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(54) **RESEALABLE CONTAINER HAVING TACTILE ELEMENTS**

(57) The present invention relates to a resealable package (106) for consumer goods. The package (106) has an access opening (114) through which consumer goods can be removed, and an adhesive label (108) covering the access opening of the package and extending beyond the periphery of the access opening of the package. The adhesive label (108) is at least partially releasably affixed to the package by a resealable adhesive provided on the inner surface of the label extending about at least a sealing portion of the package located at the periphery of the access opening (114). At least the sealing portion of the package is provided with a plurality of formations (116), the plurality of formations being adapted to reduce the effective area of the sealing portion. A hinge lid container (100) is also provided that comprises a box (102) having such a resealable package (106), and a lid (104) hinged to the box along a hinge line extending across a rear wall of the container.

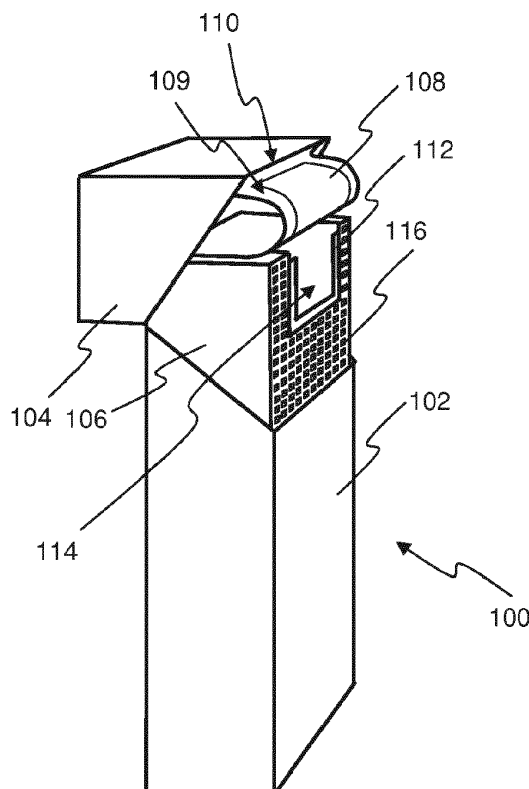


Figure 1

Description

[0001] The present invention relates to a resealable container for consumer goods with a resealable adhesive label with a plurality of formations. The invention further relates to a container comprising the resealable container.

[0002] Smoking articles such as cigarettes and cigars are commonly packaged in rigid hinge-lid containers having a box and a lid connected to the box portion about a hinge line extending across the rear wall of the container. Such hinge-lid containers are typically constructed from one-piece laminar cardboard blanks. In use, the lid portion is pivoted about the hinge line to open the container and so gain access to a bundle of smoking articles housed in the box portion.

[0003] The bundle of smoking articles housed in the box portion is typically wrapped in an inner liner of metallised paper, metal foil or other flexible sheet material. To access the bundle of smoking articles within the inner liner, a consumer typically removes and discards a pre-perforated upper portion of the inner liner upon first opening the hinge-lid container.

[0004] However, to provide improved protection against the ingress and egress of, for example, air, moisture, flavours and odours, it is also known to enclose the bundle of smoking articles in a resealable substantially airtight wrapper.

[0005] For example, EP-A-0 944 539 discloses a hinge-lid pack of smoking articles in which the smoking articles are enclosed in a sealed enclosure of a layer of barrier material having an access aperture defined therein. The access aperture is covered by a cover layer with a permanently tacky surface, which can be engaged with the layer of barrier material to reseal the enclosure after first opening the aperture. A frame against which the cover layer may be pressed to ensure good resealing is provided in the sealed enclosure between the smoking articles and the layer of barrier material. To aid opening and reopening of the sealed enclosure, a non-adhesive tab is provided at the bottom edge of the cover layer.

[0006] US-B-5,061,535 discloses a primerless release article comprising a substrate with a geometric pattern consisting of discrete islands and bridges for use with adhesive tapes, which does not require the use of a primer silicone release agent.

[0007] US-A-2003/0129343 discloses a microstructure release liner with a plurality of outwardly extending embossed protrusions, which penetrate an adhesive layer.

[0008] JPH U-076182 discloses a wet paper packaging pouch, wherein at least a section of the openable part corresponding to a cover strip is embossed to reduce peeling resistance.

