**Container with a lifting element**

The present invention relates to a container comprising smoking articles and further comprising a lifting element correlated to at least one smoking article for lifting the smoking article.

Smoking articles are commonly provided in hinged-lid containers which are formed from a blank. In order to access the smoking articles in the container, the consumer typically removes a transparent outer wrapper, opens the lid and removes a section of the inner liner that covers the upper ends of the smoking articles. Typically, the upper end of the smoking article is the mouth end of the smoking article. This is particularly common where the smoking article comprises a filter. When removing such a smoking article from the container, the consumer touches the mouth end of the smoking article.

Some consumers prefer to avoid touching the mouth end of the filter, particularly, where the mouth end of the smoking article comprises a recessed filter. A smoking article with a recessed filter is disclosed for example in the European Patent EP1299012.

The US patent US-A-4,949,841 discloses a hinged-lid pack for easily extracting cigarettes contained therein. The cigarettes in the pack are wrapped in an inner liner that is attached, for example glued, to parts of the bottom wall and the rear wall of the pack. When a gripping tab at the front wall of the inner liner is pulled, a part of the bottom wall of the inner liner is raised such that the first row of cigarettes is lifted.

However, the inner liner of this pack requires a significant modification of the inner liner blank compared to a prior art container for smoking articles and requires extensive modification to the packaging machine. Furthermore, the lifting part and the liftable front wall of the inner liner exert pressure on the rod end of the smoking article during the lifting process which may damage the rod end.

Embodiments~~It is therefore the object~~ of the invention ~~to~~ provide a container that facilitates the easy removal of the smoking articles, whilst being able to be manufactured at high quality and cost efficient.

According to an aspect of the invention, there is provided~~The object of the invention is solved by providing~~ a container comprising smoking articles and a cup shaped box for the smoking articles where the cup shaped box comprises a bottom wall, side walls and an opening, the container further comprising a lifting element correlated to at least one smoking article for lifting the smoking article off the bottom wall of the container, wherein the lifting element comprises an engaging portion, and wherein the engagement portion is engageable with the outside upper end portion of the smoking article

As the engagement between the lifting element and the smoking article takes place at a location at the outside upper end portion of the smoking article the rod end portion of the smoking article is not engaged and thus cannot be damaged during the lifting movement. In addition, the consumer does not have to touch the mouth end of the smoking article as the lifting element may move the smoking article sufficiently off the bottom wall of the container, so that the upper end of the smoking article protrudes over the other smoking articles in the container. This allows the consumer to easily grab the protruding upper end of the lifted smoking article along its side.

Furthermore, the construction of the lifting element according to embodiments of the invention facilitates the production of the container according to embodiments of the invention as the lifting element can easily be included at a well known production step during the production process of the container. Thus, the lifting element according to embodiments of the present invention only requires slight modification regarding the known container production process, and can therefore be implemented as an inexpensive modification in a known production line.

The engagement of the lifting element with the outside upper end portion of the smoking article further enables a small size and simple geometry of the lifting element. Such a lifting element is inexpensive in its manufacture itself.

As used herein, the terms "front", "back", "upper", "lower", "side", "top", "bottom" and other terms used to describe relative positions of the components of containers according to embodiments of the invention refer to the container in an upright position with the lid at the top end. Where the container comprises a hinged lid, the lid may be hinged at the back of the container. The terms "left" and "right" are used with reference to side walls of the container when the container is viewed from the front in its upright position. When the container in the upright position is open, the smoking articles contained in the box may be removed from the upper end of the container.

The lower end portion of the smoking article is the end portion which is closer to the bottom of the container. Accordingly, the upper end portion is the opposite end of the smoking article. Where the smoking article comprises a filter, the upper end portion of the smoking article is typically the filter end of the smoking article.

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 across the front wall, the back wall or one of the side walls. The referred lifting direction is generally in the longitudinal direction away from the bottom wall of the container.

one end of the smoking article. The engagement of the lifting element with the edge of a tipping paper provides the benefit that a feature already commonly available in filter cigarettes can be used to provide a lifting functionality. According to embodiments of the invention, a filter cigarette requires no modification to engage with the lifting element according to embodiments of the invention. Thus, the manufacturing process of the smoking article does not have to be amended, and therefore the lifting functionality is inexpensive to implement.

Preferably the dimension of the lifting element is such that it extends from the opening of the cup shaped box to below the lower edge of the tipping paper. This feature provides the benefit that only a lifting motion of the lifting element towards the top is necessary to securely engage the lifting element with the edge of the tipping paper to lift the smoking article.

