

Hinged lid container with outer shell

The present invention relates to an improved slide and
5 shell container that finds particular application as a pack for
elongate smoking articles such as cigarettes.

It is known to pack smoking articles and other consumer
goods in containers comprising an outer shell or sleeve and an
inner slide or drawer mounted in the outer shell for slidable
10 movement relative thereto. To access goods housed in the inner
slide of such "slide and shell" containers, a consumer pushes
or pulls the inner slide from an initial closed position, in
which the inner slide is surrounded by the outer shell, to an
open position, in which a portion of the inner slide projects
15 outwardly from the outer shell in order to expose an open end
or side of the inner slide through which the goods may be
removed.

Containers of this type are known for example from
US-A-4,646,960 which discloses a slide and shell container
20 comprising an outer shell with an u-shaped stopper flap on the
inside of the rear wall of the outer shell. The inner slide of
the slide and shell container comprises a box portion and a lid
portion hinged to another at the rear wall of the inner slide.
The inner slide further comprises a u-shaped stopper flap on
25 the rear wall of the box portion of the inner slide which is
aligned in an opposite direction then the stopper flap on the
inside of the rear wall of the outer shell. When the outer
shell and the inner slide are moved relative to each other, the
two opposing stopper flaps engage with each other and stop the
30 opening movement at a predetermined position. However, because
of the additional stopper flaps known high-speed manufacturing
machines cannot readily be used for the production of these
known containers without a complicated and expensive
adaptation, if such an adaptation is possible at all. As a
35 consequence these containers are made by hand which is a severe

limitation, in particular when high quantities of these types of containers are required.

It would be desirable to provide a container which may at least partially be manufactured on common high-speed

5 manufacturing machines with no or only minor adaptation of these machines.

According to one aspect, there is provided a container comprising

an outer shell , wherein the outer shell comprises a outer
10 shell front wall , a outer shell rear wall , left and right
outer shell side walls and an outer shell stopper flap , and
wherein the outer shell at least partially embraces an inner
slide , wherein the inner slide comprises a box portion ,
wherein the box portion of the inner slide comprises a box
15 bottom wall , a box front wall and a box rear wall and a
inner slide stopper flap , wherein the inner slide further
comprises a lid portion , wherein the lid portion of the
inner slide comprises a lid top wall , and wherein the lid
portion of the inner slide is hinged to the box portion of
20 the inner slide at the box rear wall and wherein the outer
shell stopper flap and the inner slide stopper flap interact
with each other and limit the movement between the outer shell
and the inner slide when opening the container ,

characterized in that

25 the box front wall comprises the inner slide stopper flap
and the outer shell front wall comprises the outer shell
stopper flap,

the lid portion of the inner slide further comprises a left
30 lid side wall and a right lid side wall and wherein the left
outer shell side wall and right outer shell side wall have a
size such that the lid side walls are not completely covered
by the outer shell side walls ,

the lid top wall is hinged to the box rear wall or
the lid portion of the inner slide further comprises a lid
rear wall and the lid rear wall is hinged to the box rear
5 wall,

the box front wall is the inner slide stopper flap and the
outer shell stopper flap is formed by an increased thickness
of the inside of the upper part of the outer shell front wall.

According to the disclosure, there is provided a
10 container comprising an outer shell, wherein the outer shell
comprises a outer shell front wall, a outer shell rear wall,
left and right outer shell side walls and an outer shell
stopper flap, and wherein the outer shell at least partially
embraces an inner slide , wherein the inner slide comprises a
15 box portion, wherein the box portion of the inner slide
comprises a box bottom wall, a box front wall and a box rear
wall and a inner slide stopper flap, wherein the inner slide
further comprises a lid portion, wherein the lid portion of
the inner slide comprises a lid top wall, and wherein the lid
20 portion of the inner slide is hinged to the box portion of the
inner slide at the box rear wall and wherein the outer shell
stopper flap and the inner slide stopper flap interact with
each other and limit the movement between the outer shell and
the inner slide when opening the container, wherein the box
25 front wall comprises the inner slide stopper flap and the
outer shell front wall comprises the outer shell stopper flap.

Preferably, the box portion of the inner slide further
comprises left and right box side walls. Preferably, the lid
portion of the inner slide further comprises also left and
30 right lid side walls and a lid front wall. Preferably, the
outer shell further comprises a shell bottom wall.