[0009] JPH-U-0830 discloses an adhesive sheet body with an adhesive layer with a plurality of independent small raised parts, establishing a gap through which air

can escape when applying the adhesive layer to another object.

[0010] WO-A-2008/142540 discloses a hinge-lid pack of smoking articles in which the smoking articles are enclosed in an inner package with an extraction opening closed by a cover flap that is fixed to the inner package using non-dry re-stick adhesive applied to the underside of the cover flap. The inner or outer surface of a bottom tab of the cover layer is glued permanently and non-removably to an inner surface of the lid of the hinge-lid pack so that opening and closing the lid simultaneously also opens and closes the cover flap.

[0011] When such a container is opened, the consumer can feel the resistance of the peeling force that needs to be overcome in order to separate the cover label from the underlying surface. When the cover layer or flap is opened and closed a plurality of times the tactile experience of the consumer may change during opening of the cover layer or flap due to the irregularity of the adhesive connection. In addition, the force required to open the cover layer or flap changes in dependence on the number of times the cover layer or flap has been opened. Therefore, it would be desirable to provide a resealable container for consumer goods improved opening characteristics, such as a more consistent opening force, or a tactile sensation for the user. It would also be desirable to provide a resealable container with controllable opening force.

[0012] According to the present invention, there is provided a resealable container for consumer goods according to claim 1. The resealable container comprises a package for containing consumer goods. The package has an access opening through which consumer goods can be removed. The resealable container also comprises an adhesive label covering the access opening of the package and extending beyond the periphery of the access opening of the package. The adhesive label is at least partially releasably affixed to the package by a resealable adhesive provided on the inner surface of the label extending about at least a sealing portion of the package located at the periphery of the access opening. At least the sealing portion of the package is provided with a plurality of formations provided in a continuous repeating pattern and in spaced apart rows. The plurality of formations are adapted to reduce the effective area of the sealing portion.

[0013] The term "effective area" is used throughout the specification to refer to the area of the sealing portion that is predominantly contributing to the peeling force when the adhesive label is peeled from the underlying surface of the inner package.

[0014] 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. Likewise, 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 the inside or outside surface is not necessarily equivalent 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.

[0015] Providing the sealing portion with a plurality of formations enables the peeling force to be controlled. Furthermore, providing the sealing portion with a plurality of formations may improve the tactile sensation for the user when opening the resealable container. In addition, providing the sealing portion with a plurality of formations may improve the quality of opening of the resealable container. The quality of opening may be improved by reducing the standard deviation of the peeling force over a plurality of opening operations. This is particularly advantageous in the embodiment of a sealed package, where the sealing and unsealing of the adhesive label works in conjunction with the opening and closing of a lid of a hinged lid container, such as for example described in WO-A-2008/142540. It has been found that, advantageously, despite the reduction of the effective sealing area, the moisture barrier property of the sealing is maintained.

[0016] The adhesive label provided for covering the access opening comprises a resealable adhesive, such that the label can be removed from the sealing portion of the package and reattached a number of times. This allows for repeated opening and closing of the package in order to access the consumer goods individually. The resealable adhesive on the adhesive label will preferably provide sufficient adhesion for the label to be reattached at least as many times as there are consumer goods within the package. This enables a consumer to open and reseal the package until the package is empty.

[0017] Suitable resealable adhesives would be known to the skilled person and a wide variety of adhesives are commercially available from a number of suppliers. The selection of a suitable adhesive may depend upon the material forming the sealing portion of the package to which the adhesive label is sealed and resealed during use.

[0018] The adhesive label preferably comprises an adhesive free surface area, wherein this adhesive free surface area corresponds in size to the access opening in the package. When the lid is in the closed position with the adhesive label sealed to the package, this adhesive free surface area covers the access opening in the inner package. This will prevent dust or small particles, for example tobacco shorts or other residue from the consumer goods within the package, from adhering to the adhesive label. This can happen if the adhesive label comes into contact with the consumer goods within the inner pack-

age.

