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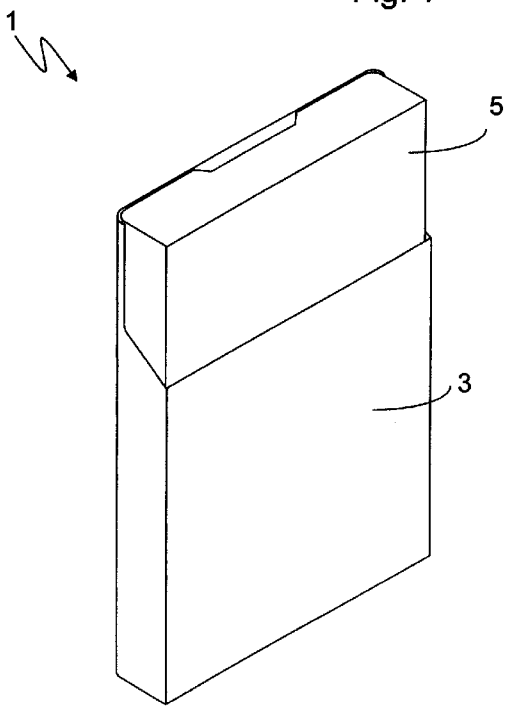
(54) Title: PACKAGING

Fig. 1



(57) Abstract: A pack (1) for smoking articles comprises an outer shell (3). The outer shell comprises opposing front (2) and back major panels (4), two opposing minor side panels (6,8) and opposing first and second ends. The first end is open and the second end is closed. The pack further comprises an inner tray (5). The inner tray is located within the outer shell and is slidable along a length axis directed between the first and second ends of the outer shell so as to emerge from the first open end of the outer shell. The inner tray has an aperture (19) formed therein. The pack further comprises a tongue (21) having a head portion (24) located inside the inner tray and wider than said aperture, and a stem portion (23) connected at one end to the outer shell at or near the second end of the outer shell. The stem portion extends through the aperture to join the head portion. The aperture and tongue provide a stop mechanism to prevent withdrawal of the inner tray from the first end of the outer shell past a predetermined limit.

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PACKAGING

Field of the invention

The invention relates to packaging for smoking articles, such as cigarettes. In particular the invention relates to packaging smoking articles in a shell and slider type pack.

Background to the invention

Cigarette packs having an outer shell and inner slider are well-known, see for example: German patent DE 29619233, PCT patent application WO 00/45654, US patent US 3096878, US patent US 3107008, US patent US 3828923, GB Patent GB 335838 and Swiss patent CH 370699. In such packs, the contents of the inner slider, usually cigarettes, are accessed by pulling the inner slider from the outer shell to expose the contents of the inner slider. Some of these existing packs also include some form of mechanism to prevent the inner slider from being completely removed from the outer shell.

It is desirable to provide a shell and slider combination that is easier to use and/or more robust than existing configurations.

Summary of the invention

A pack for smoking articles comprises an outer shell. The outer shell comprises opposing front and back major panels, two opposing minor side panels and opposing first and second ends. The first end is open and the second end is closed. The pack further comprises an inner tray formed with an aperture. The inner tray is located within the outer shell and is slidable along a length axis directed between the first and second ends of the outer shell so as to emerge from the first open end of the outer shell. The pack further comprises a tongue having a head portion located inside the inner tray and wider than said aperture, and a stem portion connected at one end to the outer shell at or near the second end of the outer shell. The stem portion extends through the aperture to join the head portion. The aperture and tongue

provide a stop mechanism to prevent withdrawal of the inner tray from the first end of the outer shell past a predetermined limit.

Such a stop mechanism is robust and reliable, while convenient and effective to manufacture.

In one embodiment, the tongue is substantially T-shaped (other embodiments may involve a mushroom shape, etc). The stem portion comprises an end region which is folded parallel with and adhered to the second end of the outer shell. The aperture is located centrally between the opposing minor side panels of the outer shell, and extends from a bottom edge of the base of the inner tray, which is adjacent to the second end of the outer shell when the pack is closed.

In one embodiment, the outer shell includes a recessed portion that extends from the open first end of the outer shell partway down the back major panel. The recessed portion on the outer shell extends across the width of the back major panel and onto the opposing minor side panels. Such a configuration for the outer shell exposes a portion of the inner tray. Accordingly, a user can grip the inner tray for withdrawal from the outer shell in order to access the contents of the pack (e.g. smoking articles such as cigarettes).

In one embodiment, the pack is relatively thin (measuring depth from front to back) compared to a conventional hinged-lid pack. Note that the combination of outer shell and inner tray for such a thin pack is helpful, since in contrast, a very thin conventional hinged-lid pack may have interference problems with the lid opening action.

Another embodiment of the invention provides a set of blanks for forming such a pack.

Brief description of the drawings

Embodiments of the invention are described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a rear perspective view of a slider and shell pack according to an embodiment of the invention when closed;

Figure 2a shows a rear perspective view of the outer shell of the pack shown in Figure 1;

Figure 2b shows a front perspective view of the outer shell of the pack shown in Figure 1;

Figure 3a shows a front perspective view of the inner tray from the pack shown in Figure 1;

Figure 3b shows a rear perspective view of the inner tray from the pack shown in Figure 1;

Figure 4a shows a rear perspective view of the pack of Figure 1 where the inner tray is partially withdrawn from the outer shell;

Figure 4b shows a front perspective view of the pack of Figure 1 where the inner tray is partially withdrawn from the outer shell;

Figure 5a shows a front schematic view of the pack of Figure 1 when closed and shows the outer shell in phantom;

Figure 5b shows a front schematic view of the pack of Figure 1 when open and shows the outer shell in phantom;

Figure 6a shows a blank suitable for making the inner tray of the pack as illustrated in Figures 1, 3a, 3b, 4a, 4b, 5a and 5b;

Figure 6b shows a blank suitable for making the outer shell of the pack as illustrated in Figures 1, 2a, 2b, 4a, 4b, 5a and 5b; and

Figure 6c shows a blank suitable for making the tongue to be fixed inside the outer shell as illustrated in Figures 5a and 5b.

