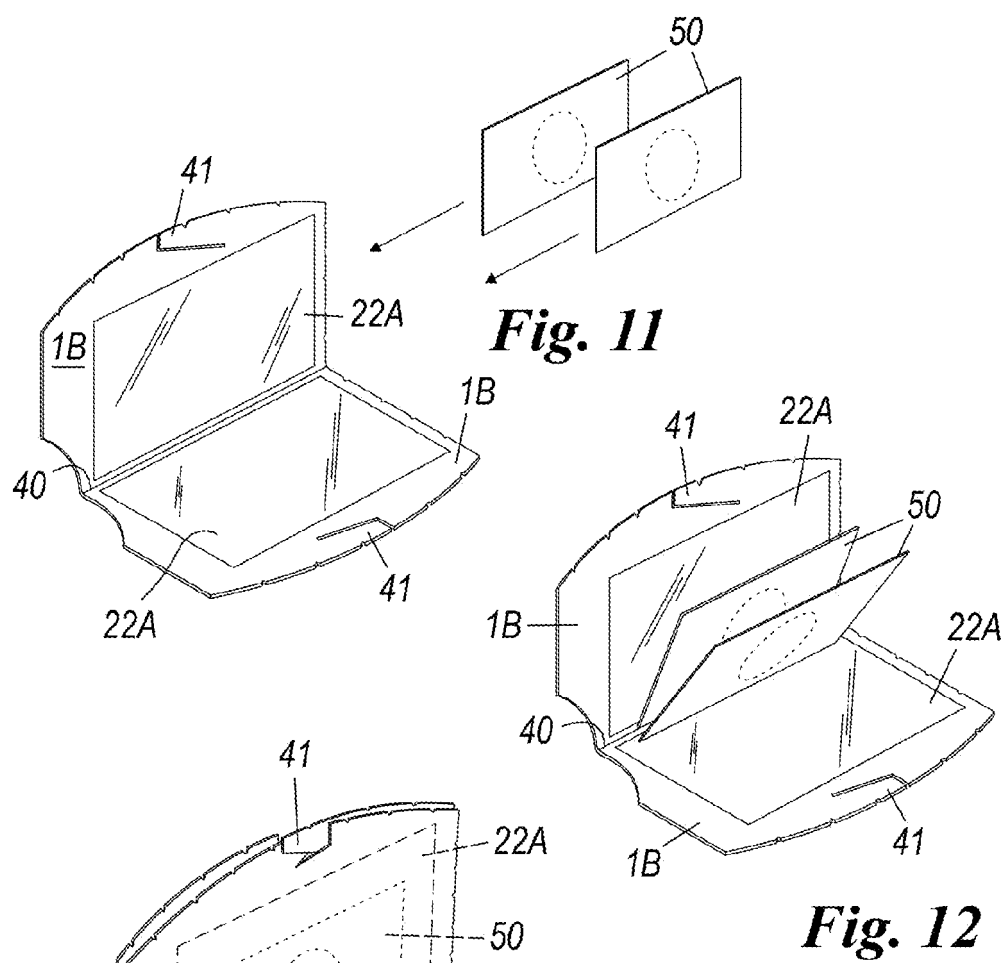
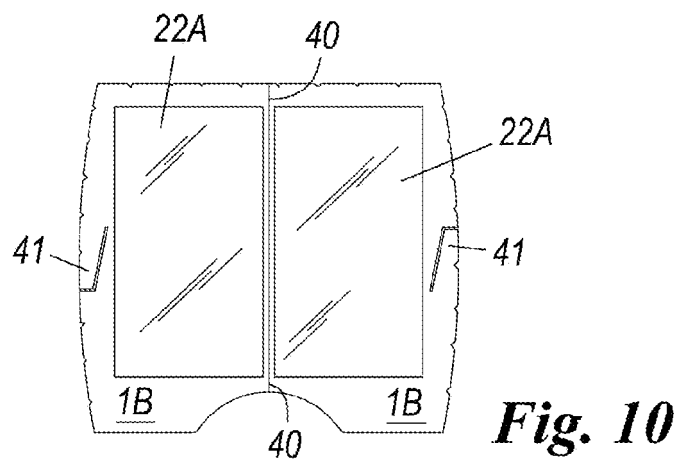


**Fig. 8**



**Fig. 9**







## EUROPEAN SEARCH REPORT

Application Number  
EP 09 17 1287

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	FR 2 823 719 A (COSMETECH EUROP SA [FR]) 25 October 2002 (2002-10-25) * abstract; figures 1,4,5 *	1-4	INV. B65D5/42
A	EP 0 818 393 A (BOXMORE HEALTHCARE PACKAGING I [GB] FIELD BOXMORE BELFAST LTD [GB]) 14 January 1998 (1998-01-14) * the whole document *	1-4	
A	EP 1 619 131 A (LITOCARTOTECNICA IVAL S P A [IT]) 25 January 2006 (2006-01-25) * the whole document *	1-4	
A	US 2006/158733 A1 (BILLEN WILLIAM D [US]) 20 July 2006 (2006-07-20) * figure 1 *	1-4	
A	WO 2006/003443 A (WILKINS ANDRE PHILIP [GB]) 12 January 2006 (2006-01-12) * figures *	1-4	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 2 November 2009	Examiner Vigilante, Marco
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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 17 1287

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The members are as contained in the European Patent Office EDP file on  
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02-11-2009

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FR 2823719	A	25-10-2002	NONE	
EP 0818393	A	14-01-1998	NONE	
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**REFERENCES CITED IN THE DESCRIPTION**

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- EP 1493676 A [0002] [0023]
- FR 2823719 A [0003] [0005]
- EP 1538090 A [0023]
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