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(54) Hinge lid container with audible indication of closing

(57) A hinge lid container (10) for consumer goods comprises: a box (12) comprising a box front wall (16) having a cut out portion (30) therein; an inner frame (34) mounted within the box (12) and comprising a frame front wall (36), wherein a portion of the frame front wall is exposed through the cut out portion (30) in the box front wall (16); a spacer element (40) arranged between the box (12) and the inner frame (34) and providing separation between the box front wall (16) and the frame front wall (36); and a hinge lid (14) connected to the box. The hinge lid (14) is pivotable between a closed position and an open position and comprises a lid flap (32) hingedly connected to the lid front wall (16a) and folded inwardly towards the inner surface of the lid front wall.

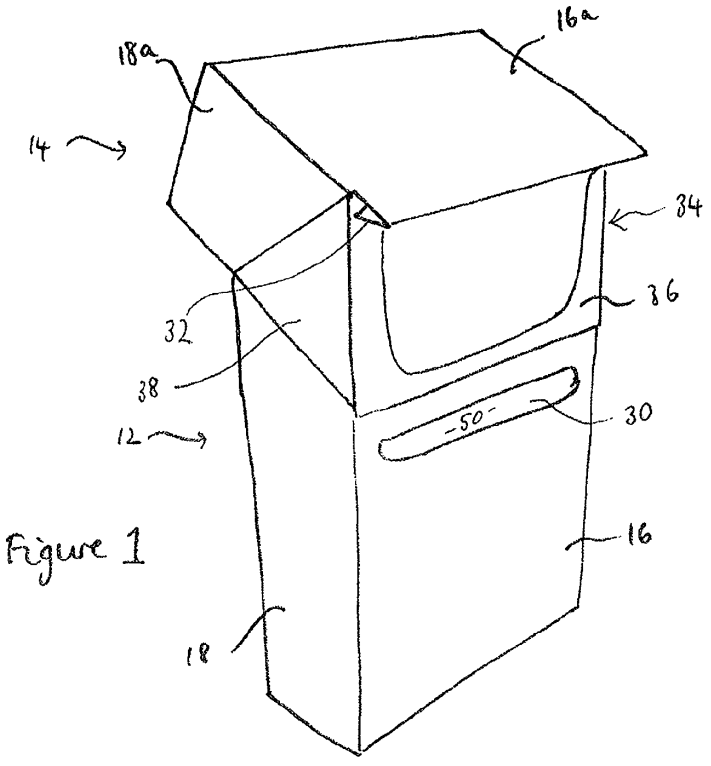

Figure 1

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Description

[0001] The present invention relates to a novel hinge lid container, which finds particular application as a container for consumer goods, for example elongate smoking articles such as cigarettes.

[0002] It is known to package elongate smoking articles and other consumer goods in containers formed from folded laminar blanks. Elongate smoking articles, such as cigarettes and cigars, are commonly sold in hinge lid packs having a box portion for housing the smoking articles and a lid portion connected to the box portion about a hinge line extending across the rear wall of the container. Such packs are typically constructed from one-piece laminar cardboard blanks. In use, the lid portion is pivoted about the hinge line to open the pack and so gain access to the smoking articles held in the box portion.

[0003] Hinge lid containers are commonly used for packaging cigarettes and other consumer goods which are adversely affected by prolonged contact with air or moisture. Prior to the first opening, a container will typically be wrapped in an outer wrapper. However, this wrapper must be at least partially removed in order to access the consumer goods and will not typically be re-applied or re-sealed each time the container is opened and closed. It is therefore important that the container can be closed securely in order to prevent the inadvertent loss of some of the consumer goods or parts of the consumer goods. The loss of parts of consumer goods may be inconvenient, for example, where the consumer goods are smoking articles and the parts of the consumer goods are so called tobacco shorts. Tobacco shorts are small pieces of cut tobacco that get detached from the open end of the cigarette through transport and handling.

[0004] It would therefore be desirable to provide a hinge lid container with a novel arrangement for allowing the consumer to confirm that the container is fully closed between uses and that the consumer goods within the container will remain inside the container. It would be particularly desirable if such an arrangement could ensure that the hinge lid remains in the closed position between uses and that inadvertent or accidental opening of the hinge lid is avoided.

[0005] According to the present invention there is provided a hinge lid container for consumer goods comprising: a box comprising a box front wall having a cut out portion therein; an inner frame mounted within the box and comprising a frame front wall, wherein a portion of the frame front wall is exposed through the cut out portion in the box front wall; a spacer element arranged between the box and the inner frame and providing separation between the box front wall and the frame front wall; and a hinge lid connected to the box along a hinge line and pivotable about the hinge line between a closed position and an open position. The hinge lid comprises a lid front wall and a lid flap hingedly connected to the lid front wall and folded inwardly towards the inner surface of the lid front wall. When the hinge lid is in the closed position the lid front wall overlies the cut out portion in the box front wall and during pivotal movement of the hinge lid from the open position to the closed position, at least a part of the lid flap slides along the box front wall and into the cut out portion in the box front wall, thereby generating a sound.

[0006] The terms "front", "back", "upper", "lower", "side", "top", "bottom", "left", "right" and other terms used to describe relative positions of the components of containers according to the invention refer to the container in an upright position. When the container in the upright position is open, the consumer goods may be removed from the upper end of the container.

[0007] The term "hinge line" refers to a line about which the hinge lid may be pivoted in order to open the container. A hinge line may be, for example, a fold line or a score line in the panel forming the back wall of the container. Alternatively, a hinge line may be a fold line or a score line in a piece of material bridging the lower edge of the back wall of the hinge lid and the upper edge of the back wall of the box. Such a piece of material may be, for example, a label that is permanently or removably attached to the back wall of the lid portion and the back wall of the box. Preferably, the hinge line is positioned along the back wall of the container at a level below the upper edge of the container.

[0008] The production of a sound during movement of the hinge lid of the container according to invention from the open position to the closed position advantageously provides the consumer with an audible indication of closure of the container. The production of a sound upon closure of a container may advantageously be employed, for example, to provide the consumer with an audible indication that the container has been correctly or fully closed, thereby ensuring that all parts of the consumer goods are retained within the container. For example it is ensured that no tobacco shorts will fall out of the container during transport between uses.