[0019] The access opening of the package may be defined by one or more lines of weakness in the package. In this embodiment, the one or more lines of weakness define an access portion of the package. By providing the package with a defined access portion the package may be more securely sealed before the first opening of the resealable container. This may increase the storage life of the consumer goods contained within the resealable container. In this embodiment, the adhesive label preferably comprises a further area of the inner surface of the adhesive label permanently affixed to the access portion of the package bounded by the one or more lines of weakness. The access portion of the package is preferably partially separated from the remainder of the package along the one or more lines of weakness on first opening of the adhesive label such that the access portion of the package remains attached to the remainder of the package during subsequent opening and closing of the adhesive label. The resealable adhesive provided on the first area of the inner surface of the adhesive label may extend about substantially the entire periphery of the access portion of the package.

[0020] Preferably, the adhesive label is permanently affixed to the package at least in an area of the resealable package. More preferably, the adhesive label is permanently affixed to the package by a connection portion extending about substantially the entire periphery of the adhesive label. The connection portion is connected to the adhesive label along an edge of the adhesive label adjacent an edge of the access portion. Preferably, the connection edge is located towards the rear of the top side of the package.

[0021] The plurality of spaced apart rows of formations may be substantially linear, or they may be substantially non-linear. The rows may comprise a combination of substantially linear rows, and substantially non-linear rows. The rows may alternate between substantially linear rows, and substantially non-linear rows. Alternatively, a plurality of substantially-linear rows may be provided with a single substantially non-linear row provided, for example, on the longitudinal mid-line of the package. Any other suitable combination of substantially linear rows and non-linear rows is envisaged.

[0022] The substantially non-linear rows may be wavy rows, or they may be zigzag rows. The substantially non-linear wavy rows may be substantially regular wave functions such as a sinusoidal wave. The substantially non-linear zigzag rows may be substantially regular zigzag wave functions, such as a triangle wave function or a sawtooth wave function.

[0023] The plurality of formations are provided in a continuous repeating pattern. The plurality of formations may thus be more easily manufactured utilising conventional embossing or debossing machinery, or printing machinery. The continuous repeating pattern may provide the user with an improved tactile sensation when opening the resealable container. The plurality of formations is

preferably regularly spaced apart over the sealing portion. As used herein, "regularly spaced apart" connotes that the distances between each formation, and its neighbouring formations, are substantially equal. A continuous repeating pattern may advantageously simplify production and ensure consistent sealing quality across a large number of subsequently produced resealable packages by eliminating the requirement for precise registration of the pattern with the boundaries of the opening in the resealable package.

[0024] By controlling the pattern of the formations the tactile experience of the user may also be controlled. In addition, the sealing of the adhesive label to the package may be controlled by, for example, providing fewer formations substantially adjacent the access opening to locally increase the surface area of the sealing portion, and thus improve the sealing in close proximity to the access opening.

[0025] The rows of formations may be parallel to the direction the adhesive label is peeled from the package. Alternatively, the rows may be perpendicular to the direction the adhesive label is peeled from the package. In a further embodiment, a combination of rows parallel to the direction the adhesive label is peeled, and rows perpendicular to the direction the adhesive label is peeled may be provided.

[0026] The adhesive label is peeled from the package along the longitudinal direction, and thus where the rows of formations are parallel to the peeling direction they are parallel to the longitudinal axis of the package. Where the rows are perpendicular to the peeling direction they are parallel to the transverse axis of the package.

[0027] By providing the rows of formations parallel to the peeling direction, the force required to peel the label from the package may be substantially constant during a peeling operation. However, where the rows of formations are provided perpendicular to the peeling direction, the force required to peel the label from the package may alternate between a low and a high peeling force during a peeling operation. The force may be controlled by setting, for example, the spacing between the rows of formations. In this way, a zipper effect may be experienced by the user to provide the user with an improved tactile experience. In addition, providing the rows of formations perpendicular to the peeling direction may enable a sound to be generated as the adhesive label is peeled from the package. The sound is generated by the variation in the peeling force causing the adhesive label to vibrate. By controlling the distance between each row of formations, and the width of each row, the sound generated can be varied as the adhesive label is peeled away from the package. For example, a short tune, such as a jingle, may be generated each time the adhesive label is peeled from the package.

[0028] The plurality of formations may be provided on substantially the entire front wall of the package. Providing the plurality of formations on substantially the entire front wall of the package may allow the package to be

manufactured more easily as the formations may be formed in a continuous process. Similarly, the plurality of formations may be provided on all of the walls of the package, and thus the package may be yet more easily manufactured.

