Title of the Invention: Tobacco industry product container
Abstract Title: Tobacco industry product container

A tobacco industry product container 1 includes a base portion 500 defining a cavity 560, and an opening 570 into the cavity from an exterior of the base portion. A lid 200 is hinged to the base portion and closes the opening, and a tray 300 is movable within the cavity relative to the base portion. A member 400 has a first end hinged to the tray and a second end hinged to the lid at a position on the lid no closer to the proximal end 201 than to the plane of the front portion 510 of the base when the opening is closed by the lid. The member may also be hinged to the lid at a position on the lid no closer to the proximal end than to a portion of the lid furthest from the proximal end. The hinged member may have an additional hinge (403, fig 6) between its first and second ends.
TOBACCO INDUSTRY PRODUCT CONTAINER

Technical Field

The present invention relates to a tobacco industry product container and to a set of blanks for forming a tobacco industry product container.

Background

It is known to provide tobacco industry products, such as smoking articles, e.g. cigarettes, in a container such as a box. Some known tobacco industry product containers comprise a base portion defining a cavity and an opening into the cavity from an exterior of the base portion, a tray for receiving cigarettes located within the cavity and movable relative to the cavity, and a lid for closing the cavity.

Summary

In accordance with some embodiments of the invention, there is provided a tobacco industry product container, comprising: a base portion having a front portion lying in a first plane and a rear portion, the base portion defining a cavity between the front and rear portions and an opening into the cavity from an exterior of the base portion; a lid for closing the opening and having a proximal end hinged to the rear portion; a tray movable within the cavity relative to the base portion; and a member having a first end hinged to the tray, and a second end hinged to the lid at a position on the lid no closer to the proximal end than to the first plane when the opening is closed by the lid.

Optionally, the position on the lid is no closer to the proximal end than to a portion of the lid furthest from the proximal end.

Optionally, the tray has a front portion and a rear portion, the rear portion of the tray is closer to the rear portion of the base portion than is the front portion of the tray, and the first end of the member is hinged to the rear portion of the tray.
Optionally, the proximal end of the lid and a distal end of the lid are at opposed edges of the opening when the opening is closed by the lid.

Optionally, the member has a hinge between the first and second ends.

Optionally, the hinge is closer to the first end of the member than to the second end of the member.

Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the member has first and second portions connected by the hinge for rotation about an axis parallel to the first axis.

Optionally, the hinge comprises a relatively weak portion of the member that is located between relatively strong portions of the member.

Optionally, the hinge is a living hinge.

Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, the tray has a first end furthest from the second end of the base portion, and the first end of the member is hinged to the tray at a position on the tray that is closer to the second end of the base portion than is the first end of the tray.

Optionally, the member has first and second portions connected by the hinge for rotation about an axis, and a distance between the axis and the first end of the member is no less than a distance between the first end of the tray and the position on the tray.

Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the second end of the member is hinged to the lid for rotation about a second axis parallel to the first axis.

Optionally, the tray is linearly movable in a first direction relative to the base portion between first and second positions, at which second position the tray projects further from the cavity than when the tray is at the first position.
Optionally, the tobacco industry product container comprises a limiter for limiting the extent to which the tray is linearly movable in the first direction relative to the base portion.

Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, and the second end of the base portion has a hole therethrough connecting the cavity with the exterior of the base portion, through which hole the tray is contactable from the exterior of the base portion for pushing the tray within the cavity relative to the base portion.

Optionally, the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, and the front and/or rear portion of the base portion has an aperture therethrough connecting the cavity with the exterior of the base portion, through which aperture the tray is contactable from the exterior of the base portion for moving the tray within the cavity relative to the base portion.

Optionally, the aperture extends from the hole.

Optionally, the tray defines a cavity and an opening into the cavity, and the tray comprises a divider dividing the cavity defined by the tray into first and second spaces.

In accordance with some embodiments of the invention, there is provided a tobacco industry product container, comprising: a base portion defining a cavity and an opening into the cavity from an exterior of the base portion; a lid for closing the opening and having a proximal end hinged to the base portion; a tray movable within the cavity relative to the base portion; and a member having a first end hinged to the tray, and a second end hinged to the lid at a position on the lid no closer to the proximal end than to a portion of the lid furthest from the proximal end.

Optionally, the base portion has a front portion lying in a first plane and a rear portion, the cavity being between the front and rear portions, the proximal end of the lid is hinged to the rear portion, and the position on the lid is no closer to the proximal end than to the first plane when the opening is closed by the lid.

Optionally, the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, the tray has a front portion and a rear portion, the rear portion of the
tray is closer to the rear portion of the base portion than is the front portion of the tray, and the first end of the member is hinged to the rear portion of the tray.

Optionally, the proximal end of the lid and a distal end of the lid are at opposed edges of the opening when the opening is closed by the lid.

Optionally, the member has a hinge between the first and second ends.

Optionally, the hinge is closer to the first end of the member than to the second end of the member.

Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the member has first and second portions connected by the hinge for rotation about an axis parallel to the first axis.

Optionally, the hinge comprises a relatively weak portion of the member that is located between relatively strong portions of the member.

Optionally, the hinge is a living hinge.

Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, the tray has a first end furthest from the second end of the base portion, and the first end of the member is hinged to the tray at a position on the tray that is closer to the second end of the base portion than is the first end of the tray.

Optionally, the member has first and second portions connected by the hinge for rotation about an axis, and a distance between the axis and the first end of the member is no less than a distance between the first end of the tray and the position on the tray.

Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the second end of the member is hinged to the lid for rotation about a second axis parallel to the first axis.
Optionally, the tray is linearly movable in a first direction relative to the base portion between first and second positions, at which second position the tray projects further from the cavity than when the tray is at the first position.

Optionally, the tobacco industry product container comprises a limiter for limiting the extent to which the tray is linearly movable in the first direction relative to the base portion.

Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, and the second end of the base portion has a hole therethrough connecting the cavity with the exterior of the base portion, through which hole the tray is contactable from the exterior of the base portion for pushing the tray within the cavity relative to the base portion.

