



(43) International Publication Date
27 October 2016 (27.10.2016)

- (51) **International Patent Classification:**
B65D 5/42 (2006.01) *B65D 85/10* (2006.01)
- (21) **International Application Number:**
PCT/EP2016/058918
- (22) **International Filing Date:**
21 April 2016 (21.04.2016)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
15164532.2 21 April 2015 (21.04.2015) EP
- (71) **Applicant:** PHILIP MORRIS PRODUCTS S.A.
[CH/CH]; Quai Jeanrenaud 3, CH-2000 Neuchâtel (CH).
- (72) **Inventor:** RUDOLF, David; Žižkov 1010, 28401 Kutná
Hora (CZ).
- (74) **Agent:** NEVETT, Duncan; Reddie & Grose LLP, 16
Theobalds Road, London Greater London WC1X 8PL
(GB).
- (81) **Designated States** (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,
SD, SE, SG, SH, SI, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

(54) Title: CONTAINER WITH MULTIPLE AUDIBLE INDICATIONS OF CLOSING AND/OR OPENING

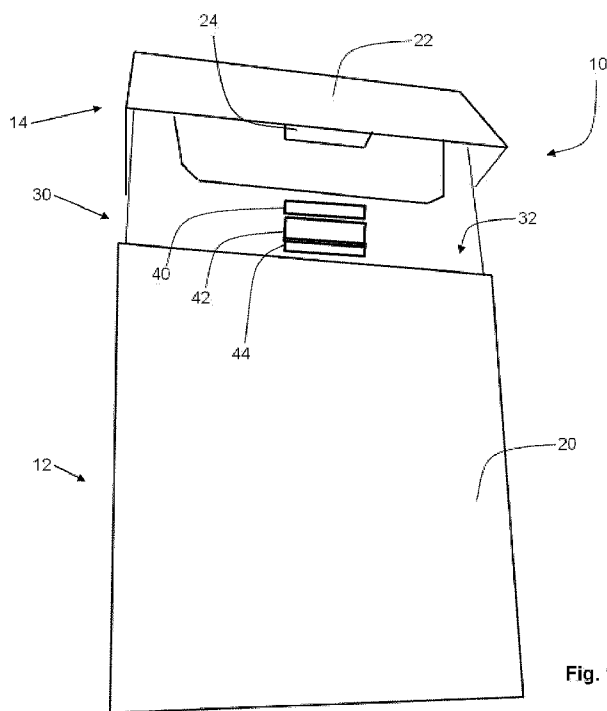


Fig. 1.

(57) Abstract: A hinge lid container comprises a lid with a lid front wall and a lid flap depending from the lid front wall and folded inward towards the inner surface of the lid front wall. A front wall of the container comprises three cut out portions having respective heights (H1, H2, H3) and widths (W1, W2, W3). The second cut out portion is distinct and vertically offset by a distance (D1) from the first cut out portion. The third cut out portion is distinct and vertically offset by a distance (D2) from the second cut out portion. Each cut out portion is provided in a respective portion of the container front wall having a thickness (T1, T2, T3). When the lid is in the closed position, the lid front wall overlies the three cut out portions. During pivotal movement of the lid between the open position and the closed position, at least a part of the lid flap slides along the container front wall and sequentially into the three cut out portions to generate a sequence of sounds.

CONTAINER WITH MULTIPLE AUDIBLE INDICATIONS OF CLOSING AND/OR OPENING

The present invention relates to a container for consumer goods and to a blank for forming such container, which find particular application for holding consumer goods, such as smoking articles.

Smoking articles such as cigarettes and cigars are typically packaged in rigid hinge-lid containers. These typically have a box part having a box front wall, a box rear wall, box side walls and a box base. They also usually have a lid part with a lid front wall, a lid rear wall, lid side walls and a lid top side. The lid part is typically hinged to the box part along a hinge line extending across a back wall of the container. The hinge line is usually provided as a pre-folded line, a crease line or a score line. The bundle of smoking articles housed in the box part is commonly wrapped in an inner liner, or inner package, of metallised paper, metal foil or other flexible sheet material. To access the bundle of smoking articles within the inner liner, a consumer should remove an upper portion of the inner liner upon first opening of the hinge-lid container.

In one such container, an arrangement is often provided for allowing the consumer to confirm that the container is fully closed between uses and that, accordingly, the consumer goods within the container will remain inside the container. This has been achieved in the past by providing a cut out portion in the front wall of the container and a flap depending from the lid front wall and folded inwardly towards the inner surface of the lid front wall. In more detail, when the hinge lid is in the closed position, the lid front wall overlies the cut out portion in the box front wall. Further, 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. For example, WO 00/51897 A1 describes a container having a pivotable lid, which comprises a single tab that is configured to simultaneously engage with multiple slots in a front wall of the container, when the lid is in the closed position.