[0029] The formations may reduce the effective area of the sealing portion by at least about 10 percent, preferably at least about 15 percent, more preferably at least about 17 percent. In some embodiments, the formations may reduce the effective area of the sealing portion by up to about 25 percent. The formations reduce the effective area of the sealing portion by preventing sections of the sealing portion from contacting the adhesive label. This can be achieved for example by embossed structures or debossed structures in the surface of the package.

[0030] The term "debossed structure" is used to refer to a structure that is formed into the direction of the inside of the package. The term "embossed structure" is used to refer to a structure that is formed into the direction of the outside of the package. In a debossed structure, the effective surface area is reduced as the debossed structure typically does not contribute to the peeling force as the adhesive of the adhesive layer only enters the debossed structure partially or not at all. In an embodiment with debossed structures, the adhesive layer rests predominantly on the un-debossed surface such that the sealing and moisture retention properties of the seal are maintained. In an embodiment with an embossed structure, the effective surface area is reduced substantially to the peaks of the structures. In this embodiment, the un-embossed "valleys" between the embossed structures do not significantly contribute to the peeling force, if at all. In some embodiments, a combination of embossed structures and debossed structures may be desirable. In some embodiments, the entire surface of the package may be embossed or debossed.

[0031] By preventing the adhesive label from contacting the sealing portion of the package in a controlled manner, the force required to peel the adhesive label from the package may be reduced, but the seal formed between the adhesive label and the package is not adversely affected. Reducing the force required to peel the adhesive label from the package allows the standard deviation of the peeling force during a peeling operation to be reduced. A reduction in the standard deviation of the peeling force has the effect, that the peeling operation of the adhesive layer from the package is more even.

[0032] Alternatively, the reduction of the peeling force could be achieved by reducing the strength of the adhesive utilised on the adhesive label. However, it has been found that the strength of the adhesive reduces which each peeling operation, and thus if the adhesive strength of the adhesive label is reduced initially, the adhesive label may not perform adequately after a number of peeling operations. Thus, reducing the effective area of the sealing portion of the package advantageously allows the adhesive strength to remain suitably high while re-

ducing the force required peeling the adhesive label from the package.

[0033] The shape of each formation may be circular, triangular, rectangular, or any other suitable polygonal shape. The shape of the formation, as used herein, is the shape of the two-dimensional projection at the surface of the package. The formation may have a three-dimensional form such as a hemisphere, a cone, a pyramid, a frustum, a cuboid, a trapezoidal prism, or any other suitable three-dimensional shape.

[0034] The formations may be embossed or debossed into the package. The formations may be formed by embossing or debossing the package material. The embossing or debossing is preferably conducted before the package is assembled, and as such substantially the entire package may be provided with the plurality of formations. Alternatively, the formations may be printed on the package. Where the formations are printed, the formations may be formed using lacquer.

[0035] The package may comprise an inner frame, provided within the package, adapted to increase the structural resilience of the package such that the adhesive label may be more easily sealed to the package.

[0036] Preferably, the inner frame is a U-shaped inner frame having a front wall and a pair of opposed side walls. The term "U-shaped" is used to refer to a shape that comprises three parts, wherein the first and the third part are parallel to each other and extend into the same direction perpendicular to the second part.

[0037] Preferably, the front wall of the inner frame is provided adjacent the front wall of the package. Advantageously, an inner frame with a large surface area provided adjacent the front wall of the package increases the structural strength of the package. The increased structural strength provided by the inner frame allows the more secure closing of the adhesive label. This is particularly advantageous for subsequent closing operations when the package is no longer full.

[0038] Preferably, the inner frame comprises a cut-out at the top of the front wall. The cut-out preferably corresponds to the access opening, and is provided such that the consumer goods within the package may be more easily accessed. Where the inner frame comprises a cut-out, the height of the inner frame is defined as the distance from the bottom of the inner frame to the cut-out.

[0039] 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, where present 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.

[0040] In a preferred embodiment, a container for consumer goods is provided that comprises a box adapted

to receive a resealable package as described herein. The container also comprises a lid hinged to the box along a hinge line extending across a back wall of the container.

[0041] In this preferred embodiment, the adhesive label may be permanently affixed to the inner surface of the front wall of the lid such that upon opening the lid the adhesive label is peeled away to reveal the access opening. As such, when a user opens the lid of the container, the adhesive label is automatically opened to reveal the access opening, and when the user closes the lid, the adhesive label is automatically closed to reseal the access opening.