Detailed description

Figure 1 shows a perspective view of a slider and shell pack or packet 1 in accordance with an embodiment of the invention. The pack 1 includes an outer shell 3, as shown separately in Figures 2a and 2b, and an inner tray 5, as shown separately in Figures 3a and 3b. Smoking articles such as cigarettes may be located in the inner tray 5. Figure 2a shows a rear perspective view of the outer shell 3 with the inner tray 5 removed. Figure 2b shows a front perspective view of the outer shell 3 with the inner tray removed. Figure 3a shows a perspective view of the inner tray 5, viewed from the front. Figure 3b shows a perspective view of the inner tray 5, viewed from the rear.

Referring to Figures 1, 2a and 2b, the outer container 3 has a generally rectangular shape and includes a front major panel 2, a rear major panel 4 and two opposing minor side panels 6, 8. The outer shell 3 further includes a bottom end panel 10. The top end of the outer shell 3 (opposite the bottom end panel 10) is open to allow the inner tray 5 to be withdrawn from the outer shell 3.

A recessed portion 12 in the outer shell 3 extends from the open end of the outer shell 3 partway down the rear major panel 4. The recessed portion 12 extends around the side edges of the rear major panel 4 onto each of the two minor side panels 6, 8. The recessed portion 12 exposes a portion of the inner tray 5 (as shown in Figure 1), thereby allowing a consumer to grasp and pull the inner tray 5 out of the open end of the outer shell 3.

In the illustrated embodiment, the recessed portion 12 occupies approximately one third (lengthwise) of the rear major panel 4, from the top of the panel (at the open end) downwards towards bottom end panel 10. The recessed portion further extends approximately two-thirds (widthwise) of each of the minor side panels 6, 8, i.e. from rear major panel 4 towards the front major panel 2. It will be appreciated that other embodiments may have other shapes and/or dimensions for the recessed portion 12 on the outer shell 3.

Referring now to Figures 3a and 3b, the inner tray 5 has a substantially rectangular shape and comprises a base panel 7, two opposing side panels 9, 11, and

two opposing end panels, namely top end panel 13 and bottom end panel 15. An extension panel 17 extends from the bottom end of each side panel 9, 11, and is folded to join the respective side panel to bottom end panel 15.

When the inner tray 5 is inside the outer shell 3, and when the pack 1 is closed, as shown in Figure 1, the base 7 of the slider 5 is parallel and adjacent to the rear major panel 4 of the outer shell 3; the side walls 9 and 11 of the slider are parallel and adjacent to the side panels 8 and 6 respectively of the outer shell 3; and the bottom end panel 15 of the slider is parallel and adjacent to the bottom end panel 10 of the outer shell. Furthermore, in the position shown in Figure 1, the top end panel 13 of the inner slider acts to close the pack 1 to prevent the contents from falling out.

As shown in Figures 3a and 3b, an aperture 19 is included in the base panel 7 of the inner slider 3. The aperture 19 extends into the base panel 7 from the edge defined by the bottom end panel 15 and the base panel 7. The aperture 19 extends part-way up the base panel 7 (approximately one third lengthwise) towards the top end panel 13. The aperture 19 is substantially centrally positioned widthwise on the base panel 7, and occupies approximately two-thirds of the width of the base panel 7 (between opposing side walls 9 and 11). The aperture 19 acts in conjunction with a tongue portion (as discussed below) as a stop mechanism to prevent the inner tray 5 from being fully withdrawn from the outer shell 3 when opening the pack 1.

In the embodiment illustrated, the top end panel 13 includes a notch 20. When the inner tray 5 is fully inside the outer shell 3 (as shown in Figure 1), notch 20 provides the consumer with an additional facility (in particular a gap between end panel 13 of the inner slider 5 and front major panel 2 of the outer shell 3) for holding and pulling the inner tray 5 out through the open end of the outer shell 3.

Thus in the embodiment shown, a consumer can open the pack 1 by withdrawing the inner tray 5 from the outer shell 3. This withdrawal can be accomplished by pulling on the top panel 13 via the recess 20 and/or by grasping the exposed area on the base 7 and side panels 9, 11 of the inner tray 5. To close the pack 1, the consumer applies pressure to the outer face of the top end panel 13 of the inner

tray 5 to push the inner tray 5 back into the outer shell 3. The closed position is reached when the bottom wall 15 of the inner slider 5 abuts against the bottom end panel 10 of the outer shell 3 (thereby preventing further movement in this direction).

Figures 4a and 4b are rear and front views respectively of the pack 1 with the inner tray 5 partly withdrawn from the outer shell 3. The pack includes a stop mechanism to limit the withdrawal of the inner tray 5 from the outer shell 3 to the amount shown in Figures 4a and 4b. In the illustrated position, the inner tray is about 40% withdrawn - i.e. the inner tray 5 has moved a distance corresponding to approximately 40% of the length of the inner tray from the closed position shown in Figure 1.

Figures 5a and 5b show schematic front views of the assembled pack 1. The outer shell 3 is shown in broken lines (and in transparent form) to illustrate the stop mechanism used to control movement of the inner slider 5 out of the outer shell 3. In Figure 5a the pack 1 is closed (as in Figure 1), while in Figure 5b, the pack is open (as in Figures 4a and 4b).

The stop mechanism used to limit movement of the inner slider 5 out from the outer shell utilises interaction between a tongue 21 and the aperture 19. For clarity, those portions of the tongue 21 that are hidden behind the side wall 9 or bottom end panel 15 are shown in broken lines in Figures 5a and 5b (in order to depict the full shape of tongue 21).

As shown in Figures 5a and 5b, the tongue 21 may be substantially T-shaped and comprises a head portion 24 and a stem portion 23. The stem portion 23 is attached at one (bottom) end to the outer shell 3. In particular, this bottom end of the stem portion is attached to the edge formed by the junction of rear major panel 4 and bottom end panel 10 of the outer shell 3. In one particular embodiment, stem portion 23 includes an end region 25 shown in Figure 6c (opposite head portion 24), which is folded parallel to (and adhered to) the bottom end panel 10 of the outer shell 3.

The opposite (top) end of the stem portion 23 is attached to the (transverse) head portion 24. The stem portion 23 is narrower than the head portion 24 (width being defined along the direction between opposing side panels 6 and 8). The stem portion 23 of the tongue 21 passes through the aperture 19 such that the head portion 24 is located within the tray of the inner shell – i.e. between the base 7 of the inner slider shell and the front major panel 2 of the outer shell 3. In contrast, the bottom end region of the stem portion is located outside the tray of the inner shell – i.e. between bottom wall 15 of the inner shell and bottom end panel 10 of the outer shell 3 (as mentioned above, the stem portion 23 is attached to the latter).