However, under certain circumstances, it may become difficult for the consumer to hear the sound generated by the flap sliding into the cut out portion. By way of example, after repeated opening and closing of the container, the cooperation between the flap and the edge or edges of the cut out portion may become hindered, and thus less easy to detect for the consumer, due to bending or wear of the laminar blank material forming the flap. This incorrect interaction of the flap with the cut out portion may also be associated with a non full closure of the container, whereby it becomes impossible for the consumer to get confirmation that consumer goods within the container will remain inside the container, for example during transportation.

It would therefore be desirable to provide a container for consumer articles and a blank for the manufacture of one such container with a novel and improved arrangement such as to ensure that the hinge lid remains in the closed position between uses and that inadvertent or accidental opening of the hinge lid is avoided. Further, it would be desirable to provide an improved container and blank that presents the consumer with a novel sensory (for example, acoustic) experience and which may thus be associated with an interesting, novel use routine. Finally, it would be desirable to provide one such container/blank that is easy to manufacture without requiring any major modification of the existing apparatus.

According to an aspect of the present invention, there is provided a container for consumer articles comprising a box comprising a box 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 at least one lid flap depending from the lid front wall along an edge fold line, the lid flap being folded inward towards the inner surface of the lid front wall. A front wall of the container comprises at least: a first cut out portion having a height (H1) and a width (W1); a second cut out portion having a height (H2) and a width (W2), the second cut out portion being distinct and vertically offset by a distance (D1) from the first cut out portion; and a third cut out portion having a height (H3) and a width (W3), the third cut out portion being distinct and vertically offset by a distance (D2) from the second cut out portion. Each of the at least first, second and third cut out portion are provided in a respective portion of the container front wall having a respective thickness (T1, T2, T3), such that, when the hinge lid is in the closed position, the lid front wall overlies the at least first, second and third cut out portions in the container front wall. During pivotal movement of the hinge lid between the open position and the closed position, an edge of the at least one lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall and thus generates a first sequence of audible sounds. The first, second and third cut out portions vertically overlap with one another.

According to another aspect of the present invention, there is provided a blank for forming a container for consumer articles. The blank comprises a box-defining blank portion for forming a box of the container and a lid-defining blank portion for forming a lid of the container. The lid defining blank portion comprises a lid front panel for forming a lid front wall and at least one lid flap depending from the lid front panel. The box-defining portion comprises a box front panel for forming at least part of a front wall of the container. The box front panel comprises at least: a first cut out portion having a height (H1) and a width (W1); a second cut out portion having a height (H2) and a width (W2), the second cut out portion being distinct and vertically offset by a distance (D1) from the first cut out portion; and a third cut out portion having a height (H3) and a width (W3), the third cut out portion being distinct and vertically offset by a distance (D2) from the second cut out portion. Each of the at least first, second

and third cut out portion is provided in a respective portion of the box front panel having a respective thickness (T1, T2, T3), such that, in assembled container, when the hinge lid is in the closed position, the lid front wall overlies the at least first, second and third cut out portions in the container front wall. The first, second and third cut out portions vertically overlap with one another.

It shall be appreciated that any features described with reference to one aspect of the present invention are equally applicable to any other aspect of the invention.

In accordance with the present invention, hinge lid containers for consumer goods are provided, wherein the hinge lid comprises a lid front wall and at least one lid flap, which depends from the lid front wall along an edge fold line, and is folded inward towards the inner surface of the lid front wall. In contrast to known containers, a front wall of container according to the present invention comprises at least three cut out portions, each having a height (H1, H2, H3) and a width (W1, W2, W3). The three cut out portions are vertically offset from one another, whereby the second cut out portion is at a first distance (D1) from the first cut out portion and the third cut out portion is at a second distance (D2) from the second cut out portion. Each cut out portion is formed in a respective portion of the container front wall that has a respective thickness (T1, T2, T3). When the hinge lid is in the closed position, the lid front wall overlies the at least first, second and third cut out portions in the container front wall. When the hinge lid is pivoted between the open position and the closed position, at least a part of the lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall. Thus, the cooperation between the lid flap and the cut out portions generates a sequence of audible sounds. During pivotal movement of the hinge lid between the open position and the closed position, a single point on the edge of the at least one lid flap enters all of the first, second and third cut out portions.

