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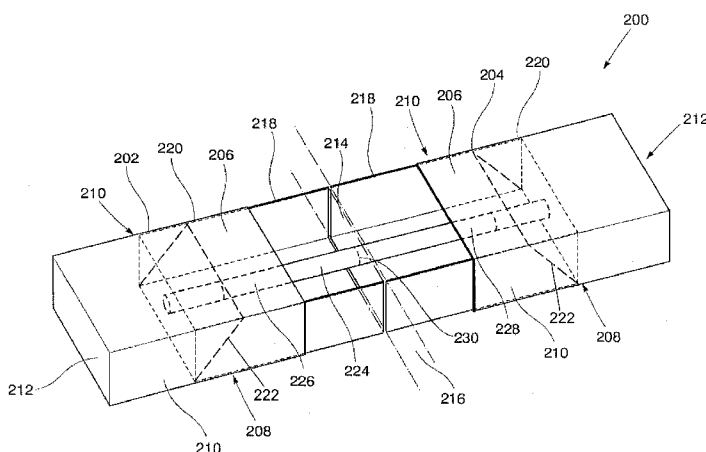


FIGURE 7

(57) Abstract: Packaging solutions for breakable cigarettes are provided. The packaging solutions include cigarette boxes (200) containing breakable cigarettes (268) that are separable into two separate cigarette packs (276, 278) so that each separated pack contains portions of the original breakable cigarettes. The separated cigarette packs include closures (281, 282) which are operable into a closed position after the cigarettes have been split, thereby enclosing the cigarette portions contained within the pack. The packaging solutions also include a modular cigarette pack (320) comprising a standard flat cigarette box (322) containing breakable cigarettes (80) located within smaller than standard size cigarette boxes (338). The breakable cigarettes may be split into cigarette portions such that the resulting cigarette portions are contained within the smaller boxes which, in turn, are removable from the standard flat box.



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CIGARETTE PACKAGING

This invention relates to packaging for breakable cigarettes and extends to packaging solutions for shorter than conventional length cigarettes.

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BACKGROUND TO THE INVENTION

A cigarette is broadly defined as a roll of tobacco capable of being smoked as it is and which is not a cigar or cigarillo; a roll of tobacco which, by simple non-industrial handling, is inserted into a cigarette-paper tube; or a roll of tobacco which, by simple non-industrial handling, is wrapped in smoking paper. Cigarettes and methods for their manufacture are widely known.

Cigarettes are traditionally sold in units of 10, 20, 25 or 30, mostly contained in paperboard boxes that have flip-type lids. The sizes of these boxes have, through use, become largely standardized and dispensing equipment at retail outlets has been adapted accordingly. The length of the most commonly available cigarette, including its filter if one is provided, is approximately 83 millimetres, although cigarettes of different lengths are available. In the remainder of this specification a cigarette having a length of approximately 83 millimetres, including its filter, will be referred to as a "conventional length cigarette".

A standard rectangular cigarette box (10) containing 16, 18, or 20 cigarettes is shown in the attached Figure 1 and has front and rear panels (12, 14) extending between two sides (16, 18), a bottom (20) and top (22). The box has a top opening flip-type lid (24), which opens the top (22) of the box to expose an opening (28) through which cigarettes (30) may be inserted and/or dispensed. The typical dimensions (h x d x w) of the standard box are 85 x 22 x 55 millimetres. In the remainder of this specification a cigarette box having substantially the same dimensions as mentioned above, will be referred to as a "standard cigarette box" and a standard cigarette box having

a top opening lid as described here with reference to Figure 1, will be referred to as a standard cigarette box having a "top opening lid".

The applicant is aware of standard cigarette boxes (40) having been produced with side opening flip-type lids (42), as shown in Figure 2. In these boxes the lid (42) opens on a long side (44) of the box (40). These boxes typically still contain 16, 18 or 20 conventional length cigarettes (30) that may be dispensed sideways through the side opening (48). In the remainder of this specification a cigarette box as described here with reference to Figure 2 will be referred to as a standard cigarette box having a "side opening lid".

The applicant is also aware of standard cigarette boxes having been produced that do not have flip-type lids, but that open in a sliding, match-box-like fashion. An example of such a cigarette box (50) is shown in Figure 3. These boxes contain an inner container (52), or tray, that slides within a sleeve (54). The sliding may take place along the length or width of the boxes. In the example shown in Figure 3 it slides along the width. The boxes (50) typically contain conventional length cigarettes that are orientated along a long side (56) of the box (50). In the remainder of this specification a cigarette box as described with reference to Figure 3 will be referred to as a "standard slide open cigarette box".

Cigarette boxes containing 30 cigarettes are often sold in differently shaped boxes. An example of a box (60) containing 30 cigarettes is shown in Figure 4. The box (60) is also rectangular but has a larger top (62) and bottom (64) and is flatter than a standard cigarette box described above. The top (62) and bottom (64) of the box (60) are attached along one, long edge (66), allowing the box to open in a hinged fashion. In the remainder of this specification a cigarette box as described here with reference to Figure 4 will be referred to as a "standard flat cigarette box". The dimensions of a standard flat cigarette box (l x d x w) are typically 122 x 20 x 87 millimetres.

The applicant is aware of United States patent publication number 2005/006134 to Wojcik ("Wojcik"), which relates to a breakable cigarette. The cigarette in Wojcik includes a tear line midway between its ends and possibly two additional tear lines, one at each filter attached at its ends. The cigarette in Wojcik can be broken at the tear line midway between its ends to provide two shorter cigarettes or may be smoked as a whole by breaking off one of the filters at the additional tear line.

The applicant is further aware of United States patent publication number 2004/0237977 to Nandram ("Nandram"), which relates to cigarette-type articles having filters attached at both ends enabling them to be broken into two separate cigarettes that may be smoked individually. The cigarette articles may be broken at variable locations between the filters to produce cigarettes of varying length. The cigarettes in Nandram do not have a tear line as in Wojcik to facilitate the breaking thereof.

The applicant is still further aware of United States patent number 5,564,563 to Focke ("Focke"). Focke discloses, amongst others, a box for receiving a cigarette group, in particular dividable cigarettes. The box defines a cavity in its lid for storing a part-cigarette resulting from breaking a dividable cigarette into smaller, individually smokable cigarettes. The dividable cigarettes are preferably dividable at their centres and may include a weakened line in the smoking paper at which the cigarette may be divided.

The breakable cigarettes disclosed in each of the aforementioned patent and patent applications, however, suffer from one major disadvantage in that the breaking of the cigarettes cannot and do not result in clean breaks. This is as a result of tobacco strands that inevitably span across the breaking zone. When the disclosed breakable cigarettes are broken, loose strands of tobacco inevitably protrude and fall from the broken ends. These loose strands, apart from giving a messy appearance to the cigarette, make it difficult to light the broken cigarette and also cause a potential burn risk as

the loose strands may light up quickly and then fall from the tip of the cigarette while still smouldering. A breakable cigarette (1) in accordance with the disclosed patent and patent applications is shown in Figure 5. The cigarette (1) includes a cigarette rod (2) which comprises a tobacco roll wrapped in smoking paper (3). In the most advance embodiment disclosed by the prior art, the smoking paper (3) includes a weakened line (4) on the paper alone at which the cigarette (1) may be broken in two, thus providing two individually smokable cigarette portions (5) each having its own filter (6). As can be seen from Figure 5, loose strands of tobacco (7) protrude from the non-filtered ends (8) of the cigarette portions (5) after breaking the cigarette (1), thus resulting in the messy appearance.

The applicant has invented a breakable cigarette, which does not suffer from the disadvantages mentioned above. This cigarette is the subject of the applicant's co-pending PCT international patent application and an example thereof is shown in Figure 6. The breakable cigarette (80) shown in Figure 6 includes a generally cylindrical tobacco filled paper body (82) (also referred to as a cigarette rod) and two cigarette filters (84) connected co-axially with the body (82), one at either end (86) thereof. The cigarette rod includes two separate sections of tobacco (not shown), abutting midway between the ends (86) of the cigarette. The tobacco has been severed so that essentially no tobacco strands span from one section to the other. The body (82) has a line of weakness (88) midway between its ends (86) in alignment with the abutting ends of the tobacco sections, thus allowing the cigarette to be split in two at the line (88) thereby yielding two shorter cigarettes (90) (also referred to as cigarette portions), each having its own filter (84).

In the remainder of this specification a breakable cigarette in accordance with the prior art and, in particular, in accordance with the applicant's co-pending patent application will simply be referred to as a breakable cigarette and the smaller cigarettes resulting from breaking a breakable cigarette will be referred to as cigarette portions.

In the remainder of this specification the term "tobacco roll" will refer to a roll of tobacco of an undefined length. A "cigarette rod", in turn, will refer to a tobacco roll which is wrapped in smoking paper.

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OBJECT OF THE INVENTION

It is an object of this invention to provide packaging solutions, including a two-part divisible cigarette box, for breakable cigarettes. It is a further object of the invention to provide packaging solutions for shorter than convention length cigarettes.

15 SUMMARY OF THE INVENTION

In accordance with this invention there is provided a box of cigarettes comprising two cigarette packs each having at least one open end and orientated to be aligned open end – to – open end so that the open ends abut on a breaking plane, and a plurality of breakable cigarettes inside the packs and orientated with their longitudinal axes transverse to the breaking plane with one end of each cigarette located in a first cigarette pack and the other end thereof in a second cigarette pack directly opposite the breaking plane so that a line of weakness associated with each breakable cigarette lies in the breaking plane, thereby allowing the cigarettes to be split at the breaking plane so that each pack on opposite sides of the breaking plane contains cigarette portions; the box of cigarettes being characterized in that it includes a closure associated with the open end of each cigarette pack which is operable into a closed position after the cigarettes have been split, thereby enclosing the cigarette portions contained within the pack.

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Further features of the invention provide for each cigarette pack to include a tray slideable within a sleeve, the tray including a flip-type lid at the end opposite the open end; for each cigarette pack to include a conventional flip-type lid; and for the box of cigarettes to be sealed in a conventional fashion
5 holding the two cigarette packs together for retail purposes.

A still further feature of the invention provides for the two cigarette packs to be formed from a unitary blank, the blank defining a line of weakness defining a separation plane which, in use, is in alignment with the breaking plane,
10 thereby allowing the box to be split into the two cigarette packs at the same time as splitting the cigarettes contained therein into cigarette portions.

The invention further provides a two-part divisible cigarette box having a length consistent with that of a breakable cigarette, the box being separable
15 into two individual packs along a separation plane in alignment with breaking zones of breakable cigarettes stored within the box, characterised in that the box has a top opening and a bottom opening with a closure associated with each opening for selectively closing such opening.

20 Further features of the invention provide for the separation plane to be defined by a line of weakness on the cigarette box; for the line of weakness to be provided by perforations in the box, alternatively by a tear strip; for the packs to be joined together end to end by a strip of suitable joining material to form the box and wherein the joining material defines the line of weakness
25 at the abutting ends of the packs; for the box to include panels which are deployable to close the exposed end of each pack after separation of the box; and for the box to be rectangular, square, circular, triangular or hexagonal in shape.

30 The invention still further provides a blank suitable for assembly into a breakable cigarette box.

The invention yet further provides a modular cigarette pack comprising a standard flat cigarette box having top and bottom panels each having a short side, a long side and a skirt projecting inwardly from free edges thereof providing a depth to the box; four smaller than standard size cigarette boxes each having an open end and located inside the standard flat cigarette box with adjacent boxes on an axis parallel to the long side forming a pair and being aligned open end to open end so that the open ends meet in a breaking plane transverse to the long side, the pair having a combined length consistent with that of the long side; and a plurality of breakable cigarettes inside the smaller boxes and orientated with their longitudinal axes extending along the long side with one end of each cigarette located in a first smaller box of a pair and the other end thereof in a second smaller box of the pair, directly opposite the breaking plane; wherein the lines of weakness of the cigarettes lie in the breaking plane thereby allowing the cigarettes to be split at their lines of weakness, along the breaking plane so that each smaller box of a pair contains portions of the original breakable cigarettes.

Further features of the invention provide for each pair of smaller boxes to comprise a box of cigarettes comprising two cigarette packs in accordance with the an aspect of the invention mentioned above, alternatively, for each pair of smaller boxes to be a two-part divisible cigarette box in accordance with another aspect of the invention.

The invention further provides a pack of cigarettes comprising a standard cigarette box having front and rear panels extending between side panels providing a depth to the box, the front and rear panels having a short side and a long side, wherein the cigarette box contains a plurality of shorter than conventional length cigarettes orientated with their longitudinal axes extending along the short side and transverse to the long side.

Further features of the invention provide for the cigarette box to have a side opening lid, alternatively, for the cigarette box to be a slide-open cigarette box; for the cigarettes to have shorter tobacco containing bodies and/or shorter filters than conventional length cigarettes; and for the tobacco containing bodies to be about 35 millimetres long and the filters to be about 20 millimetres long.

The invention still further provides a cigarette box having at least one window therein through which the contents of the box are visible.

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Further features of the invention provide for the window to have a transparent pane; for the pane to be made of a plastics material; and for the plastics material to be biodegradable.

15 The invention yet further provides a cigarette box made of a suitably biodegradable plastics material.

BRIEF DESCRIPTION OF THE DRAWINGS

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The invention will now be described, by way of example only with reference to the accompanying representations in which:

25 Figure 1 is a perspective view of a standard cigarette box having a top opening lid in accordance with the prior art;

Figure 2 is perspective view of a standard cigarette box having a side opening lid in accordance with the prior art;

30 Figure 3 is a perspective view of a standard slide open cigarette box in accordance with the prior art;

- Figure 4 is a perspective view of a standard flat cigarette box in accordance with the prior art;
- 5 Figure 5 is a side view of a breakable cigarette in accordance with the prior art before and after it has been split into cigarette portions;
- 10 Figure 6 is a side view of a breakable cigarette in accordance with the applicant's co-pending application before and after it has been split into cigarette portions;
- Figure 7 is a perspective view of a box of cigarettes comprising two cigarette packs in accordance with the invention;
- 15 Figure 8 is a side sectional view of a breakable box of cigarettes comprising two cigarette packs in accordance with another aspect of the invention;
- 20 Figure 9 illustrates the splitting of a breakable box of breakable cigarettes in accordance with Figure 8, into separate packs;
- Figure 10 is a perspective view of a breakable box of cigarettes comprising two cigarette packs;
- 25 Figure 11 is a perspective view of the breakable cigarette box in Figure 10 separated into two packs
- 30 Figure 12 is a modular cigarette pack comprising four smaller than standard size cigarette boxes in accordance with the invention;

- Figure 13 is a smaller cigarette box in accordance with an aspect of the invention;
- 5 Figure 14 is a plan view of one embodiment of a unitary blank used for producing a breakable cigarette box in accordance with the invention.
- Figure 15 is a plan view of a blank for a cigarette box in accordance with the invention;
- 10 Figure 16 is a plan view of a second embodiment of a blank for a cigarette box;
- Figure 17 is a plan view of a third embodiment of a blank for a cigarette box;
- 15 Figure 18 is a plan view of a fourth embodiment of a blank for a cigarette box;
- Figure 19 is a plan view of a fifth embodiment of a blank for a cigarette box;
- 20 Figure 20 is a plan view of a sixth embodiment of a blank for a cigarette box;
- 25 Figure 21 is a plan view of a seventh embodiment of a blank for a cigarette box;
- Figure 22 is a plan view of an eighth embodiment of a blank for a cigarette box;
- 30

- 5 Figure 23 is a plan view of a blank of the front of a ninth embodiment for a cigarette box;
- Figure 24 is a plan view of a blank of the front of a tenth embodiment for a cigarette box;
- Figure 25 is a plan view of a blank of the back of an eleventh embodiment for a cigarette box;
- 10 Figure 26 is a plan view of a twelfth embodiment of a blank for a cigarette box;
- Figure 27 is a plan view of a thirteenth embodiment of a blank for a cigarette box;
- 15 Figure 28 is a plan view of a fourteenth embodiment of a blank for a cigarette box;
- Figure 29 is a plan view of a fifteenth embodiment of a blank for a cigarette box;
- 20 Figure 30 is a plan view of a sixteenth embodiment of a blank for a cigarette box;
- Figure 31 is a plan view of a seventeenth embodiment of a blank for a cigarette box;
- 25 Figure 32 is a plan view of an eighteenth embodiment of a blank for a cigarette box;
- 30

Figure 33 is a standard cigarette box having a side opening lid containing shorter than conventional size cigarettes;

5 Figure 34 is a standard slide opening cigarette box containing shorter than conventional size cigarettes;

DETAILED DESCRIPTION WITH REFERENCE TO THE DRAWINGS

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The prior art cigarette boxes shown in Figures 1 to 4 as well as the prior art breakable cigarette shown in Figure 5 and the breakable cigarette according to the applicant's co-pending application shown in Figure 6 are described in the background of the invention above and will accordingly not be described here.