The aperture 19 is dimensioned so that it is (slightly) wider than the stem portion 23, but narrower than the head portion 24. This arrangement allows the inner tray 5 to slide unimpeded in the direction from the closed end 10 to the open end of the outer shell 3 in order to open the pack. As this opening occurs, aperture 19 moves along stem portion 23 (i.e. stem portion 23 moves through aperture 19). However, when the position shown in Figure 5b is reached, the inner tray 5 is prevented from being withdrawn any further from the outer shell 3. In particular, in this position, the bottom edge of the aperture 19 (i.e. the edge formed by bottom end panel 15) reaches and abuts against the bottom edge of the head portion 24. Since the head portion 24 is wider than the stem portion 23, and also wider than aperture 19, further movement of the inner slider 5 out from the outer shell 3 is prevented.

It will be appreciated that while the bottom edge of the aperture 19 acts as a stop mechanism, the top edge of the aperture (i.e. the edge closest to the top end panel 13) does not form part of the stop mechanism. Accordingly, the shape and position of this edge is relatively flexible. For example, this top edge might be moved much closer to the bottom edge (so that aperture 19 becomes a relatively narrow strip or slit). The skilled person will be aware of various other possible alternative shapes and dimensions for the tongue 21 and the aperture 19 to form the stop mechanism. Such variations can be used (inter alia) to control the maximum permitted amount of withdrawal of the inner tray from the outer shell. Other tongue and aperture shapes can be used. Foe example, the tongue may be L-shaped with the head portion

extending transversely of the stem portion on one side only. The tongue may alternatively have a head portion in the shape of an arrowhead, a semicircle or an ellipse. Also, the tongue may include two generally parallel, spaced stem portions received in respective apertures in the inner tray, with the head portion of the tongue bridging the stem portions.

Figure 6a shows a blank 50 suitable for making the inner tray 5 as illustrated in Figures 1, 2a, 2b, 4a, 4b, 5a and 5b in accordance with one embodiment of the invention. The blank 50 includes a first panel 51 which is joined by a scored fold line F10 at its bottom edge to a second panel 52. The first panel 51 folds against second panel 52 to form end panel 13. A hole 502 is provided across the scored fold line F10 and extends onto both the first and second panels 51, 52. In the erected inner frame 5, the first panel 51 is folded back against the second panel 52 along fold line F10, with the result that the hole 502 defines the notch 20 in the top panel 13 of the inner frame 5. Folding the first and second panels together provides a rounded, stronger edge for top end panel 13

The second panel 52 is joined by a scored fold line F11 to a third panel 53 that defines the base panel 7 of the inner tray 5. The third panel 53 is joined by a scored fold line F12 to a fourth panel 54 that defines the bottom end panel 15 of the inner tray 5. A hole or aperture 19 as previously described is cut through the third panel 53. The fold lines F10, F11 and F12 are parallel to each other.

The third panel 53 is joined by a scored fold line F13 to a fifth panel 55 and by a scored fold line F14 to a sixth panel 56. The fold line F14 is parallel to fold line F15. The fifth panel 55 and the sixth panel 56 define the opposing side panels 9, 11 respectively of the inner tray 5.

A seventh panel 57 and an eighth panel 58 are joined by scored fold lines F15 and F16 to the fifth and sixth panels 55, 56 respectively. Each of the seventh and eighth panels 57, 58 overlaps with the inside of the second panel 54 (bottom end panel 15 of the inner tray 5), thereby attaching the side panels 9, 11 of the inner tray 5 to the bottom end panel 15 of the inner tray 5.

A ninth panel 59 and a tenth panel 60 are joined by scored fold lines F17, F18 to the fifth and sixth panels 55, 56 respectively. Each of the ninth and tenth panels 59, 60 is each sandwiched between the first and second panels 51, 52 (when folded together) to link the side panels 9, 11 to the top end panel 13 of the inner tray 5.

Figure 6b shows a blank 30 suitable for making the outer shell 3 as illustrated in Figures 1, 2a, 2b, 4a, 4b, 5a and 5b in accordance with one embodiment of the invention. The blank 30 includes a first panel 31 that defines the rear major panel 4 of the outer shell 3. The first panel 31 is joined by a scored fold line F1 at its bottom edge to a second panel 32 that forms the closed end 10 of the outer shell 3. The second panel 32 is joined by a scored fold line F2 to a third panel 33 that forms the front major panel 2 on the outer shell 3. The third panel 33 is joined at its bottom edge by a scored fold line F3 to a fourth panel 34 that defines a reinforcement panel at the open end of the outer shell 3 (during assembly, the fourth panel is folded back onto the third panel to provide a rounded and strengthened edge). The fold lines F1, F2 and F3 are parallel to each other.

The first panel 31 is joined by a scored fold line F4 to a fifth panel 35 and by a scored fold line F5 to a sixth panel 36. The fold line F4 is parallel to fold line F5, and the fifth panel 35 and sixth panel 36 define opposing side panels 8 and 6 respectively of the outer shell 3.

A seventh panel 37 and an eighth panel 38 are joined by scored fold lines F6 and F7 to the fifth and sixth panels 35, 36 respectively. In the assembled pack, each of the seventh and eight panels 37, 38 overlaps with the inside of the second panel 32 (bottom panel 10 of the outer shell 3) to attach the side panels 6, 8 of the outer shell 3 to the bottom panel 10 (closed end) of the outer shell 3.

A ninth panel 39 and a tenth panel 40 are respectively joined by scored regions S1, S2 to the third panel 33. In the erected outer shell 3, each of scored regions S1 and S2 defines a rounded edge on the front edge of the outer shell 3. In the erected outer shell 3, the ninth panel 39 overlaps the fifth panel 35 and the tenth panel 40

overlaps the sixth panel 36 to form opposing side panels 8 and 6 respectively of the outer shell 3.

Figure 6c shows a blank for the tongue 21 in accordance with one embodiment of the invention. The tongue 21 comprises a stem portion 23 and a head portion 24. The stem portion 23 includes a scored fold line F20 to define a bottom panel or end region 25. In the assembled pack, end region 25 is parallel (and fixed) to the inside of the closed end panel 10 of the outer shell 3.