The production of a sequence of sounds during movement of the hinge lid of containers 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 recognisable sequence of sounds 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. Further, because the lid flap or flaps get to cooperate sequentially with at least three cut out portions, the lid may be held more securely in the closed position.

In addition, by varying one or more of several parameters characterising the cut out portions, the characteristics of the sequence of sounds may be modified in many different ways. The volume and quality of the sounds in the sequence, as well as the duration of the

breaks between the sounds in the sequence may be impacted by changes in the parameters of the cut out portions, so that different forms of customisation or identification or both of a product become possible. Thus, according to the present invention, it is advantageously possible to provide the consumer with a distinctive product associated with a novel acoustic experience.

As used herein, the term “vertically overlap” is used to mean that the first, second and third cut out portions all overlay a single imaginary line which is parallel to a vertical axis of the front wall of the container.

As used herein, the terms “front”, “back”, “upper”, “lower”, “top”, “bottom” and “side”, refer to the relative positions of portions of containers according to the invention and components thereof when the container is in an upright position with the lid of the outer housing in the closed position and the hinge line at the back of the container. When describing containers according to the present invention, these terms are used irrespective of the orientation of the container being described. The back wall of the container is the wall comprising the hinge line.

The term “inner surface” is used throughout the specification to refer to the surface of a component of the assembled container that is facing towards the interior of the container, for example towards the consumer goods, when the container is in the closed position. The term “outer surface” is used throughout the specification to refer to the surface of a component of the container that is facing towards the exterior of the container. For example, the inner frame comprises an outer surface that is facing the outer housing of the container and an inner surface that is facing the inner package of the container. It should be noted that referring to a surface as the inner surface or the outer surface is not necessarily equivalent to referring to a certain side of a blank used in assembly of the container. Depending on how the blank is folded around the consumer goods, areas that are on the same side of the container can either face towards the inside or the towards the outside of the container.

The term “hinge line” refers in particular to a line about which the lid may be pivoted in order to open the container. A hinge line may be, for example, a pre-folded fold line or a score line in the panel forming the back wall of the container.

The term “height” refers to the maximum distance between the upper edge and the lower edge of a cut out portion as measured with respect to a vertical axis of the front wall of the container. The term “width” refers to the maximum distance between the left edge and the right edge of a cut out portion as measured with respect to a horizontal axis of the front wall of the container. Where the cut out portion does not have a polygonal shape, the term “height” shall be construed as referring to the distance between the uppermost point and the lowermost point of the perimeter of the cut out portion. In addition, the term “width” shall be construed

as referring to the distance between the points of the perimeter of the cut out portion farthest from each other with reference to a horizontal axis of the front wall of the container.

The term “distance” between (adjacent) cut out portions refers to the distance between the lower edge of the higher cut out portion and the upper edge of the lower cut out portion as measured with respect to a vertical axis of the front wall of the container. In practice, it corresponds to the height of the band of blank material forming the front wall of the container that is left intact between adjacent cut out portions. Thus, the “distance” between adjacent cut out portions may impact the duration of the breaks between the sounds in the sequence.

The term “thickness” is used herein to refer to the distance measured between two opposite surfaces of the material forming a portion of the front wall of the container. In practice, the thickness at a given location is measured along a direction locally perpendicular to the opposite surfaces. In general, the “thickness” of a portion of the front wall of the container shall correspond to the thickness of the laminar blank from which the front wall is formed. In some embodiments, the thickness may be constant over the front wall and so the various portions of the front wall wherein the different cut out portions are provided all have the same thickness ($T1 = T2 = T3$). In other embodiments, the thickness of the front wall may vary. For example, if material is removed (for example, ablated) homogeneously substantially over a portion of the blank, this may have a reduced thickness compared with other portions of the blank. Different degrees of removal of material may result in corresponding different values of thickness. As an alternative, a portion of the front wall of the container may be reinforced by affixing an additional sheet material on the inner surface of the main laminar blank. Accordingly, in said portion of the front wall of the container, the overall thickness shall correspond to the sum of the thicknesses of the various, superimposed sheet materials.

In hinge lid containers according to the invention, at least three cut out portions are formed in the front wall. When the hinge lid is in the closed position, the lid front wall overlies the cut out portions. During pivotal movement of the hinge lid between the open position and the closed position, at least a part of the lid flap slides along the container front wall and sequentially into the three cut out portions in the container front wall and thus generates a sequence of audible sounds.