[0009] In the hinge lid containers of the present invention, the cut out portion in the box front wall forms a recess together with the underlying frame front wall. A sound will typically be generated as the lid flap, or the part of the lid flap in contact with the box front wall passes over the edge of the cut out portion and drops into the recess. As the lid flap or part of the lid flap drops into the recess, it springs against the surface of the frame front wall due to the resilient bias of the lid flap away from the lid front wall. The sound will typically be heard as an audible 'click' or snapping noise.

[0010] The inclusion of a spacer element between the box and the inner frame provides a separation between the box front wall and the frame front wall. This increases the depth of the recess formed by the cut out portion and the underlying frame front wall. The additional depth of the recess advantageously increases the distance over which the lid flap or part thereof must drop before hitting the surface of the inner frame front wall. Due to the resilient force that biases the lid flap, the lid flap is accel-

erated towards the bottom of the recess and reaches a higher velocity, the deeper the recess is. The higher the velocity at which the part of the lid flap contacts the frame front wall, the better is the audibility of the sound generated.

[0011] The position and configuration of the spacer element is preferably such that the element itself does not extend underneath the cut out portion in the box front wall. This arrangement maximises the depth of the recess formed by the cut out portion and the frame front wall.

[0012] Preferably, in the closed position of the hinge lid at least a part of the lid flap engages with an edge of the cut out portion to lock the hinge lid in the closed position. Typically, a free edge of the lid flap abuts the upper edge of the cut out portion in the closed position. In order to open the hinge lid, it is necessary to apply a positive force to release the lid flap from engagement with the edge of the cut out portion. The likelihood of the hinge lid being inadvertently moved to an open position is therefore significantly reduced. This prevents the consumer goods or parts of the consumer goods from falling out of the container.

[0013] Preferably, as the hinge lid is moved from the closed position to the open position the lid flap is released from engagement with the edge of the cut out portion, thereby generating a second sound. The production of a sound upon opening of a hinge lid container according to the invention may advantageously be employed, for example, to provide an audible indication of tampering with the contents of the container. In addition, the sounds generated upon closing and upon opening of the container advantageously improve the quality perception of the closing mechanism.

[0014] In certain preferred embodiments of the hinge lid container according to the present invention, the lid flap lies between the box front wall and the frame front wall when the hinge lid is in the closed position. This provides a similar function to the engagement of the lid flap with an edge of the cut out portion, as described above, in that the position of the lid flap locks the hinge lid in the closed position and ensures that the hinge lid is not moved to an open position until a positive force is applied to release the lid flap.

[0015] The spacer element may take a variety of forms and preferably provides a separation between the box front wall and the frame front wall which is at least the same as the thickness of the box front wall and more preferably, greater than the thickness of the box front wall.

[0016] Preferably, the spacer element is in the form of a spacer panel, which extends over some or all of the area of the box front wall. The spacer panel may be provided such that it lies substantially flat between the box front wall and the frame front wall. In this case the separation between the box front wall and the frame front wall is substantially equal to the thickness of the spacer panel. Alternatively, the spacer panel may be provided such that it lies at an angle to the box front wall and the frame front wall. In this arrangement, the separation between the box front wall and the frame front wall will typically be greater than the thickness of the spacer panel. The separation will depend upon the angle of the spacer panel.

[0017] As described above, any increase in the separation between the box front wall and the frame front wall increases the effective depth of the recess formed by the cut out portion in the box front wall and the frame front wall. This increases the distance over which the part of the lid flap must drop before hitting the surface of the frame front wall. As described above, this improves the audibility of the sound generated as the hinge lid is moved to the closed position.

[0018] Where a spacer panel is provided, the spacer panel and the box front wall are preferably connected along a hinge line extending across an edge of the box front wall. Particularly preferably, the spacer panel is connected to the box front wall along the top edge of the box front wall, so that the spacer panel can be conveniently folded between the box and the inner frame. This arrangement also enables the spacer panel to be integrally formed with the box, from a single laminar blank.

[0019] The spacer panel may be connected to the box front wall along the hinge line only, so that the spacer panel is free to move relative to the box about the hinge line and is restrained only by the position of the frame front wall. With this arrangement, the spacer panel may project at an angle to the box front wall, increasing the separation between the box front wall and the frame front wall, as described above. This arrangement may be preferred for embodiments in which the lid flap lies between the box front wall and the frame front wall in the closed position of the hinge lid, as described above.

[0020] Alternatively, the spacer panel may be adhered or attached to the inner surface of the box front wall, for example by means of an adhesive. In this case, the spacer panel will lie flat against the box front wall and the separation between the box front wall and the frame front wall will be substantially equal to the thickness of the spacer panel and the adhesive layer.

[0021] Alternatively, or in addition to any attachment between the box front wall and the frame front wall, the spacer panel may optionally be adhered or attached to the frame front wall. For example, in a particularly preferred embodiment of the present invention, the spacer panel is attached to the frame front wall, but the spacer panel and the box front wall are connected along the hinge line only. In this embodiment, the edge of the cut out portion in the box front wall is typically separated from both the underlying spacer panel and the frame front wall. This arrangement is particularly suitable for embodiments in which it is desired to produce an additional sound upon opening of the hinge lid.

[0022] The spacer panel or other type of spacer element may extend over substantially the entire area of the box front wall. In this case, the size and shape of the

spacer element will be substantially the same as that of the box front wall. Alternatively, the spacer element may cover only a portion of the area of the box front wall. For example, where a spacer panel extends from a hinge line along the top edge of the box front wall, the spacer panel may extend only part way down the box front wall or may extend all of the way to the bottom edge of the box front wall.

[0023] In certain embodiments, the spacer panel may extend under at least a part of the cut out portion in the box front wall. In such cases, the spacer panel preferably comprises a cut out portion which substantially coincides with the cut out portion in the box front wall, so that the spacer panel is not visible through the cut out portion in the box front wall and does not affect the depth or shape of the recess. Preferably, the cut out portion in the spacer panel is at least slightly larger than the cut out portion in the box front wall so that the alignment of the cut out portions is easier. Where the spacer panel does not coincide with the entire cut out portion, it may be sufficient to provide a smaller cut out portion in the spacer panel, provided that the spacer panel is cut away such that it is not visible through the cut out portion in the box front wall.

[0024] The lid flap of hinge lid containers according to the present invention is hingedly connected to the lid front wall, preferably along the bottom edge of the lid front wall. The lid flap is folded inwardly towards the inner surface of the lid front wall. Preferably, the width of the lid flap is less than the width of the lid front wall so that the lid flap does not extend all the way to the side edges of the lid front wall.