Optionally, the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, and the front and/or rear portion of the base portion has an aperture therethrough connecting the cavity with the exterior of the base portion, through which aperture the tray is contactable from the exterior of the base portion for moving the tray within the cavity relative to the base portion.

Optionally, the aperture extends from the hole.

Optionally, the tray defines a cavity and an opening into the cavity, and the tray comprises a divider dividing the cavity defined by the tray into first and second spaces.

In accordance with some embodiments of the invention, there is provided a tobacco industry product container, comprising: a base portion defining a cavity and an opening into the cavity from an exterior of the base portion; a lid hinged to the base portion for closing the opening; a tray movable within the cavity relative to the base portion; and a member having a first end hinged to the tray, a second end hinged to the lid, and a hinge between the first and second ends.

Optionally, the hinge is closer to the first end of the member than to the second end of the member.
Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the member has first and second portions connected by the hinge for rotation about an axis parallel to the first axis.

Optionally, the hinge comprises a relatively weak portion of the member that is located between relatively strong portions of the member.

Optionally, the hinge is a living hinge.

Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, the tray has a first end furthest from the second end of the base portion, and the first end of the member is hinged to the tray at a position on the tray that is closer to the second end of the base portion than is the first end of the tray.

Optionally, the member has first and second portions connected by the hinge for rotation about an axis, and a distance between the axis and the first end of the member is no less than a distance between the first end of the tray and the position on the tray.

Optionally, the lid has a proximal end hinged to the base portion, and the second end is hinged to the lid at a position on the lid no closer to the proximal end than to a portion of the lid furthest from the proximal end.

Optionally, the base portion has a front portion lying in a first plane and a rear portion, the cavity being between the front and rear portions, the lid has a proximal end hinged to the rear portion, and the second end is hinged to the lid at a position on the lid no closer to the proximal end than to the first plane when the opening is closed by the lid.

Optionally, the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, the tray has a front portion and a rear portion, the rear portion of the tray is closer to the rear portion of the base portion than is the front portion of the tray, and the first end of the member is hinged to the rear portion of the tray.
 Optionally, the lid has a proximal end hinged to the base portion, and the proximal end of the lid and a distal end of the lid are at opposed edges of the opening when the opening is closed by the lid.

 Optionally, the first end of the member is hinged to the tray for rotation about a first axis, and the second end of the member is hinged to the lid for rotation about a second axis parallel to the first axis.

 Optionally, the tray is linearly movable in a first direction relative to the base portion between first and second positions, at which second position the tray projects further from the cavity than when the tray is at the first position.

 Optionally, the tobacco industry product container comprises a limiter for limiting the extent to which the tray is linearly movable in the first direction relative to the base portion.

 Optionally, the opening is at a first end of the base portion, the base portion has an opposite second end, and the second end of the base portion has a hole therethrough connecting the cavity with the exterior of the base portion, through which hole the tray is contactable from the exterior of the base portion for pushing the tray within the cavity relative to the base portion.

 Optionally, the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, and the front and/or rear portion of the base portion has an aperture therethrough connecting the cavity with the exterior of the base portion, through which aperture the tray is contactable from the exterior of the base portion for moving the tray within the cavity relative to the base portion.

 Optionally, the aperture extends from the hole.

 Optionally, the tray defines a cavity and an opening into the cavity, and the tray comprises a divider dividing the cavity defined by the tray into first and second spaces.

 In accordance with some embodiments of the invention, there is provided a plurality of blanks, each of which comprises a sheet of material comprising one or more predetermined fold lines, wherein the blanks are foldable along the fold lines and locatable relative to each other to
form one of the tobacco industry product containers described above as in being accordance with some embodiments of the invention.

**Brief Description of the Drawings**

5 Embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1a shows a perspective view of a tobacco industry product container according to an embodiment of the present invention with a tray of the container at a second location relative to a base portion of the container,

Figure 1b shows a cross sectional view of the container shown in Figure 1a with the tray at a first location relative to the base portion of the container,

Figure 1c shows a cross sectional view of the container shown in Figure 1a,

Figure 2a shows a perspective view of a tobacco industry product container according to another embodiment of the present invention with a tray of the container at a second location relative to a base portion of the container,

Figure 2b shows a cross sectional view of the container shown in Figure 2a with the tray at a first location relative to the base portion,

Figure 2c shows a cross sectional view of the container shown in Figure 2a,

Figure 3a shows a perspective view of a tobacco industry product container according to another embodiment of the present invention with a tray of the container at a second location relative to a base portion of the container,

Figure 3b shows a cross sectional view of the container shown in Figure 3a with the tray at a first location relative to the base portion,

Figure 3c shows a cross sectional view of the container shown in Figure 3a,
Figure 4 shows a front perspective view of a tobacco industry product container according to another embodiment of the present invention, with a lid of the container at a closed position relative to a base portion of the container,

Figure 5 shows a rear perspective view of the container shown in Figure 4,

Figure 6 shows a front perspective view of the container shown in Figure 4, with the lid at an open position relative to the base portion and with a tray on the container at a second location relative to the base portion,

Figure 7 shows a front perspective view of the tray of the container shown in Figure 4,

Figure 8 shows a rear perspective view of the tray shown in Figure 7,

Figure 9 shows a front perspective view of a wall of the tray shown in Figure 7,

Figure 10 shows a rear perspective view of the wall shown in Figure 9,

Figure 11 shows a cross sectional view of the container shown in Figure 4 with the lid at the closed position relative to the base portion and with the tray at a first location relative to the base portion,

Figure 12 shows a cross sectional view of the container shown in Figure 11 with the lid part way between the closed and open positions relative to the base portion, and with the tray part way between the first and second locations relative to the base portion,

Figure 13 shows a cross sectional view of the container shown in Figure 12 with the lid closer the open position relative to the base portion and with the tray closer to the second location relative to the base portion,

Figure 14 shows a cross sectional view of the container shown in Figure 13 with the lid at the open position relative to the base portion and with the tray at the second location relative to the base portion,
Figure 15 shows a blank from which a combination of a shell, the lid and a member of the container shown in Figure 4 may be formed, and

Figures 16 and 17 show respective blanks from which the tray and wall of the container shown in Figure 4 may be formed.