Preferably, at least one of the first, second and third cut out portions differs from at least another one of the first, second and third cut out portions for at least one of height ($H1$, $H2$, $H3$) and width ($W1$, $W2$, $W3$). Cut out portions of different sizes will cooperate with the lid flap in different manners, thereby generating different sounds, for example slightly louder or softer sounds. This is advantageous, because the sequence of sounds can be tailored to create different acoustic experiences for the consumer. Further, it is easy to associate different sequences of sounds to the opening and closing of the container, respectively.

In addition, or as an alternative, at least the distance (D1) between the second cut out portion and the first cut out portion differs from the distance (D2) between the third cut out portion and the second cut out portion. Variations in the distance between adjacent cut out portions creates an alternation of longer and shorter rests between the sounds in the sequence. Thus, it is possible to alter the rhythm pattern of the sequence of sounds generated upon opening or closing the package or both. This is advantageous, because the sequence of sounds can be tailored to create different acoustic experiences for the consumer, and it is quite easy to associate different sequences of sounds to the opening and closing of the container, respectively.

In addition, or as an alternative, the thickness (T1, T2, T3) of the box front wall portion in which one of the first, second and third cut out portions is provided differs from the thickness (T2, T3, T1) of at least another box front wall portion in which another one of the first, second and third cut out portions is provided. The lid flap will cooperate with cut out portions formed in portions of the front wall made from sheets having different thicknesses in different manners. Accordingly, different sounds, such as slightly louder or softer sounds, may easily be generated. The sequence of sounds can thus easily be adjusted to create different acoustic experiences for the consumer. In particular, it may be possible to associate different sequences of sounds to the opening and closing of the container, respectively.

A similar effect may also be obtained by providing that the different portions of the front wall of the container wherein the various cut out portions are manufactured from different sheet materials, for example materials having a different rigidity or hardness.

Preferably, the first, second and third cut out portions are all provided in the frame front wall. This has the advantage that, when in the closed position, the lid front wall can easily align with the box front wall while fully covering the cut out portions. Thus, the container presents to the user a substantially flat front surface and the ingress of dust or other small particles into the container via the cut out portions is advantageously prevented.

Preferably, at least one of the distance (D1) between the second cut out portion and the first cut out portion and the distance (D2) between the third cut out portion and the second cut out portion is at least 0.2 mm, more preferably at least about 0.5 mm. In addition, or as an alternative, at least one of the distance (D1) between the second cut out portion and the first cut out portion and the distance (D2) between the third cut out portion and the second cut out portion is preferably less than about 10 mm, more preferably less than about 2 mm. In some preferred embodiments, at least one of the distance (D1) between the second cut out portion and the first cut out portion and the distance (D2) between the third cut out portion and the second cut out portion is from about 0.2 mm to about 10 mm, more preferably from about 0.5 mm to about 2 mm.

Preferably, the hinge lid comprises at least second lid flap depending from the lid front wall along an edge fold line, the lid flap being folded inward towards the inner surface of the lid front wall and extending beyond a free edge of the first lid flap, such that, during pivotal movement of the hinge lid between the open position and the closed position, at least a part of the second lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall to generate a second sequence of audible sounds, at least one of which is not generated simultaneously with a sound in the first sequence of sounds. Thus, it may be possible to create a more complex sequence of sounds with shorter rests or with the superimposition of sounds generated in at least partial unison. In general, this is advantageous because the sequence of sounds can be further tailored to create novel acoustic sequences, which give the product a distinctive feature and provide new acoustic experiences for the consumer.

In some embodiments, the lid flap generates the first sequence of audible sounds when the container is closed. In other embodiments, the lid flap generates the first sequence of audible sounds when the container is opened. In further embodiments, the lid flap generates the first sequence of audible sounds when the container is both closed and opened.

As used herein, the terms "closed" and "opened" refer to pivotal movements of the hinge lid that result in the container being in the closed position and the open position respectively.

Containers according to the present invention find application as containers for consumer goods, in particular elongate consumer goods such as smoking articles. However, they can also be used for several other types of consumer goods.

Containers according to the present invention are at least partially formed from a blank having a predetermined thickness. The blank may be formed from any suitable material or combination of materials, including, but not limited to, cardboard, paperboard, plastic, metal, or combinations thereof. Preferably, the blank is a laminar cardboard blank having a weight of between about 100 grams per square metre and about 350 grams per square metre.

The container may optionally comprise an outer wrapper, which is preferably a transparent polymeric film of, for example, high or low density polyethylene, polypropylene, oriented polypropylene, polyvinylidene chloride, cellulose film, or combinations thereof and the outer wrapper is applied in a conventional manner. The outer wrapper may include a tear tape. In addition, the outer wrapper may be printed with images, consumer information or other data.