The container according to the present disclosure allows for the preparation of the inner slide on known manufacturing machines. For example, conventional blanks for making hinge-
5 lid cigarette containers can be modified by simply reducing the size of the flap forming the box front wall, for example by about 2, 3 or 4 centimeters. In a container according to the

present disclosure the box front wall serves as the inner slide stopper flap and its upper edge can interact with the outer shell stopper flap. Irrespective of this modification of the conventional blank of a hinge-lid container regular machinery
5 can still be used.

During the opening of the container and the movement of the outer shell and the inner slide the inner slide stopper flap and the outer shell stopper flap move towards each other until their edges engage, stopping the opening movement. Under
10 normal handling conditions the outer shell is movable relative to the inner slide but is not separable there from.

Preferably, the lid portion of the inner slide comprises lateral extension flaps of the lid top wall. These improve the grip on the lid portion of the inner slide and thus facilitate
15 the opening of the container. In this embodiment the shell side walls may or may not cover the lid side walls. The grip on the inner slide may further be improved by a suitable surface treatment of the lid portion of the inner slide that enhances friction, for example locally applied anti-slipping varnish or
20 suitable embossed patterns or any combination thereof.

Instead or in addition to the above-described means to improve the grip on the inner slide of the container, it is also possible to provide means allowing pushing the box portion of the inner slide out of the outer shell in order to open the
25 container. For that purpose at least one of the outer shell front wall, the outer shell rear wall, the left outer shell side wall, the right outer shell side wall and the outer shell bottom wall has a cut-out. For example, a cut-out may be in the outer shell bottom wall with a rectangular, circular or
30 ellipsoidal shape and a size allowing insertion of one or more of the consumer's fingers to open the container. In a further preferred embodiment there are provided cut-outs in the outer shell rear wall and in the outer shell front wall or cut-outs in each of the outer shell side walls, each having a width
35 corresponding roughly to the width of a finger and a length

which is adapted to the distance of the opening movement. Thus, the width of these cut-outs is preferably about 1 cm to about 2 cm and in particular about 1.5 cm and the length is preferably about 2 cm to about 4 cm, in particular about 3 cm. In a third preferred embodiment there are cut-outs in the outer shell bottom wall and the outer shell front wall which are connected to each other so that one single cut-out extending from the outer shell bottom wall into the outer shell front wall results. It is also possible to provide cut-outs in the outer shell bottom wall and the outer shell rear wall.

The box rear wall may be hinged directly to the lid top wall. Alternatively, the lid portion of the inner slide contains in addition to the lid top wall also a lid rear wall and preferably also lid side walls and a lid front wall and the box rear wall is then hinged to the lid rear wall. In this preferred version the combined box and lid portions correspond to a regular hinge-lid container as it is commercially available in particular for cigarettes, however, with the box front wall being reduced in size.

Preferably, the box portion of the inner slide has left and right box side walls and the lid portion of the inner slide has left and right lid side walls. It is then further preferred that the size and shape of these side walls are adapted to each other such that when closing the lid the lower edges of the lid side walls lie directly on the upper edges of the box side walls and thus form the combined side walls of the inner slide. In an alternative preferred embodiment the width of the lid front wall slightly exceeds that of the box front wall so that as a consequence the lid side walls partially embraces the box side walls. In order to avoid an increased thickness of the lid in the closed position compared to that of the box, the front edges of the box side walls have cut-outs. These cut-outs are adapted in size to the lid front wall. Thus, the length of the cut-outs along the edge of the box side walls corresponds to the length of the lid front wall in the same direction. The

depth of these cut-outs corresponds preferably to the thickness of the lid wall and the thickness of the blank used for making the inner slide or, if an enforcement flap is provided on the inside of the lid front wall, preferably to twice the thickness
5 of the lid front wall.

Preferably, the container further comprises an inner frame between the outer shell and the inner slide attached to the inner slide. Preferably the inner frame extends into the lid portion of the inner slide to improve the closure of the inner
10 slide. Preferably the inner frame comprises a cut-out at the upper edge to facilitate the access to the cigarettes or other consumer goods housed inside the inner slide.

Preferably, the container is a container for elongate smoking articles such as cigarettes. Preferably, the cigarettes
15 inside the container are bundled in an inner wrapper.