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It should be appreciated that the external length of the body (82) of the breakable cigarette (80) is approximately 80 millimetres and the filters 20 millimetres each. This implies that the total length of the cigarette (80) is approximately 120 millimetres thus enabling the cigarette to fit inside a standard flat cigarette box as shown in Figure 4, parallel to the long edge (66) of the box.

20

A two-part divisible box of cigarettes (200) in accordance with a further aspect of the invention is shown in Figures 7, 8 and 9, and includes two cigarette packs (202 and 204) having front (206) and rear (208) surfaces, two sides (210), a top (212) and an open bottom end (214). The open ends (214) of the packs are aligned end – to – end and abut on a breaking plane (216).

25

In the embodiment shown in Figure 7, each cigarette pack (202 and 204) includes a tray (218) which is slideable within a sleeve (220). In the embodiment shown in side-sectional view in Figure 8, the packs do not

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include the tray and sleeve but each includes a flip-up lid (222) arrangement at the top (212). It should, however, be appreciated that irrespective of the embodiment used, the ends of the packs will abut on the breaking plane (216).

5

The box (200) is configured to receive a plurality of breakable cigarettes orientated so that their longitudinal axes are transverse to the breaking plane (216). The first end (226) of each cigarette (224) is located within the first pack (202) and the second end (228) within the second pack (204). The line
10 of weakness (230) of each cigarette (224) lies in the breaking plane (216).

As the lines of weakness (230) of the cigarettes (224) lie in the breaking plane (216), the cigarettes (224) may be split at their lines of weakness (230), along the breaking plane (216), as shown more clearly in Figure 9. The
15 splitting can be achieved by any suitable means but it is envisaged that, properly constructed, it will be achievable by pushing the distal ends (212) of the boxes and the open ends (214) on the breaking plane (216) in opposite directions by hand, in a snapping motion. Once split, each pack (202 and 204) contains half of the original cigarettes (224), being shorter than
20 conventional cigarettes (90), and each having its own filter (232).

Each cigarette pack (202, 204) may have a closure (234), preferably in the form of a foldable flap, at the open end (214). The closure may be operable
25 between a first, open position when the cigarettes (224) have not yet been split, and a second, closed position after the cigarettes (224) have been split. Once in the closed position, the ends of the portions of the original cigarettes (224) will be enclosed within the packs (202, 204).

In one embodiment of the invention, the cigarette packs (202, 204) are
30 manufactured from a unitary blank that, once folded, provides a two-part divisible cigarette box. An example of such a unitary blank is shown in Figure 14 and will be explained in more detail below. The blank (240)

includes two separation lines (242) that, once the blank has been folded into the cigarette box, align into a separation plane at which the box may be separated into the individual cigarette packs (202, 204). In this embodiment of the invention the box (200) may be divided into two separate packs (202, 204) at the same time as the cigarettes (224) are broken into cigarette portions.

The embodiment of a two-part divisible cigarette box (200) shown in Figures 8 and 9 are shown in further detail in Figures 10 and 11. The box (200) is made from a unitary cardboard blank and has a front panel (252), a back panel (254) and side panels (256,258) extending between the front panel (252) and back panel (254) on each of their longitudinal sides. The box (200) is open at each end and a flip open lid (260, 262) is provided on the box (200) at each end. These operate in conventional fashion to selectively close the openings at each end. A stiffener (264, 266) is secured in each end in conventional fashion.

The box (200) is of suitable length to receive a breakable cigarette (268) as described above (80, 160). Such cigarettes are accommodated in the box with their filters (270) adjacent to each of the lids (260, 262). In this condition, the line of weakness (272) on the cigarettes (268) lies in a plane extending midway through the box (200). A line of weakness (274) is provided on the box (200) about its circumference in the plane of those of the cigarettes (268). In this embodiment the line of weakness (274) is provided by a series of perforations in the back panel (254) of the box (200), with the front panel (252) and side panels (256, 258) not joined to each other but simply abutting along the line of weakness, as will become apparent from the further description below.

In use, the box (200) and cigarettes (268) can be broken into two by bending the box (200) about the line of weakness (274). Referring to Figure 11, breaking the box (200) and breakable cigarettes (268), results in two

separate packs (276, 278) of cigarette portions. To prevent the cigarette portions falling out of the exposed lower end (280, 281) of the newly formed packs (276, 278) a flap (282, 284) is provided. Each flap (282, 284) extends parallel to the front panel (252) of the box (200) prior to breaking. The flap (282) extends between the front panel (252) and cigarettes (268) of the pack (278), while the flap (284) extends along the outside of the front panel (252) of the pack (276) and is secured in position by a conventional plastics sleeve over the box (200). After breaking the panels (282, 284) are withdrawn from the opposite packs and folded over the open end of each pack, as shown by the arrows (286, 288). A fold (290, 292) in each flap (282, 284) permits the end (293, 294) of each flap to be tucked between the cigarettes and back panel (254) of each pack (276, 278).

A modular cigarette pack (320) in accordance with a further aspect of the invention is shown in Figure 12. The pack (320) includes a standard flat cigarette box (322), as shown in Figure 4, having a top panel (324) and a bottom panel (326) each having a short side (328) and a long side (330). The panels (324, 326) are attached along a long side (330) by means of a rear panel (332) having a crease line (334) parallel with the long side (330), allowing the box (322) to be opened and closed in a hinged fashion. A skirt (336) projects inwardly from the free edges of both the top (324) and bottom (326) panels thereof providing a depth to the box.

Four smaller than standard size cigarette boxes (338) each having an open end (340) are located inside the cigarette box (322) with adjacent boxes on an axis (342) parallel to the long side (330) forming a pair and being orientated open end – to – open end so that their respective open ends (340) are aligned and meet on a breaking plane (344) which is transverse to the long side (330). It should be appreciated that the pair of smaller boxes have a combined length which is consistent with that of the long side (330) of the standard flat box (322).

Breakable cigarettes (80) are packed inside the smaller boxes (338) so that their longitudinal axes (346) extend along the long side (330) of the box (322). One end (348) of each cigarette (80) is located in a first smaller box (350) of a pair and the other end (352) thereof in a second smaller box of the pair (354) directly opposite the breaking plane (344). It should be appreciated that the modular pack (320) therefore includes two pairs, a top and bottom pair, each pair having one smaller box on either side of the breaking plane (344).

10 The dimensions of the smaller boxes (338) described above are typically (h x d x w) 60 x 16 x 40 millimetres although these dimensions are not crucial for the invention to be workable. It is envisaged, for example, that smaller boxes of different sizes, in particular lengths, may be used, in which case the line of weakness on the cigarettes may be moved closer to one end than to the other. The cigarette may also have only one filter at one end thereof, in which case the splitting of the cigarette along the line of weakness will result in one cigarette with a filter and one without.

Each of the smaller boxes (338), as shown more clearly in Figure 13, also include a closure in the form of a flap (360). Before the cigarettes (80) as packed in the pack (320) have been split, the flap (360) may be folded away in a first, open position, underneath the smaller box (338). Once the cigarettes (80) have been split, the flap (360) may be folded out from under the box (338), over the exposed ends (362) of the split, shorter cigarettes (90), and underneath a front panel (364) of the box (338) into a second, closed position, thereby obscuring and protecting the cigarettes (90).

It should be appreciated that the modular pack of cigarettes (320) in accordance with the invention provides a convenient way of packaging four smaller boxes (338) of shorter than conventional length cigarettes (90) into a standard commercially available flat box (60).

It should also be appreciated that instead of four separate smaller boxes, two two-part divisible cigarette boxes as described with reference to Figures 7 to 11 may be packaged side-by-side inside the standard flat box resulting in the same modular package configuration.

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As mentioned above, an example of a unitary blank for making a two-part divisible cigarette box is shown in Figure 14. The blank (240) includes two separation lines (242) that, once the blank has been folded into the breakable box, align into a separation plane at which the box may be divided into the individual cigarette packs (202, 204).

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As shown in Figure 15, a blank (300) for the two-part divisible cigarette box in Figure 10 can be provided as a single unit. In Figure 15 like numerals indicate like features in Figures 10 and 11. It will be appreciated, however, that many other embodiments of a breakable cigarette box exists which fall within the scope of the invention. For example, the line of weakness in the cigarette box could be provided by a tear strip in the material of the box. Also, many other blanks can be used to provide a cigarette box of the invention.

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As shown in Figure 16, extra stiffeners (310) could be provided. As shown in Figure 17, the flaps (282, 284) could have tapered ends (312), or rounded ends (314), as shown in Figure 18.

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The box could also be of a two piece construction as shown in Figures 19 to 22. Here the individual packs are simply held together to form the box by a sleeve, typically of a plastics material as used conventionally to wrap cigarette boxes. Any suitable material could be used to join the packs together. The sleeve could be provided with a tear strip about the separation plane to facilitate breaking the box into two packs. A further tear strip would be provided in the sleeve about each closure in conventional fashion.

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Figure 23 shows a front panel for a further one piece box. Figure 24 shows a front panel for a further two piece box and Figure 25 for an alternate one piece box.

- 5 Figures 26 and 27 show more alternative blanks for one piece boxes including stiffeners.

Clearly, any suitable means for closing the exposing ends of the newly formed packs can also be used. Also the box could have any suitable shape and could, for example, be rectangular, square, circular, triangular or
10 hexagonal in shape. Figures 28 to 32 show blanks suitable for producing triangular boxes.

The invention also provides a cigarette box having a window, which could be covered with a transparent plastics pane, allowing the cigarettes within the
15 box to be seen.

Also, the invention provides for a cigarette box, whether of conventional or divisible configuration, made of a plastics material which is biodegradable.

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A standard cigarette box (370) having a side opening lid (372) in accordance with a further aspect of this invention is shown in Figure 33. The box (370) comprises a front panel (374) and a rear panel (376) extending between side panels (378) providing a depth to the box. The front (374) and rear (376)
25 panels again have a short side (380) and a long side (382). Shorter than conventional length cigarettes (384) are packed in the box (370) so that their longitudinal axes (386) extend along the short side (380) of the box (370). The cigarettes (384) may accordingly be discharged in a direction transverse to the long side (382) of the box (370).

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It should be appreciated that the standard cigarette box loaded with shorter than conventional length cigarettes, as described, allows the use of the

standard cigarette box for packaging a larger than normal number of cigarettes, albeit that the cigarettes are smaller.

An alternative embodiment of this aspect of the invention is shown in Figure 5 34. In this embodiment a standard slide opening cigarette box (390), as shown in more detail in Figure 3, is used. The box (390) comprises an inner tray (392) having a base (394) and four side walls (396), that slides within a sleeve (398). The tray and sleeve have a short side (400) and a long side (402) and shorter than conventional length cigarettes (404) are again packed 10 in the tray (392) so that their longitudinal axes (406) extend along the short side (400) of the container (392). Cigarettes (404) are discharged from the box (390) by partially sliding the tray (392) out of the sleeve (398) thereby exposing the cigarettes (404).

15 The sliding of the tray (392) with respect to the sleeve (398) may take place along the long (402) or short (400) sides of the box (390).

The above description is by way of example only and numerous modifications may be made to the embodiments described without departing 20 from the scope of the invention.

CLAIMS:

1. A box of cigarettes (200) comprising two cigarette packs (202, 204) each having at least one open end (214) and orientated to be aligned
5 open end – to – open end so that the open ends abut on a breaking plane (216), and a plurality of breakable cigarettes (224) inside the packs and orientated with their longitudinal axes transverse to the breaking plane with one end of each cigarette (226) located in a first cigarette pack (202) and the other end (228) thereof in a second
10 cigarette pack (204) directly opposite the breaking plane so that a line of weakness (230) associated with each breakable cigarette lies in the breaking plane, thereby allowing the cigarettes to be split at the breaking plane so that each pack on opposite sides of the breaking plane contains cigarette portions; the box of cigarettes being
15 characterized in that it includes a closure (234) associated with the open end of each cigarette pack which is operable into a closed position after the cigarettes have been split, thereby enclosing the cigarette portions contained within the pack.
- 20 2. A box of cigarettes as claimed in claim 1 in which each cigarette pack includes a tray (218) slideable within a sleeve (220), the tray including a flip-type lid (222) at the end opposite the open end.
3. A box of cigarettes as claimed in claim 1 in which each cigarette pack
25 includes a conventional flip-type lid.
4. A box of cigarettes as claimed in any one of claims 1 to 3 which is sealed in a conventional fashion holding the two cigarette packs together for retail purposes.
30
5. A box of cigarettes as claimed in any one of claims 1 to 4 in which the two cigarette packs are formed from a unitary blank (240), the blank

defining a line of weakness (242) defining a separation plane which, in use, is in alignment with the breaking plane, thereby allowing the box to be split into the two cigarette packs at the same time as splitting the cigarettes contained therein into cigarette portions.

5

6. A two-part divisible cigarette box (200) having a length consistent with that of a breakable cigarette (268), the box being separable into two individual packs (276, 278) along a separation plane in alignment with breaking zones (272) of breakable cigarettes stored within the box, characterised in that the box has a top opening and a bottom opening with a closure (260, 262) associated with each opening for selectively closing such opening.

10

7. A two-part divisible cigarette box as claimed in claim 6 in which the separation plane is defined by a line of weakness (274) on the cigarette box.

15

8. A two-part divisible cigarette box as claimed in claim 6 or claim 7 in which the line of weakness is provided by perforations in the box, alternatively by a tear strip.

20

9. A two-part divisible cigarette box as claimed in any one of claims 6 to 8 in which the packs are joined together end to end by a strip of suitable joining material to form the box and wherein the joining material defines the line of weakness at the abutting ends of the packs.

25

10. A two-part divisible cigarette box as claimed in any one of claims 6 to 9 in which the box includes panels (281, 282) which are deployable to close the exposed end of each pack after separation of the box.

30

11. A two-part divisible cigarette box as claimed in any one of claims 6 to 10 in which the box is rectangular, square, circular, triangular or hexagonal in shape.
- 5 12. A blank suitable for assembly into a two-part divisible cigarette box as claimed in any one of claims 6 to 11.
- 10 13. A modular cigarette pack (320) comprising a standard flat cigarette box (322) having top (324) and bottom (326) panels each having a short side (328), a long side (330) and a skirt projecting inwardly from free edges thereof providing a depth to the box; four smaller than standard size cigarette boxes (338) each having an open end (340) and located inside the standard flat cigarette box with adjacent boxes on an axis (342) parallel to the long side forming a pair and being aligned open end to open end so that the open ends meet in a breaking plane (344) transverse to the long side, the pair having a combined length consistent with that of the long side; and a plurality of breakable cigarettes (80) inside the smaller boxes and orientated with their longitudinal axes (346) extending along the long side with one end (348) of each cigarette located in a first smaller box (350) of a pair and the other end (352) thereof in a second smaller box (354) of the pair, directly opposite the breaking plane; wherein the lines of weakness of the cigarettes lie in the breaking plane thereby allowing the cigarettes to be split at their lines of weakness, along the breaking plane so that each smaller box of a pair contains portions of the original breakable cigarettes.
- 15
- 20
- 25
- 30 14. A modular cigarette pack as claimed in claim 13 in which each pair of smaller boxes comprises a box of cigarettes in accordance with any one of claims 1 to 5.