Further, the consumer articles may be provided within the container in the form of a bundle wrapped in an inner package formed of metal foil or metallised paper. The inner package material may be formed as a laminate of a metallised polyethylene film, and a liner material. The liner material may be a super-calendered glassine paper. In addition, the inner package material may be provided with a print-receptive top coating. The inner package has

an access opening through which consumer goods can be removed when a lid of the container is in a respective open position.

The container is preferably a rectangular parallelepiped comprising two wider walls spaced apart by two narrower walls. Hinge lid 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 hinge lid 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 hinge lid container according to the invention may comprise, without limitation:

- One or two longitudinal rounded edges on the front wall, and/or one or two longitudinal rounded or bevelled edges on the back wall.
- One or two transverse rounded 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.

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 multi-bevelled edge formed by parallel creasing or scoring lines that are spaced such that two or more distinct bevels are formed on at least one edge of the container.

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

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.

Through an appropriate choice of the dimensions, 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, containers according to the invention may be designed to hold a total of between ten and thirty smoking articles.

The smoking articles may be arranged in different collations, depending on the total number of smoking articles.

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 filter-less 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). 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.

The length, width and depth of containers according to the invention may be such that the resultant overall dimensions of the container are similar to the dimensions of a typical disposable pack of twenty cigarettes.

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.

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.

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.

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

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.

Preferably, the ratio of the height of the lid back wall to the height of the box back wall of the outer sleeve is between about 0 to 1 (lid located at the top edge of the container) to about 1 to 1, more preferably, between about 1 to 5 and about 1 to 10, most preferably, between about 1 to 6 to about 1 to 8.

Preferably, the ratio of the height of the lid front wall of the outer sleeve to the height of the box front wall of the outer sleeve is between about 1 to 0 (lid covering the entire front wall) to about 1 to 10, more preferably, between about 1 to 1 and about 1 to 5, most preferably, between about 1 to 2 and about 1 to 3.

The 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.

Containers according to the invention may be filled and assembled using conventional apparatus and methods, modified to include the step of forming the cut out in the front wall of the container and the cut line in the lid flap forming the retention tab. Several different tools can be used for forming the cut out portions and the cut line, such as a laser or a blade.

A laser is particularly preferred as the cutting tool as it can allow for a wide variety of shapes of the cut out and the retention tab whilst never comprising the precision and efficiency of the manufacturing process. This is because it is possible to accurately control the relative movement of the laser and the blank. Further, because a laser may advantageously be used for ablating material from portions of a blank for forming a container with one or more rounded or chamfered corners, use of a laser as the cutting tool is advantageous in that the ablation and cutting operations can, to an extent, be combined in a single step of the manufacturing process.

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

Figure 1 depicts a schematic perspective view of a container in accordance with the present invention; and

Figure 2 shows a detail of the container of Figure 1 on a larger scale.

The container 10 shown in Figure 1 is rectangular parallelepipedal in shape. It comprises a box portion 12 and a hinge lid 14 connected to the box portion 12 along a hinge line (not shown) extending across the back wall of the container 10. The overall size and construction of the box 12 and lid 14 of the container 10 are substantially the same as that of a standard hinge lid cigarette pack. The box portion 12 comprises a box front wall 20, a box back wall, a box bottom wall, a box left side wall and a box right side wall. The hinge lid 14 comprises a lid front wall 22, a lid back wall, a lid top wall, a lid left side wall and a lid left side wall. The hinge lid 14 is pivotable about the hinge line between a closed position and an open position. In the closed position, the hinge lid 14 covers an access opening of the container 10 and the walls of the hinge lid form extensions of the corresponding walls of the box portion. In the open position (shown in Figure 1), the hinge lid 14 is pivoted to project backwardly from the box portion 12 and the access opening at the top end of the box portion 12 is fully uncovered. Further, the lid 14 comprises a lid flap 24 depending from the lid front wall 22 along an edge fold line, the lid flap 24 being folded inward towards the inner surface of the lid front wall 22. As illustrated in Figure 1, the lid flap 24 is slightly raised with respect to the plane defined by the lid front wall 22.

The box portion 12 and the hinge lid 14 may be formed together from a single laminar blank. The container 10 may be assembled from the laminar blank and filled using standard apparatus.

