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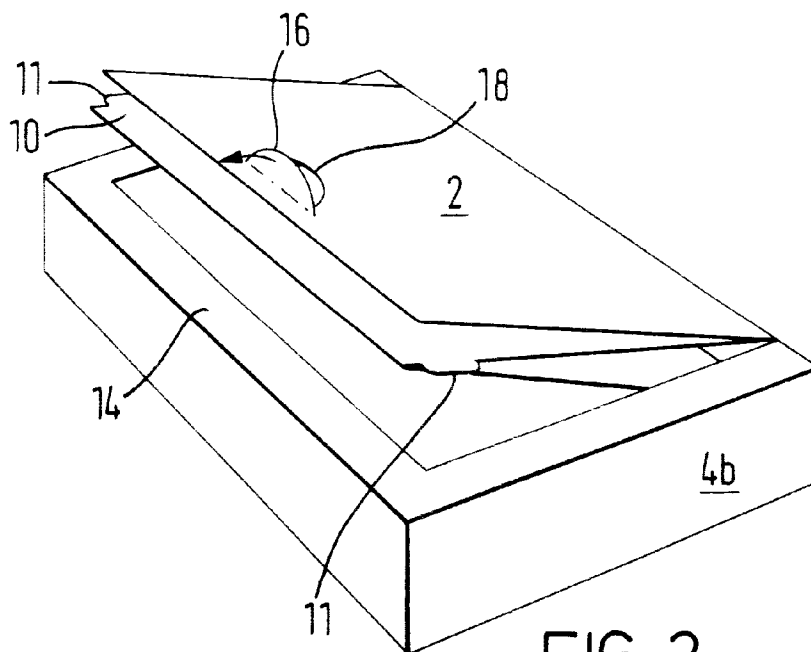
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### (54) Improvements relating to pharmaceutical cartons

(57) A pharmaceutical carton having an opening portion (2) for access to the inside of the carton and one or more panels (10) for the provision of information, at least one panel being integral with the carton and at least one panel being wholly or substantially located between the opening portion and the inside of the carton so requiring movement by the user to obtain access to the inside of the carton is described. The carton is preferably tamper-evident. Lid (2) is defined by lines of

weakness (A).

By requiring movement by the user of at least one panel before access, even partial access, to the contents of the carton is possible, this ensures as far as possible that the information on that panel has at least been seen if not read by the user prior to the first and/or every dose. Also, by having at least one panel being integral with the carton, the information thereon cannot be discarded.



**FIG. 2**

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## Description

The present invention relates to cartons, particularly but not exclusively cardboard pharmaceutical cartons.

Many pharmaceutical pills, tablets, etc. are packaged in cardboard cartons. The cartons also contain separate leaflets providing information on the use and dosage of the pharmaceutical, along with safety advice. However, the leaflets are commonly ignored by users, and/or discarded or lost. The elderly also find separate leaflets hard to handle and read. This could lead to accidental misuse of the pharmaceutical. Naturally, it is desired that the information with the pharmaceutical is read by the user, or at least so clearly available to read that the user is more likely to read it, reducing the chance of misuse. The information should also be continually available for all dosages of the pharmaceutical, and not readily or accidentally discardable.

According to one aspect of the present invention, there is provided a pharmaceutical carton having an opening portion for access to the inside of the carton and one or more panels for the provision of information, at least one panel being integral with the carton and at least one panel being wholly or substantially located between the opening portion and the inside of the carton so requiring movement by the user to obtain access to the inside of the carton.

By requiring movement by the user of at least one panel before access, even partial access, to the contents of the carton is possible, this ensures as far as possible that the information on that panel has at least been seen if not read by the user prior to the first and/or every dose. Also, by having at least one panel being integral with the carton, the information thereon cannot be discarded (compared with separate leaflets which are often discarded, most usually after the first dose has been taken).

The carton may be of any shape, size or design, although generally pharmaceutical cartons are of a rectangular cuboid nature. The shape, size and shape of the opening portion is dependent upon the shape etc. of the carton. For cuboid cartons, the opening portion is usually one end and/or part of the front face of the carton. The opening portion preferably creates an aperture in the carton which will allow access (after movement of a panel) to all or substantially all the contents of the carton once opened.