Detailed Description

Figures 1a, 1b and 1c show a tobacco industry product container 1 according to an embodiment of the present invention. The container 1 comprises a base portion 500 having a front portion 510 lying in a first plane and a rear portion 520, the base portion 500 defining a cavity 560 between the front and rear portions 510, 520 and an opening 570 into the cavity 560 from an exterior of the base portion 500; a lid 200 for closing the opening 570 and having a proximal end 201 hinged to the rear portion 520; a tray 300 movable within the cavity 560 relative to the base portion 500; and a member 400 having a first end 401 hinged to the tray 300, and a second end 402 hinged to the lid 200 at a position on the lid 200 no closer to the proximal end 201 than to the first plane when the opening 560 is closed by the lid 200. In Figure 1b, the tray 300 is shown at a first location relative to the base portion 500, whereas in Figures 1a and 1c the tray 300 is shown having been moved relative to the base portion 500 from the first location to a second location.

Figures 2a, 2b and 2c show a tobacco industry product container 2 according to another embodiment of the present invention. The container 2 comprises a base portion 500 defining a cavity 560 and an opening 570 into the cavity 560 from an exterior of the base portion 500; a lid 200 for closing the opening 560 and having a proximal end 201 hinged to the base portion 500; a tray 300 movable within the cavity 560 relative to the base portion 500; and a member 400 having a first end 401 hinged to the tray 300, and a second end 402 hinged to the lid 200 at a position on the lid 200 no closer to the proximal end 201 than to a portion of the lid 200 furthest from the proximal end 201. In Figure 2b, the tray 300 is shown at a first location relative to the base portion 500, whereas in Figures 2a and 2c the tray 300 is shown having been moved relative to the base portion 500 from the first location to a second location.

Figures 3a, 3b and 3c show a tobacco industry product container 3 according to another embodiment of the present invention. The container 3 comprises a base portion 500 defining a
cavity 560 and an opening 570 into the cavity 560 from an exterior of the base portion 500; a lid 200 hinged to the base portion 500 for closing the opening 560; a tray 300 movable within the cavity 560 relative to the base portion 500; and a member 400 having a first end 401 hinged to the tray 300, a second end 402 hinged to the lid 200, and a hinge 430 between the first and second ends 401, 402. In Figure 3b, the tray 300 is shown at a first location relative to the base portion 500, whereas in Figures 3a and 3c the tray 300 is shown having been moved relative to the base portion 500 from the first location to a second location.

Figures 4 to 14 show a tobacco industry product container 4 according to another embodiment of the present invention. Briefly, and generally speaking, the container 4 comprises a shell 100, a lid 200, a tray 300 and a member 400. Each of these elements will be described in turn.

As best shown in Figures 4 to 6 and 11 to 14, the shell 100 comprises a front panel 110, a rear panel 120 spaced from and parallel to the front panel 110, first and second side portions 130, 140 extending between the front and rear panels 110, 120, and a bottom panel 150. The front panel 110 is planar, or substantially planar, lies in a first plane, and has a top edge 111, parallel left and right edges 113, 114 orthogonal to the top edge 111, and a bottom edge 112. The bottom edge 112 is non-linear and defines a cut-out into the otherwise rectangular front panel 110. The cut-out defines an aperture 115 through the front panel 110, which will be discussed below. The rear panel 120 also is planar, or substantially planar, lies in a second plane parallel to the first plane, and has a top edge 121, parallel left and right edges 123, 124 orthogonal to the top edge 121, and a bottom edge 122. The bottom edge 122 is non-linear and defines a cut-out into the otherwise rectangular rear panel 120. The cut-out defines an aperture 125 through the rear panel 120, as will also be discussed below. The top, bottom, left and right edges 111, 112, 113, 114 of the front panel 110 are respectively parallel to the top, bottom, left and right edges 121, 122, 123, 124 of the rear panel 120.

The first side portion 130 comprises a first side panel 135 extending from the left edge 123 of the rear panel 120 and orthogonal to the rear panel 120, and a first curved edge 136 extending from the left edge 113 of the front panel 110 and connecting the first side panel 135 with the front panel 110. The first side portion 130 has top and bottom edges 131, 132. Similarly, the second side portion 140 comprises a second side panel 145 extending from the right edge 124 of the rear panel 120 and orthogonal to the rear panel 120, and a second curved edge 146 extending from the
right edge 114 of the front panel 110 and connecting the second side panel 145 with the front panel 110. The second side portion 140 has top and bottom edges 141, 142.

A width of the front panel 110 measured between, and orthogonal to, the left and right edges 113, 114 thereof is less than a width of the rear panel 120 measured between, and orthogonal to, the left and right edges 123, 124 thereof. The bottom edges 132, 142 of the first and second side portions 130, 140, and portions of the bottom edges 112, 122 of the front and rear panels 110, 120, all lie in, or substantially in, a third plane orthogonal to the first and second planes. A maximum height of the front panel 110 measured between, and orthogonal to, the top and bottom edges 111, 112 thereof is equal to, or substantially equal to, a maximum height of the rear panel 120 measured between, and orthogonal to, the top and bottom edges 121, 122 thereof. The top edges 111, 121, 131, 141 of the front and rear panels 110, 120 and of the first and second side portions 130, 140 all lie in, or substantially in, a fourth plane orthogonal to the first and second planes and parallel to the third plane. Moreover, the top edges 131, 141 of the first and second side portions 130, 140 join the top edges 111, 121 of the front and rear panels 110.

Edges 151, 152, 153, 154 of the bottom panel 150 of the shell 100 respectively are adjacent, or abut, the bottom edges 112, 122, 132, 142 of the front and rear panels 110, 120 and of the first and second side portions 130, 140 of the shell 100. The bottom panel 150 is planar, or substantially planar, and is orthogonal to each of the front and rear panels 110, 120 of the shell 100 and each of the first and second side portions 130, 140 of the shell 100. The bottom panel 150 of the shell 100 has a hole 155 therethrough, which will be discussed below. Each of the apertures 115, 125 extends from the hole 155. The top edges 111, 121, 131, 141 of the front and rear panels 110, 120 and of the first and second side portions 130, 140 of the shell 100 are at a first end 101 of the shell 100, and the bottom panel 150 is at an opposite second end 102 of the shell 100.