[0042] The term "longitudinal" refers to a direction from bottom to top or vice versa. The term "transverse" refers to a direction perpendicular to the longitudinal direction.

[0043] As used herein, the term "height" refers to the dimension of the respective portion of the adhesive label measured in the longitudinal direction when the adhesive label is affixed to the inner package. The term "width" refers to the dimension of the respective portion of the adhesive label measured in the transverse direction when the adhesive label is affixed to the inner package.

[0044] The container is preferably a rectangular parallelepiped comprising two wider walls spaced apart by two narrower walls.

[0045] The term "hinge line" refers to a line about which the lid may be pivoted in order to open the container. A hinge line may be, for example, a fold line, a creasing line or a score line in the panel forming the back wall of the container.

[0046] The container may be formed from any suitable materials including, but not limited to, cardboard, paperboard, plastic, metal, or combinations thereof. Preferably, the outer housing are each 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.

[0047] Preferably, the inner package is 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 supercalendered glassine paper. In addition, the inner package material may be provided with a print-receptive top coating.

[0048] As described above, 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.

[0049] 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.

[0050] Alternatively, the container may have a non-rectangular transversal cross section, for example polygonal such as triangular or hexagonal, semi-oval or semi-circular.

[0051] 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 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.

[0052] 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).

[0053] 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.

[0054] 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.

[0055] 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.

[0056] 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 (comprising the hinge between box and lid).

[0057] 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

[0058] 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.

[0059] 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.

[0060] 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.

[0061] Where the container comprises smoking articles, the container may further comprise waste-compartments (for example for ash or butts) or other consumer goods, for example matches, lighters, extinguishing means, breath-fresheners or electronics. The other consumer goods may be attached to the outside of the container, contained within the container along with the smoking articles, in a separate compartment of the container or combinations thereof.

[0062] 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.

[0063] 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.

[0064] Any feature in one aspect of the invention may be applied to other aspects of the invention, in any appropriate combination. In particular, method aspects may be applied to apparatus aspects, and vice versa. Furthermore, any, some and/or all features in one aspect can be applied to any, some and/or all features in any other aspect, in any appropriate combination.

[0065] The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a perspective view of a container according to the present invention with the lid in an open position;

Figure 2 shows an example of a tactile pattern provided on the container; and

Figures 3(a) and (b) show examples of a tactile pattern in the cross direction of peeling, and in the same direction of peeling respectively.

[0066] Figure 1 shows a perspective view of a container 100 comprising a resealable package with the lid in an open position. The container 100 comprises a box 102, and a lid 104 hinged to the box along a hinge line on the rear wall of the box. The box has a resealable package 106 provided inside. The resealable package 106 is provided with an adhesive label 108 to seal the

resealable package when the container is not in use. The adhesive label 108 is permanently affixed to the inner surface of the front wall 110 of the lid portion 104. By permanently affixing the adhesive label to the lid portion, the adhesive label is automatically peeled away from the resealable package when the lid is moved from the closed position to the open position shown in Figure 1.

[0067] To enable the adhesive label to be more securely and easily resealed to the resealable package, an inner frame 112 is provided within the resealable package 106. The inner frame is a cardboard element, having a front wall and two opposed side walls. The side walls of the inner frame 112 act to strengthen the front wall of the resealable package. Thus, the resealable package is more able to resist the forces applied to the front wall of the resealable package when the adhesive label is resealed to the package. An access opening 114 is provided in the top wall and front wall of the resealable package. As can be seen, a plurality of formations 116 is provided on the front wall of the resealable package in the area that the adhesive label seals with the package when in the closed position. This area is a sealing portion of the resealable package, and the formations act to reduce the effective area of the sealing portion is discussed in further detail below.

[0068] In use, as the lid is moved from the closed position to the open position the adhesive label is automatically peeled from the package to reveal the access opening. As can be seen, the adhesive label is peeled in a direction corresponding to the longitudinal axis of the container.