The opening portion also preferably includes an opening means to assist opening of the opening portion by the user. The opening means may be a tab or a flap etc., which can be extended, e.g. folded, outwardly from the opening portion or the main body of the carton for manual grip.

The panel(s) for information may also be of any shape, size or design. Preferably, the panel(s) are of similar size to the opening portion, so they fit wholly or substantially across the aperture in the carton created

by opening the opening portion. At least one panel may be of greater size than the opening aperture in the carton to allow it (and possibly connected panels) to be held within the carton by the edges of the aperture.

Alternatively, at least one panel includes outstanding lugs, tabs, etc. which extend beneath the edges of the aperture and thus hold the panel(s) within the carton. The panel(s) which require movement upon opening of the carton may also be initially attached to the carton so as to require breakage of the attachment before movement is possible. The opening portion and/or panel(s) may be securably recloseable. The opening portion could also be discardable after opening.

Where a plurality of panels are used, all or some of them may be initially lightly bonded together and/or bonded to the opening portion with an adhesive to ensure that the panels do not unfold or otherwise interfere during the insertion of the contents into the carton.

The number of panels may be as desired or necessary. Preferably, they can accommodate all the information required to be associated with the relevant pharmaceutical such that separate leaflets are not needed. The time, effort and additional machinery needed to print, fold and insert separate leaflets can thus be avoided.

The problems caused by the packaging of leaflets in cartons are considerable, and they are one of the commonest sources of production stoppage or wastage (of a pharmaceutical "packed" product, any slight defect in which leads to complete destruction of the product). The information on the panel(s) may be of large print for the elderly, or in Braille for the blind, etc. Preferably, there are two or three panels. Multiple panels may be separable or integral, and preferably overlie each other when the carton is closed.

According to one preferred embodiment of the present invention, the carton is 'tamper-evident'. That is, it is possible to determine whether the carton has been opened (and thus possibly tampered with) prior to proper use. This is especially important for pharmaceuticals. The carton may be tamper evident by providing irreparable or non-resealable weakenings between the main body of the carton and the opening portion. The weakenings assist ease of separation of the opening portion from the main body of the carton to open the carton, whilst still providing an initial seal. Such weakenings include perforations, tear perforations, cut creases, scoring, reverse scoring, etc. The other parts of the carton can be sealed by glue.

The carton of the present invention may be used for any pharmaceuticals, and veterinary substances and medicines, and also non-medical health care products which have detailed instructions therewith. The term "pharmaceutical" as used here includes these other types of products.

According to a second aspect of the present invention, there is provided a flat blank foldable into a pharmaceutical carton as hereinbefore described. Preferably, the or each panel is integral with the carton blank,

such that only one blank need be formed, and that blank can be directly assembled or part assembled into the desired carton (for subsequent packing). More preferably, the blank can be assembled using apparatus currently assembling blanks without information panels.

The blank and/or carton of the present invention may be made from any suitable material or combination of materials. Usually the material is (card)board, which is easily workable, foldable, and acceptable of printed matter. Preferably, the part assembled carton is collapsible to reduce its size and so assist transportation to the packer.

Embodiments of the present invention shall now be described by way of example only and with reference to the accompanying drawings in which:-

Fig. 1 is a plan view of a blank according to one embodiment of the present invention;

Fig. 2 is a perspective view of a carton formed from the blank of Fig. 1; and

Fig. 3 is a cross sectional view of the carton in Fig. 2 prior to opening.

Referring to the drawings, Fig. 1 shows an integral blank of cardboard. All internal lines are for folds apart from lines A of the opening portion 2. Lines A are two lines of reverse scoring. Perforations could also be added if desired. These weakenings form an initially sealed barrier, but also assist the initial opening of the opening portion 2.

First side edges 4a will overlap and be glued together to create a cuboid carton having a top face 6 and bottom face 8. The blank has three panels 10 which will be folded underneath the opening portion 2. The lowermost panel 10 includes an adhesive area 12 to lightly bond it to the uppermost panel upon assembly to ensure that the panels 10 do not unfold or otherwise interfere during the insertion of the contents into the carton.