[0025] Preferably, the dimensions and position of the cut out portion in the box front wall are such that the part of the lid flap that comes into contact with the box front wall can be fully received into the cut out portion in the closed position of the hinge lid. In certain embodiments, the width of the cut out portion is greater than the width of the lid flap so that the entire lid flap can readily slide into the cut out portion as the hinge lid is moved to the closed position. The provision of a lid flap that has a width less than the width of the container means that the cut out portion does not need to extend all of the way across the box front wall. This ensures that the effect of the cut out on the structural rigidity of the container is maintained as small as possible. In other embodiments, the cut out portion may be adapted to receive only a portion of the lid flap.

[0026] In certain embodiments, the lid flap is connected to the lid front wall along the hinge line only. The lid flap is typically resiliently biased away from the inner surface of the lid front wall such that in the open position of the hinge lid, the lid flap projects at an angle from the lid front wall. In this case, as the hinge lid is moved to the closed position, the free edge of the lid flap comes into contact with the box front wall before any other part of the lid flap. The free edge of the lid flap slides along the box front wall and eventually drops into the recess formed by the cut out portion on the box front wall and the frame front wall. A sound is generated as the lid flap springs against the frame front wall at the bottom of the recess.

[0027] The lid flap may be formed of a single portion with a straight free edge. Alternatively, the lid flap may comprise a first lid flap portion and a second lid flap portion, both of which are hingedly connected to the lid front wall along the same hinge line. Preferably, the first lid flap portion extends beyond the second lid flap portion such that during the pivotal movement of the hinge lid towards the closed position the first lid flap portion slides into the cut out portion before the second lid flap portion, thereby generating two successive sounds.

[0028] In other embodiments of the present invention, the lid flap is attached to the inner surface of the lid front wall such that the edge of the lid flap is no longer free to slide into the cut out portion. Instead, the lid flap comprises a cut line forming a retention tab connected to the lid flap along a hinge line and projecting away from the lid flap. During movement of the hinge lid towards the closed position, the free edge of the retention tab slides along the box front wall and into the recess formed by the cut out portion. A sound is generated as the retention tab springs against the frame front wall. Preferably, in the closed position of the hinge lid, the retention tab lies between the box front wall and the frame front wall. Particularly preferably, an additional sound is generated as the hinge lid is moved to the open position and the retention tab is released from the cut out portion.

[0029] The configuration of the cut out portion in the box front wall will depend upon the shape and orientation of the lid flap. As described above, the position, dimensions and shape of the cut out portion must be such that at least a part of the lid flap can readily slide into the cut out portion as the hinge lid is moved towards the closed position.

[0030] Preferably, the cut out portion comprises at least one elongate cut out portion extending across the box front wall. The at least one elongate cut out portion preferably extends in a substantially horizontal direction across the box front wall. Where two or more cut out portions are provided, the cut out portions may be separate from each other or may be connected together to form an integral cut out portion.

[0031] In one preferred embodiment of the present invention, the box front wall comprises a first cut out portion and a second cut out portion vertically offset from the first cut out portion and the hinge lid comprises a first lid flap portion and a second lid flap portion. As the hinge lid container is moved to the closed position, the first lid flap portion slides into the first cut out portion at a different time to when the second lid flap portion slides into the second cut out portion, thereby generating two successive sounds. Preferably, the first lid flap portion extends beyond the second lid flap portion and the first cut out portion is provided above the second cut out portion.

[0032] Preferably, the first and second cut out portions in the box front wall are connected to form an integral, Z-shaped cut out. However, in certain embodiments the

first and second cut out portions may not be connected to each other.

[0033] In the closed position of the lid, the lid front wall overlies the cut out portion in the box front wall. Therefore, unlike in many standard hinge lid packs, the lower edge of the lid front wall does not abut the upper edge of the box front wall. Instead, in the closed position a lower part of the lid front wall overlaps with an upper part of the box front wall. In certain embodiments, the lower part of each lid side wall may similarly overlap with the upper part of the corresponding box side wall in the closed position of the hinge lid. Alternatively, the lower edge of each lid side wall may abut the upper edge of the corresponding box side wall in the closed position of the hinge lid. In this case, the lid front wall extends beyond the lower edges of the lid side walls.

[0034] The invention is further directed to a method of creating a sound with a hinge lid container wherein the method comprises the steps of providing a hinge lid container comprising a lid with a lid flap and a box front wall with a front wall cut out, wherein the cut out comprises a cut out bottom wall, providing a spacer panel between the front wall cut out and the cut out bottom wall and closing the container such that the lid flap slides into the cut out, thereby generating a sound when the lid flap strikes the cut out bottom wall.

[0035] In a further embodiment of the method according to the invention, the method further comprises the step of opening the container such that the lid flap comes into an interlocking position with the edge of the front wall cut out before the lid is fully opened and wherein the lid flap generates a second sound when the lid flap is released from the interlocking position when further opening the lid.

[0036] The container may be formed from any suitable materials including, but not limited to, cardboard, paperboard, plastic, or combinations thereof. Preferably, the container is formed from one or more folded laminar cardboard blanks and preferably, the cardboard has a weight of between about 100 grams per square metre and about 350 grams per square metre.

[0037] Containers according to the invention may be in the shape of a rectangular parallelepiped, with right-angled longitudinal and right-angled transverse edges. Alternatively, the container may comprise one or more rounded longitudinal edges, rounded transverse edges, bevelled longitudinal edges or bevelled transverse edges, or combinations thereof. For example, the container according to the invention may comprise, without limitation:

- One or two longitudinal rounded or bevelled edges on the front wall, and/or one or two longitudinal rounded or bevelled edges on the back wall.
- One or two transverse rounded or bevelled edges on the front wall, and/or one or two transverse rounded or bevelled edges on the back wall.
- One longitudinal rounded edge and one longitudinal bevelled edge on the front wall, and/or one transverse rounded edge and one transverse bevelled edge on the back wall.
- One or two transverse rounded or bevelled edges on the front wall and one or two longitudinal rounded or bevelled edges on the front wall.
- Two longitudinal rounded or bevelled edges on a first side wall or two transverse rounded or bevelled edges on the second side wall.