Preferably, the container houses one single bundle, two bundles or three bundles. If two separate cigarette bundles are present one may contain 13 cigarettes and the other may contain 7 cigarettes for a container housing 20 cigarettes. If three
20 separate cigarette bundles are present one may contain 6 cigarettes and the other two may each contain 7 cigarettes for a container housing 20 cigarettes. Each bundle may contain elongate smoking articles of a different type.

Elongate smoking articles of a different type are for
25 example, cigarettes, cigars or cigarillos comprising different types of tobacco having unique characteristic flavours and aromas, such as Burley, Oriental and Virginia tobacco, which are used alone or in varying amounts in tobacco blends to produce brands of cigarettes having different characteristic
30 flavours. In addition, both plain cigarettes and cigarettes having many different types of filter tips are available as well as cigarettes of differing length and circumference, for example cigarettes of conventional size, king size, super-king size, slim size or super-slim size. Additionally, cigarette
35 types may differ in strength of flavour, total particulate

matter delivery and nicotine delivery. Furthermore, cigarettes containing flavourings such as menthol are also available.

Where the inner slide of a slide and shell container according to the present disclosure houses one or more bundles
5 of cigarettes or other smoking articles, the smoking articles are preferably wrapped in an inner liner of, for example, metal foil, plastic or metallised paper. Preferably, the inner liner may be formed from a material with a high barrier property to enhance the retention of flavor inside the bundle. This may be
10 especially suitable for mentholated cigarettes. Additionally, the inner liner may comprise a means to reclose or reseal the bundle.

The dimensions of the outer shell correspond to the above-described dimensions of the container provided the outer shell
15 completely covers the box front, rear and bottom wall and the lid front and rear wall. However, it is also possible that the outer shell, in addition to only a partial coverage of the lid side walls, does not cover or only partially cover the lid front or the lid rear wall or both. Finally, it is also
20 possible that the outer shell does not cover any lid wall and only partially covers the box front, rear and side walls. The dimensions of the outer shell are then correspondingly reduced compared to the dimensions of the container as detailed above.

Preferably, the external dimensions of the inner slide of
25 the container according to the present disclosure are substantially the same as the internal dimensions of the outer shell thereof. In use, frictional forces generated between inner surfaces of the outer shell that overlie and abut outer surfaces of the inner slide resist slidable movement of the
30 inner slide within the outer shell between the closed position and the open position, thereby advantageously preventing opening and closing of the slide and shell container without the application of a positive force by a consumer.

The outer shell and the inner slide of slide and shell containers
35 according to the disclosure may be formed from the

same or different materials. The outer shell and the inner slide of containers according to the disclosure may, for example, be formed from cardboard, paperboard, plastic, metal or combinations thereof or from any other suitable material.

5 Preferably, the outer shell and the inner slide are formed from folded laminar blanks, more preferably from folded laminar cardboard blanks.

10 The outer or inner surface of the outer shell or the inner slide of slide and shell containers according to the present disclosure may be printed, embossed or otherwise embellished (for example, using labels or stickers) with manufacturer or brand logos, trade marks, slogans or other consumer information and indicia or any combination thereof.

15 The outer shell and the inner slide of slide and shell containers according to the disclosure may have right-angled longitudinal edges, right-angled transverse edges, rounded longitudinal edges, rounded transverse edges, beveled longitudinal edges, beveled transverse edges or any suitable combination thereof.

20 For example, by scoring in a known manner laminar cardboard blanks from which the outer shell and the inner slide are erected, a "rounded-corner" slide and shell container of smoking articles or other consumer goods according to the disclosure may be formed. Additionally, the inner slide may be
25 formed like any existing hinge-lid container with a modified box front wall such as a hinge-lid container with a triangular, rectangular, square, trapezoidal, hexagonal, octagonal, oval, circular, semi-circular, ellipsoid or any other cross section.

30 Slide and shell containers of elongate smoking articles or other consumer goods according to the present disclosure may be shrink wrapped or otherwise over wrapped with

a transparent polymeric film of, for example, polyethylene or polypropylene in a conventional manner. Where slide and shell containers according to the disclosure are over wrapped, the over wrapper may include a tear tape.