The shell 100 is a base portion 500 of the container 4. The base portion 500 comprises a front portion 510 (comprising the front panel 110 of the shell 100), a rear portion 520 (comprising the rear panel 120 of the shell 100) spaced from and parallel to the front portion 510, a first side portion 530 (comprising the first side portion 130 of the shell 100), a second side portion 540 (comprising the second side portion 140 of the shell 100), and a bottom portion 550 (comprising the bottom panel 150 of the shell 100).
As shown in Figures 11 to 14, the base portion 500 defines a cavity 560 therein and an opening 570 into the cavity 560 from an exterior of the base portion 500. The cavity 560 is defined by and between the front, rear, bottom and first and second side portions 510, 520, 530, 540, 550 of the base portion 500, and thus is defined by the shell 100. The cavity 560 has a substantially D-shaped cross-sectional shape in a plane parallel to the third plane, which D-shaped cross-sectional shape has a maximum width measured between, and orthogonal to, the first and second side portions 530, 540 of the base portion 500, and a maximum depth measured between, and orthogonal to, the front and rear portions 510, 520 of the base portion 500. The opening 570 is defined by a rim 571, which comprises the top edges 111, 121, 131, 141 of the front and rear panels 110, 120 and of the first and second side portions 130, 140 of the shell 100. The opening 570 is at a first end 501 of the base portion 500, and the bottom portion 550 of the base portion 500 is at an opposite second end 502 of the base portion 500.

As shown in Figures 11 to 14, a sub-panel 116 is fixed, by adhesive or otherwise, to an inner (i.e. facing in the direction of the rear panel 120) surface of the front panel 110 of the shell 100, and is comprised in the front portion 510 of the base portion 500. The sub-panel 116 is integral with the front panel 110 and joined to the front panel 110 by a fold at the top edge 111 of the front panel 110. An edge 116a of the sub-panel 116 distal from the fold faces generally towards the second end 502 of the base portion 500, and is a stop 116a comprised in the base portion 500. The purpose of this stop 116a, which will be termed the “first stop” in the rest of this description, will become apparent from consideration of the rest of this description.

The bottom portion 550 of the base portion 500 has the hole 155 therethrough, which hole 155 connects the cavity 560 defined by the base portion 500 with the exterior of the base portion 500. The tray 300 is contactable through the hole 155 from the exterior of the base portion 500 for pushing the tray 300 within the cavity 560 relative to the base portion 500, as discussed below. Moreover, each of the front and rear portions 510, 520 of the base portion 500 has the respective aperture 115, 125 therethrough. Each of the apertures 115, 125 also connects the cavity 560 defined by the base portion 500 with the exterior of the base portion 500. The tray 300 is contactable through the apertures 115, 125 from the exterior of the base portion 500 for moving the tray 300 within the cavity 560 relative to the base portion 500, as also discussed below.

The lid 200 is for closing the opening 570 at the first end 501 of the base portion 500. The lid 200 has a proximal end 201 hinged to the rear portion 520 of the base portion 500 for rotation
relative to the base portion 500 about a fourth axis A4-A4. More specifically, the lid 200 is unitary or integral with the shell 100, and the proximal end 201 of the lid 200 is connected directly to the top edge 121 of the rear panel 120 of the shell 100 by a hinge 503 formed at the top edge 121 of the rear panel 120. The 503 hinge is thus a living hinge. The lid 200 is movable relative to the base portion 500 about the fourth axis A4-A4 between a closed position as shown in Figures 4, 5 and 11, at which the lid 200 closes or blocks the opening 570, and an open position as shown in Figures 6 and 14, at which the opening 570 is not blocked or closed by the lid 200. When the lid 200 is at the closed position, the proximal end 201 of the lid 200 and a distal end 202 of the lid 200 are at opposed edges of the opening 570 defined by the base portion 500.

As best shown in Figures 4 and 6, the lid 200 comprises a top panel 250, first to fourth edges 251, 252, 253, 254 of which respectively are adjacent, or abut, the top edges 111, 121, 131, 141 of the front and rear panels 110, 120 and of the first and second side portions 130, 140 of the shell 100 when the lid 200 is at the closed position. The proximal end 201 of the lid 200 is at the second edge 252 of the top panel 250, and the opposite distal end 202 of the lid 200 is at the first edge 251 of the top panel 250. The top panel 250 is planar, or substantially planar, and is orthogonal to each of the front and rear panels 110, 120 and each of the first and second side portions 130, 140 of the shell 100 when the lid 200 is at the closed position. Moreover, when the lid 200 is at the closed position, the first edge 251 of the top panel 250 lies in, or substantially in, the first plane, and the base portion 500 and the lid 200, and more specifically the shell 100 and the lid 200, together give the container 4 a substantially cuboid shape, albeit with two curved edges formed by the first and second curved edges 136, 146 of the shell 100.

As best shown in Figures 7 and 8, the tray 300 comprises a front portion 310, a rear portion 320 spaced from and parallel to the front portion 310, first and second side portions 330, 340 extending between the front and rear portions 310, 320, and a bottom portion 350. The front portion 310 is planar, or substantially planar, has a bottom edge 312, parallel left and right edges 313, 314 orthogonal to the bottom edge 312, and a top edge 311. The top edge 311 is non-linear and defines a cut-out into the otherwise rectangular front portion 310. The rear portion 320 also is planar, or substantially planar, and has a rectangular shape with parallel top and bottom edges 321, 322 and parallel left and right edges 323, 324 orthogonal to the top and bottom edges 321, 322. The bottom, left and right edges 312, 313, 314 of the front portion 310 of the tray 300 are respectively parallel to the bottom, left and right edges 322, 323, 324 of the rear portion 320 of the tray 300.
The first side portion 330 of the tray 300 comprises a first side panel 335 extending from the left edge 323 of the rear portion 320 and orthogonal to the rear portion 320, and a first curved edge 336 extending from the left edge 313 of the front portion 310 and connecting the first side panel 335 with the front portion 310. The first side portion 330 has top and bottom edges 331, 332. Similarly, the second side portion 340 of the tray 300 comprises a second side panel 345 extending from the right edge 324 of the rear portion 320 and orthogonal to the rear portion 320, and a second curved edge 346 extending from the right edge 314 of the front portion 310 and connecting the second side panel 345 with the front portion 310. The second side portion 340 has top and bottom edges 341, 342.