15. A modular cigarette pack as claimed in claim 13 in which each pair of smaller boxes comprises a two-part divisible cigarette box in accordance with any one of claims 6 to 11.
- 5 16. A pack of cigarettes comprising a standard cigarette box (370) having front (374) and rear (376) panels extending between side panels (378) providing a depth to the box, the front and rear panels having a short side (380) and a long side (382), wherein the cigarette box contains a plurality of shorter than conventional length cigarettes (384) orientated with their longitudinal axes (386) extending along the short side and transverse to the long side.
- 10 17. A pack of cigarettes as claimed in claim 16 in which the cigarette box has a side opening lid (372), alternatively, in which the cigarette box is a slide-open cigarette box (390).
- 15 18. A pack of cigarettes as claimed in claim 16 or claim 17 in which the cigarettes have shorter tobacco containing bodies and/or shorter filters than conventional length cigarettes.
- 20 19. A pack of cigarettes as claimed in claim 18 in which the tobacco containing bodies are about 35 millimetres long and the filters are about 20 millimetres long.
- 25 20. A cigarette box having at least one window therein through which the contents of the box are visible.
21. A cigarette box as claimed in claim 20 in which the window has a transparent pane.
- 30 22. A cigarette box as claimed in claim 21 in which the pane is made of a plastics material.

23. A cigarette box as claimed in claim 22 in which the plastics material is biodegradable.
- 5 24. A cigarette box made of a suitably biodegradable plastics material.