This blank may be folded and assembled using existing machinery, avoiding new tooling costs. The assembled, (that is part-assembled ready for contents insertion) carton made from this blank is collapsible, i.e. can be flattened, for transportation.

Fig. 2 shows a fully assembled carton with the opening portion 2 and two panels 10 thereunder, both parts partly opened for clarity. In Figs 2 and 3, only two of the three panels 10 of the blank in Fig. 1 are shown for clarity. On the panels 10 may be written all the user information required. As the panels 10 are integral with the carton, this information is always available to the user. As also shown in Fig. 3, the panels 10 are located wholly between the opening portion 2 and the inside of the carton 15 and require moving before access into the carton is possible. Thus, at least the top face of one panel 10 will be visible to the user when the opening portion 2 is opened. The panels 10 may then be unfolded to access any information on the other faces.

One of the panels 10 includes two lugs 11 extending

therefrom to hold the panels 10 in place whilst the opening portion 2 is opened. The lugs 11 may also allow the panels 10 to be securely recloseable, thus requiring movement (and thus being visible) every time the carton is opened by the user. The opening portion 2 could be discardable after opening by weakening its attachment along line B in Fig. 1, e.g. using perforations. The lugs 11 would ensure that the contents of the carton are still held therewithin.

Once the contents have been inserted into the carton, the remaining sides 4b are glued together. The primary access to the contents of the carton is therefore through the opening portion 2. As the opening portion 2 is attached to the remaining part 14 of the top face of the carton 6 using the irreparable weakenings of line A, the carton is tamper evident.

The opening portion 2 includes a flap 16 and associated aperture 18. The flap 16 can be folded outwardly of the plane of the opening portion 2 as shown in Fig. 2 by pulling thereunder through the aperture 18. The flap 16 assists opening of the opening portion 2.

The present invention thus provides a tamper evident carton which can have all user information integral therewith. The user has assurance of an untampered product with the necessary information always available. At least some of the information must be seen by the user upon opening of the carton in moving a panel. This will ensure as far as possible that the necessary instructions and information are read by the user prior to usage.

Variations and modifications may be made within the scope of the present invention.

## Claims

1. A pharmaceutical carton having an opening portion for access to the inside of the carton and one or more panels for the provision of information, at least one panel being integral with the carton and at least one panel being wholly or substantially located between the opening portion and the inside of the carton so requiring movement by the user to obtain access to the inside of the carton.
2. A pharmaceutical carton as claimed in Claim 1 wherein irreparable or non-resealable weakenings are provided between the opening portion and the main body of the carton.
3. A pharmaceutical carton as claimed in Claim 1 or Claim 2 wherein irreparable or non-resealable weakenings are provided between the or at least one of the panels and the main body of the carton.
4. A pharmaceutical carton as claimed in any one of Claims 1-3 wherein the opening portion and/or the or at least one panel are securably recloseable.

5. A pharmaceutical carton as claimed in Claim 4 wherein the or at least one panel includes one or more outstanding lugs.
6. A pharmaceutical carton as claimed in any one of the preceding claims wherein the or at least one panel is wholly or substantially the same size as the opening portion. 5
7. A pharmaceutical carton as claimed in Claim 6 wherein the or at least one panel is of greater size than the opening portion. 10
8. A pharmaceutical carton as claimed in any one of the preceding Claims wherein the opening portion creates an aperture in the carton to allow access after movement of the or at least one panel to all or substantially all of the contents of the carton. 15
9. A pharmaceutical carton as claimed in Claim 8 wherein the opening portion is located across the largest side of the carton. 20
10. A pharmaceutical carton as claimed in any one of the preceding Claims wherein the or all the panels accommodate all the information required to be associated with the relevant pharmaceutical to be packaged within the carton. 25
11. A pharmaceutical carton as claimed in any one of the preceding Claims wherein the carton has two or three panels. 30
12. A pharmaceutical carton as claimed in any one of the preceding Claims wherein the carton has a plurality of panels and the panels overlie each other when the carton is closed. 35
13. A flat carton blank foldable into a pharmaceutical carton as defined in any one of Claims 1 to 12. 40
14. A blank as claimed in Claim 13 wherein the or each panel is integral with the other parts of the blank. 45