The tray 300 defines a cavity 360 therein and an opening 370 into the cavity 360 from an exterior of the tray 300. The opening 370 is defined by a rim 371, which comprises the top edges 311, 321, 331, 341 of the front and rear portions 310, 320 and of the first and second side portions 330, 340 of the tray 300. The opening 370 is at a first end 301 of the tray 300, and the bottom portion 350 is at an opposite second end 302 of the tray 300. The cavity 360 defined by the tray 300 is defined by and between the front portion 310, the rear portion 320, the first and second side portions 330, 340 and the bottom portion 350 of the tray 300. The bottom portion 350 of the tray 300 is planar, or substantially planar, and is orthogonal to each of the front and rear portions 310, 320 of the tray 300 and each of the first and second side portions 330, 340 of the tray 300.

As shown in Figures 6, 7 and 11 to 14, the tray 300 comprises a wall 600 within the cavity 360 defined by the tray 300. The wall 600 comprises a main panel 610 and first and second side tabs 630, 640. The main panel 610 is planar, or substantially planar, and has a rectangular shape with parallel top and bottom edges 611, 612 and parallel left and right edges 613, 614 orthogonal to the top and bottom edges 611, 612. The first side tab 630 extends from the left edge 613 of the main panel 610 and orthogonal to the main panel 610, and the second side tab 640 extends from the right edge 614 of the main panel 610 and orthogonal to the main panel 610 and parallel to the first side tab 630. The first and second side tabs 630, 640 are respectively directly affixed to the first and second side portions 330, 340 of the tray 300.

The wall 600 comprises a divider, in the form of the main panel 610 of the wall 600, which divides the cavity 360 of the tray 300 into first and second spaces 361, 362. The first space 361 is defined by and between the main panel 610 of the wall 600 and the rear, bottom and first and
second side portions 320, 330, 340, 350 of the tray 300, whereas the second space 362 is defined by and between the main panel 610 of the wall 600 and the front, bottom and first and second side portions 310, 330, 340, 350 of the tray 300. The first space 361 has a substantially rectangular cross-sectional shape in a plane parallel to the third plane, which rectangular cross-sectional shape has a width measured between, and orthogonal to, the first and second side portions 330, 340 of the tray 300, and a depth measured between, and orthogonal to, the main panel 610 of the wall 600 and the rear portion 320 of the tray 300. The second space 362 has a substantially D-shaped cross-sectional shape in a plane parallel to the third plane, which D-shaped cross-sectional shape has a maximum width measured between, and orthogonal to, the first and second side portions 330, 340 of the tray 300, and a maximum depth measured between, and orthogonal to, the main panel 610 of the wall 600 and the front portion 310 of the tray 300. All of the wall 600 is within the cavity 360 defined by the tray 300, so that none of the wall 600 projects from the cavity 360 through the opening 370 defined by the tray 300. The first and/or second space 361, 362 of the cavity 360 defined by the tray 300 is for receiving one or more tobacco industry products, such as smoking articles, e.g. cigarettes. The tray 300 and the one or more tobacco industry products received by the tray 300 are together called an “assembly” herein.

As shown in Figures 6 and 11 to 14, the tray 300 is within the cavity 560 defined by the base portion 500, with the front portion 310 of the tray 300 adjacent and parallel to the front portion 510 of the base portion 500 and the rear portion 320 of the tray 300 adjacent and parallel to the rear portion 520 of the base portion 500. The front portion 310 of the tray 300 is thus located between the front portion 510 of the base portion 500 and the cavity 360 defined by the tray 300, whereas the rear portion 320 of the tray 300 is thus located between the cavity 360 defined by the tray 300 and the rear portion 520 of the base portion 500. Accordingly, the rear portion 320 of the tray 300 is closer to the rear portion 520 of the base portion 500 than is the front portion 310 of the tray 300. A width of the tray 300 measured between, and orthogonal to, outer surfaces of the first and second side portions 330, 340 thereof is no more than, and may be less than, the width of the cavity 560 defined by the base portion 500, and a depth of the tray 300 measured between, and orthogonal to, outer surfaces of the front and rear portions 310, 320 thereof is no more than, and may be less than, the depth of the cavity 560 defined by the base portion 500. The tray 300 is a reasonably snug fit within the cavity 560. For example, the width and depth of the tray 300 may be no more than 5% less than the maximum width and maximum depth of the cavity 560 defined by the base portion 500.
A maximum length of the tray 300, measured between the first and second ends 301, 302 thereof, and which may be orthogonal to the top and bottom edges 321, 322 of the rear portion 320 of the tray 300, is less than a distance between the bottom portion 550 of the base portion 500 and the top panel 250 of the lid 200 when the lid 200 is at the closed position, so that the tray 300 within the cavity 560 defined by the base portion 500 does not prevent the lid 200 from reaching the closed position. The first end 301 of the tray 300 is the portion of the tray 300 furthest from the second end 502 of the base portion 500.

As shown in Figures 7 and 11 to 14, a hole 315 is provided through the front portion 310 of the tray 300, and a flap 317 extends from an edge of the hole 315. The flap 317 is connected to the rest of the tray 300 by a living hinge 316. A proximal end 317a of the flap 317 is thus at the living hinge 316. The flap 317 is turned outwards from the tray 300, so that a distal end 317b of the flap 317 is located further from the cavity 360 defined by the tray 300 than is the rest of the front portion 310, faces generally towards the first end 501 of the base portion 500, and is a stop 317b of the tray 300. Accordingly, the cavity 360 defined by the tray 300, and more specifically the second space 362 thereof, is free of the flap 317, so that the flap 317 does not interfere with any contents of the cavity 360. The purpose of this stop 317b, which will be termed the “second stop” in the rest of this description, will become apparent from consideration of the rest of this description.