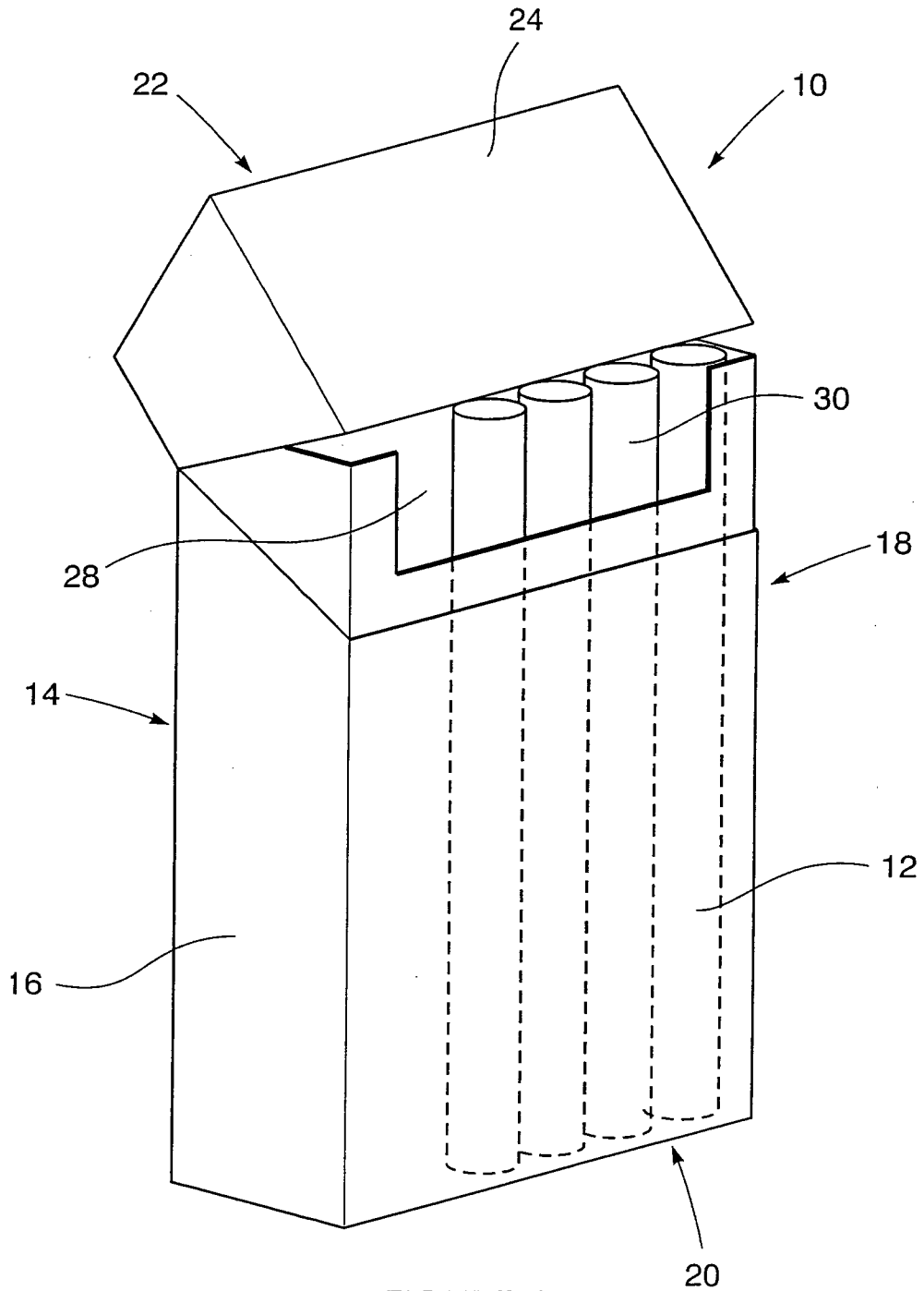


FIGURE 1

PRIOR ART

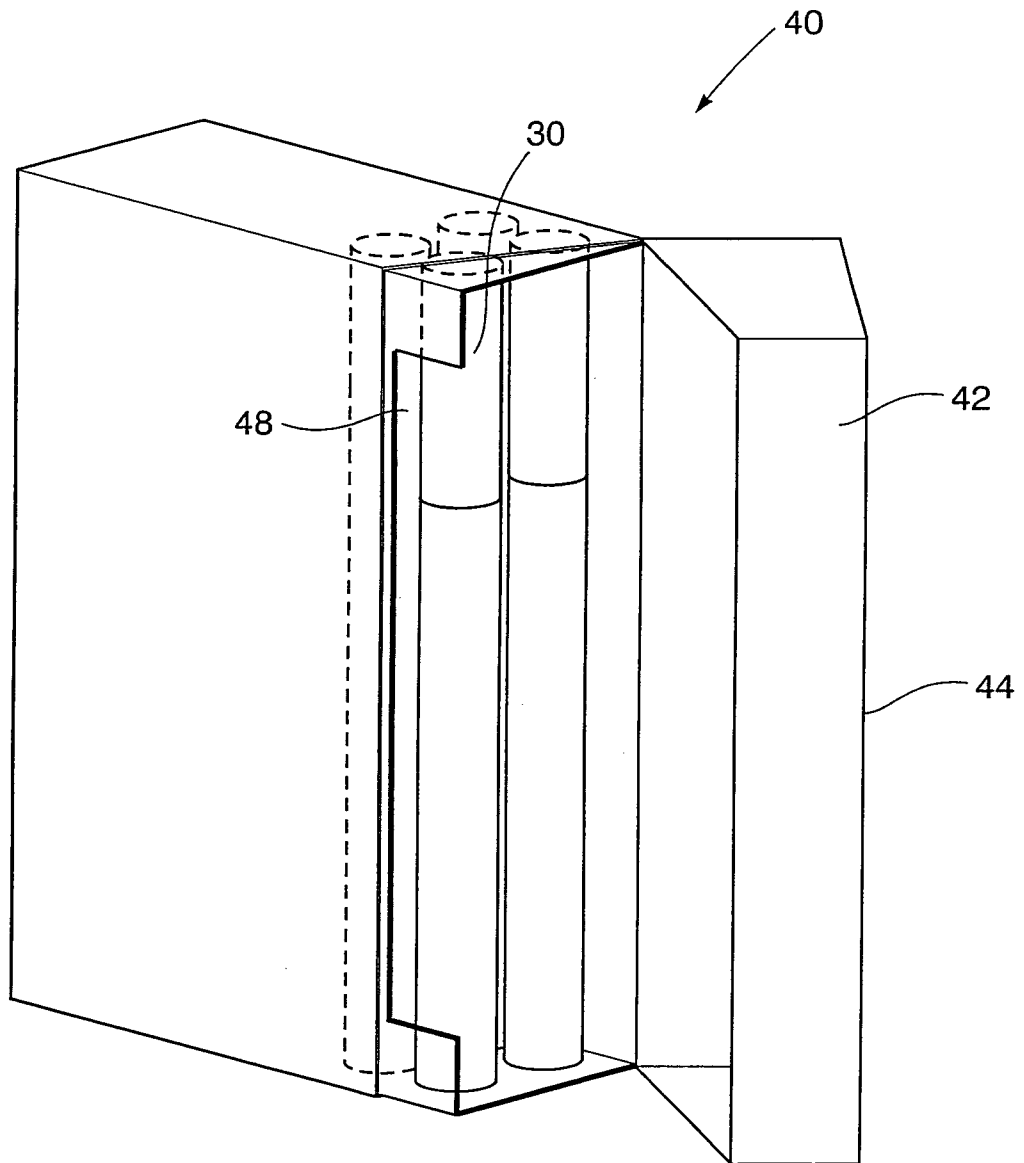


FIGURE 2

PRIOR ART

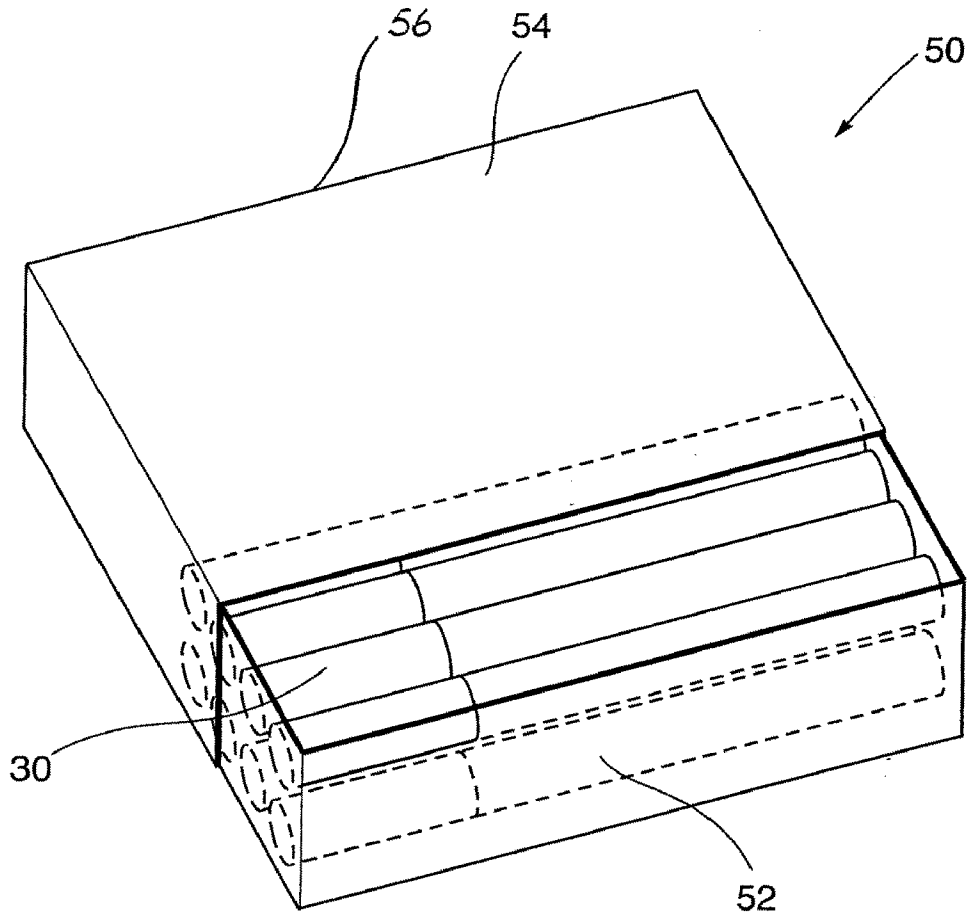


FIGURE 3

PRIOR ART

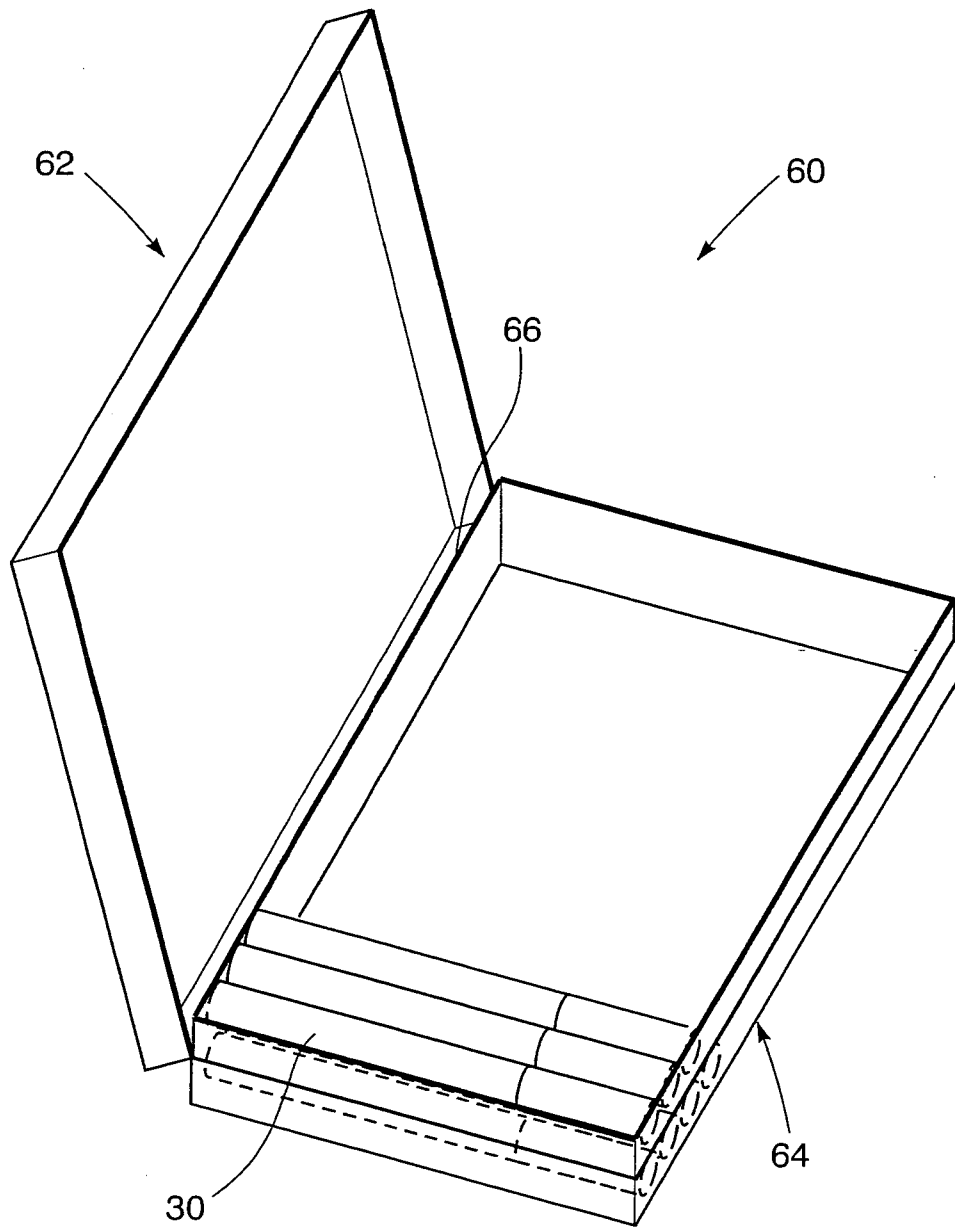


FIGURE 4

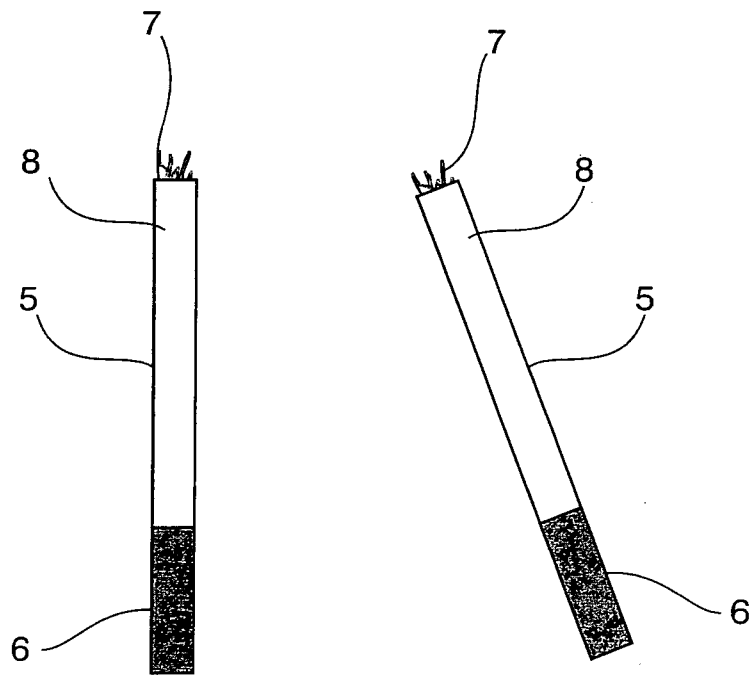
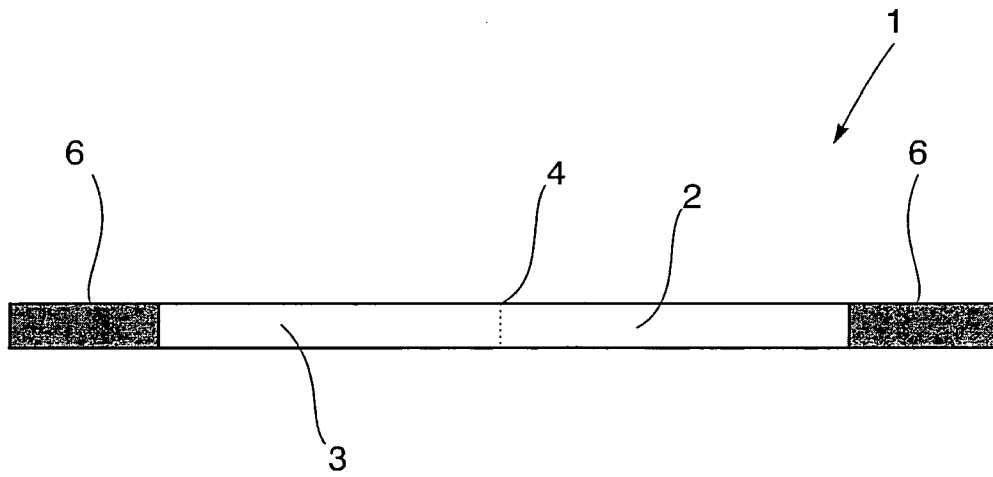


FIGURE 5

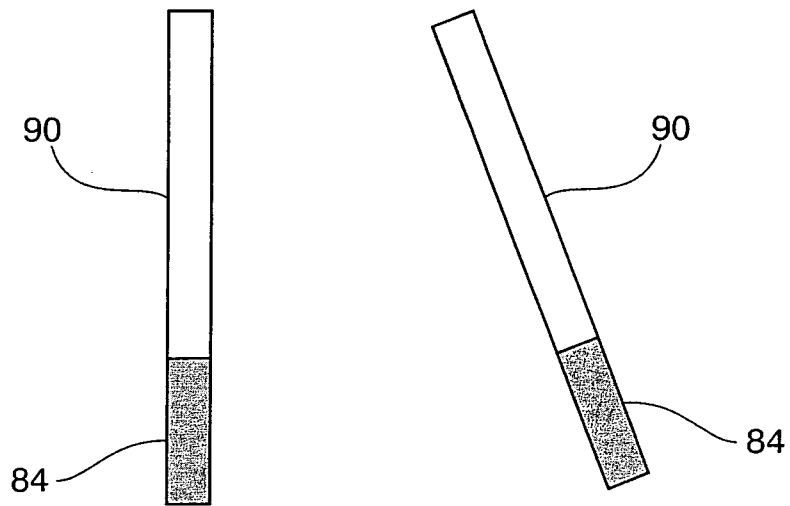
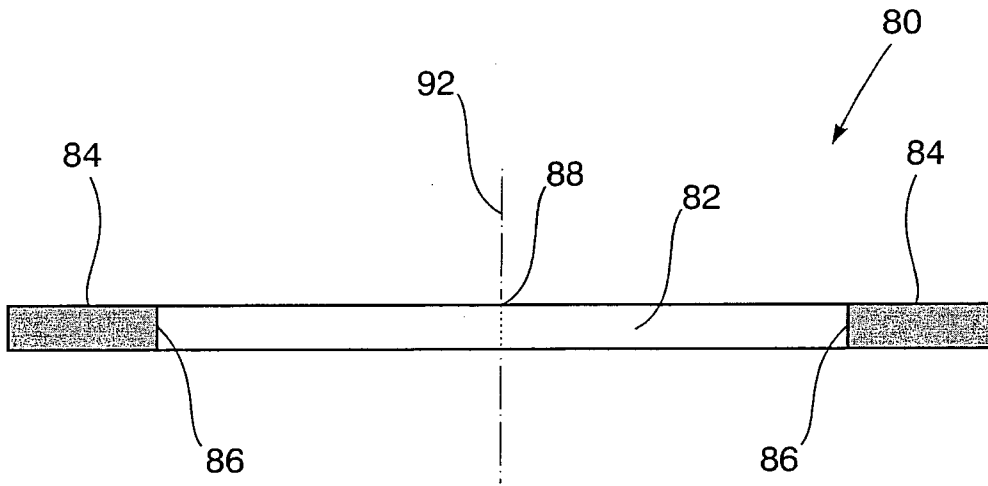