[0038] Where the container comprises one or more rounded edges and is made from one or more laminar blanks, preferably the blanks comprise three, four, five, six or seven scoring lines or creasing lines to form each rounded edge in the assembled container. The scoring lines or creasing lines may be either on the inside of the container or on the outside of the container. Preferably, the scoring lines or creasing lines are spaced from each other by between about 0.3 mm and 4 mm.

[0039] Preferably, the spacing of the creasing lines or scoring lines is a function of the thickness of the laminar blank. Preferably, the spacing between the creasing lines or scoring lines is between about 0.5 and about 4 times larger than the thickness of the laminar blank.

[0040] Where the container comprises one or more bevelled edge, preferably the bevelled edge has a width of between about 1 mm and about 10 mm, preferably between about 2 and about 6 mm. Alternatively, the container may comprise a double bevel formed by three parallel creasing or scoring lines that are spaced such that two distinct bevels are formed on the edge of the container.

[0041] Where the container comprises a bevelled edge and is made from one or more laminar blanks, the bevel may be formed by two parallel creasing lines or scoring lines in the laminar blank. The creasing lines or scoring lines may be arranged symmetrically to the edge between a first wall and a second wall. Alternatively, the creasing lines or scoring lines may be arranged asymmetrically to the edge between the first wall and the second wall, such that the bevel reaches further into the first wall of the container than into the second wall of the container.

[0042] Alternatively, the container may have a non-rectangular transversal cross section, for example polygonal such as triangular or hexagonal, semi-oval or semi-circular.

[0043] Containers according to the invention find particular application as packs for elongate smoking articles such as, for example, cigarettes, cigars or cigarillos. It will be appreciated that through appropriate choices of the dimensions thereof, containers according to the invention may be designed for different numbers of conventional size, king size, super-king size, slim or super-slim cigarettes. Alternatively, other consumer goods may be housed inside the container.

[0044] Through an appropriate choice of the dimensions thereof, containers according to the invention may

be designed to hold different total numbers of smoking articles, or different arrangements of smoking articles. For example, through an appropriate choice of the dimensions thereof, containers according to the invention may be designed to hold a total of between ten and thirty smoking articles.

[0045] The smoking articles may be arranged in different collations, depending on the total number of smoking articles. For example, the smoking articles may be arranged in a single row of six, seven, eight, nine or ten. Alternatively, the smoking articles may be arranged in two or more rows. The two or more rows may contain the same number of smoking articles. For example, the smoking articles may be arranged in: two rows of five, six, seven, eight, nine or ten; three rows of five or seven; or four rows of four, five or six. Alternatively, the two or more rows may include at least two rows containing different number of smoking articles to each other. For example, the smoking articles may be arranged in: a row of five and a row of six (5-6); a row of six and a row of seven (6-7); a row of seven and a row of eight (7-8); a middle row of five and two outer rows of six (6-5-6); a middle row of five and two outer rows of seven (7-5-7); a middle row of six and two outer rows of five (5-6-5); a middle row of six and two outer rows of seven (7-6-7); a middle row of seven and two outer rows of six (6-7-6); a middle row of nine and two outer rows of eight (8-9-8); or a middle row of six with one outer row of five and one outer row of seven (5-6-7).

[0046] Containers according to the present invention may hold smoking articles of the same type or brand, or of different types or brands. In addition, both filterless smoking articles and smoking articles with various filter tips may be contained, as well as smoking articles of differing length (for example, between about 40 mm and about 180 mm), diameter (for example, between about 4 mm and about 9 mm). In addition, the smoking articles may differ in strength of taste, resistance to draw and total particulate matter delivery. Preferably, the dimensions of the container are adapted to the length of the smoking articles, and the collation of the smoking articles. Typically, the outer dimensions of the container are between about 0.5 mm to about 5 mm larger than the dimensions of the bundle or bundles of smoking articles housed inside the container.

[0047] The length, width and depth of containers according to the invention may be such that, in the closed lid position, the resultant overall dimensions of the container are similar to the dimensions of a typical disposable hinge-lid pack of twenty cigarettes.

[0048] Preferably, containers according to the invention have a height of between about 60 mm and about 150 mm, more preferably a height of between about 70 mm and about 125 mm, wherein the height is measured from the bottom wall to the top wall of the container.

[0049] Preferably, containers according to the invention have a width of between about 12 mm and about 150 mm, more preferably a width of between about 70 mm and about 125 mm, wherein the width is measured from one side wall to the other side wall of the container.

[0050] Preferably, containers according to the invention have a depth of between about 6 mm and about 150 mm, more preferably a depth of between about 12 mm and about 25 mm wherein the depth is measured from the front wall to the back wall of the container.

[0051] Preferably, the ratio of the height of the container to the depth of the container is in between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 3 to 1 and 5 to 1

[0052] Preferably, the ratio of the width of the container to the depth of the container is in between about 0.3 to 1 and about 10 to 1, more preferably between about 2 to 1 and about 8 to 1, most preferably between about 2 to 1 and 3 to 1.

[0053] The interior surfaces or exterior surfaces of containers or both interior and exterior surfaces of containers according to the invention may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trade marks, slogans and other consumer information and indicia.

[0054] The consumer goods within the containers according to the invention may be individually wrapped. This has the advantage that once the container according to the invention is opened and a first consumer good is removed, the remainder of the consumer goods are still wrapped and remain such protected from dust, sunlight or other environmental influences.

[0055] Once filled, containers according to the invention may be shrink wrapped or otherwise over wrapped with a transparent polymeric film of, for example, high or low density polyethylene, polypropylene, oriented polypropylene, polyvinylidene chloride, cellulose film, or combinations thereof in a conventional manner. Where containers according to the invention are over wrapped, the over wrapper may include one or more a tear tapes. In addition, the over wrapper may be printed with images, consumer information or other data.

[0056] Preferably, containers according to the invention are formed from a single laminar blank, which is provided with a box-defining portion incorporating the cut out portion in the box front wall, and a lid-defining portion incorporating the lid flap.

[0057] The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a container according to a first embodiment of the present invention with the hinge lid in an open position;

Figure 2 shows a side view of the top part of container of Figure 1;

Figure 3 shows the cardboard blank for forming the container of Figures 1 and 2;

Figure 4 shows a cardboard blank for forming a container according to a second embodiment of the

present invention; and

Figure 5 shows a cardboard blank for forming a container according to a third embodiment of the present invention.