As shown in Figures 6 and 11 to 14, the member 400 has first end 401 hinged to the tray 300, and a second end 402 hinged to the lid 200. In order to robustly connect the first end 401 of the member 400 to the tray 300, the member 400 is integrally formed with a pad 700 that extends from the first end 401 of the member 400. The pad 700 is fixed, by adhesive or otherwise, to the rest of the rear portion 320 of the tray 300, as is best shown in Figures 11 to 14, and is considered to be comprised in the rear portion 320 of the tray 300 in the assembled container 4. Moreover, in order to robustly connect the second end 402 of the member 400 to the lid 200, the member 400 is integrally formed with the lid 200.

The first end 401 of the member 400 is hinged to the rear portion 320 of the tray 300 for rotation relative to the tray 300 about a first axis A1-A1, which first axis A1-A1 is parallel to the fourth axis A4-A4. The first end 401 of the member 400 is hinged to the rear portion 320 of the tray 300 at a position on the tray 300 that is closer to the second end 502 of the base portion 500 than is the first end 301 of the tray 300. This position corresponds to the location at which the
member 400 meets the pad 700. As will be understood at least from consideration of the rest of this description, such a construction permits the tray 300 to project further from the cavity 560 defined by the base portion 500 when the lid 200 is at the open position so that, when the lid 200 is at the open position, there is greater presentation of any products received by the tray 300 and extraction of the products by a user is easier, as compared to an alternative arrangement in which the first end 401 of the member 400 is hinged to the rear portion 320 of the tray 300 at a position on the tray 300 that is equally as close to the second end 502 of the base portion 500 as is the first end 301 of the tray 300.

The second end 402 of the member 400 is hinged to the lid 200 for rotation relative to the lid 200 about a second axis A2-A2, which second axis A2-A2 is parallel to the first axis A1-A1 and the fourth axis A4-A4. The second end 402 of the member 400 is hinged to the lid 200 at a position on the lid 200 no closer to the proximal end 201 than to a portion of the lid 200 furthest from the proximal end 201, and no closer to the proximal end 201 than to the first plane when the opening 570 defined by the base portion 500 is closed by the lid 200. This specific location of the “position” on the lid 200 makes it easier to move the lid 200 between the open and closed positions, since there is a greater distance between the “position” and the pivot point (i.e. the hinge 503) of the lid 200 than in a comparative container in which an equivalent member is connected to the lid at a position closer to the proximal end of the lid than to a portion of the lid furthest from the proximal end and closer to the proximal end than to the first plane when the lid is at the closed position. This greater distance means that, as compared to the comparative container, a smaller force need be applied to create the same moment to rotate the lid 200 relative to the base portion 500. Moreover, as also compared to the comparative container, this specific location of the “position” on the lid 200 permits the tray 300 to project further from the cavity 560 defined by the base portion 500 when the lid 200 is at the open position, since the tray 300 is connected, via the member 400, to a portion of the lid 200 that is relatively far from the opening 570 defined by the base portion 500 when the lid 200 is at the open position. Accordingly, when the lid 200 is at the open position, there is greater presentation of any products received by the tray 300 and extraction of the products by a user is easier. The “position” on the lid 200 is at an inner side of the lid 200, i.e. a side that faces the cavity 560 defined by the base portion 500, when the opening 570 defined by the base portion 500 is closed by the lid 200.

In the embodiment illustrated in Figures 4 onwards, the position on the lid 200 is closer to the portion of the lid 200 furthest from the proximal end 201 than to the proximal end 201, and
closer to the first plane when the opening 570 defined by the base portion 500 is closed by the lid 200 than to the proximal end 201. More specifically, in the embodiment illustrated in Figures 4 onwards, a first distance between the position on the lid 200 and the portion of the lid 200 furthest from the proximal end 201 is about 20% of a second distance between the position on the lid 200 and the proximal end 201, and, when the opening 570 defined by the base portion 500 is closed by the lid 200, a third distance between the position on the lid 200 and the first plane is about 20% of the second distance. In the embodiment illustrated in Figures 4 onwards, the portion of the lid 200 furthest from the proximal end 201 is the distal end 202 of the lid 200.

The member 400 has a hinge 403 between the first and second ends 401, 402 of the member 400. The hinge 403 is closer to the first end 401 of the member 400 than to the second end 402 of the member 400. The hinge 403 connects integral or unitary first and second portions 410, 420 of the member 400. The first portion 410 of the member 400 extends between the first end 401 of the member 400 and the hinge 403, whereas the second portion 420 of the member 400 extends between the second end 402 of the member 400 and the hinge 403. The first and second portions 410, 420 of the member 400 are connected by the hinge 403 for rotation about a third axis A3-A3 parallel to each of the first, second and fourth axes A1-A1, A2-A2, A4-A4. The hinge 403 is a living hinge comprising a relatively weak portion of the member 400 that is located between relatively strong portions 410, 420 of the member 400.

A distance between the third axis A3-A3 and the first end 401 of the member 400 is greater than a distance between the first end 301 of the tray 300 and the position on the tray 300 at which the first end 401 of the member 400 is connected to the tray 300. Accordingly, as the lid 200 is moved relative to the base portion 500 towards the closed position, the first portion 410 of the member 400 may abut the tray 300 at the first end 301 of the tray 300, and the second portion 420 of the member 400 may rotate relative to the first portion 410 of the member 400 and relative to the tray 300 until it is between the tray 300 and the lid 200, and the lid 200 is at the closed position, as discussed below. Such a construction helps to avoid deformation of the tray 300, and possibly any product(s) received by the tray 300, by the movement of the member 400 relative to the tray 300 during the movement of the lid 200 to the closed position.