The invention will be explained in more detail in the following. There are shown in:

Fig. 1 a perspective view of a container according to a first embodiment according to the invention in closed position,

5 Fig. 2 a perspective view of the container of Fig. 1 in open position,

Fig. 3 a perspective view of a container according to a second embodiment according to the invention in open position,

10 Fig. 4 a perspective view of a container according to a third embodiment according to the invention in open position,

Fig. 5 a one piece laminar cardboard blank for forming the inner slide of a container according to the invention, and

Fig. 6 a one piece laminar cardboard blank for forming the outer shell of a container according to the invention

15 Fig. 1 shows a container 1 in closed position. The outer shell 30 with its outer shell front wall 32, its outer shell rear wall 35 and its right outer shell side wall 34 are visible. The lid portion 20 of the inner slide 10, 20 with its lid top wall 26 and its right lid side wall 24 are shown. The
20 size of the outer shell side wall 34 is such that part of the right lid side wall 24 is not covered by the right outer shell side wall 34.

Fig. 2 shows the container 1 of Fig.1 after opening. Beside the outer shell 30 with its shell front wall 32, its
25 shell rear wall 35 and its right outer shell side wall 34 the box portion 10 of the of the inner slide 10, 20 can be seen with its left box side wall 13 and right 14 box side wall and its box rear wall 15. The box portion 10 of the inner slide 10, 20 is partially pulled out of the outer shell 30. The lid
30 portion 20 of the inner slide 10, 20 is connected to the box portion 10 of the inner slide 10, 20 by a hinge between the box rear wall 15 and the lid rear wall 25. The lid 20 of the inner slide 10, 20 is completely open so that any goods (not shown) contained in the container 1 are accessible. For closing the
35 container the consumer may apply a slight pressure on the lid

top wall 26 whereupon the box portion 10 of the inner slide 10, 20 and the lid portion 20 of the inner slide 10, 20 will slide into the outer shell 30.

Fig. 3 shows a second embodiment of the container 1, which is like the first embodiment of the container 1, but further comprising an inner frame 40. The inner frame 40 has a cut-out along the upper edge, close to the lid portion 20 of the inner slide 10, 20.

Fig. 4 shows a third embodiment of the container 1 in its open position. The outer shell 30 is similar to the outer shell 30 as in the first embodiment of the container 1 shown in Fig. 1 and Fig. 2. However, as can be seen from Fig. 4 the lid portion 20 of the inner slide 10, 20 is hinged to the box portion 10 of the inner slide 10, 20 by a hinge between the box rear wall 15 and the lid top wall 26. To allow for an easy opening of the container 1 the lid portion 20 of the inner slide 10, 20 extension flaps 28 are formed on both sides of the lid portion 20 of the inner slide 10, 20. These extension flaps 28 are protruding so that the consumer may grip same and pull the lid portion 20 and the box portion 10 of the inner slide 10, 20 out of the outer shell 30. The container 1 of Fig. 4 further has box side walls 13, 14 which, once the lid portion 20 of the inner slide 10, 20 is closed, reach to the inside of lid top wall 26. Thus, upon closing the lid portion 20 of the inner slide 10, 20 the lid side walls 23, 24 slide along the outer sides of the box side walls 13, 14 until they reach the front edges of the box side walls 13, 14. These box side walls 13, 14 are recessed by the thickness and length of the lid front wall 22 forming cut-outs 19 on which the lid front wall 22 lies when the lid 20 is closed.

Fig. 5 shows a blank 110, 120 for forming the box portion 10 of the inner slide 10, 20 and the lid portion 20 of the inner slide 10, 20 hinged to the box portion 10 of the inner slide 10, 20. Dotted lines represent cuts in the blank. Surfaces or flaps corresponding to walls in the completed

container bear similar reference numerals plus 100. Main surface flaps 112, 117, 111, 115 and the corresponding side-surface flaps 113 and 114 form the box front wall 12, the box bottom wall 11, the box rear wall 15 and the left and right box side walls 13 and 14. Flap 112, 117 forms the box front wall 12 and at the same time the stopper flap 17. Main surface flaps 125, 126 and 122 with the corresponding side-surface flaps 123 and 124 form after assembly the lid rear wall 25, the lid top wall 26 and the lid front wall 22 and the left and right lid side walls 23 and 24.