In one embodiment, the pack described herein is relatively thin compared to conventional hinged-lid packs. For example, the dimensions of the outer shell are approximately as follows:

length (from top to bottom): 86mm
width (from one side panel to the other side panel): 59mm
depth (from front to back): 12mm.

It is relatively difficult to make such a thin pack – i.e. with the low depth dimension – according to a traditional pattern for a hinged-lid carton because of potential interference with the lid opening action. Accordingly, these dimensions are well-suited to a shell and slider pack.

In the embodiments shown, the front edges of the outer shell 3 are curved, whereas the rear edges of the outer shell 3 (and the corresponding edges of the inner tray 5) are sharp. It will be appreciated that in other embodiments, the edges of the outer container 3 and inner tray 5 can be any suitable shape, for example rounded, sharp or chamfered.

The skilled person will be aware of various modifications that may be made to the embodiments described above and although the invention has been described by way of example in relation to a thin cigarette pack, it can be embodied in any of the usual pack and carton configurations used for cigarettes and similar smoking articles, for example standard square corner, twenties, tens and other sized packs. As used herein the term pack is intended to include a carton.

Also, the stopping mechanism can be mounted on other sides of the pack. For example two apertures could be formed in the inner tray in the base in alignment with the opposing side walls 9, 11 with respective tongues having head portions overlying the side walls and stem extending through the apertures and attached to the outer shell at their lower ends.

In order to facilitate opening of the pack, and aperture may be formed in the bottom end panel 10 and or the rear major panel 4 of the outer shell 3, to allow the usr to manually slide the inner tray upwardly until stopped at a predetermined limit by the stopping mechanism.

Accordingly, the scope of the present invention is defined by the appended claims and their equivalents.

Claims

1. A pack for smoking articles comprising:

an outer shell, wherein the outer shell comprises opposing front and back major panels, two opposing minor side panels and opposing first and second ends, wherein the first end is open and the second end is closed;

an inner tray, wherein the inner tray is located within the outer shell and is slidable along a length axis directed between the first and second ends of the outer shell so as to emerge from the first open end of the outer shell, the inner tray having an aperture formed therein; and

a tongue having a head portion wider than said aperture, and a stem portion connected at one end to the outer shell through the aperture;

wherein the aperture and tongue provide a stop mechanism to prevent withdrawal of the inner tray from the first end of the outer shell past a predetermined limit.

2. A pack according to claim 1 wherein the inner tray includes a base adjacent and parallel to the major back panel of the outer shell, and the aperture is formed in the base.

3. A pack according to Claim 1 or 2, wherein the tongue is substantially T-shaped.

4. A pack according to any one of the preceding claims, wherein the stem portion is adhered to the second end of the outer shell.

5. A pack according to Claim 4, wherein the stem portion comprises an end region which is folded parallel with and adhered to the second end of the outer shell.

6. A pack according to any one of the preceding claims, wherein the aperture is located centrally between the opposing minor side panels of the outer shell.

7. A pack according to any one of the preceding claims, wherein the aperture extends from a bottom edge of the base of the inner tray which is adjacent to the second end of the outer shell when the pack is closed.

8. A pack according to any one of the preceding claims, wherein the outer shell includes a recessed portion that extends from the open first end of the outer shell partway down the back major panel.

9. A pack according to Claim 8, wherein the recessed portion on the outer shell extends across the width of the back major panel and onto the opposing minor side panels.

10. A pack according to any preceding claim, containing smoking articles.

11. A set of one or more blanks for forming the pack as claimed in any one of the preceding claims.

12. A pack for smoking articles as hereinbefore described and with reference to the accompanying drawings.

13. A set of blanks as hereinbefore described and with reference to Figures 6a, 6b and 6c.

14. A blanks for forming a pack including:

a first flat blank foldable to form an outer shell, including panel portions foldable along fold lines to provide opposing front and back major panels, and panel portions foldable along fold lines to provide two opposing minor side panels and opposing first and second ends, wherein the first end is open and the second end is closed;

a second flat blank foldable along fold lines to provide an inner tray slidable along a length axis of the outer shell between the first and second ends of the outer shell, the second blank having aperture formed therein; and

a third blank defining a tongue having a head portion wider than said aperture, and a stem portion for connection to the outer shell and of a width slidable within the aperture of the second blank.

wherein the aperture and tongue provide a stop mechanism to prevent withdrawal of the inner tray from the first end of the outer shell past a predetermined limit.