[0069] Figure 2 shows an example of the material 200 utilised for the sealing portion 116 of the resealable package 106. In this example, formations 202 are provided in the material. The formations are embossed or debossed into the material by embossing machinery before the material is formed into the resealable package. The formations 202 are pyramidal in shape, but may be any other suitable three-dimensional shape. In a preferred embodiment, the formations reduce the effective surface area of the sealing portion by about 17 percent. As can be seen, the formations 202 as provided in spaced apart rows. The orientation of the rows is described in further detail below.

[0070] The embossed or debossed formations act to reduce the effective area of the sealing portion of the package by preventing the adhesive label from contacting the portion of the material within the formation. This has the effect of reducing the force required to peel the adhesive label away from the sealing portion. This enables the resealable adhesive utilised to seal the adhesive label to the package to have a conventional strength, but reduces the variation in the average force required to peel the adhesive label during one peeling operation. The user is therefore provided with an improved tactile sensation. Using a resealable adhesive having a conventional strength ensures that the adhesive label remains suitably adhesive to seal the label even after a number

of opening operations.

[0071] Figures 3(a) and 3(b) show examples of a tactile pattern in the cross direction of peeling, and in the same direction of peeling respectively. The material 300 shown in Figure 3(a) is provided with a plurality of formations in spaced apart rows as described above in relation to Figure 2. As indicated by the arrow 302, the direction of peeling is substantially parallel to the direction of the rows of formations. As the rows of formations are parallel to the direction of peeling, the force required to peel the adhesive label away from the sealing portion of the resealable package remains substantially constant during one opening operation. The result of having rows of formations parallel to the peeling direction is to provide the user with a smooth tactile experience.

[0072] In an alternative, and as shown in Figure 3(b), the material 304 for the sealing portion of the package is provided with a plurality of formations in spaced apart rows that are substantially perpendicular to the peeling direction 306. By providing the formations in spaced apart rows perpendicular to the peeling direction a so-called zipper effect may be created. The zipper effect is experienced by the user as an oscillating high to low force as the adhesive label is peeled from the package. The initial force is high due to the surface area in the region adjacent the peeling line of the adhesive label being continuous and uninterrupted by formations in the material. The peeling line is the imaginary line generated between the adhesive label and the resealable package; it extends across the width of the adhesive label. When the peeling line intersects the row of formations the peeling force is reduced due to the decrease in surface area of adhesive label being in contact with the resealable package. Once the peeling line passes over the row of formations the surface area of adhesive label being in contact with the resealable package increases due to the absence of the formations. This process repeats each time a row of formations is encountered, and thus an oscillating peeling force is generated. By altering the space between the rows, and the width of each row, the frequency and amplitude of the oscillating peeling force can be tuned to provide the user with an improved tactile and potentially acoustic sensation.

Claims

1. A resealable container for consumer goods comprising:

a package for containing consumer goods, the package having an access opening through which consumer goods can be removed; and an adhesive label covering the access opening of the package and extending beyond the periphery of the access opening of the package, the adhesive label is at least partially releasably affixed to the package by a resealable adhesive

provided on the inner surface of the label extending about at least a sealing portion of the package located at the periphery of the access opening,

wherein, at least the sealing portion of the package is provided with a plurality of formations provided in a continuous repeating pattern and in spaced apart rows, the plurality of formations being adapted to reduce the effective area of the sealing portion.

2. A resealable container according to claim 1, wherein the formations are debossed structures in the surface of the package that are formed into the direction of the inside of the package.
3. A resealable container according to claim 2, wherein the resealable adhesive forming an adhesive layer only enters the debossed structure partially or not at all.
4. A resealable container according to claim 2 or 3, wherein the adhesive layer formed by the resealable adhesive rests predominantly on the un-debossed surface, such that the sealing and moisture retention properties of the seal are maintained.
5. A resealable container according to any one of the preceding claims, wherein the rows are substantially linear.
6. A resealable container according to any one of the preceding claims, wherein the rows are substantially nonlinear.
7. A resealable container according to any one of the preceding claims, wherein the rows are parallel to the direction the adhesive label is peeled from the package.
8. A resealable container according to any one of claims 1 to 6, wherein the rows are perpendicular to the direction the adhesive label is peeled from the package.
9. A resealable container according to any of the preceding claims, wherein the formations reduce said effective area by at least about 10 percent, preferably at least about 15 percent, more preferably at least about 17 percent.
10. A resealable container according to any of the preceding claims, wherein the shape of each formation is rectangular, triangular or circular.
11. A resealable container according to any of the preceding claims, wherein the formations are printed on the package.