The tray 300 is movable within the cavity 560 defined by the base portion 500 relative to the base portion 500. More specifically, the tray 300 is linearly movable in a first direction relative to the base portion 500 between first and second positions. When the tray 300 is at the first position
as shown in Figures 4, 5 and 11, the tray 300 is nested to a maximum extent in the cavity 560 defined by the base portion 500, with the bottom panel 350 of the tray 300 in contact with the bottom portion 550 of the base portion 500. When the tray 300 is at the second position relative to the base portion 500 as shown in Figures 6 and 14, the tray 300 projects further from the cavity 560 defined by the base portion 500 than when the tray 300 is at the first position, so that the bottom panel 350 of the tray 300 is spaced from the bottom portion 550 of the base portion 500. This linear movability of the tray 300 allows a user to move the opening 370 of the tray 300 away from the base portion 500 so that they may better access products received by the first and/or second space 361, 362 of the cavity 360 defined by the tray 300. When one or more tobacco industry products are received by the tray 300, the complete resultant assembly of the tray 300 and the tobacco industry product(s) is linearly movable as discussed above.

Movement of the tray 300 relative to the base portion 500 between the between first and second positions causes movement of the member 400 relative to the base portion 500, which in turn causes movement of the lid 200 relative to the base portion 500. When the tray 300 is at the first position relative to the base portion 500, as shown in Figures 4, 5 and 11, the lid 200 is at the closed position, and the member 400 is bent at the hinge 403 with the second portion 420 of the member 400 located between the lid 200 and the first end 301 of the tray 300 and non-parallel to the lid 200, and with the hinge 403 of the member 400 distanced from the lid 200.

A user is able to contact the tray 300 through the hole 155 from the exterior of the base portion 500 in order to push the tray 300 within the cavity 560 relative to the base portion 500 from the first position towards the second position. As the tray 300 is so moved, the member 400 moves with the tray 300 relative to the base portion 500 and causes the lid 200 to rotate from the closed position towards the open position. During this movement of the tray 300 and rotation of the lid 200, the hinge 403 of the member 400 approaches the lid 200 until the second portion 420 of the member 400 becomes parallel to the lid 200, as shown in Figure 12. Continued movement of the tray 300 relative to the base portion 500 towards the second position causes the first portion 410 of the member 400 to rotate relative to the tray 300, the lid 200 and the base portion 500, and then also relative to the second portion 420 of the member 400. This series of motions causes further rotation of the lid 200 relative to the base portion 500 towards the open position, so that the state shown in Figure 13 is reached. Still further movement of the tray 300 relative to the base portion 500 towards the second position causes the second portion 420 of the member 400 to rotate relative to the tray 300, the lid 200 and the base portion 500, so that the hinge 403 of the member
400 becomes increasingly distanced from the lid 200 and the second portion 420 of the member 400 becomes non-parallel to the lid 200. This motion causes still further rotation of the lid 200 relative to the base portion 500 towards the open position, until the tray 300 reaches the second positon, as shown in Figures 6 and 14.

In order to prevent a user from damaging the member 400 or its connection to one of the lid 200 and the tray 300, and/or to prevent a user from fully removing the tray 300 from the cavity 560 defined by the base portion 500, the container 4 comprises a limiter for limiting the extent to which the tray 300 is linearly movable in the first direction relative to the base portion 500. In the embodiment illustrated in Figure 4 onwards, the limiter comprises the first stop 116a of the base portion 500 and the second stop 317b of the tray 300. As discussed above, the first stop 116a faces generally towards the second end 502 of the base portion 500, and the second stop 317b faces generally towards the first end 501 of the base portion 500. In the assembled container 4, the distal end 317b of the flap 317 of the tray 300 is biased against the inner surface of the front panel 110 of the shell 100 and, when the tray 300 is at the first position relative to the base portion 500, is located between the first stop 116a and the bottom edge 112 of the front panel 110 of the shell 100. Movement of the tray 300 relative to the base portion 500 from the first position towards the second position causes the distal end 317b of the flap 317 of the tray 300 to come into contact with the edge 116a of the sub-panel 116 (i.e. causes the second stop 317b to come into contact with the first stop 116a) when the tray is at the second position, as shown in Figure 14, thereby to stop the movement.

When the tray 300 is at the second position relative to the base portion 500, as shown in Figures 6 and 14, a user is able to contact the tray 300 through the apertures 115, 125 from the exterior of the base portion 500 in order to move the tray 300 within the cavity 560 relative to the base portion 500 from the second position towards the first position. The user may grip the tray 300 between the thumb and forefinger of one hand while gripping the base portion 500 with their other hand, and then pull the tray 300 towards the first position. Movement of the tray 300 relative to the base portion 500 from the second position towards the first position causes movement of the member 400 relative to the base portion 500, which in turn pulls the lid 200 from the open position towards the closed position. Such movement of the tray 300 relative to the base portion 500 also causes the first and second stops 116a, 317b to disengage. Continued movement of the tray 300 towards the first position causes the bottom panel 350 of the tray 300 to come into contact with
the bottom portion 550 of the base portion 500 when the tray 300 is at the first position, as shown in Figures 4, 5 and 11, thereby to stop the movement.

The combination of the shell 100, lid 200, member 400 and pad 700 may be formed from the blank 10 shown in Figure 15. The blank 10 comprises a sheet of material, such as card, paper or cardboard, which has a plurality of predetermined fold lines 11. The blank 10 may have been cut from a larger sheet of the material. As would be readily understood by the skilled person on consideration of Figures 4 to 6 and 11 to 15, the blank 10 is foldable along the fold lines 11 to form the combination of the shell 100, lid 200, member 400 and pad 700. As would also be readily understood by the skilled person, the blank 10 includes a plurality of tabs 12 there are fixable, by adhesive or otherwise, to other portions of the blank 10 to hold the material in the desired final configuration.

The tray 300 (less the wall 600 and the pad 700) may be made from the blank 30 shown in Figure 16. The blank 30 comprises a sheet of material, such as card, paper or cardboard, which has a plurality of predetermined fold lines 31. The blank 30 may have been cut from a larger sheet of the material. As would be readily understood by the skilled person on consideration of at least Figures 6 to 8 and 16, the blank 30 is foldable along the fold lines 31 to form the tray 300 (less the wall 600 and the pad 700). As would also be readily understood by the skilled person, the blank 30 includes a plurality of tabs 32 there are fixable, by adhesive or otherwise, to other portions of the blank 30 to hold the material in the desired final configuration.