[0058] The hinge lid container 10 shown in Figures 1 and 2 is a rectangular parallelepiped and comprises a lower box 12 and an upper lid 14 that is hinged to the box 12 along a hinge line extending substantially horizontally along the back wall of the container. A bundle of cigarettes (not shown) is housed in the box 12 of the container 10. The overall size of container 10 is substantially the same as that of a standard hinge lid cigarette pack. The container is formed from the laminar blank 110 shown in Figure 3.

[0059] The box 12 has a box front wall 16, a box left side wall 18, a box right side wall 20, a box back wall 22, and a box bottom wall 24. The upper side of the box 12 is open, to provide an upper opening through which the cigarettes can be removed. An elongate, rectangular cut out 30 is provided at the upper end of the box front wall 16. The cut out 30 extends in a substantially horizontal direction across the box front wall 16. The width of the cut out 30 is less than the overall width of the box front wall 16 so that the ends of the cut out 30 are located at a short distance from the side edges of the box front wall 16.

[0060] The lid 14 has a lid front wall 16a, a lid left side wall 18a, a lid right side wall 20a, a lid back wall 22a and a lid top wall 26. When the container 10 is closed, the free edges of the lid side walls 18a, 20a abut the free edges of the corresponding box side walls 18, 20. However, the lid front wall 16a extends beyond the free edges of the lid side walls 18a, 20a such that in the closed position of the lid, the lid front wall 16a overlaps the upper part of the box front wall 16 and covers the cut out portion 30.

[0061] As can be seen from Figures 1 to 3, the lid 14 further comprises a lid flap 32 which is connected to the lid front wall 16a along a fold line extending across the bottom edge of the lid front wall 16a. The lid flap 32 is folded inwardly towards the inner surface of the lid front wall 16a. As shown in Figure 2, in the open position of the lid 14 the lid flap 32 lies at an angle of approximately 45 degrees to the lid front wall 16a.

[0062] An inner frame 34 is mounted within the box 12, in the conventional manner. The inner frame 34 comprises a frame front wall 36, a frame left side wall 38 and a frame right side wall. The upper edges of the inner frame 34 extend above the upper edges of the box 12 and the frame front wall 36 is provided with a cut out at the top edge, to facilitate removal of the smoking articles from the box portion 12. A portion of the frame front wall 36 is visible through the cut out 30 in the box front wall 16.

[0063] The box 12 further comprises a spacer panel 40 which is connected to the box front wall 16 along a fold line extending across the top edge of the box front wall 16. The spacer panel 40 has substantially the same width as the box front wall 16 but has a height corresponding to approximately one quarter the height of the box front wall 16. The spacer panel 40 is folded inwardly towards the inner surface of the box front wall 16 and extends to a position just below the cut out 30 in the box front wall 16.

[0064] The spacer panel 40 includes a cut out 30a which is similar in shape to the cut out 30 in the box front wall but slightly larger. This means that when the spacer panel 40 is folded against the box front wall 16, the cut out 30a in the spacer panel 40 underlies the cut out 30 in the box front wall 16 and the spacer panel 40 is not visible from the front of the container 10.

[0065] The spacer panel 40 lies between the box front wall 16 and the frame front wall 36 and is attached to the frame front wall 36 by means of a suitable adhesive. The spacer panel 40 therefore provides a separation between the box front wall 16 and the frame front wall 36 corresponding approximately to the thickness of the spacer panel, or slightly greater. The combination of the overlying cut outs 30, 30a and the frame front wall 16 forms an elongate recess 50 in the front wall of the box 12, the purpose of which will be described below.

[0066] Figure 1 shows the container 10 with the lid 14 in an open position. As the lid 14 is pivoted towards its closed position, the free edge of the lid flap 32 comes into contact with the box front wall 16. As the lid is moved further, the edge of the lid flap 32 slides along the box front wall 16 and just before the lid 14 reaches its closed position, the edge of the lid flap 32 slides over the edge of the cut out 30 and drops into the recess 50. The lid flap 32 springs against the frame front wall 36 at the bottom of the recess 50 and this generates an audible sound, which gives an indication of the closure of the container 10.

[0067] In the closed position of the lid 14 the lid flap 32 lies within the recess 50 and the free edge of the lid flap 32 engages with the upper edge of the cut out 30 to effectively lock the lid in the closed position.

[0068] As the lid 14 is pivoted back towards the open position, the lid flap 32 is released from the recess 50 and an audible sound is generated as the edge of the lid flap 32 passes over the upper edge of the cut out 30.

[0069] In order to form the container 10, the blank 110 shown in Figure 3 is folded around a wrapped bundle of cigarettes and glued as necessary, using standard methods and machinery. Once assembled, the container 10 is overwrapped with a transparent wrapper.

[0070] A container according to a second embodiment of the present invention may be formed from the laminar blank 200 shown in Figure 4. The laminar blank 200 and the resultant container are similar to those described above and shown in Figures 1 to 3 except for the shape and form of the cut out in the box front wall and the lid flap. As shown in Figure 4, in the laminar blank 200 the cut out 230 in the box front wall 16 has a Z-shape, formed of a left cut out portion 230a and a right cut out portion 230b. The right cut out portion 230b is positioned verti-

cally below the level of the left cut out portion 230a and the cut out portions 230a,b are connected together by an intermediate cut out portion. A cut out 240 is also provided in the spacer panel, which corresponds in shape to the cut out 230 in the box front wall but is slightly larger.

[0071] In place of the single lid flap 32 of container 10, the laminar blank 200 comprises two adjacent lid flaps: a left lid flap 250 and a right lid flap 252, both of which are connected to the lid front wall at the hinge line across the bottom edge of the lid front wall. The left lid flap 250 extends further from the hinge line than the right lid flap 252.

[0072] In the assembled container, as the lid is moved towards the closed position, the left lid flap 250 drops into the recess formed by the left cut out portion 230a shortly before the right lid flap 252 drops into the recess formed by the right cut out portion 230b. This generates two, successive sounds as the lid is closed.

[0073] A container according to a third embodiment of the present invention may be formed from the laminar blank 300 shown in Figure 5. The laminar blank 300 and the resultant container are similar to those described above and shown in Figures 1 and 2. However, the lid flap 332 of the blank 300 extends further from the hinge line so that the area of the lid flap 332 is increased compared to the lid flap 32 of container 10. In addition, the laminar blank 300 further comprises a U-shaped cut out 310 in the lid flap 332. The ends of the U-shaped cut out 310 are connected by a hinge line 312 and the U-shaped cut out 310 and the hinge 312 together define a retention tab 320.