12. A resealable container according to any of the preceding claims, wherein substantially the entire package is provided with the plurality of formations.
13. A resealable container according to any of the preceding claims, wherein the consumer goods are smoking articles. 5
14. A hinge lid container for consumer goods, comprising: 10
- a box, the box adapted to receive a resealable container according to any preceding claim; and
- a lid hinged to the box along a hinge line extending across a rear wall of the container. 15
15. A container according to claim 14, wherein the adhesive label is permanently affixed to the inner surface of the front wall of the lid portion such that upon opening the lid the adhesive label is peeled away to reveal the access opening. 20

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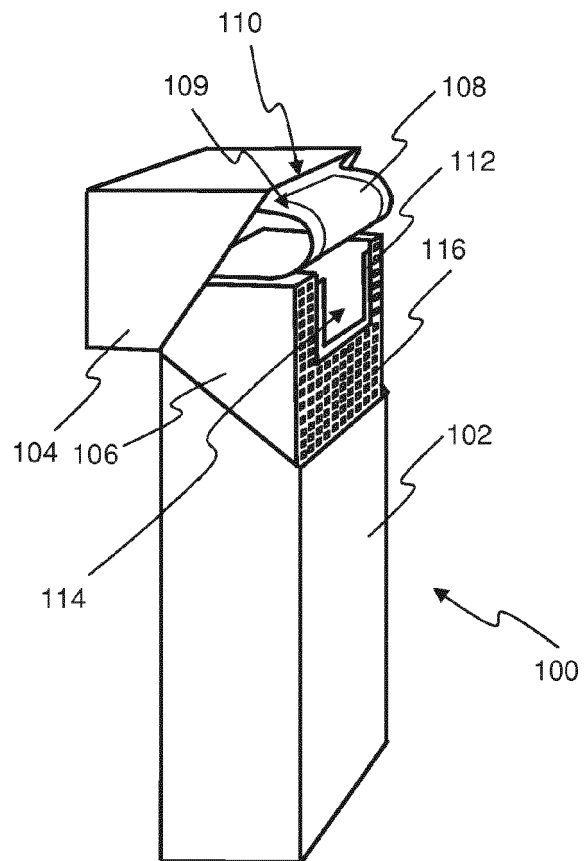