According to another embodiment of the invention, the lifting element is only in frictional engagement with the outside upper end portion of the smoking article. Thus, the engagement takes place via frictional forces. No protrusions, shoulders or the like are necessary to allow the lifting of the smoking article from the bottom of the cup shaped box by the lifting element. Embodiments of t~~T~~he invention can also be applied to smoking articles that do not comprise a tipping paper or the like, but preferably only a general cylindrical or oval outside without any edges for positive locking. Additional protrusions, edges or shoulders on the outside upper end portion of the smoking article can support the frictional engagement. In addition, the lifting element or the smoking article or both may have a surface area where the coefficient of friction is increased compared to the rest of the surface of the smoking article or lifting element. This may be, for example, a rough or tacky surface. Preferably, such lifting element interacts only through friction with the outside upper end portion of the smoking article by simultaneously interacting with at least two locations at the outside upper end portion of the smoking article, more preferably with two locations that are opposite of each other on the circumference of the outside upper end portion of the smoking article.

Preferably, the lifting element comprises a protrusion as the engaging portion. The protrusion may be adapted to form a portion which engages a shoulder of the smoking article in a positive locking. Alternatively, the protrusion may provide a normal force for a frictional engagement between the lifting element and the smoking article.

be lifted in different heights, such that the individual smoking article is easily accessible for the consumer and the arrangement of the lifted smoking articles is esthetically appealing.

Preferably, the lifting element extends at least partially parallel to one box wall of the cup-shaped box and is guided by at least one neighboring box wall. This allows that the lifting element is in the desired position during the lifting process and therefore engages properly the smoking article at the outside of the upper end portion of the smoking article such that the same may be reliably lifted out of the cup shaped box. The lifting element may be in physical contact with the cup shaped box. For example, the lifting element has substantially the same width as the interior of the cup shaped box. Thus, the lifting element may be closely correlated to the side walls of the box, and may therefore be reliably guided therein.

Preferably, the container comprises an inner frame mounted within the box, wherein the inner frame extends above the upper edges of at least the front wall of the box of the container. The inner frame becomes visible to the consumer when the lid is opened. The front wall of the inner frame may be printed with indicia which may be the same as, or different to the indicia printed on the front wall of the box. Alternatively, or in addition, the front wall of the inner frame may be cut into a distinctive shape, for example, to reflect the branding of the consumer goods. If required, the inner frame may also comprise a line of weakness to facilitate flattening of the container.

Preferably, the front wall of the inner frame is provided with a cut out portion at the upper edge thereof. This enables more convenient access to the smoking articles within the container, without significantly reducing the surface area of the front wall of the inner frame.

Containers according to embodiments of 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 embodiments of 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

Containers according to embodiments of the invention may be advantageously used to package smoking articles including, but not limited to, known lit-end cigarettes, cigars or cigarillos, heated smoking articles comprising a combustible fuel element or heat source and an aerosol-generating substrate (for example cigarettes of the type disclosed in US-A-4,714,082) and smoking articles for use with electrical smoking systems (for example cigarettes of the type disclosed in US-A-5,692,525).

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

Containers according to embodiments of the invention may hold one, two, three four or five separate bundles of smoking articles. The separate bundles may be arranged substantially parallel to the front wall and to the back wall or substantially perpendicular to the front wall and to the back wall.

Within a bundle, the smoking articles may be arranged in different collations, depending on the total number of smoking articles, the dimensions of the smoking articles or the cross sectional shape of the container. For example, the smoking articles may be arranged in a bundle in a single row of five, 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, six, seven, eight, nine, or ten; or four rows of four, five, six or seven. Alternatively, the two or more rows may include at least two rows containing different numbers 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).

Containers according to embodiments of 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. Wherein the container comprises more than one bundle, each bundle within the same container may hold the same or different types of smoking articles as listed above.

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 of smoking articles housed inside the container.

Preferably, containers according to embodiments of 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 top wall to the bottom wall of the container.

Preferably, containers according to embodiments of 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 the first side wall to the second side wall of the container.

Preferably, containers according to embodiments of the invention have a depth of between about 6 mm and about 100 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).

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 1 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 is between about 0 to 1 (hinge 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 to the height of the box front wall 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, the interior surfaces, or both the exterior and the interior surfaces of containers according to embodiments of the invention may be printed, embossed, debossed or otherwise embellished with manufacturer or brand logos, trade marks, slogans and other consumer information and indicia. Alternatively, or in addition, the exterior surfaces, the interior surfaces, or both the exterior and the interior surfaces of containers according to embodiments of the invention may be at least partially covered with lacquer, metallisation, holograms, luminescent material, or any other materials that alter the feel, odour or appearance of the container.

Where the inner housing of a container according to embodiments of the present invention contains one or more bundles of smoking articles, the smoking articles are preferably wrapped in an inner liner of, for example, metal foil or metalized paper.

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.