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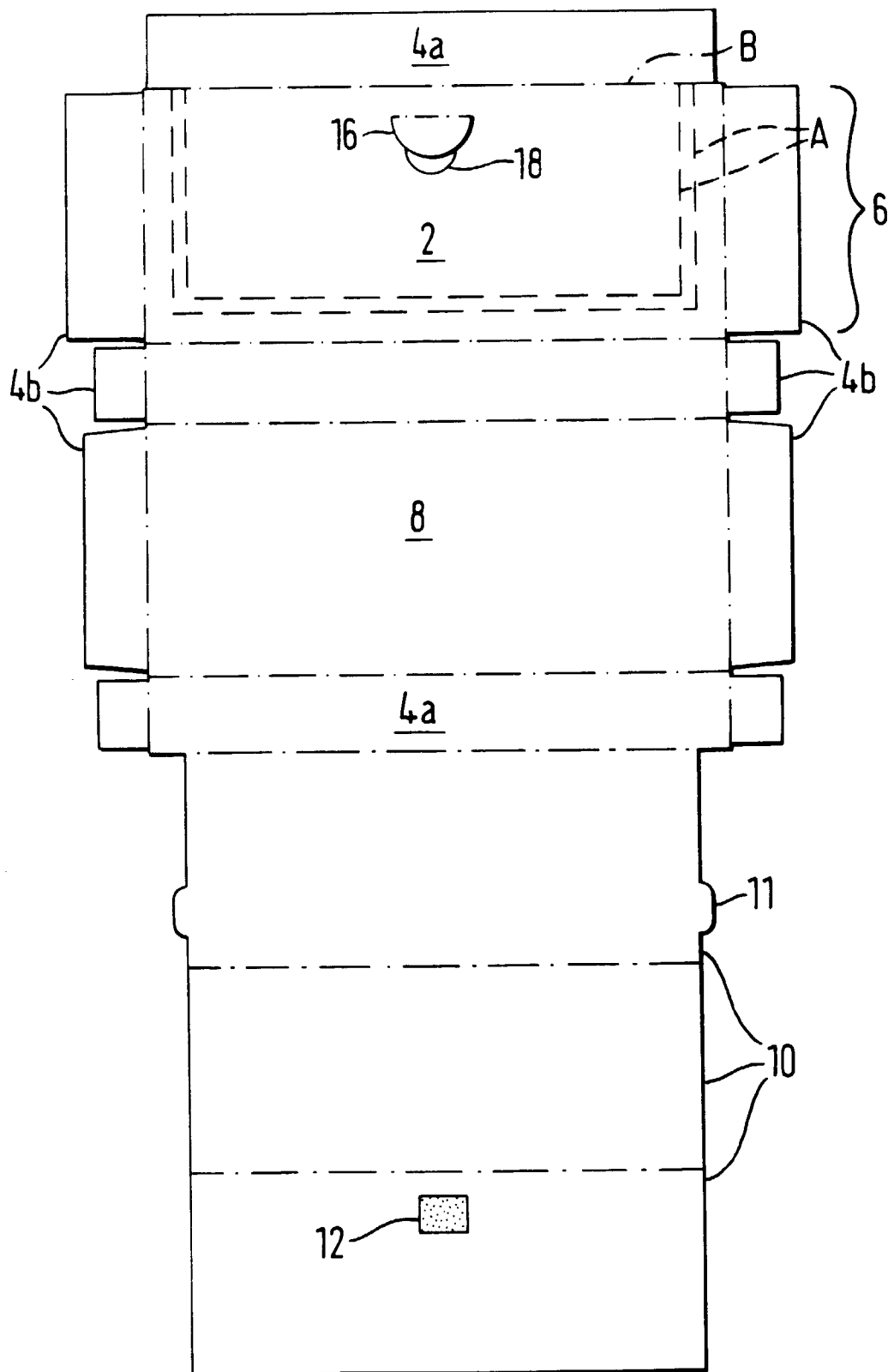