Figure 1

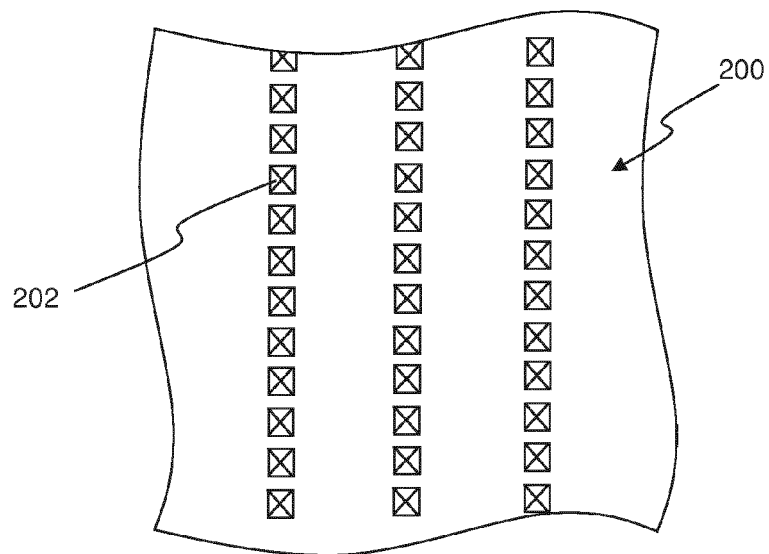


Figure 2

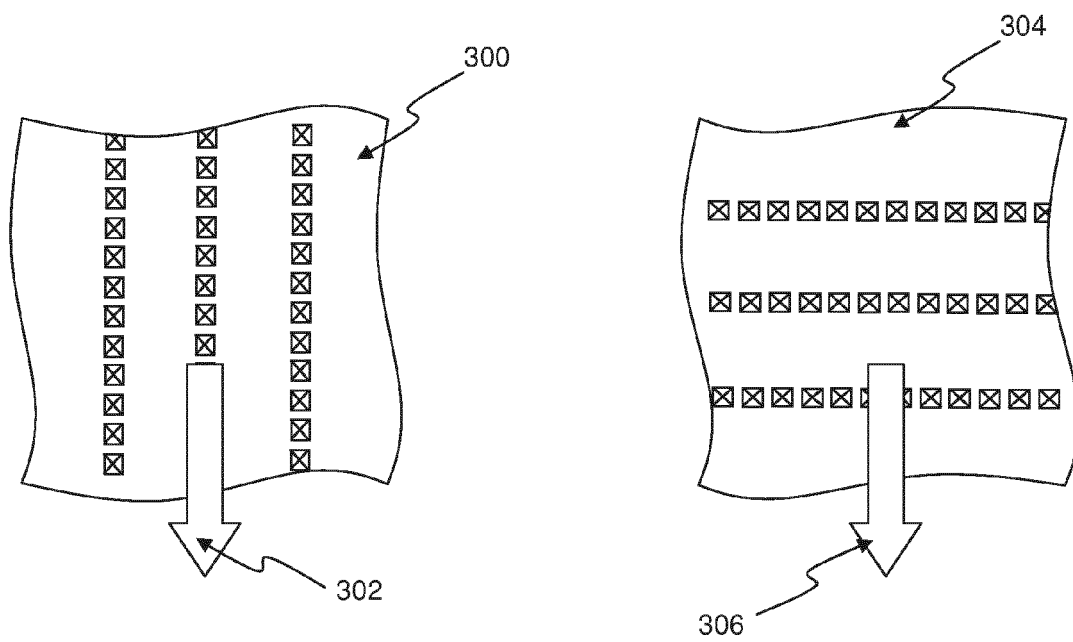


Figure 3(a)

Figure 3(b)



EUROPEAN SEARCH REPORT

 Application Number
 EP 19 19 0920

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 2 366 637 A1 (GD SPA [IT]) 21 September 2011 (2011-09-21)	14,15	INV. B65D85/10
Y	* paragraph [0014] - paragraphs [0016], [0025]; figure 4 *	1-13	
Y	US 5 061 535 A (KRECKEL KARL-WERNER [US] ET AL) 29 October 1991 (1991-10-29) * column 2, line 14 - line 47; figure 2 *	1-13	
A	US 2003/129343 A1 (GALKIEWICZ ROBERT K [US] ET AL) 10 July 2003 (2003-07-10) * paragraph [0030] *	1-15	
A	JP H07 6182 U (KUBOTA) 27 January 1995 (1995-01-27) * paragraph [0023] - paragraph [0030]; figures 9-10 *	1-15	
X	WO 2008/142540 A1 (GD SPA [IT]; MARCHETTI ROBERTO [IT]; NEGRINI STEFANO [IT]) 27 November 2008 (2008-11-27)	14,15	TECHNICAL FIELDS SEARCHED (IPC) B65D
A	* page 6, line 16 - line 23; figure 5 *	1-13	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 19 November 2019	Examiner Vesterholm, Mika
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 19 19 0920

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2366637 A1	21-09-2011	EP 2366637 A1	21-09-2011
		JP 6005904 B2	12-10-2016
		JP 2011251766 A	15-12-2011
		US 2012006823 A1	12-01-2012
US 5061535 A	29-10-1991	NONE	
US 2003129343 A1	10-07-2003	AU 2002343618 A1	30-07-2003
		EP 1465960 A1	13-10-2004
		JP 2005514515 A	19-05-2005
		US 2003129343 A1	10-07-2003
		WO 03060031 A1	24-07-2003
JP H076182 U	27-01-1995	JP H076182 U	27-01-1995
		JP 2597945 Y2	26-07-1999
WO 2008142540 A1	27-11-2008	AU 2008252539 A1	27-11-2008
		EP 2155568 A1	24-02-2010
		KR 20100033479 A	30-03-2010
		PL 2155568 T3	30-11-2012
		RU 2009147454 A	27-06-2011
		US 2010252462 A1	07-10-2010
		WO 2008142540 A1	27-11-2008
		ZA 200908772 B	25-08-2010

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- EP 0944539 A [0005]
- US 5061535 B [0006]
- US 20030129343 A [0007]
- WO 2008142540 A [0010] [0015]