To produce the inner slide 10, 20 the side-surface flaps 113 and 114 are folded upwards by 90 degrees. Then flaps 112, 117 and 111 are each folded upwards by 90 degrees and attached to the respective side-surface flaps 113 and 114 to provide the final box part 10. Similarly the lid portion 20 is formed. In addition, strengthening flap 140 is bent inwardly and attached to flap 122.

Extension flaps 141 serve to provide a constant thickness or depth of the final inner slide 10, 20. When the blank is folded as described above, flap 112, 117 forming the box front wall 12 reaches exactly to the lower edge 142 of extension flap 141. When the blank is folded as described above, flap 122 (including the inwardly bend strengthening flap 140) forming the lid front wall 22 reaches exactly to the upper edge 143 of extension flap 141. The thickness of the extension flaps 141 corresponds about to the thickness of the box front wall 12 and the lid front wall 22 so that the missing side wall thickness between the upper edge of the box front wall 12 and the lower edge of the lid front wall 22 is compensated by extension flaps 141.

Fig. 6 shows a blank 130 for forming the outer shell 30. Main surface flaps 131, 132 and 135 with the corresponding side-surface flaps 133 and 134 form the outer shell bottom wall 31, the outer shell front wall 32, the outer shell rear wall 35 and the left and right outer shell side walls 33 and 34.

Attached to main surface flap 132 is flap 137 which during assembly of the outer shell 30 is bent inwardly and may be attached to the inner side of flap 132 or outer shell front wall 32 and forms outer shell stopper flap 37.

Claims

1. A container comprising

an outer shell , wherein the outer shell comprises a
5 outer shell front wall , a outer shell rear wall , left
and right outer shell side walls and an outer shell
stopper flap , and wherein the outer shell at least
partially embraces an inner slide , wherein the inner
slide comprises a box portion , wherein the box portion
10 of the inner slide comprises a box bottom wall , a box
front wall and a box rear wall and a inner slide stopper
flap , wherein the inner slide further comprises a lid
portion , wherein the lid portion of the inner slide
comprises a lid top wall , and wherein the lid portion of
15 the inner slide is hinged to the box portion of the
inner slide at the box rear wall and wherein the outer
shell stopper flap and the inner slide stopper flap
interact with each other and limit the movement between
the outer shell and the inner slide when opening the
20 container ,

characterized in that

the box front wall comprises the inner slide stopper flap
and the outer shell front wall comprises the outer shell
stopper flap,

25 the lid portion of the inner slide further comprises a
left lid side wall and a right lid side wall and wherein
the left outer shell side wall and right outer shell
side wall have a size such that the lid side walls are
30 not completely covered by the outer shell side walls ,
the lid top wall is hinged to the box rear wall or

the lid portion of the inner slide further comprises a lid rear wall and the lid rear wall is hinged to the box rear wall,

5 the box front wall is the inner slide stopper flap and the outer shell stopper flap is formed by an increased thickness of the inside of the upper part of the outer shell front wall.

2. The container according to claim 1,

characterized in that

the lid top wall further comprises extension flaps
protruding over the lid side walls or the outer shell
side walls .

3. The container according to any of claims 1 to 2,

characterized in that

the lid portion of the inner slide further comprises a
lid front wall , the box portion of the inner slide
further comprises a left box side wall and a right box
side wall which have cut-outs adapted to the lid front
wall such that in the closed position the lid front wall
lies within the cut-outs of the box side walls .

4. The container according to any of claims 1 to 3,

characterized in that

at least one of the outer shell front wall , the outer
shell rear wall , the left outer shell side wall , the
right outer shell side wall and the outer shell bottom
wall has a cut-out.

5. The container according to any of claims 1 to 4,

characterized in that

at least a surface section of the lid portion of the inner
slide is treated to enhance friction by an anti-slipping
5 varnish or a suitable embossed patterns or any combination
thereof.

6. The container according to any of claims 1 to 5,

10 **characterized in that**

it contains two or more separately wrapped bundles.

7. The container according to claim 6,

characterized in that

15 at least one of the bundles is formed by an inner liner
comprising a means to reclose or reseal the bundle or
wherein the inner liner is formed from a material with a
high barrier property to enhance the retention of flavor
inside the bundle or combinations thereof.

20 8. The container according to any of claims 1 to 6,

characterized in that

the inner slide further comprises an inner frame .