FIG. 1

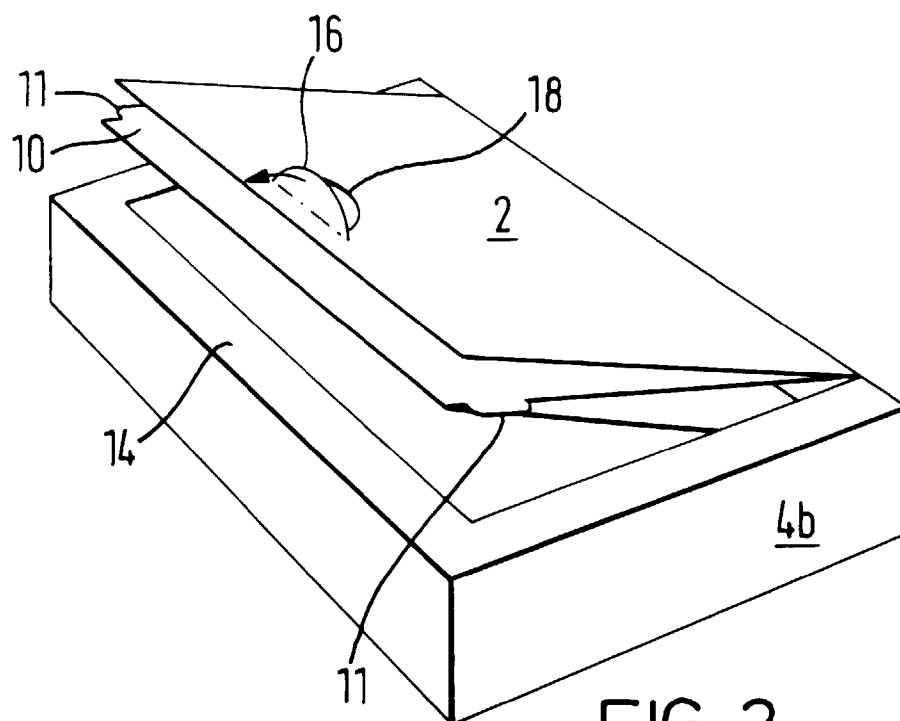


FIG. 2

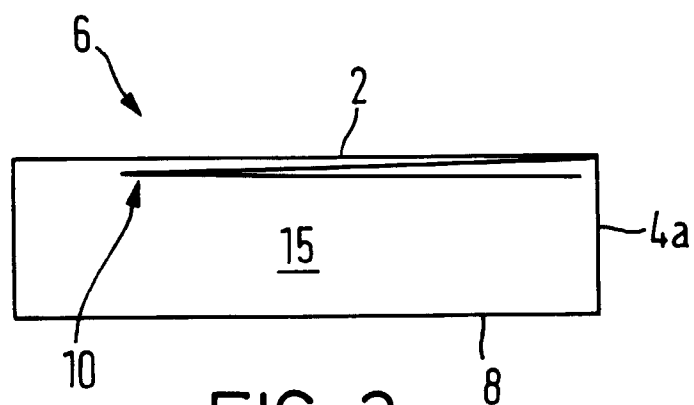


FIG. 3



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## EUROPEAN SEARCH REPORT

Application Number  
EP 97 11 1600

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	FR 1 501 985 A (CARTONNERIES DE SAINT-GERMAIN) * page 1, line 5 - page 1, line 18 * * page 1, line 35 - page 1, line 67 * * figures 1-3 *	1-4,6, 8-14	B65D5/42 B65D5/54 B65D5/66
A	---	5,7	
P,X	US 5 575 384 A (SAYE LOUIS A) 19 November 1996 * column 3, line 65 - column 7, line 10 * * figures 5,14,15 *	1,6,8-14	
X	EP 0 406 556 A (SCHMIDT C P VERPACKUNG) 9 January 1991 * page 3, column 4, line 22 - page 4, column 5, line 15 * * figure 1 *	1,3,4,8, 9	
A	GB 2 116 949 A (MOUNTFORD BRIAN) 5 October 1983 * page 1, left-hand column, line 49 - page 2, left-hand column, line 24 * * figures 1-3 *	1,13,14	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	DE 25 16 720 A (BRAUN AG) 28 October 1976 * page 3, line 21 - page 4, line 48 * * figures 1-4 *	11,12	B65D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15 September 1997	Examiner Farizon, P
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			

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