[0074] When the blank 300 is assembled to form a container, the lid flap 332 is attached to the inner surface of the lid front wall by means of a suitable adhesive. The U-shaped cut out 310 is provided in the centre of the lid flap 332 and the retention tab 320 is folded outwardly from the lid flap 332, along the hinge line 312. In the open position of the lid, the retention tab projects upwardly and outwardly from the hinge line 312 at an angle of approximately 45 degrees to the lid flap.

[0075] As the lid is moved to the closed position, the retention tab 320 slides along the box front wall and drops into the recess formed by the cut out in the box front wall, in a similar manner to that described above in relation to the lid flap 32 of container 10. Therefore, in the container assembled from the blank 300 it is the retention tab and not the lid flap that generates the sound as the container is closed, although the mechanism is similar in each case. The retention tab 320 hooks between the box front wall and the frame front wall, as described above for the lid flap, in order to lock the lid in the closed position.

Claims

1. A hinge lid container for consumer goods comprising:

   a box comprising a box front wall having a cut out portion therein;

   an inner frame mounted within the box and comprising a frame front wall, wherein a portion of the frame front wall is exposed through the cut out portion in the box front wall;

   a spacer element arranged between the box and the inner frame and providing separation between the box front wall and the frame front wall; and

   a hinge lid connected to the box along a hinge line and pivotable about the hinge line between a closed position and an open position, wherein the hinge lid comprises a lid front wall and a lid flap hingedly connected to the lid front wall and folded inwardly towards the inner surface of the lid front wall

   wherein when the hinge lid is in the closed position the lid front wall overlies the cut out portion in the box front wall and wherein during pivotal movement of the hinge lid from the open position to the closed position, at least a part of the lid flap slides along the box front wall and into the cut out portion in the box front wall.

2. A hinge lid container according to claim 1 wherein in the closed position of the hinge lid at least a part of the lid flap engages with an edge of the cut out portion to lock the hinge lid in the closed position.

3. A hinge lid container according to claim 2 wherein as the hinge lid is moved from the closed position to the open position the lid flap is released from engagement with the edge of the cut out portion.

4. A hinge lid container according to any preceding claim wherein the spacer element comprises a spacer panel connected to the box front wall along a hinge line extending across an edge of the box front wall.

5. A hinge lid container according to claim 4 wherein the spacer panel is connected to the frame front wall and wherein the spacer panel and the box front wall are connected along the hinge line only.

6. A hinge lid container according to claim 4 or 5 wherein the spacer panel comprises a cut out portion and wherein the cut out portion in the spacer panel substantially coincides with the cut out portion in the box front wall.

7. A hinge lid container according to any preceding claim wherein the lid flap comprises a first lid flap portion and a second lid flap portion, wherein the first lid flap portion extends beyond the second lid flap portion such that during the pivotal movement of the hinge lid towards the closed position the first lid flap

portion slides into the cut out portion before the second lid flap portion, thereby generating two successive sounds.

8. A hinge lid container according to any preceding claim wherein the box front wall comprises a first cut out portion and a second cut out portion vertically offset from the first cut out portion and wherein the hinge lid comprises a first lid flap portion and a second lid flap portion, wherein the first lid flap portion slides into the first cut out portion at a different time to when the second lid flap portion slides into the second cut out portion, thereby generating two successive sounds.

9. A hinge lid container according to claim 8 wherein the first lid flap portion extends beyond the second lid flap portion and wherein the first cut out portion is provided above the second cut out portion.

10. A hinge lid container according to any preceding claim wherein in the closed position of the hinge lid the lid flap lies between the box front wall and the frame front wall.

11. A hinge lid container according to any preceding claim wherein the lid flap is attached to the inner surface of the lid front wall and wherein the lid flap comprises a cut line forming a retention tab connected to the lid flap along a hinge line and projecting away from the lid flap, wherein during pivotal movement of the hinge lid towards the closed position the retention tab slides along the box front wall and into the cut out portion in the box front wall.

12. A hinge lid container according to any preceding claim containing a plurality of smoking articles.

13. A hinge lid container according to any of the preceding claims, wherein the lid flap generates a sound when the container is closed or the lid flap generates a sound when the container is opened or the lid flap generates a sound when the container is closed and when the container is opened

14. A method of creating a sound with a hinge lid container, comprising the steps of
providing a hinge lid container comprising a lid with a lid flap and a box front wall with a front wall cut out, wherein the cut out comprises a cut out bottom wall; providing a spacer panel between the front wall cut out and the cut out bottom wall; and closing the container such that the lid flap slides into the cut out, thereby generating a sound when the lid flap strikes the cut out bottom wall.

15. A method according to claim 14, further comprising the step of opening the container such that the lid flap comes into an interlocking position with the edge of the front wall cut out before the lid is fully opened and wherein the lid flap generates a second sound when the lid flap is released from the interlocking position when further opening the lid.