FIGURE 6

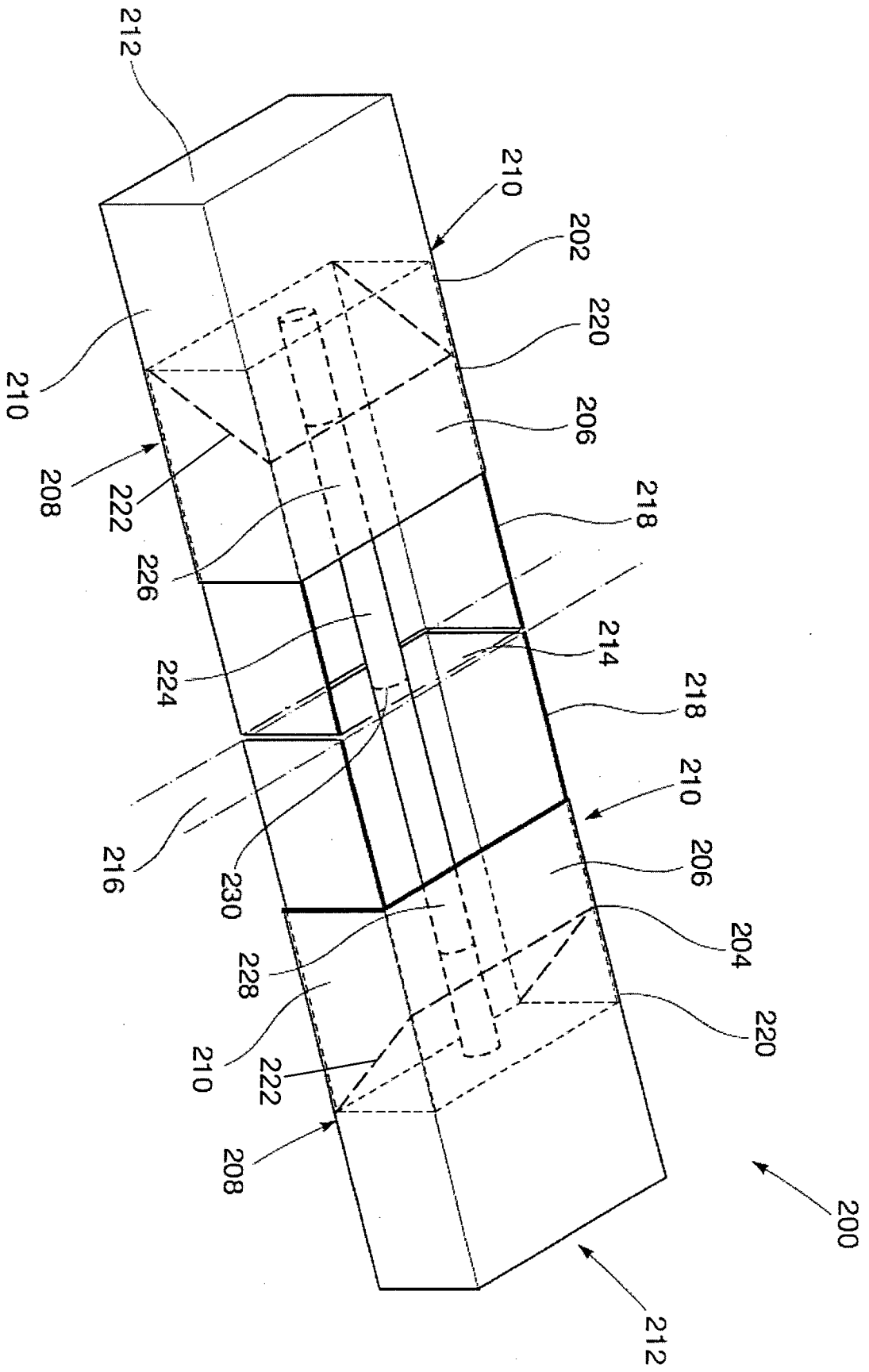


FIGURE 7

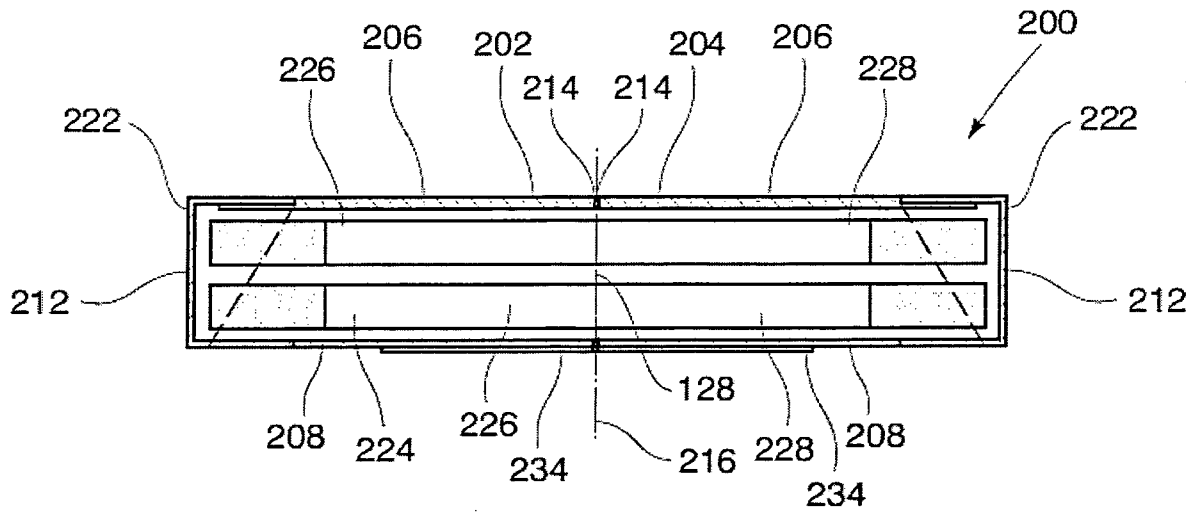


FIGURE 8

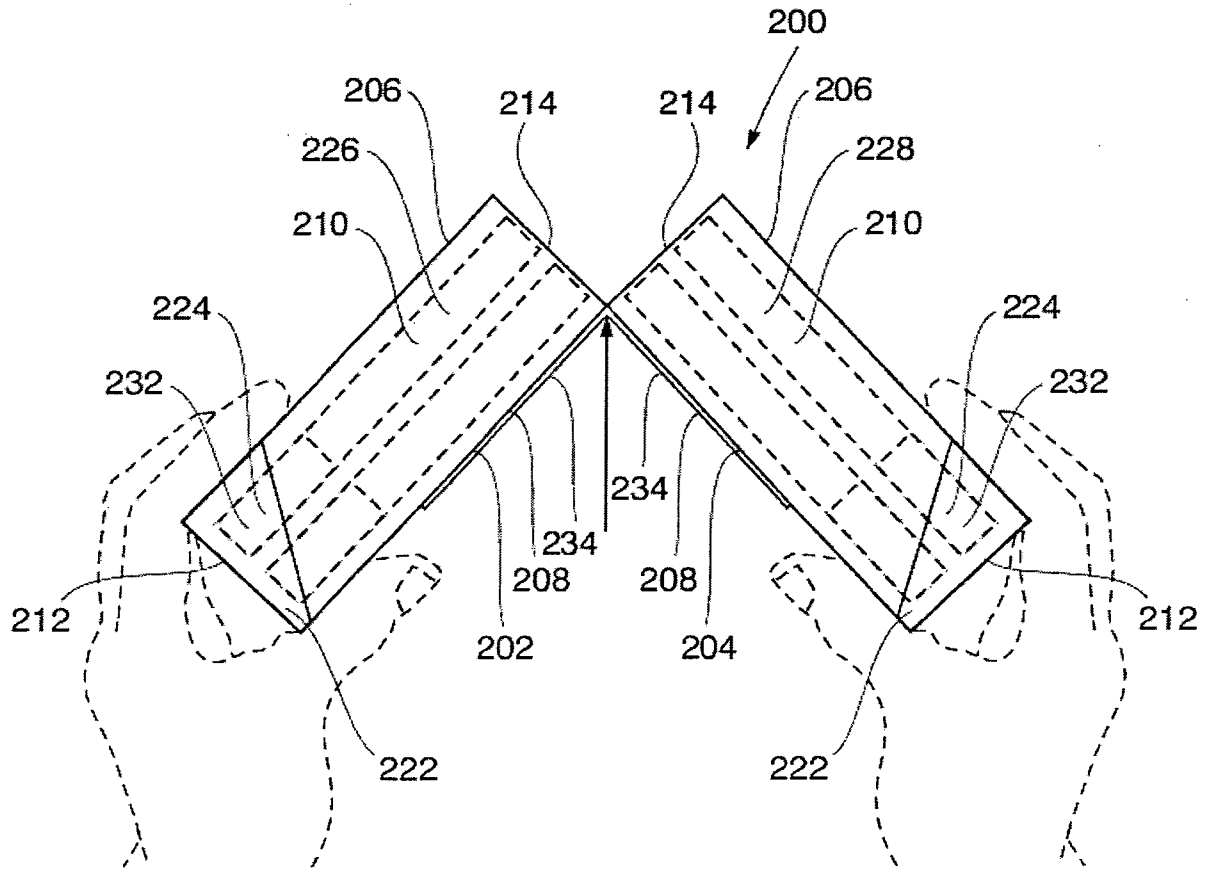


FIGURE 9

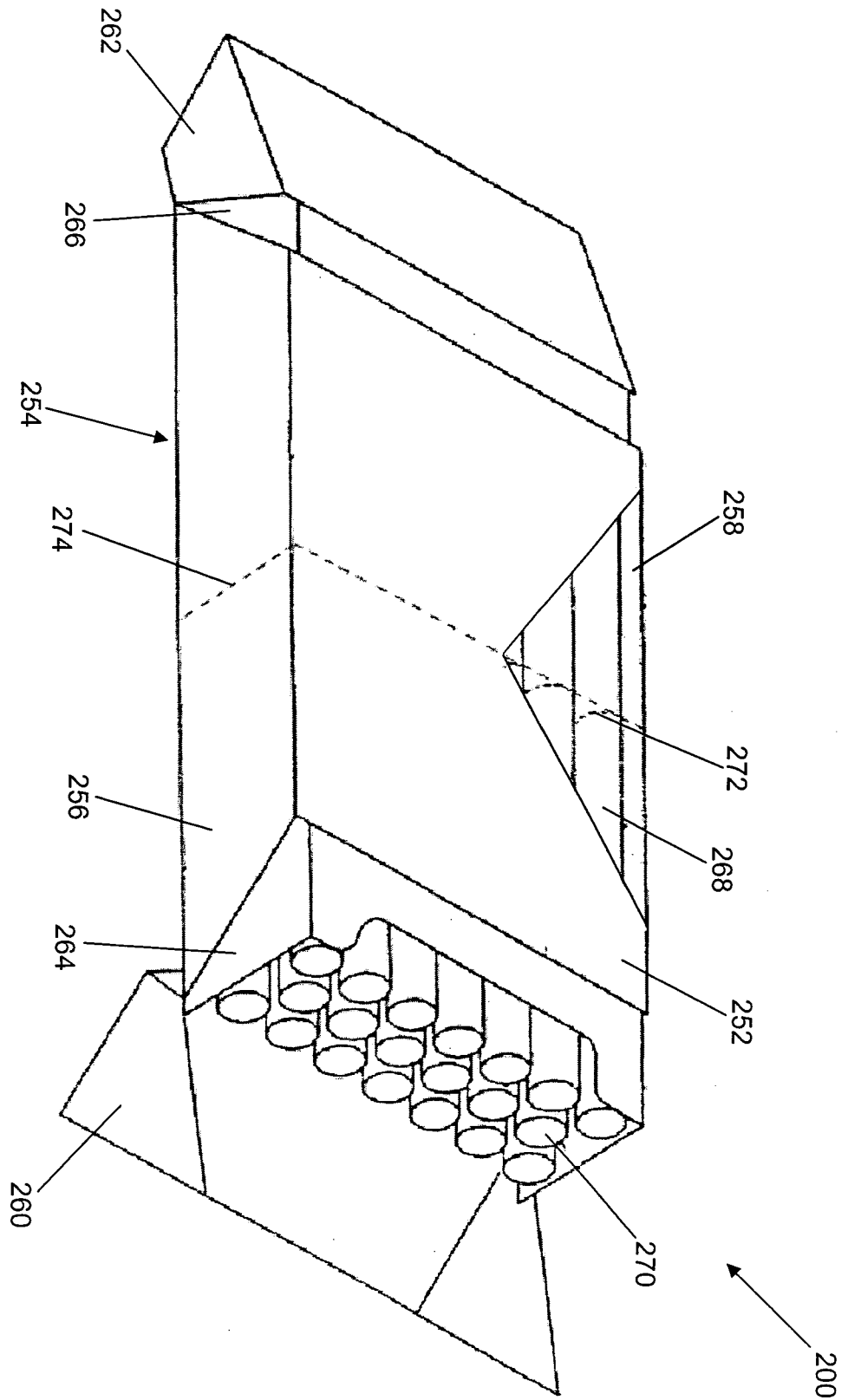


FIGURE 10

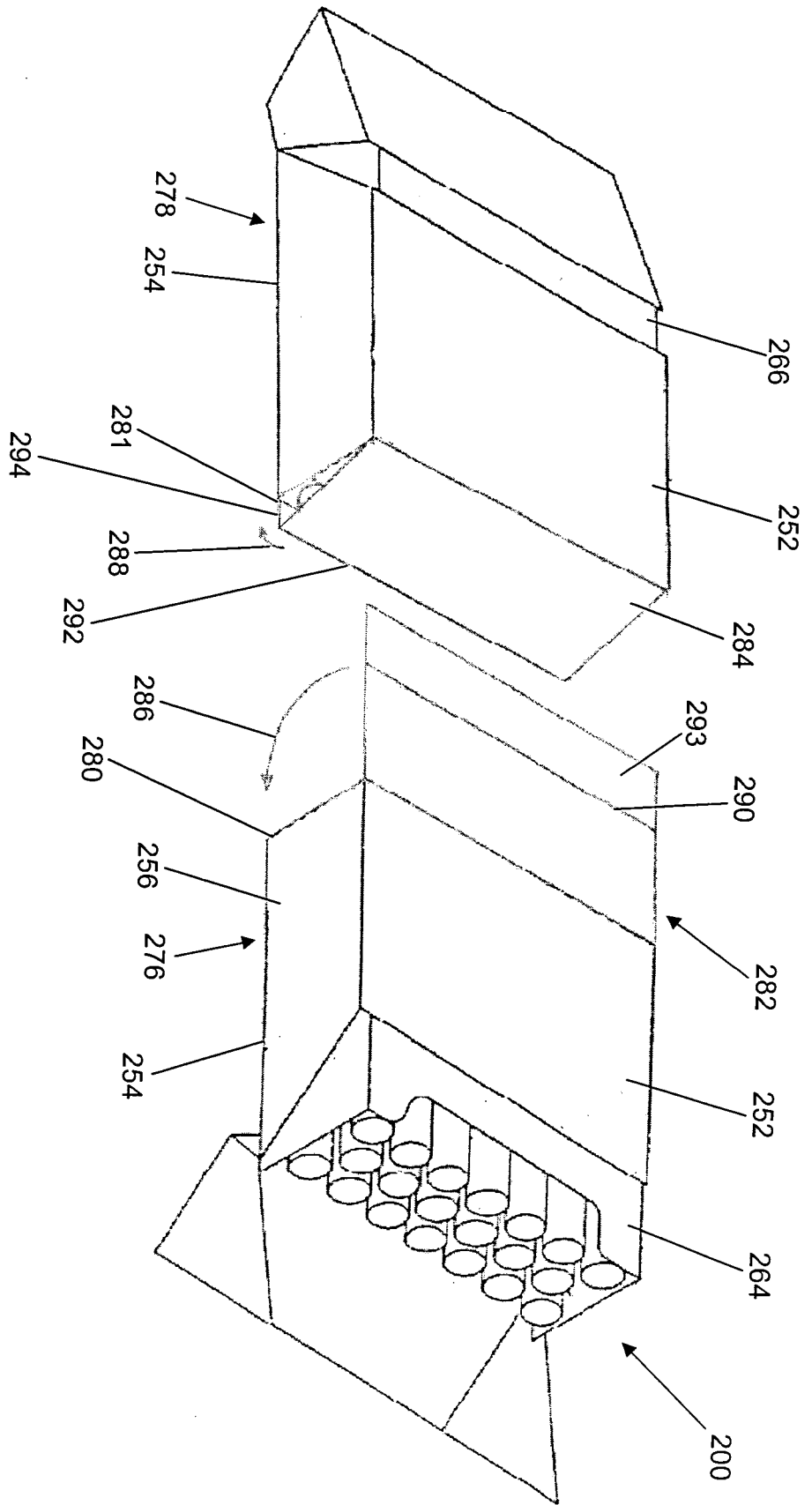


FIGURE 11

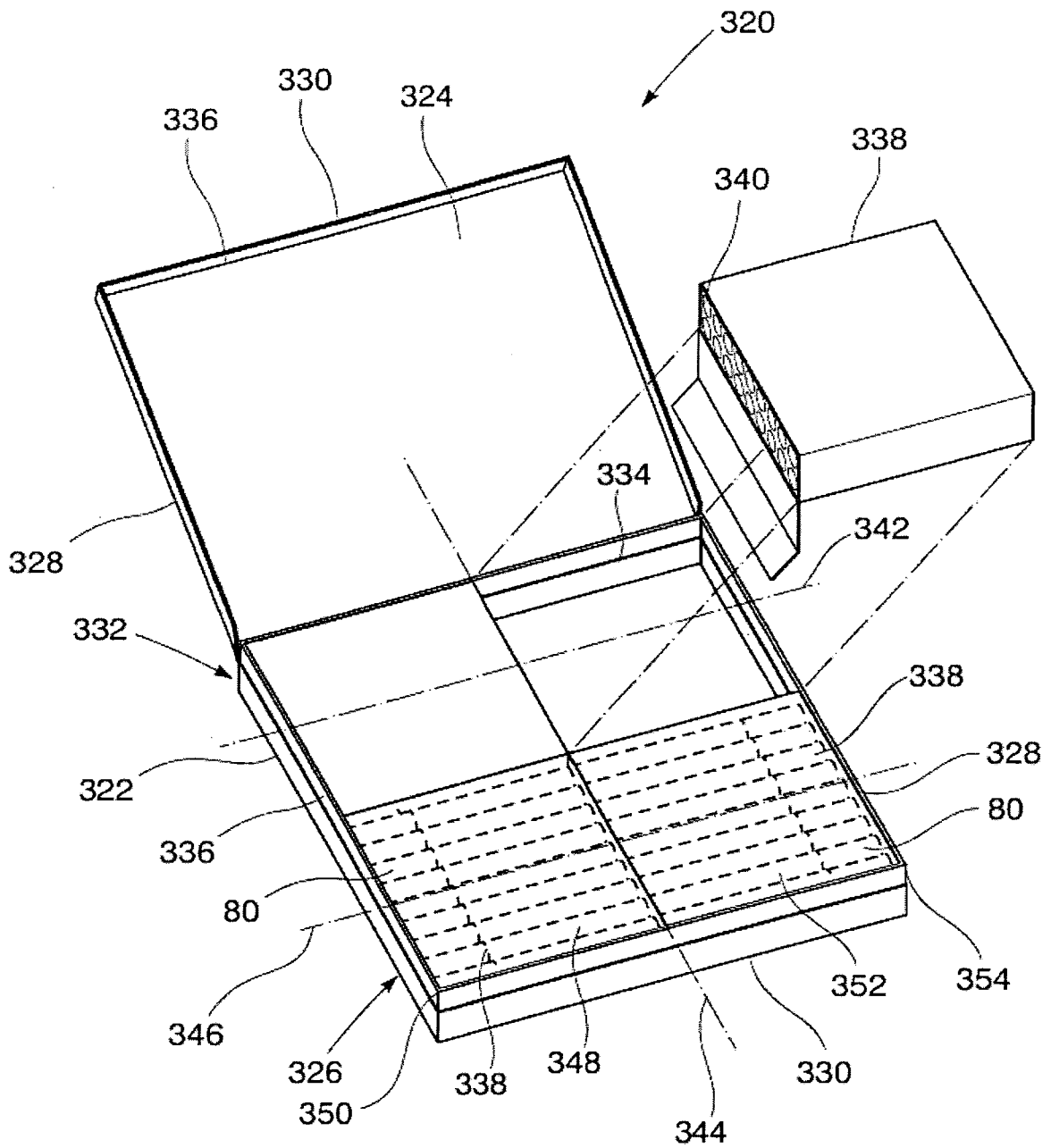


FIGURE 12

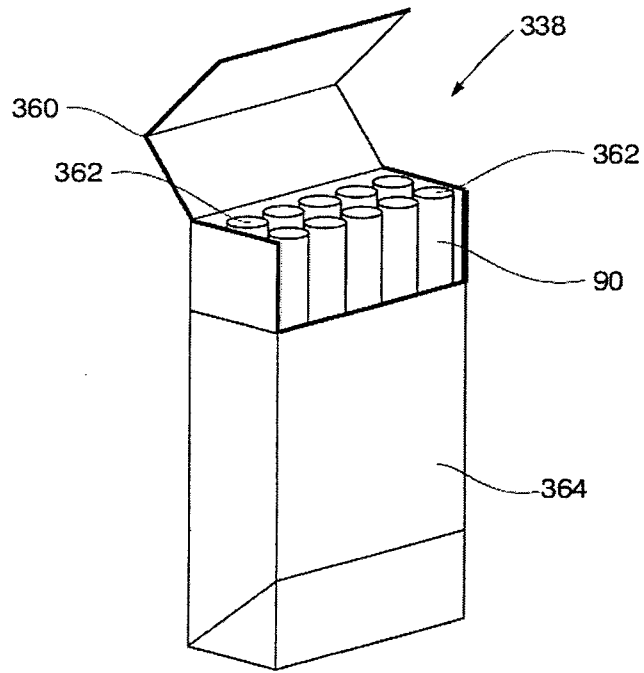


FIGURE 13

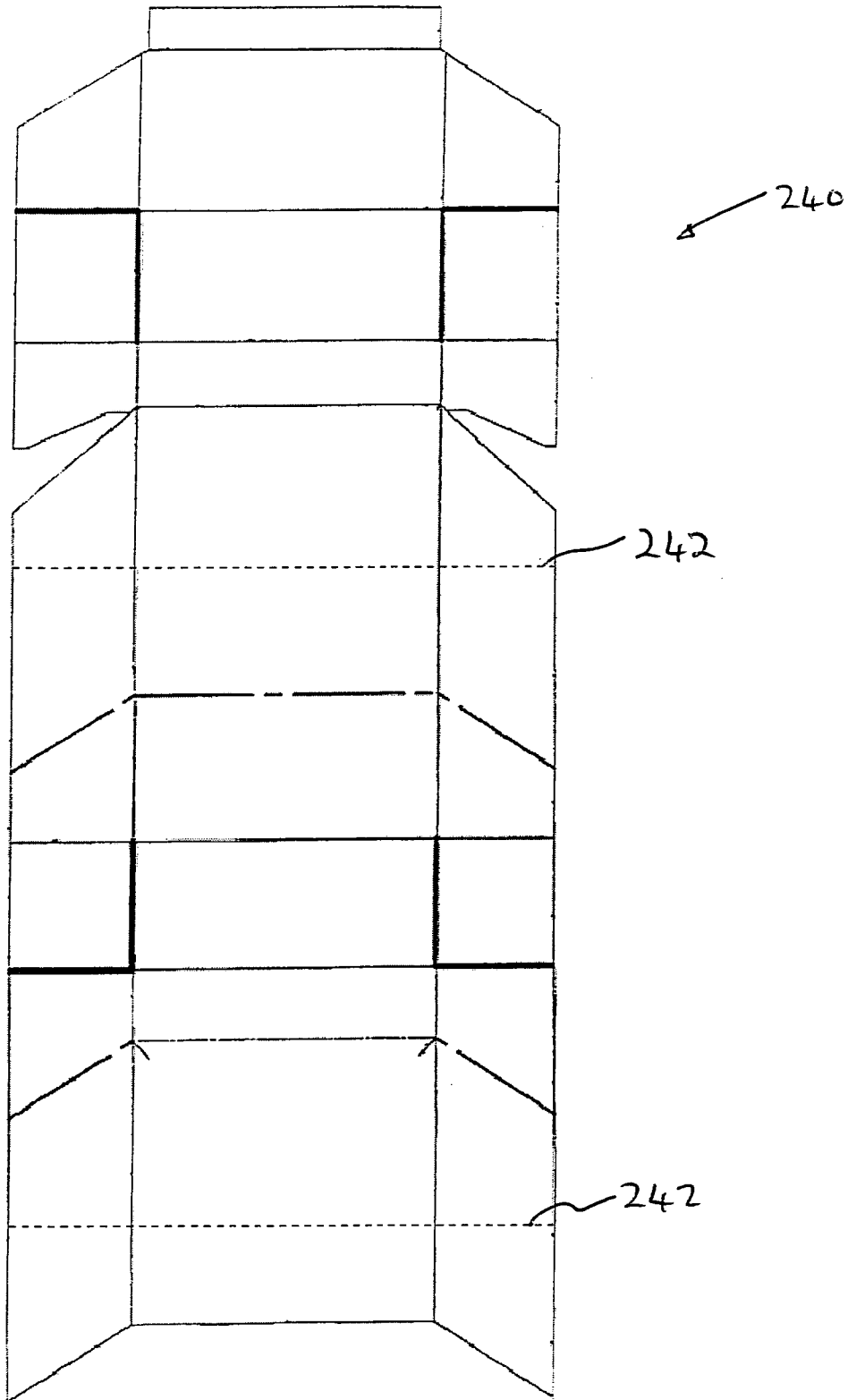


FIGURE 14

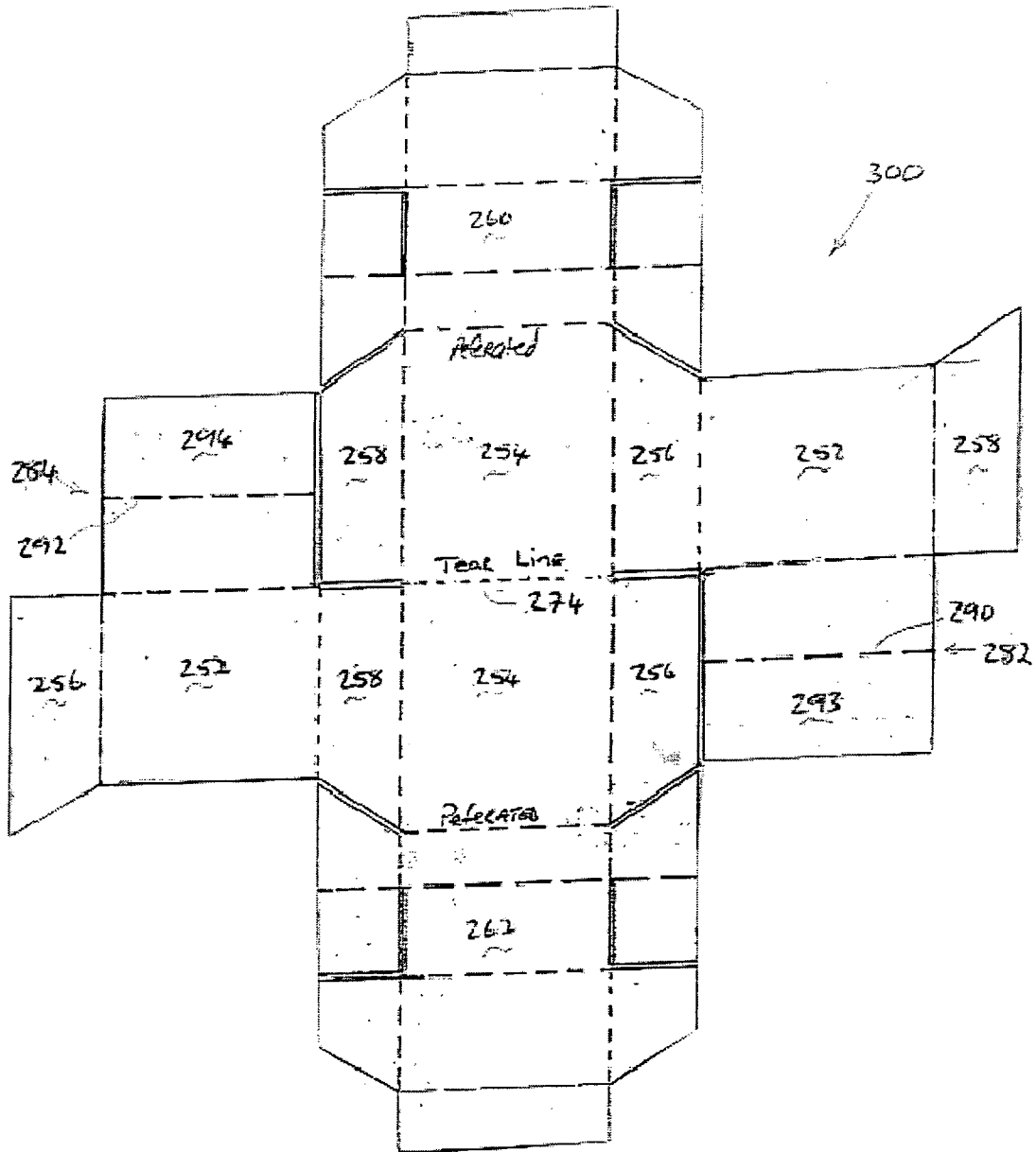


FIGURE 15

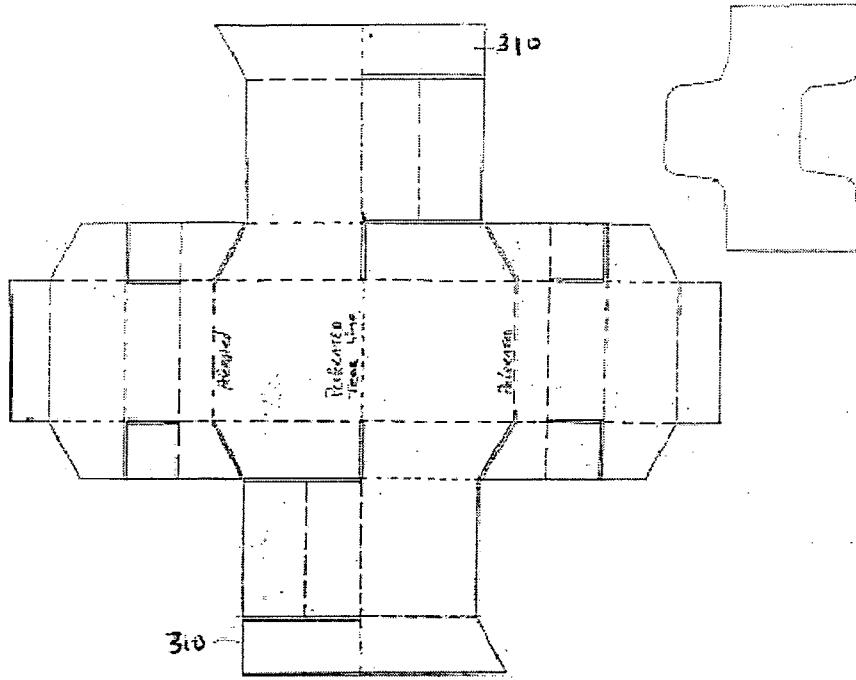


FIGURE 16

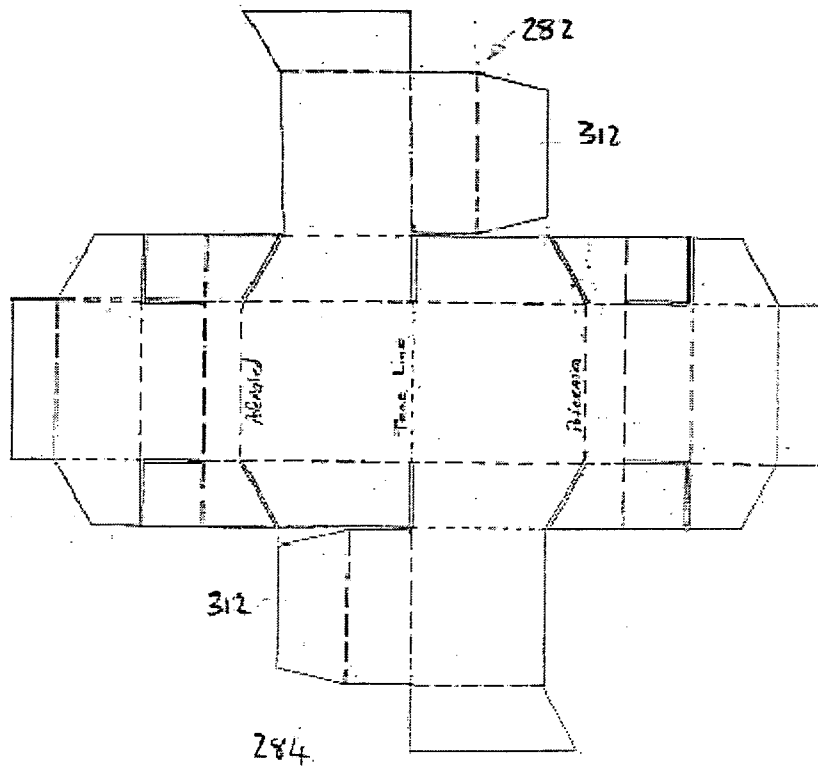


FIGURE 17

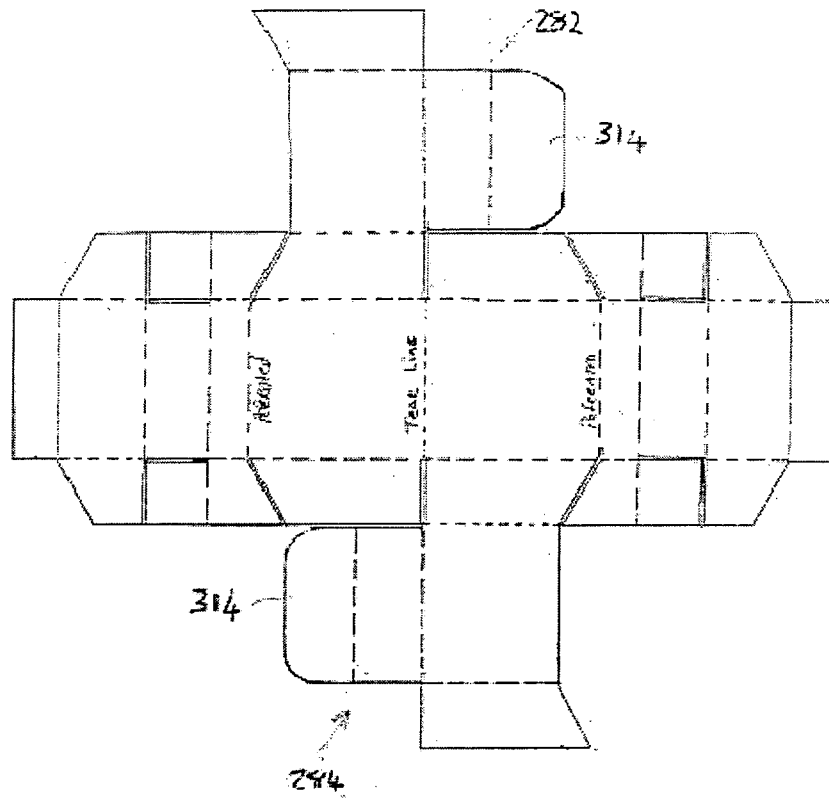


FIGURE 18

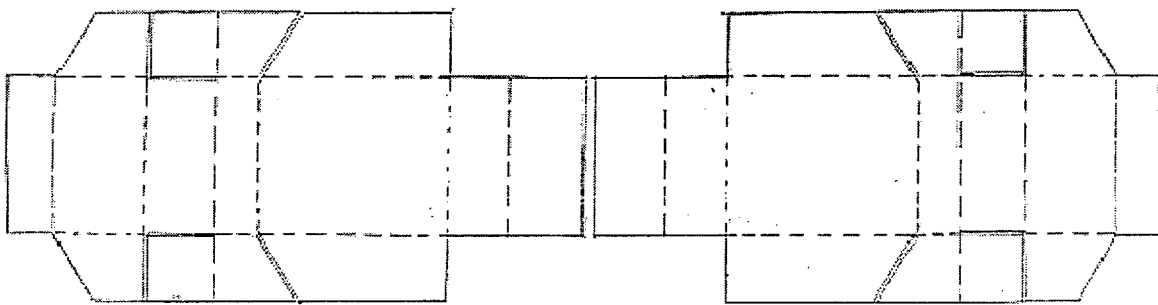


FIGURE 19

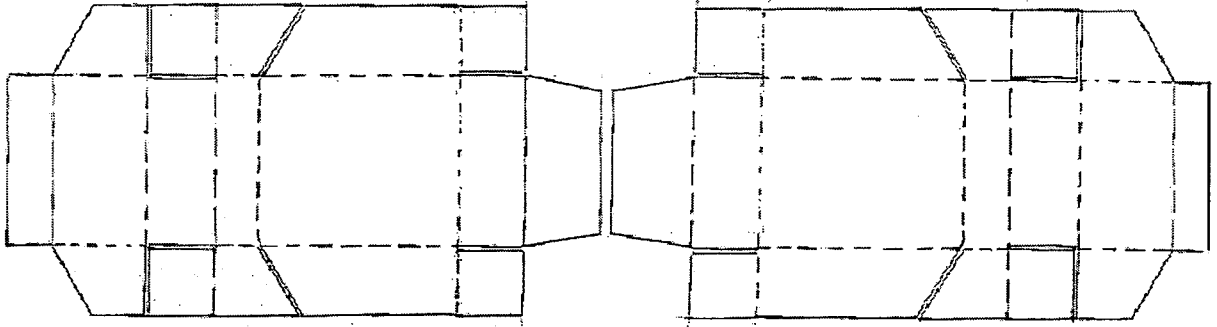


FIGURE 20

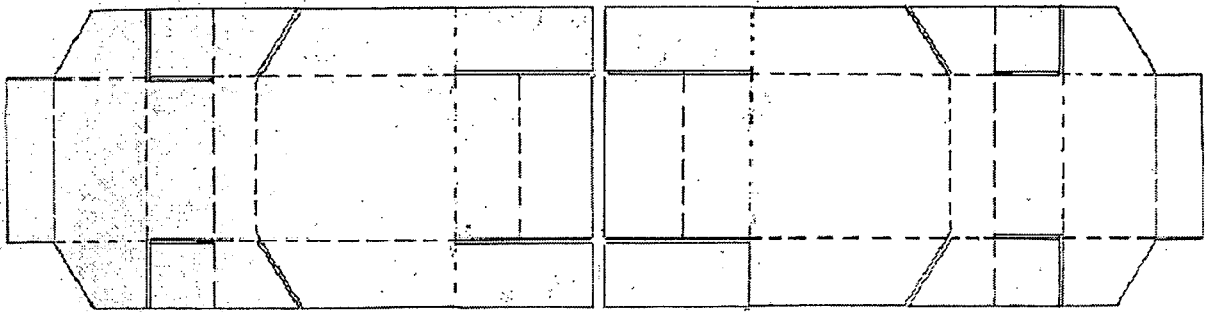


FIGURE 21

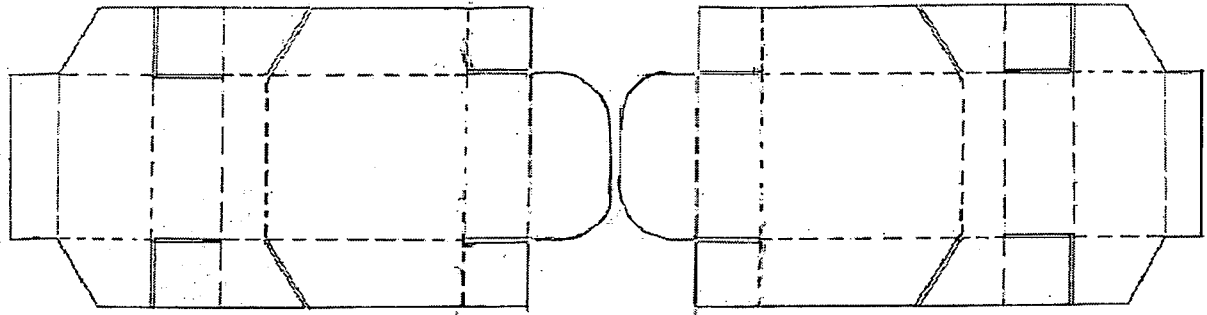


FIGURE 22

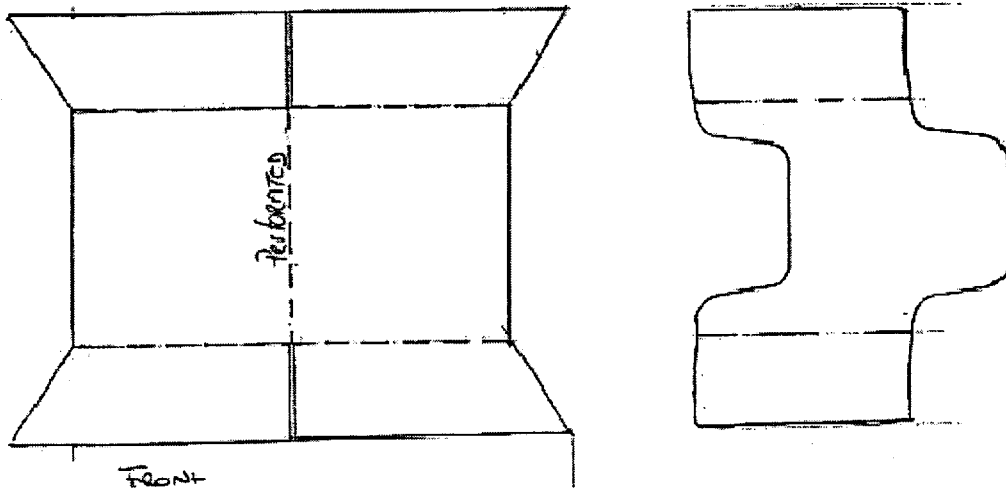


FIGURE 23

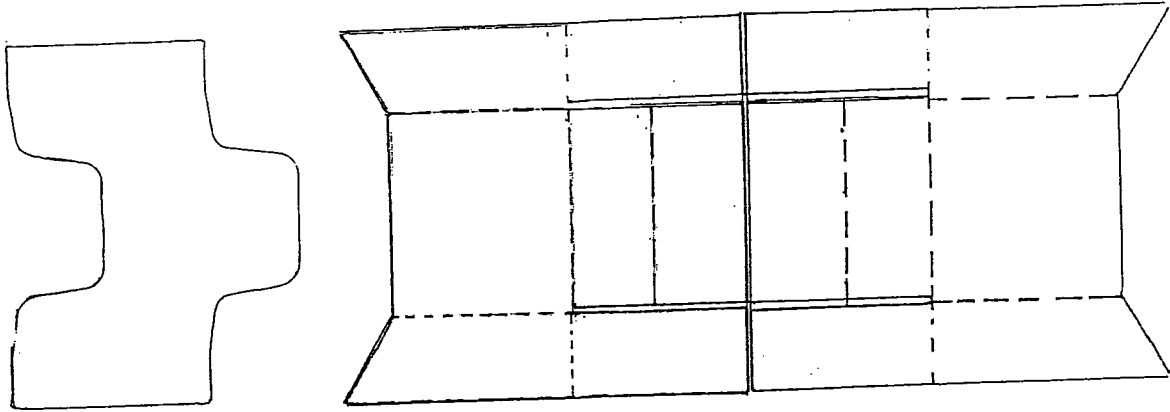


FIGURE 24

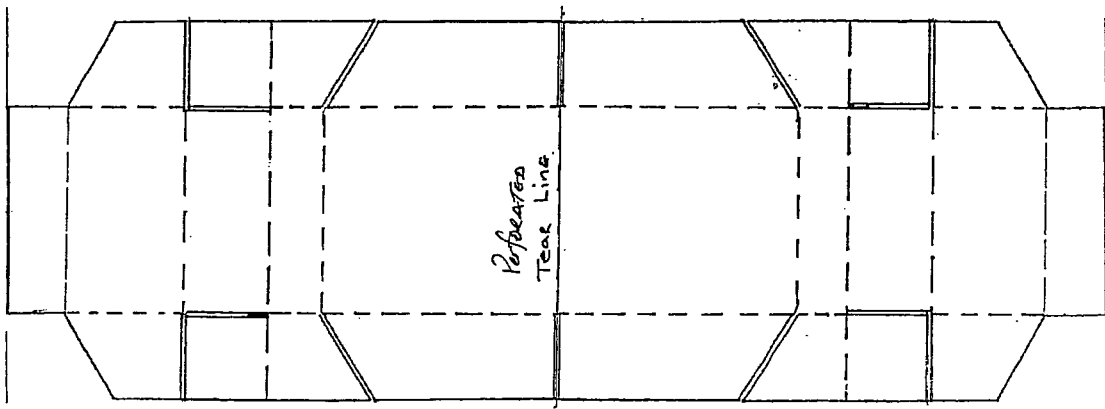


FIGURE 25

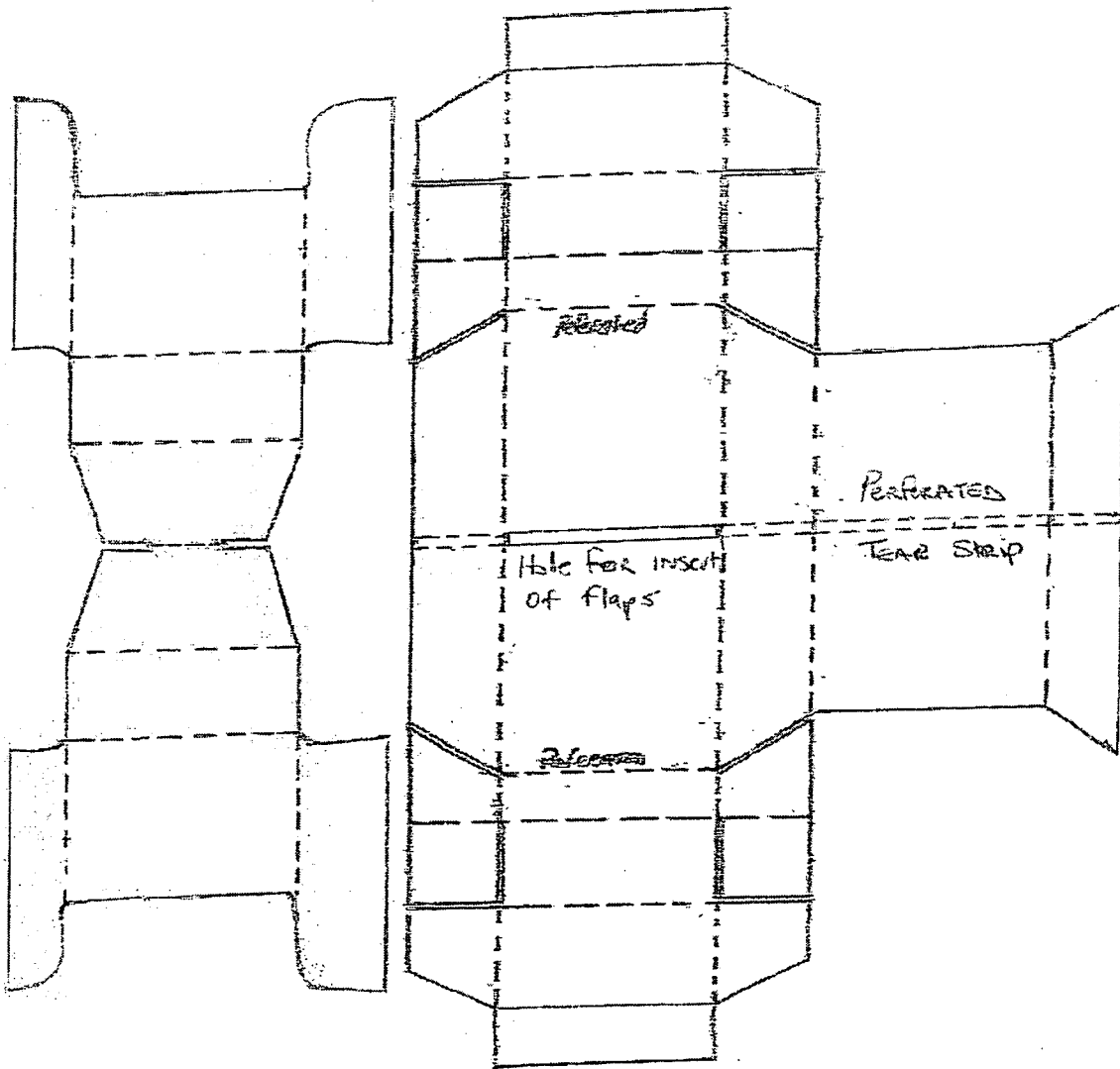


FIGURE 26

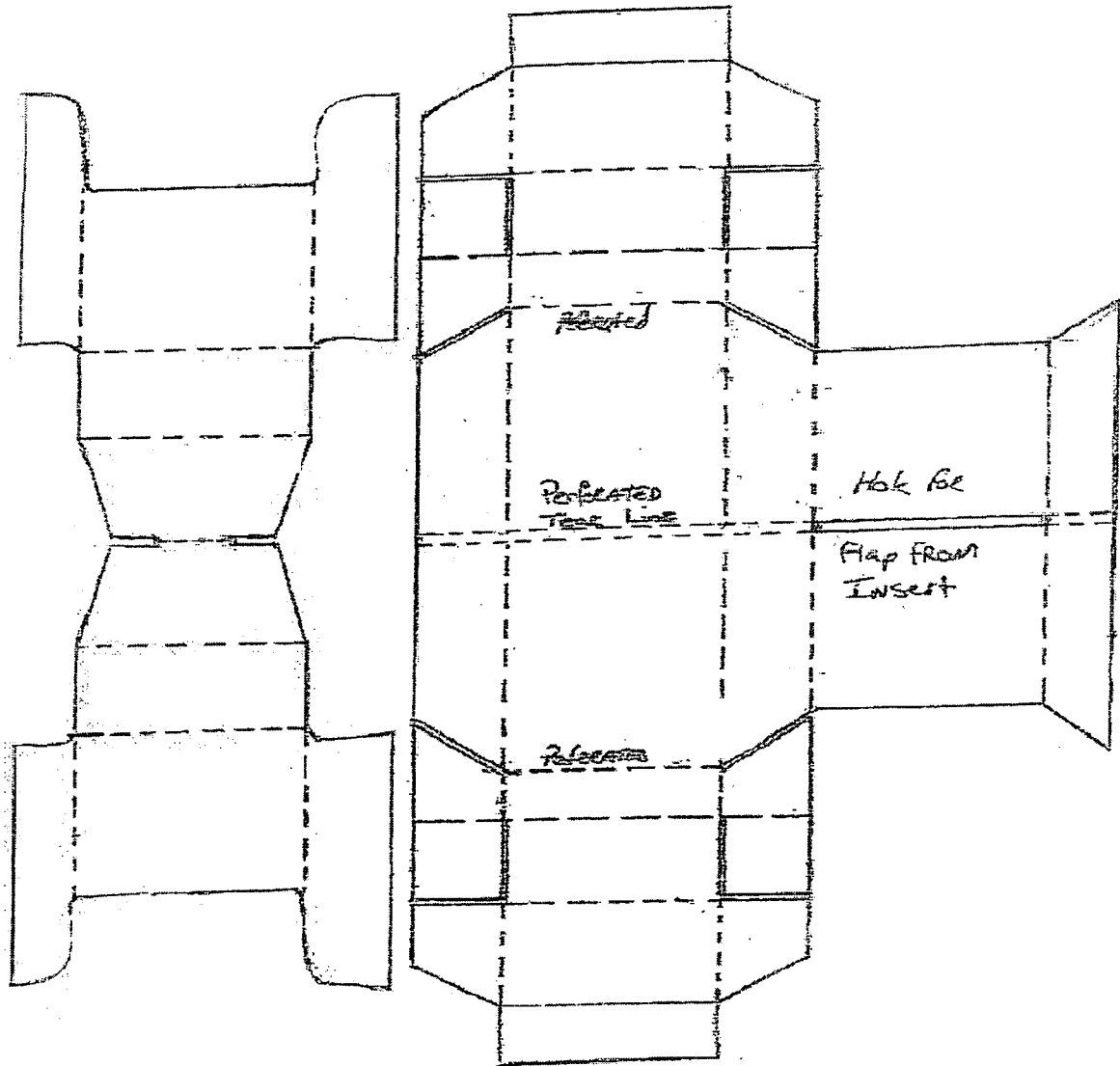


FIGURE 27

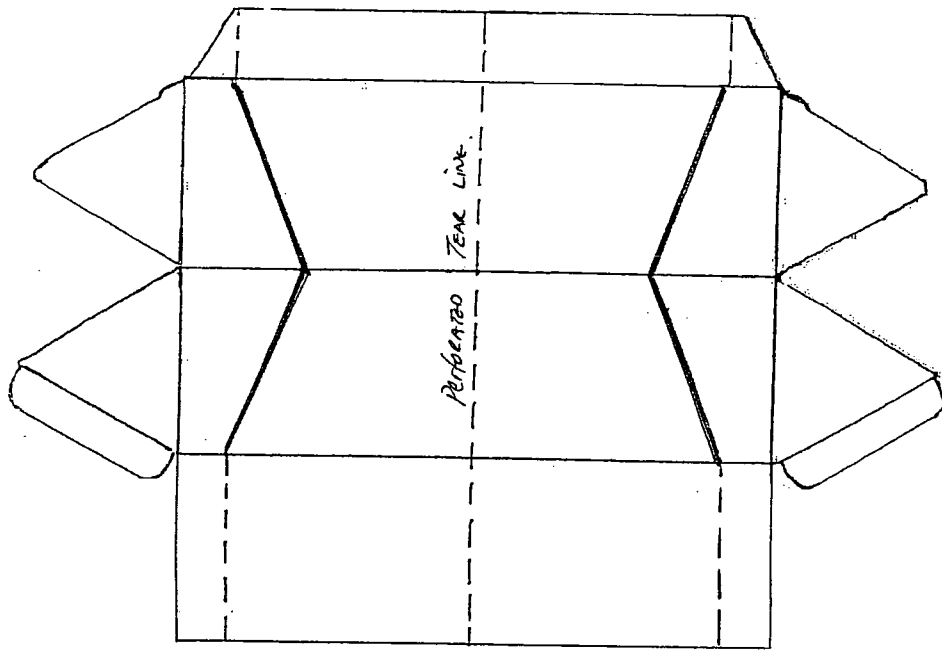


FIGURE 28

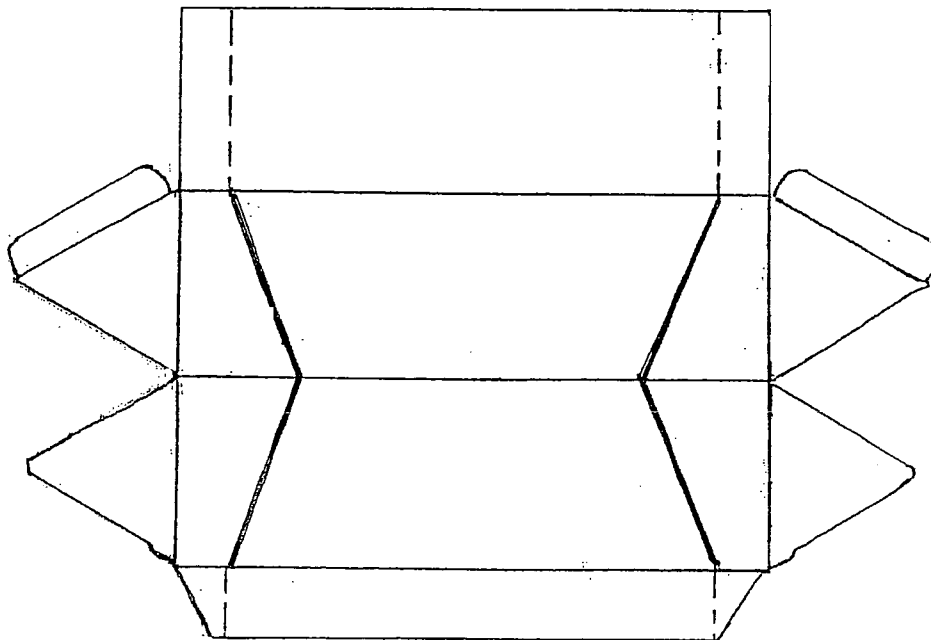


FIGURE 29

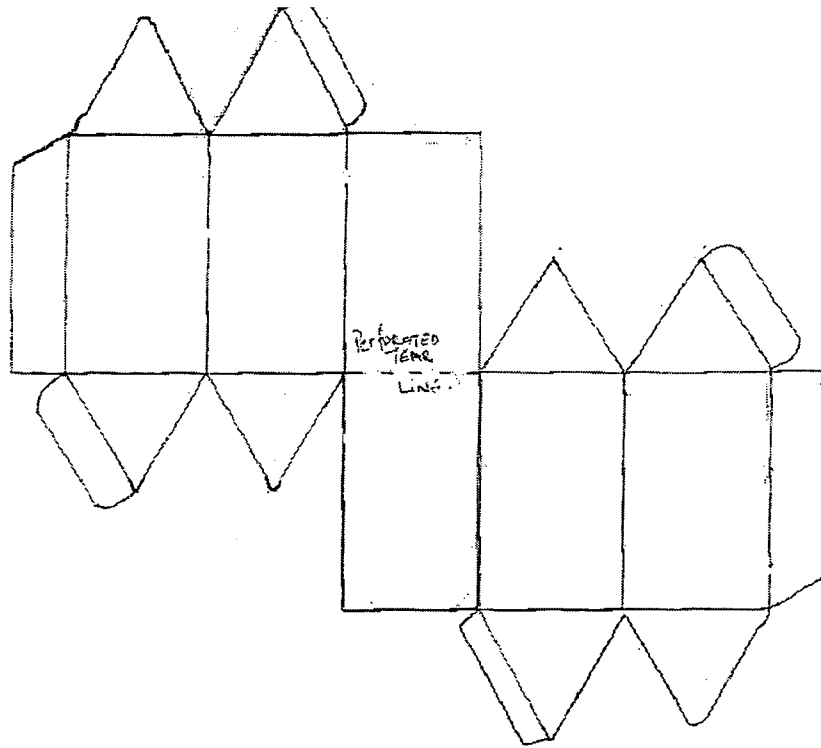


FIGURE 30

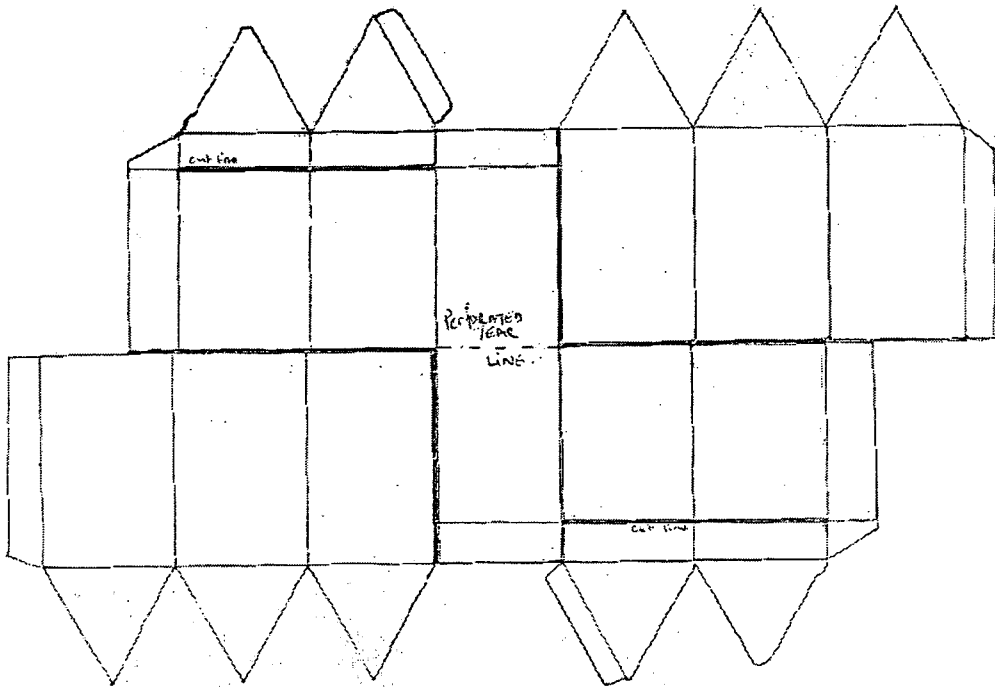


FIGURE 31

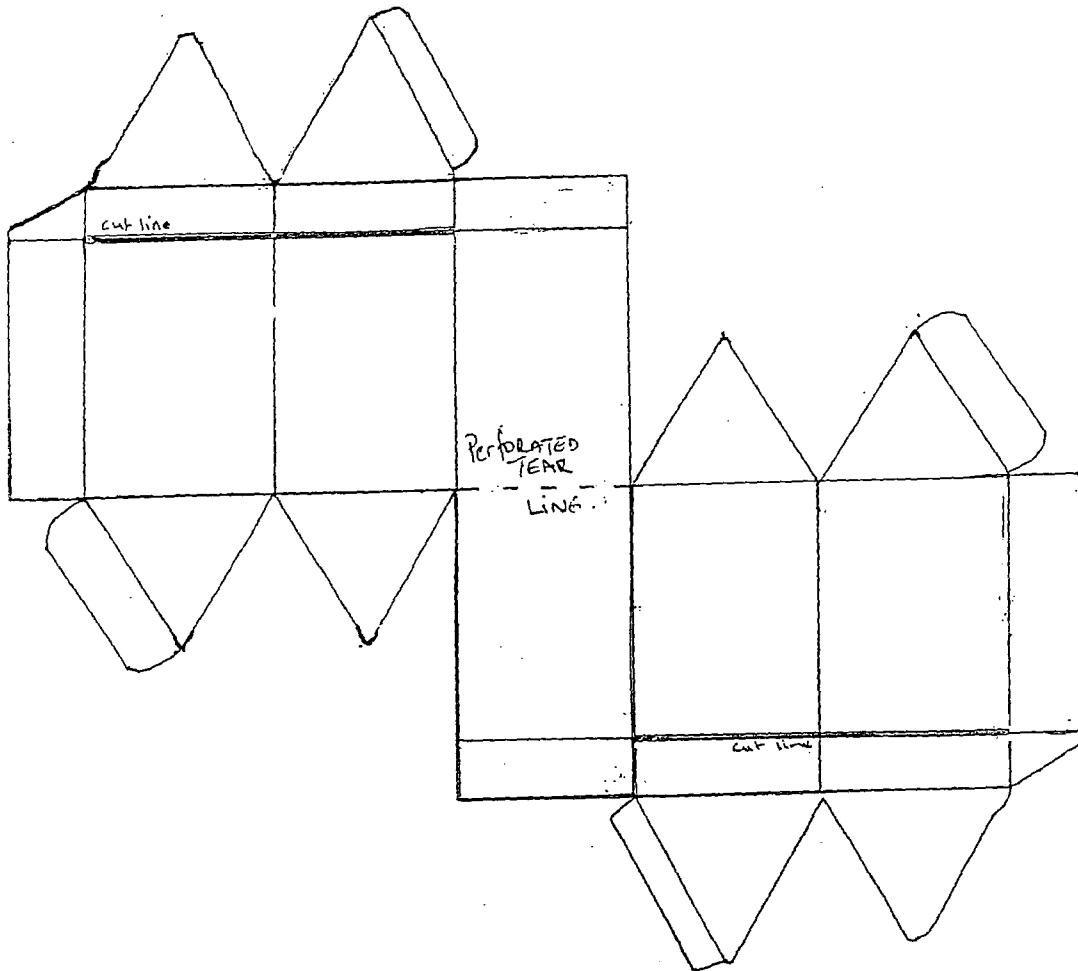


FIGURE 32

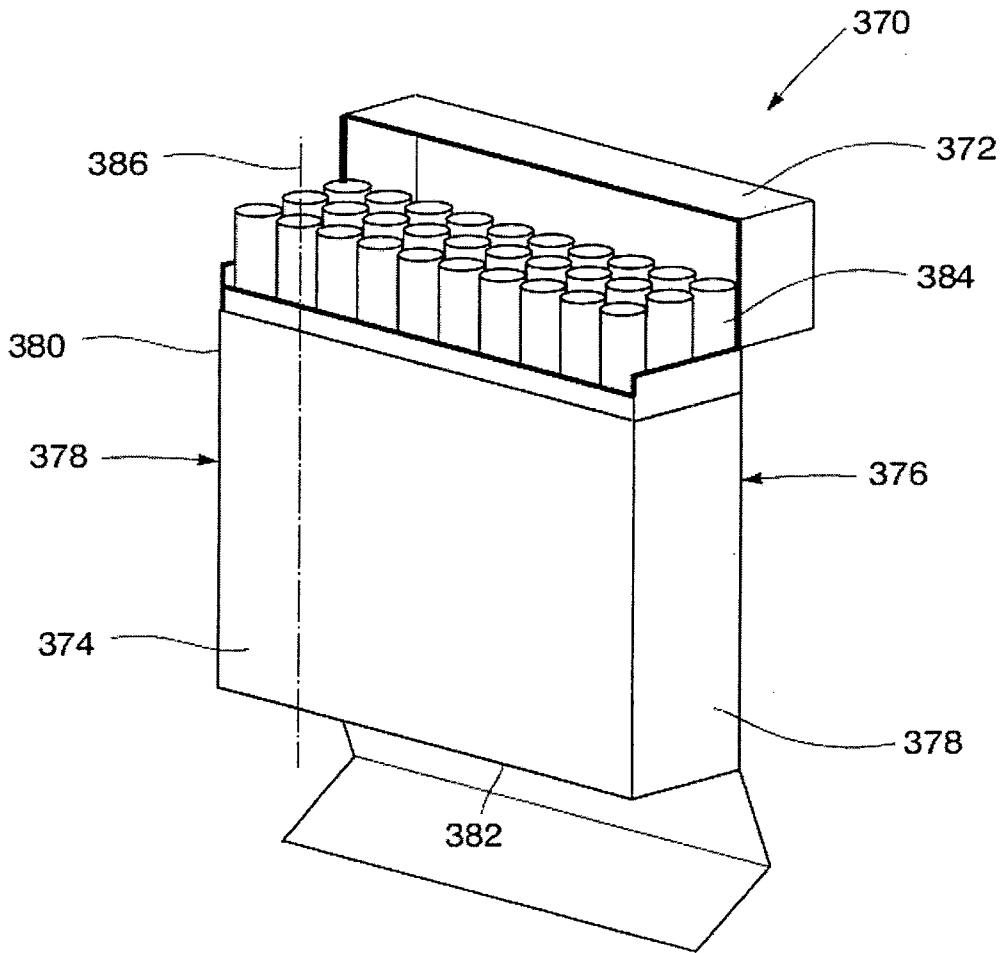


FIGURE 33

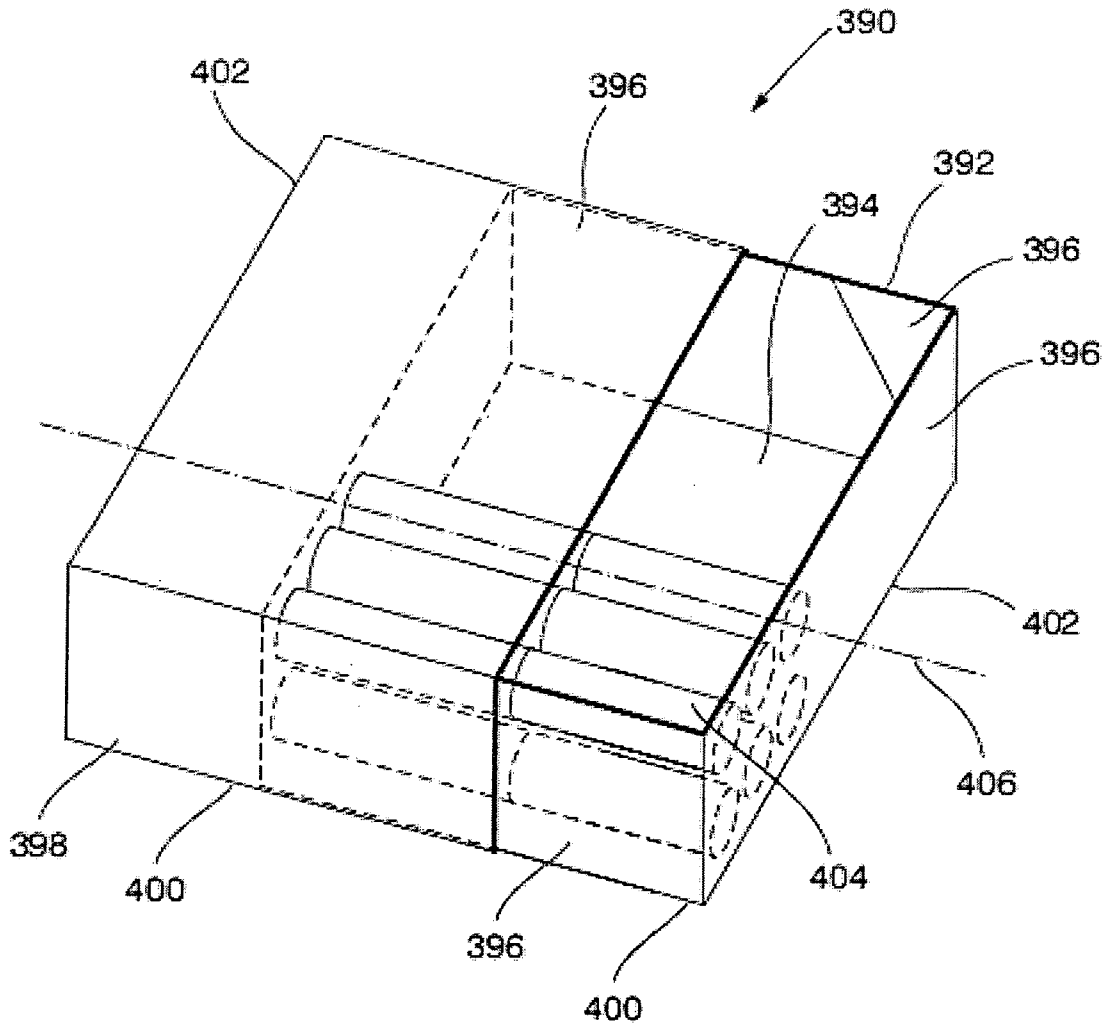


FIGURE 34

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2010/001026

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl.												