A front wall of the container comprises a plurality of cut out portions. In more detail, the container 10 comprises an inner frame 30 mounted within the box portion 12. The inner frame 30 comprises a frame front wall 32, a portion of which extends beyond an upper edge of the front wall 20 of the box portion. The frame front wall 32 is formed from a portion of a blank having a predetermined, substantially constant thickness. As illustrated in Figure 2, the frame front wall 32 comprises a first cut out portion 40 having a height (H1) and a width (W1). Further, the frame front wall 32 comprises a second cut out portion 42 having a height (H2) and a width (W2). The second cut out portion 42 is distinct and vertically offset by a distance (D1) from the first cut out portion 40. In addition, the frame front wall comprises a third cut out portion 44 having a height (H3) and a width (W3). The third cut out portion 44 is distinct and vertically offset by a distance (D2) from the second cut out portion 42.

In the embodiment depicted in Figures 1 and 2, all three cut out portions 40, 42, 44 have the same width, that is, $W1 = W2 = W3$. The height H1 of the first cut out portion 40 is less than the height H2 of the second cut out portion 42 and greater than the height H3 of the third cut out portion 44. Further, the distance D1 between the first and the second cut out portions 40, 42 is greater than the distance D2 between the second and the third cut out portion 42, 44.

When the lid 14 is in the closed position, the lid front wall 22 overlies the first, second and third cut out portions 40, 42, 44 in the container front wall 32. During pivotal movement of the lid 14 between the open position and the closed position, at least a part of the lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall and thus generates a sequence of sounds. The characteristics of the sequence of sounds, such as duration and intensity of the sounds and duration of the rests between consecutive sounds, are impacted by the geometric features of the cut out portions described above.

CLAIMS

1. A container for consumer articles comprising:
a box comprising a box 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 at least one lid flap depending from the lid front wall along an edge fold line, the lid flap being folded inward towards the inner surface of the lid front wall;
wherein a front wall of the container comprises at least:
a first cut out portion having a height (H1) and a width (W1);
a second cut out portion having a height (H2) and a width (W2), the second cut out portion being distinct and vertically offset by a distance (D1) from the first cut out portion; and
a third cut out portion having a height (H3) and a width (W3), the third cut out portion being distinct and vertically offset by a distance (D2) from the second cut out portion;
each of the at least first, second and third cut out portion being provided in a respective portion of the container front wall having a respective thickness (T1, T2, T3);
such that, when the hinge lid is in the closed position, the lid front wall overlies the at least first, second and third cut out portions in the container front wall;
wherein, during pivotal movement of the hinge lid between the open position and the closed position, an edge of the at least one lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall and thus generates a first sequence of audible sounds, and
wherein the first, second and third cut out portions vertically overlap with one another.
2. A container according to claim 1, wherein at least one of the first, second and third cut out portions differs from at least another one of the first, second and third cut out portions for at least one of height (H1, H2, H3) and width (W1, W2, W3).
3. A container according to claim 1 or 2, wherein at least the distance (D1) between the second cut out portion and the first cut out portion differs from the distance (D2) between the third cut out portion and the second cut out portion.
4. A container according to any one of claims 1 to 3, wherein the thickness (T1, T2, T3) of the box front wall portion in which one of the first, second and third cut out portions is provided differs from the thickness (T2, T3, T1) of at least another box front wall portion in which another one of the first, second and third cut out portions is provided.

5. A container according to any one of the preceding claims, wherein the container comprises an inner frame mounted within the box and comprising a frame front wall, wherein a portion of the frame front wall extends beyond an upper edge of front wall of the box portion, at least one of the first, second and third cut out portions being provided in the frame front wall.
6. A container according to claim 5, wherein the first, second and third cut out portions are all provided in the frame front wall.
7. A container according to any one of the preceding claims, wherein at least one of the distance (D1) between the second cut out portion and the first cut out portion and the distance (D2) between the third cut out portion and the second cut out portion is from about 0.2 mm to about 10 mm.
8. A container according to any one of the preceding claims, wherein at least one of the distance (D1) between the second cut out portion and the first cut out portion and the distance (D2) between the third cut out portion and the second cut out portion is from about 0.5 mm to about 2 mm.
9. A container according to any one of the preceding claims, wherein the hinge lid comprises at least second lid flap depending from the lid front wall along an edge fold line, the lid flap being folded inward towards the inner surface of the lid front wall and extending beyond a free edge of the first lid flap, such that, during pivotal movement of the hinge lid between the open position and the closed position, at least a part of the second lid flap slides along the container front wall and sequentially into the at least first, second and third cut out portions in the container front wall to generate a second sequence of audible sounds, at least one of which is not generated simultaneously with a sound in the first sequence of sounds.
10. A container according to any one of the preceding claims containing a plurality of smoking articles.
11. A container according to any one of the preceding claims, wherein the lid flap generates the first sequence of audible sounds when the container is closed or when the container is opened or both.
12. A blank for forming a container for consumer articles, the blank comprising:

a box-defining blank portion for forming a box of the container;

a lid-defining blank portion for forming a lid of the container;

the lid defining blank portion comprising a lid front panel for forming a lid front wall and at least one lid flap depending from the lid front panel;

the box-defining portion comprising a box front panel for forming at least part of a front wall of the container;

wherein the box front panel comprises at least:

a first cut out portion having a height (H1) and a width (W1);

a second cut out portion having a height (H2) and a width (W2), the second cut out portion being distinct and vertically offset by a distance (D1) from the first cut out portion; and

a third cut out portion having a height (H3) and a width (W3), the third cut out portion being distinct and vertically offset by a distance (D2) from the second cut out portion;

each of the at least first, second and third cut out portion being provided in a respective portion of the box front panel having a respective thickness (T1, T2, T3);

such that, in assembled container, when the hinge lid is in the closed position, the lid front wall overlies the at least first, second and third cut out portions in the container front wall, and

wherein the first, second and third cut out portions vertically overlap with one another.

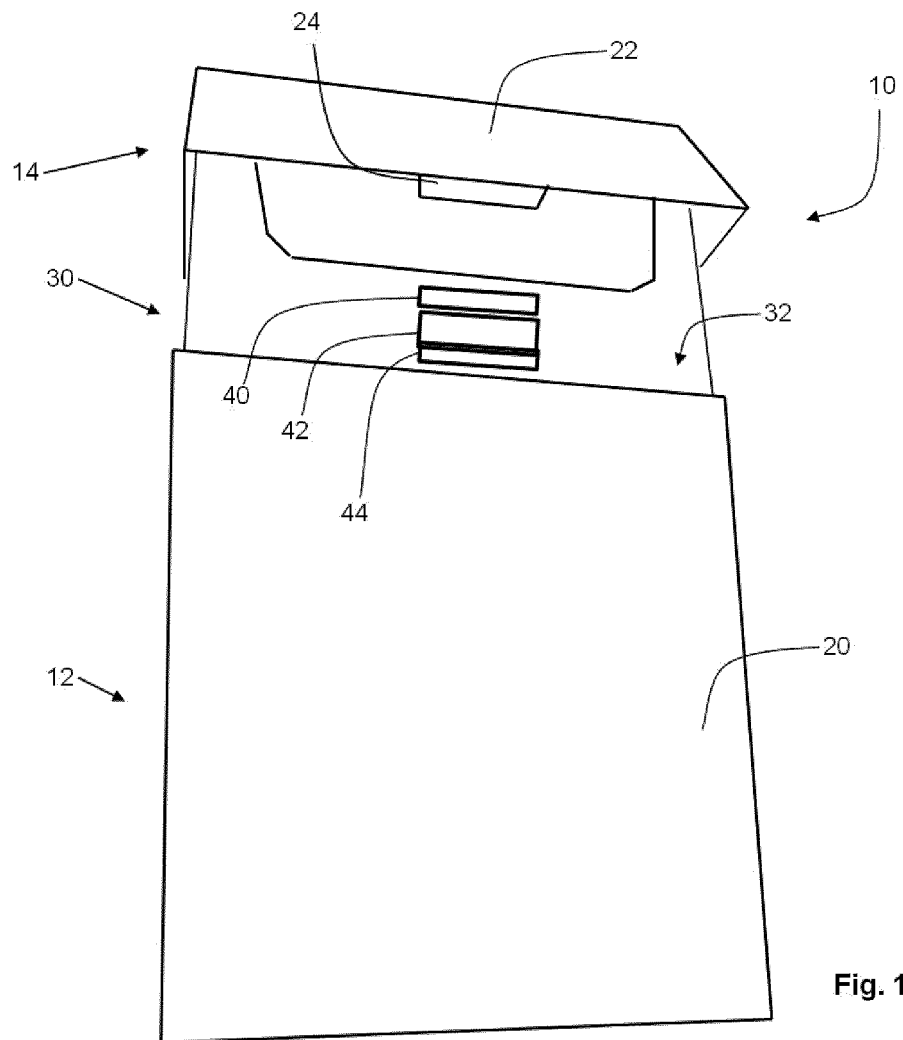
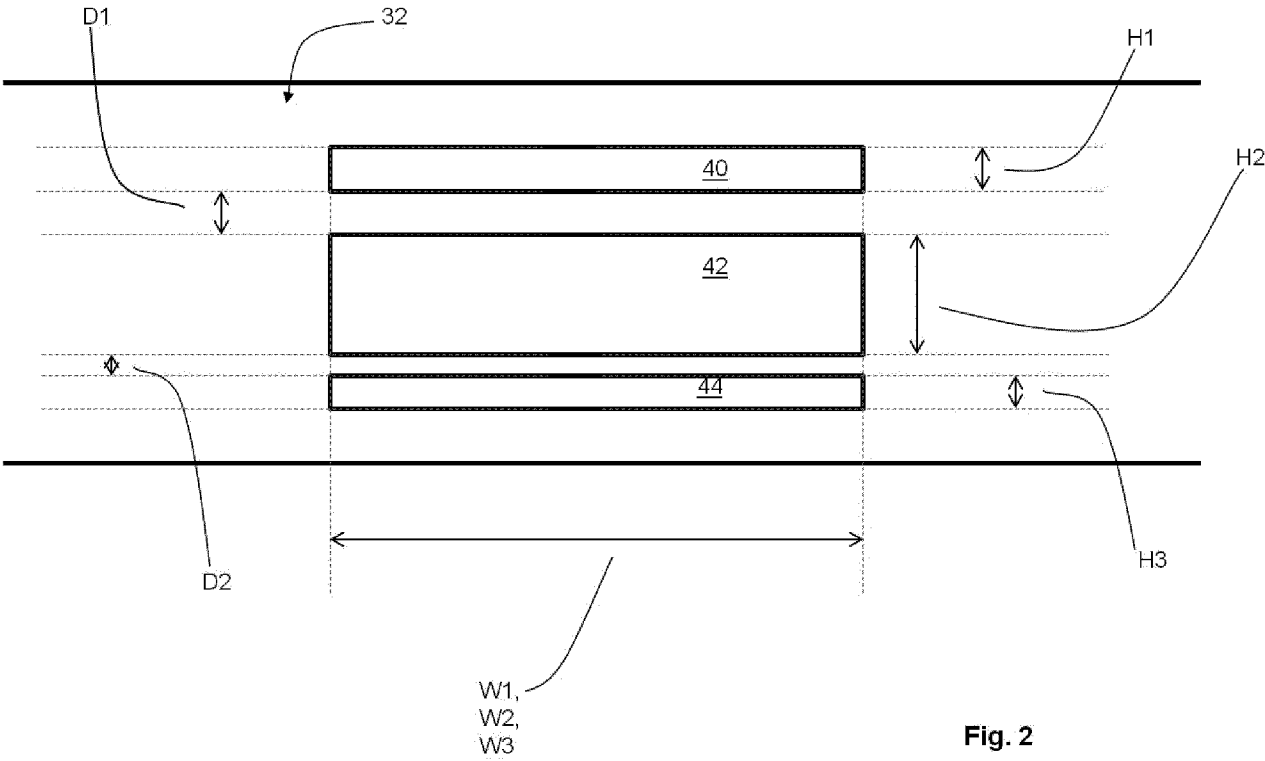