Once filled, containers according to embodiments of 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 embodiments of the invention are over wrapped, the over wrapper may include a tear tape. The tear tape is preferably positioned around the container below the lower edge of the front wall of the lid, such that once the tear tape has been removed, the lid is free to be rotated about the first hinge line. Alternatively or in addition, there may be a second tear tape positioned around the container above the hatch, such that once the tear tape has been removed, the hatch is free to be rotated about the second hinge line. Alternatively, the tear tape may be provided lengthways around the container.

Containers according to embodiments of the present inventionapplication comprise as well so called soft-packs, wherein the cup-shaped box is made of a material that has a lower bending strength or thickness compared to containers made out of cardboard or the like. However, the lifting element is brought into reliable contact with the smoking articles during the lifting operation where the soft-pack is snugly filled with smoking articles.

## Claims

1. A container ~~(1)~~ comprising smoking articles,

further comprising a cup shaped box ~~(2)~~ for the smoking articles ~~(17)~~; comprising a bottom wall, side walls and an opening,

further comprising a lifting element correlated to at least one smoking article ~~(17)~~ for lifting the smoking article ~~(17)~~ of the bottom wall of the container,

characterized in that

the lifting element ~~(20)~~ has an engaging portion ~~(22)~~, engageable with the outside upper end portion of the smoking article ~~(17)~~.

2. A container according to claim 1, wherein the smoking article ~~(17)~~ comprises a ring like shoulder ~~(24)~~ on its circumferential outer side that is adapted to be engaged by the lifting element ~~(20)~~.

3. A container according to claim 2, wherein the shoulder of the smoking article ~~(17)~~ is formed by an edge ~~(24)~~ of a circumferentially wrapped tipping paper ~~(23)~~ of the smoking article ~~(17)~~ that is in particular a filter cigarette.

4. A container according to claim 3, wherein the lifting element ~~(20)~~ extends from the opening of the cup shaped box ~~(2)~~ to below the edge ~~(24)~~ of the tipping paper ~~(23)~~.

5. A container according to one of the previous claims, wherein the lifting element ~~(20)~~ is in frictional engagement with the smoking article ~~(17)~~.

6. A container according to one of the previous claims, wherein the lifting element ~~(20)~~ comprises a protrusion ~~(22)~~ as the engaging portion.

7. A container according to claim 6, wherein the protrusion is formed by a flap ~~(22)~~ of the lifting element ~~(20)~~ that is folded along a fold ~~(26)~~ in the lifting element ~~(20)~~.

8. A container according to claim 7, wherein the flap ~~(22)~~ extends in a direction towards the smoking article ~~(17)~~, in particular in an upward direction towards the smoking article ~~(17)~~.

9. A container according to one of the claims 1 to 8, comprising an inner liner ~~(18)~~ that surrounds the smoking articles ~~(17)~~, wherein the inner liner ~~(18)~~ comprises a pull foil ~~(19)~~ that is adapted to being removed, wherein the lifting element ~~(20)~~ is attached to the inner side of the pull foil ~~(19)~~, such that the lifting element ~~(20)~~ is contactable with the smoking articles ~~(17)~~.

10. A container according to one of the claims 1 to 8 comprising an inner liner ~~(18)~~ that surrounds the smoking articles ~~(17)~~, wherein the inner liner ~~(18)~~ comprises a pull foil ~~(19)~~ that is adapted to being removed, such that the smoking articles ~~(17)~~ can be accessed and the lifting element ~~(20)~~ is contactable with the smoking articles ~~(17)~~.

11. A container according to claim 10, wherein the lifting element ~~(20)~~ is attached to the outer side of the pull foil ~~(19)~~.

12. A container according to claims 10 or 11, wherein the pull foil ~~(19)~~ is detached from the lifting element ~~(20)~~, when a predefined maximal pulling force on the pull foil ~~(19)~~ is exceeded.

13. A container according to one of previous claims, wherein the lifting element ~~(20)~~ comprises a second flap ~~(29)~~ that is adapted to engage the cup shaped box ~~(2)~~, when the lifting element ~~(20)~~ is lifted for a predefined lifting height, so as to provide a stop for the lifting element ~~(20)~~.

14. A container according to one of previous claims, wherein the lifting element ~~(20)~~ comprises several flaps ~~(22)~~ which are provided at different heights of the lifting element ~~(20)~~.

15. A container according to one of the previous claims, wherein the lifting element ~~(20)~~ extends at least partially parallel to one box wall ~~(5)~~ of the cup shaped box ~~(2)~~ and the lifting element ~~(20)~~ is guided by at least one neighboring box wall of the one box wall ~~(5)~~, and particularly the lifting element ~~(20)~~ has substantially the same width as the interior of the cup shaped box ~~(2)~~.