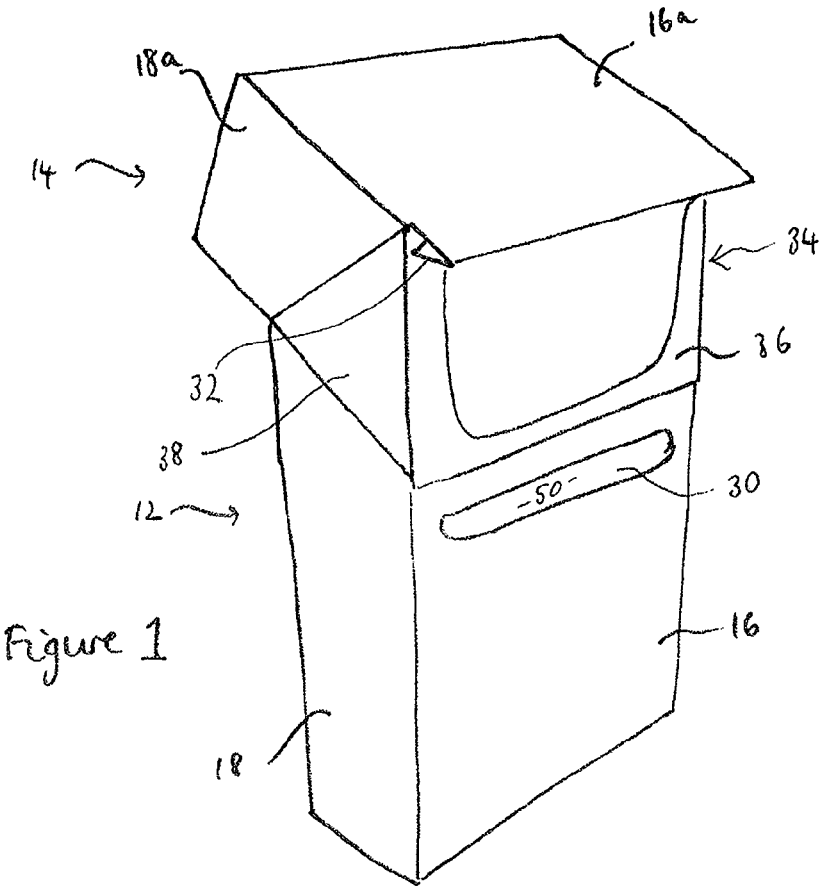

Figure 1

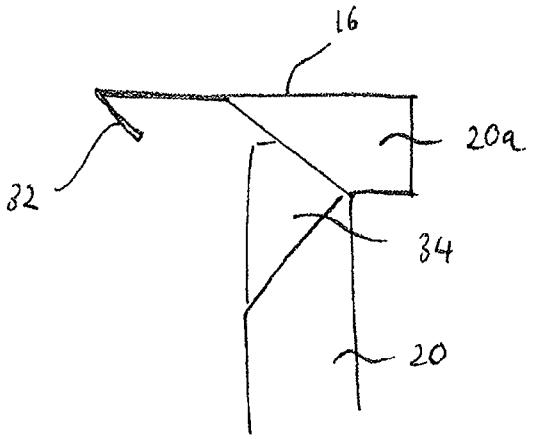

Figure 2

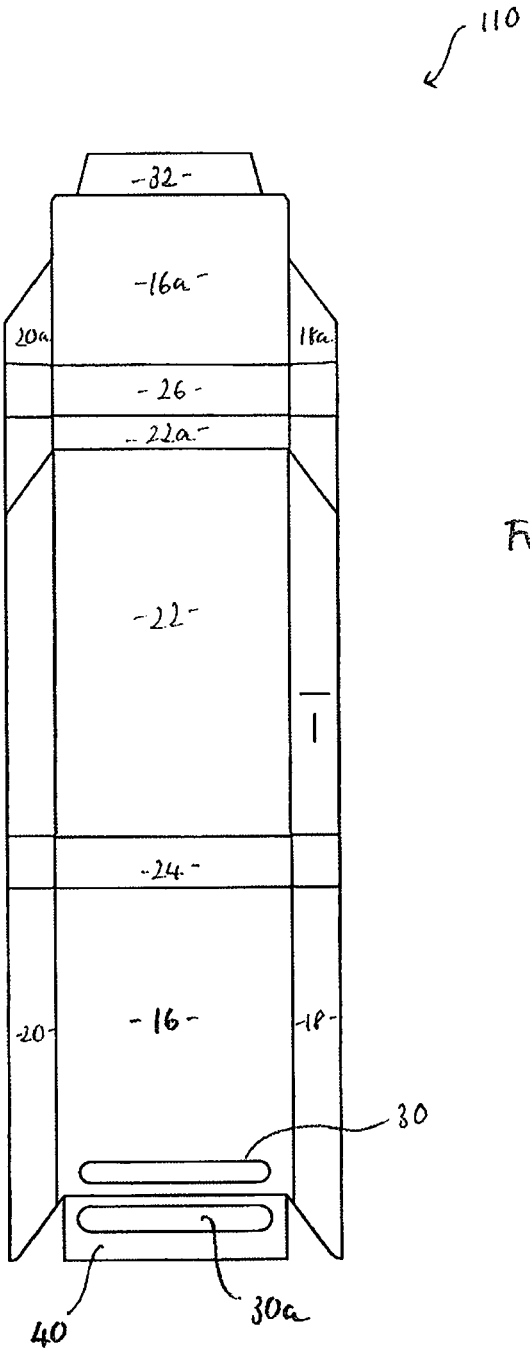

Figure 3

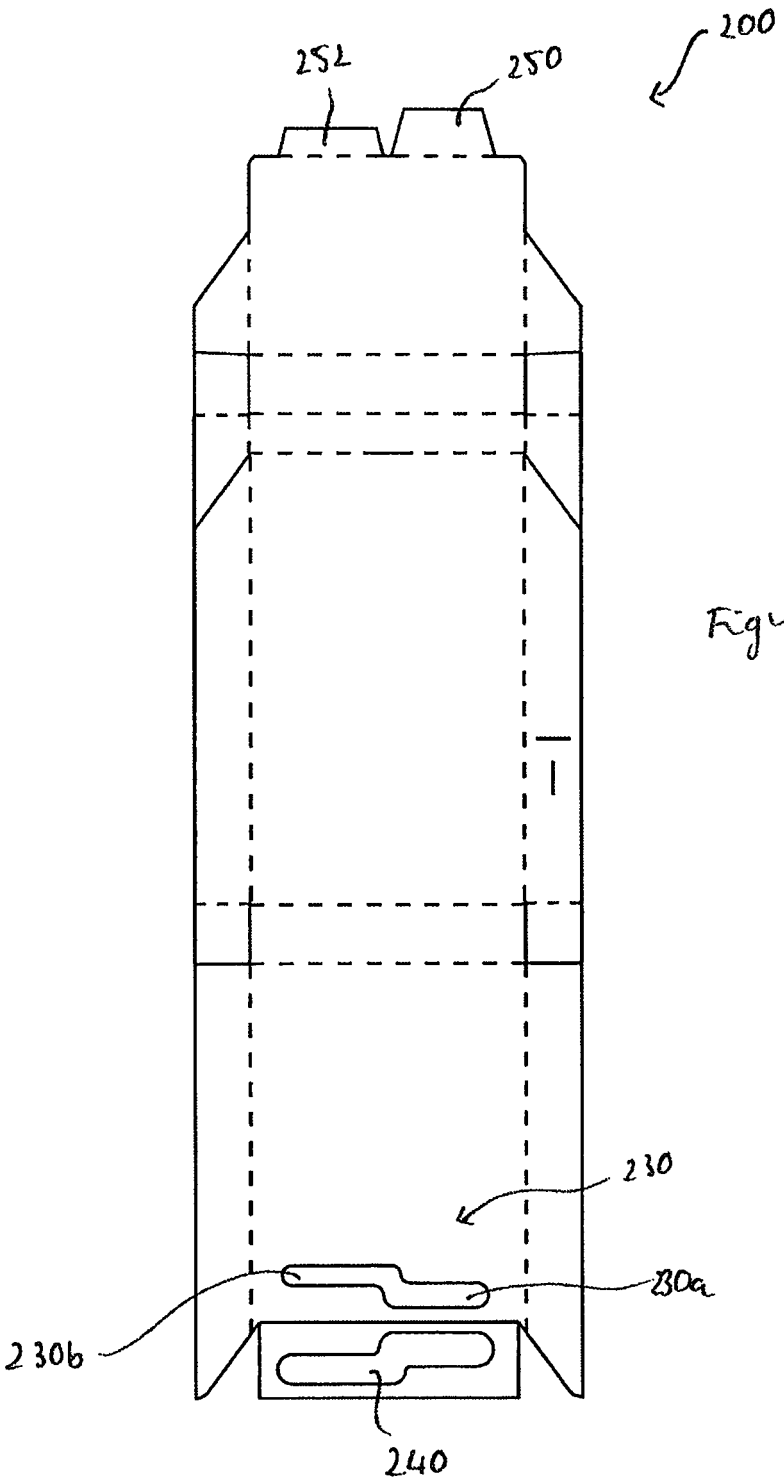

Figure 4

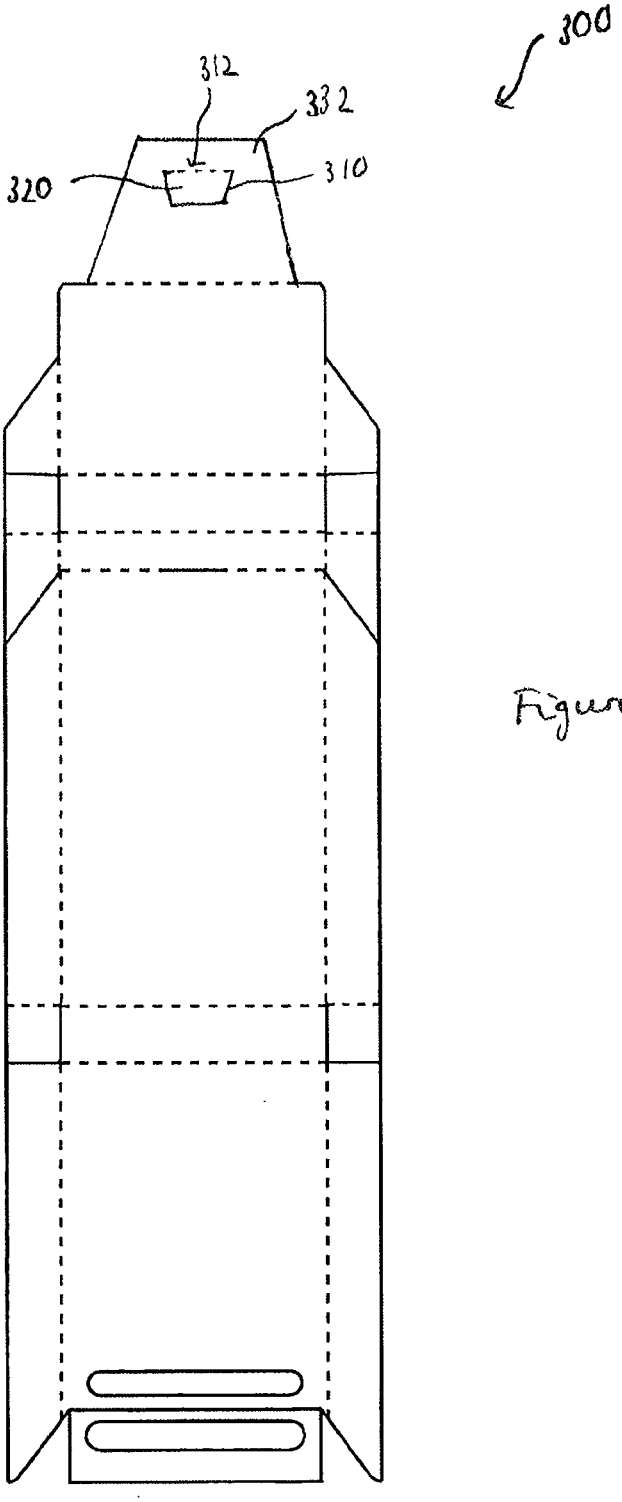

Figure 5

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EUROPEAN SEARCH REPORT

Application Number
EP 10 25 1640

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 0 894 737 A1 (JAPAN TOBACCO INC [JP]) 3 February 1999 (1999-02-03) * paragraph [0051] - paragraph [0052]; figures *	1-3, 10-15	INV. B65D85/10
A	WO 00/51897 A1 (PROCTER & GAMBLE [US]) 8 September 2000 (2000-09-08) * page 5, line 1 - line 12 * * page 6, line 6 - line 13; figures 7, 9 *	1-3,8, 10,11, 13-15	
A	WO 2010/063569 A1 (BRITISH AMERICAN TOBACCO CO [GB]; GIBSON PAUL [GB]) 10 June 2010 (2010-06-10) * page 4, line 15 - line 17; figure 2 *	1,14	
			TECHNICAL FIELDS SEARCHED (IPC) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 February 2011	Bridault, Alain

CATEGORY OF CITED DOCUMENTS

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22-02-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0894737 A1	03-02-1999	CN 1209411 A	03-03-1999
		DE 69818169 D1	23-10-2003
		DE 69818169 T2	08-04-2004
		US 6334532 B1	01-01-2002
WO 0051897 A1	08-09-2000	AT 263713 T	15-04-2004
		AU 3612900 A	21-09-2000
		DE 60009681 D1	13-05-2004
		DE 60009681 T2	14-04-2005
		EP 1159201 A1	05-12-2001
		ES 2218141 T3	16-11-2004
		JP 2002538050 T	12-11-2002
		US 6484931 B1	26-11-2002
WO 2010063569 A1	10-06-2010	NONE	

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