15. A method of fabricating a pack by folding the blanks of claim 14 to form a pack as claimed in claim 1.

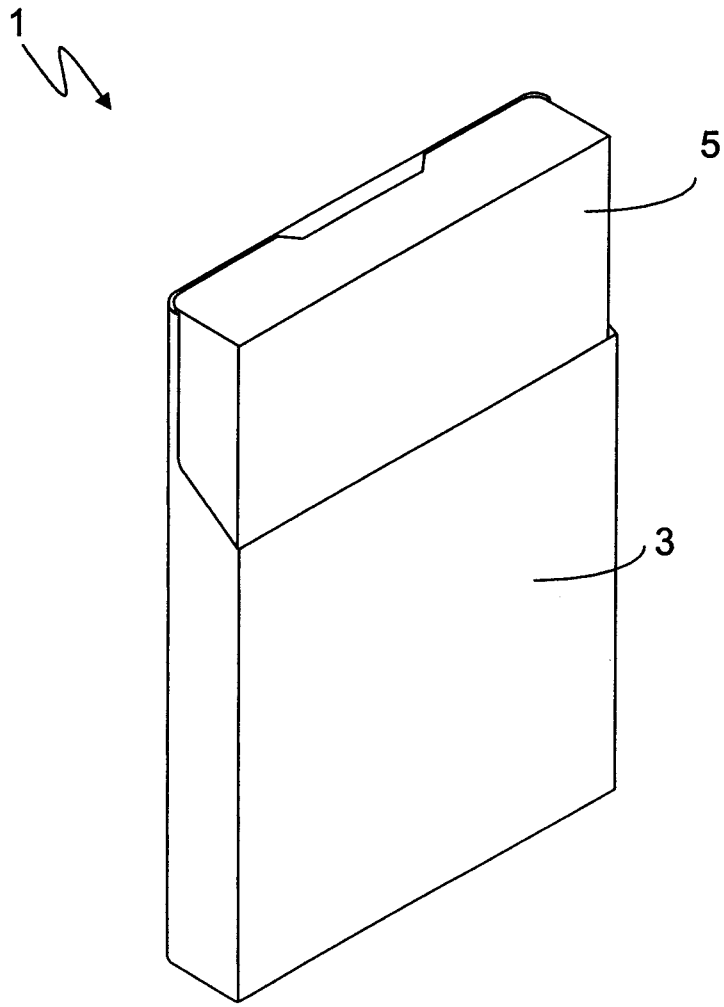

Fig. 1

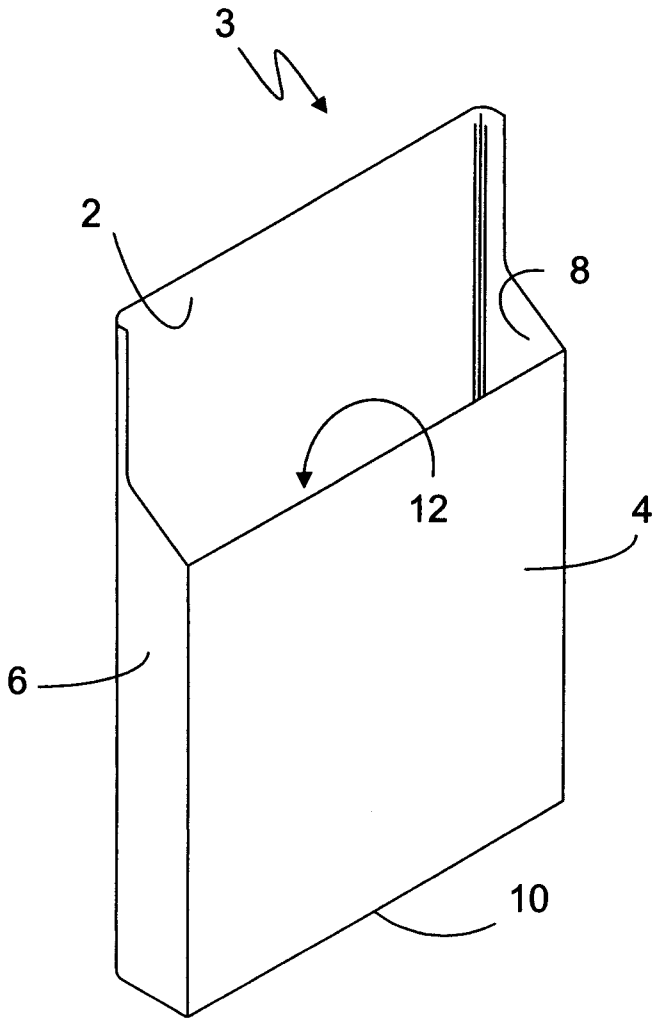

Fig. 2a

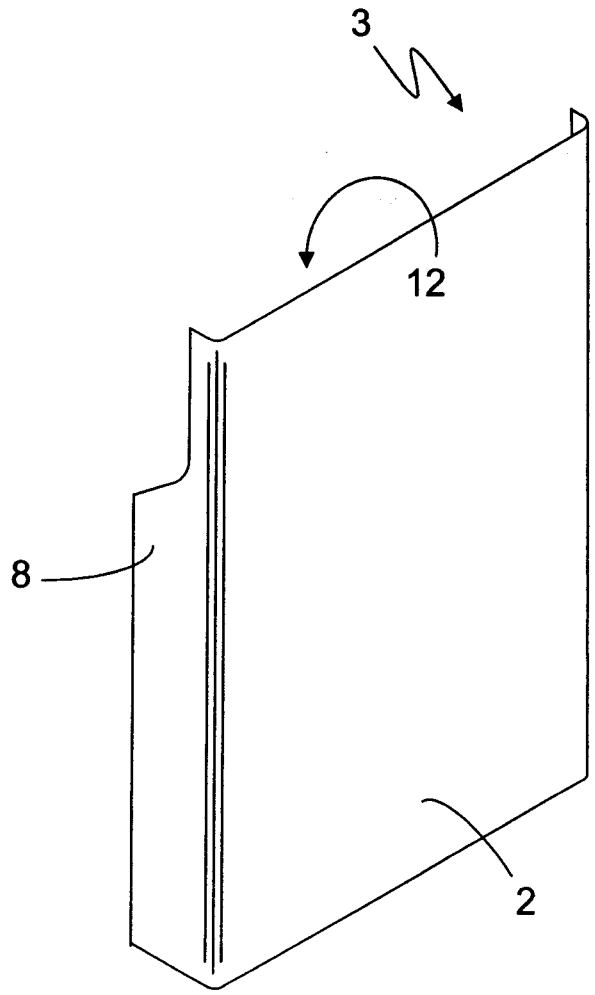

Fig. 2b

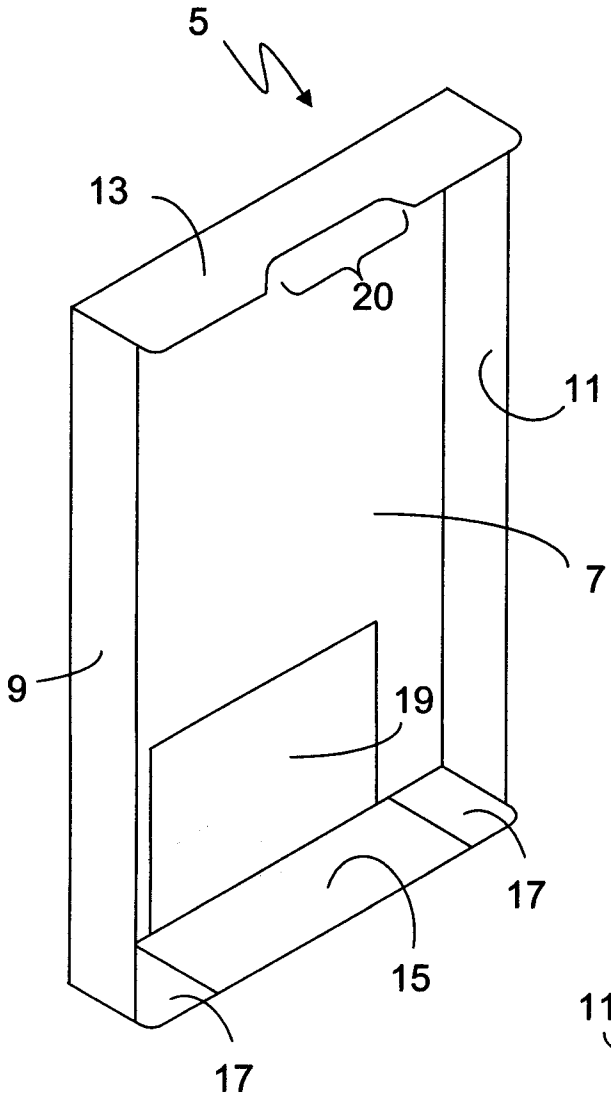

Fig. 3a

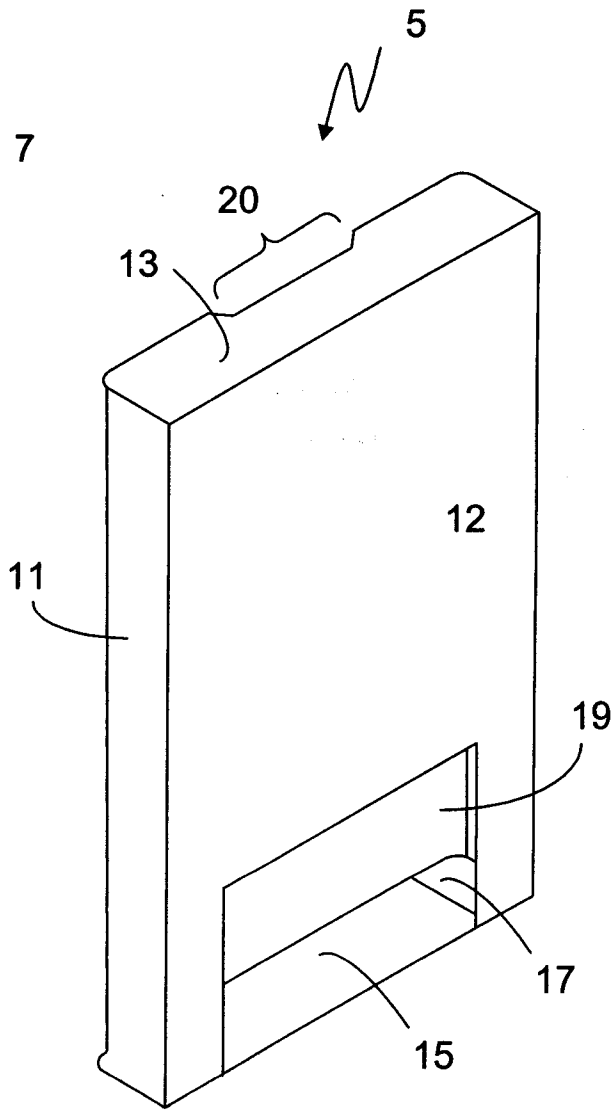

Fig. 3b

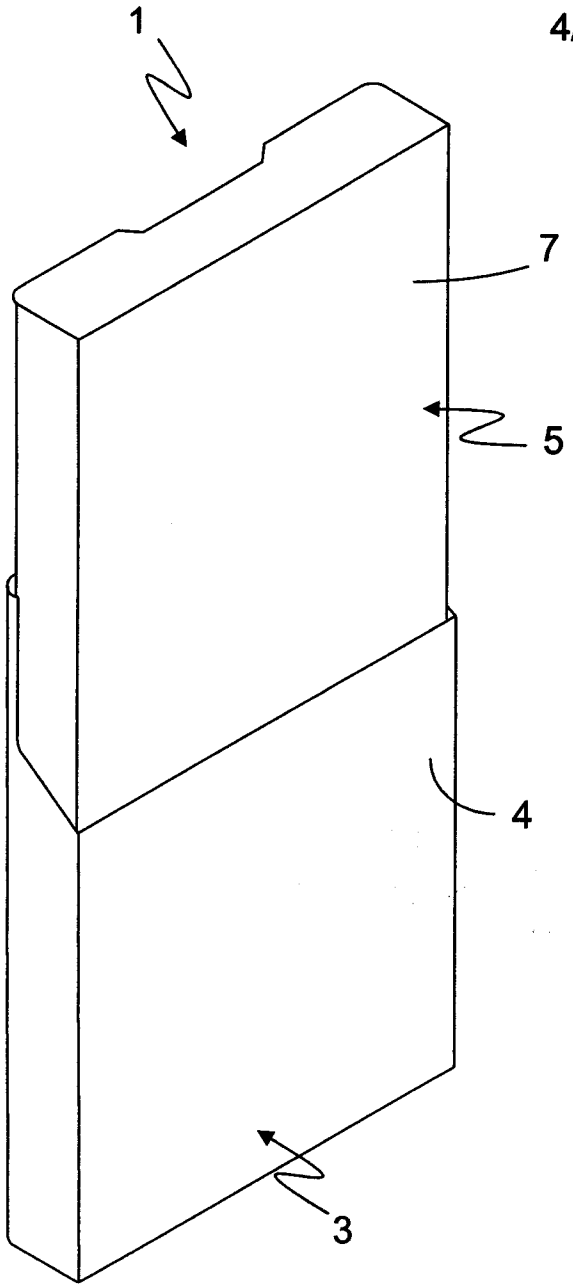

Fig. 4a

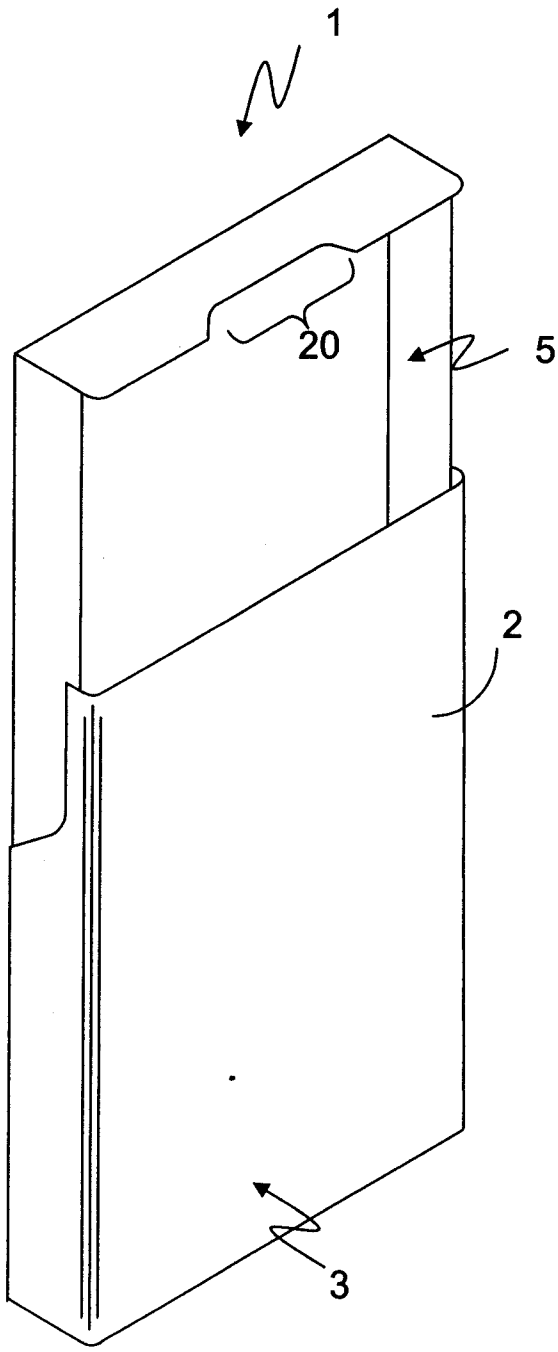

Fig. 4b

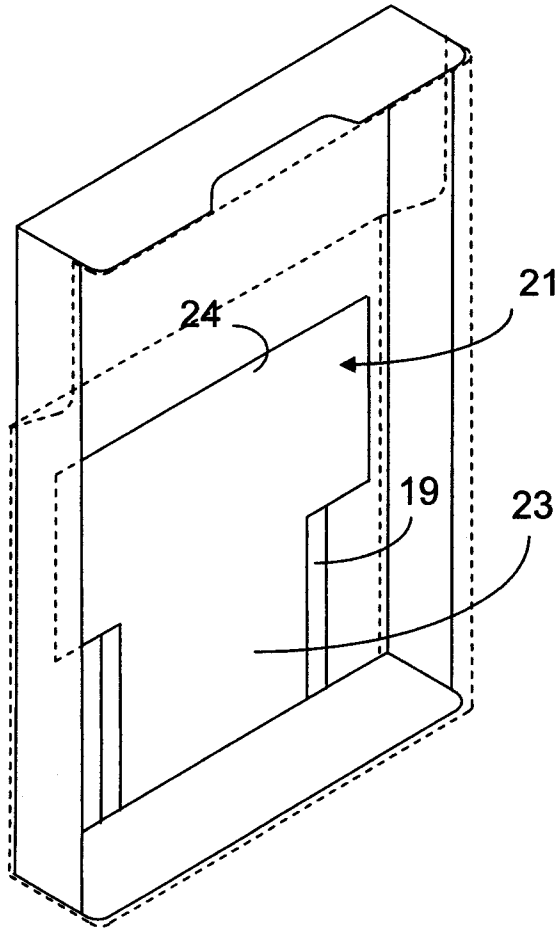

Fig. 5a

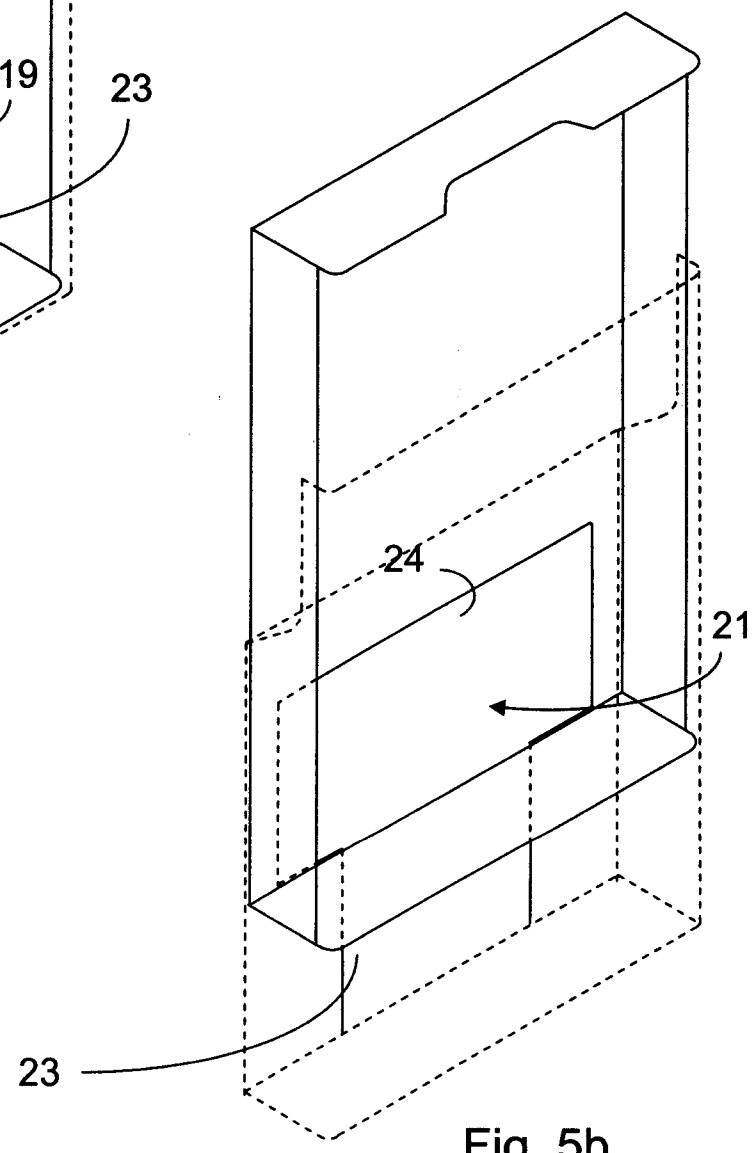

Fig. 5b

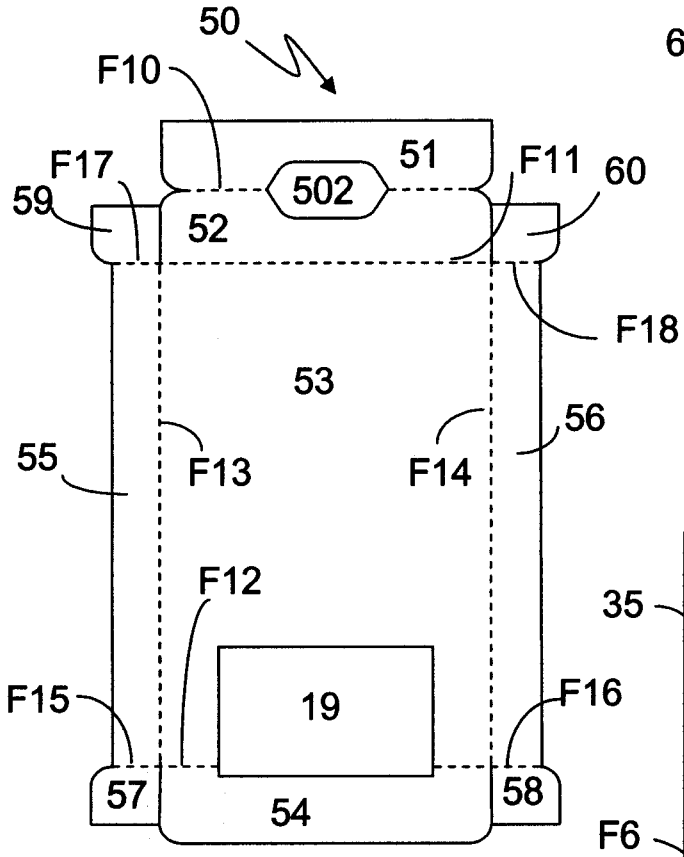