Fig. 1



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2016/058918

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D5/42 B65D85/10
ADD.

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

B. FIELDS SEARCHED

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

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/51897 A1 (PROCTER & GAMBLE [US]) 8 September 2000 (2000-09-08) page 6, line 28 - line 34; figure 9 -----	1-12
A	DE 199 38 167 A1 (FOCKE & CO [DE]) 22 February 2001 (2001-02-22) abstract; figure 1 -----	1-12
A	EP 2 765 086 A1 (REEMTSMA H F & PH [DE]) 13 August 2014 (2014-08-13) abstract; figure 4 -----	1-12



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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

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

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

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

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

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

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

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

"&" document member of the same patent family

Date of the actual completion of the international search

27 June 2016

Date of mailing of the international search report

06/07/2016

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Wimmer, Martin

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2016/058918

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0051897	A1	08-09-2000	AR 022823 A1 04-09-2002
			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 4790126 B2 12-10-2011
			JP 2002538050 A 12-11-2002
			US 6484931 B1 26-11-2002
			WO 0051897 A1 08-09-2000
DE 19938167	A1	22-02-2001	AU 6158300 A 13-03-2001
			BR 0013356 A 30-04-2002
			CN 1373727 A 09-10-2002
			DE 19938167 A1 22-02-2001
			EP 1204571 A1 15-05-2002
			JP 4485725 B2 23-06-2010
			JP 2003507268 A 25-02-2003
			PL 354459 A1 12-01-2004
			US 6719131 B1 13-04-2004
			WO 0112527 A1 22-02-2001
EP 2765086	A1	13-08-2014	NONE