B65D 85/10 (2006.01) A24F 15/02 (2006.01) A24F 15/12 (2006.01)												
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 85/10, A24F 15/-												
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 practicable, search terms used) EPODOC, WPI: IPC; B65D 85/10, A24F 15/- & keywords (Cigarette, Box, Break, Split, Pair, Dual) and simmlar terms.												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
X	DE 2702234 A1 (SCHEIDT) 27 August 1978 fig 1, 7 & 8, page 11 para 1	6, 8, 11, 12										
A	US 2005/0061340 A1 (WOJCIK) 24 March 2005											
A	WO 2005/089576 A1 (MAIDA et al) 29 September 2005											
<input type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"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</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"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</td> </tr> <tr> <td>"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)</td> <td>"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</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"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	"E" earlier application or patent but published on or after the international filing date	"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	"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)	"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	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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											
"E" earlier application or patent but published on or after the international filing date	"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											
"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)	"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											
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family											
"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 21 October 2010.	Date of mailing of the international search report 26 OCT 2010											
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. +61 2 6283 7999	Authorized officer M. Olley AUSTRALIAN PATENT OFFICE (ISO 9001 Quality Certified Service) Telephone No : +61 2 6283 2143											

Supplemental Box

(To be used when the space in any of Boxes I to IV is not sufficient)

Continuation of Box No: III

This International Application does not comply with the requirements of unity of invention because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept.

In assessing whether there is more than one invention claimed, I have given consideration to those features which can be considered to potentially distinguish the claimed combination of features from the prior art. Where different claims have different distinguishing features they define different inventions.

This International Searching Authority has found that there are different inventions as follows:

- Claims 1 to 15. It is considered that “A box of cigarettes comprising two cigarette packs each having at least one open end and oriented to be aligned open end to open end so that open ends abut on a breaking plane” comprises a first distinguishing feature.
- Claims 16 to 19. It is considered that “A pack of cigarettes comprising a standard cigarette box, wherein the cigarette box contains a plurality of shorter than conventional length cigarettes” comprises a second distinguishing feature.
- Claims 20 to 23. It is considered that “A cigarette box having at least one window therein” comprises a third distinguishing feature.
- Claim 24. It is considered that “A cigarette box made of a suitably biodegradable plastics material” comprises a fourth distinguishing feature.

PCT Rule 13.2, first sentence, states that unity of invention is only fulfilled when there is a technical relationship among the claimed inventions involving one or more of the same or corresponding special technical features. PCT Rule 13.2, second sentence, defines a special technical feature as a feature which makes a contribution over the prior art.

Each of the abovementioned groups of claims has a different distinguishing feature and they do not share any feature which could satisfy the requirement for being a special technical feature. Because there is no common special technical feature it follows that there is no technical relationship between the identified inventions. Therefore the claims do not satisfy the requirement of unity of invention *a priori*.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/IB2010/001026

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
DE 2702234	NONE
US 2005061340	CA 2456401
WO 2005089576	NONE

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX

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.:
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:

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:

See Supplemental Box

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying 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 report covers 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.: **1 to 15**

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.