Fig. 6a

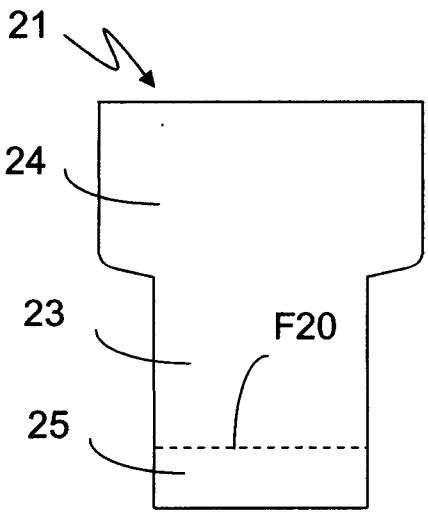

Fig. 6c

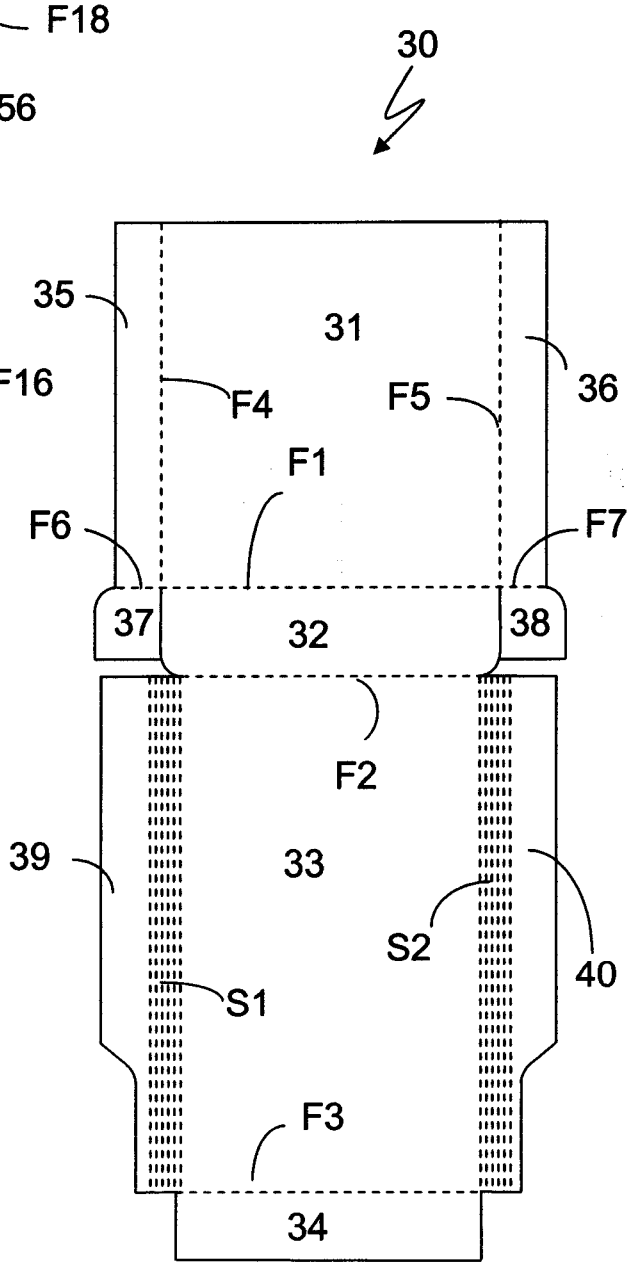

Fig. 6b

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2009/051487

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D5/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 335 838 A (HUBERT CHASE MASON) 2 October 1930 (1930-10-02) page 2, line 30 - line 68; claims 1,2; figures 1-4	1-3,6,7, 10,11, 14,15
X	FR 712 623 A (NUYTS FRERES ETS) 6 October 1931 (1931-10-06) page 1, line 49 - page 2, line 36; claim 1; figures 4-7	1,3,6, 11,14,15
X	CH 370 699 A (JEHOUDA DANIEL [CH]; ARTIGAS JOSE [CH]) 15 July 1963 (1963-07-15) the whole document	1,3,8, 10,11, 14,15

-/--

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
1 April 2009	07/04/2009

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Janosch, Joachim

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2009/051487

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 269 075 A (HENRY WILLIAM MARTIN) 14 April 1927 (1927-04-14) page 1, line 54 - page 2, line 78; claims 1,2; figures 1,2	1,14

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 12,13

Claims 12 and 13 merely refer to the drawings without defining any structural element of the subject-matter of the application. Consequently, it is unclear (Art. 6 PCT) which features shall be defined by these claims and a meaningful search of claims 12 and 13 is not possible.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2009/051487

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 12,13
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/EP2009/051487

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 335838	A	02-10-1930	NONE	
FR 712623	A	06-10-1931	NONE	
CH 370699	A	15-07-1963	NONE	
GB 269075	A	14-04-1927	NONE	