The wall 600 may be made from the blank 60 shown in Figure 17. The blank 60 comprises a sheet of material, such as card, paper or cardboard, which has a plurality of predetermined fold lines 61. The blank 60 may have been cut from a larger sheet of the material. As would be readily understood by the skilled person on consideration of at least Figures 7, 9 to 14 and 17, the blank 60 is foldable along the fold lines 61 to form the wall 600.

The blanks 10, 30, 60 are locatable relative to each other to form the tobacco industry product container 4 shown in Figures 4 to 6 and 11 to 14. Optionally, the blanks 10, 30, 60 are formed into the combination, the tray 300 (less the wall 600 and the pad 700) and the wall 600, respectively, then the wall 600 is inserted into the cavity 360 defined by the tray 300 and fixed therein as also discussed above, then the tray 300 is inserted into the cavity 560 defined by the base portion 500, and then the pad 700 is fixed to the rest of the tray 300 as discussed above. Other
orders of assembly steps may be apparent to the skilled person on consideration of the present disclosure.

In some variations to the embodiment illustrated in Figure 4 onwards, the shell 100 may have a different shape to that described above. For example, the first and/or second curved edges 136, 146 of the first and/or second side portions 130, 140 may be replaced with a bevelled edge extending from the front panel 110 and connecting the first and/or second, respectively, side panel 135, 145 with the front panel 110. In some variations, the first side portion 130 may comprise only a first side panel extending from the left edge 123 of the rear panel 120 and orthogonal to the rear panel 120 to the left edge 113 of the front panel 110. In some variations, the second side portion 140 may comprise only a second side panel extending from the right edge 124 of the rear panel 120 and orthogonal to the rear panel 120 to the right edge 114 of the front panel 110. Thus, in some variations, when the lid 200 is at the closed position, the base portion 500 and the lid 200, and more specifically the shell 100 and the lid 200, together give the container 4 a cuboid shape. In some variations, the first and/or second side portions 130, 140 of the shell 100 may comprise a curved or bevelled edge extending from the rear panel 120 and connecting the first and/or second, respectively, side panel 135, 145 with the rear panel 120.

In some variations to the embodiment illustrated in Figure 4 onwards, the hole 155 and/or the aperture 115 in the front panel 110 of the shell 100 and/or the aperture 125 in the rear panel 120 of the shell 100 may have a different form to that described above. For example, in some variations one or other of the apertures 115, 125 may not extend from the hole 155, and in some variations the hole 155 and/or one or other or both of the apertures 115, 125 may have a different shape to that shown in the Figures. In some variations, the hole 155 and/or the aperture 115 in the front panel 110 of the shell 100 and/or the aperture 125 in the rear panel 120 of the shell 100 may be omitted.

In some variations to the embodiment illustrated in Figure 4 onwards, the cavity 560 defined by the base portion 500 may have a cross-sectional shape in a plane parallel to the third plane that is other than substantially D-shaped. For example, the cross-sectional shape may be rectangular.

In some variations to the embodiment illustrated in Figure 4 onwards, the base portion 500 may comprise an inner frame within the shell 100. The cavity 560 defined by the base portion 500
may be at least partially defined by such an inner frame, optionally in combination with the shell 100. Such an inner frame may for example comprise a main panel fixed, by adhesive or otherwise, to the inner (i.e. facing in the direction of the rear panel 120) surface of the front panel 110 of the shell 100, and first and second side portions fixed, by adhesive or otherwise, to respective inner (i.e. facing in the direction of the opposite side portion 130, 140) surfaces of the first and second side portions 130, 140 of the shell 100. With the shape of the lid 200, and optionally the shape of the shell 100, adjusted accordingly, the inner frame may be located relative to the shell 100 so that top edges of the main panel and of the first and second side portions of the inner frame are further from the second end 102 of the shell 100 than are the top edges 111, 131, 141 of the front panel 110 and the first and second side portions 130, 140 of the shell 100, so that a first end of the inner frame is visible to a user when the lid 200 is at the open position.

In variations to the embodiment illustrated in Figure 4 onwards, the lid 200 may be non-unitary or non-integral with the shell 100. In some such variations, the lid 200 may be connected to the base portion 500 via a hinge or by a mechanism or element other than a hinge, and in other such variations the lid 200 may be detachable from the base portion 500 so as to be fully detached from the shell 100 when at the open position. In some variations to the embodiment illustrated in Figure 4 onwards, the lid 200 may be omitted.

In some variations to the embodiment illustrated in Figure 4 onwards, the lid 200 may have a different shape to that described above. For example, the top panel 250 may be non-planar, such as arched or domed or including one or more apexes. In some variations, the lid 200 may comprise one or more panels depending from the top panel 250.

In variations to the embodiment illustrated in Figure 4 onwards, the tray 300 may have a different shape to that described above. For example, the top edge 311 of the front portion 310 may be linear and the front portion 310 may be rectangular. Alternatively, the top edge 311 of the front portion 310 may be curved, and may provide one of a concave and a convex edge facing the first end 301 of the tray 300. In some variations, the front portion 310 and/or the rear portion 320 of the tray 300 may be omitted. In some variations, the first side portion 330 and/or the second side portion 340 of the tray 300 may be omitted.

In the embodiment illustrated in Figure 4 onwards, the first space 361 of the cavity 360 of the tray 300 is for receiving and relatively supporting twenty “slim” cigarettes. In variations to
the embodiment illustrated in Figure 4 onwards, the first space 361 may be for receiving and relatively supporting a different number of “slim” cigarettes, or a number, e.g. ten or twenty, standard sized cigarettes, or one or more other tobacco industry product(s), such as cigarette papers, cut or packaged tobacco, or snus.

In the embodiment illustrated in Figure 4 onwards, the second space 362 of the cavity 360 of the tray 300 is empty. In variations to the embodiment illustrated in Figure 4 onwards, one or more coupons, cigarette cards, smoking articles, or other items may be located in the second space 362 and withdrawable from the second space 362 when the lid 200 is at the open position.

In the embodiment illustrated in Figure 4 onwards, the first and second side tabs 630, 640 of the wall 600 are respectively directly affixed to the first and second side portions 330, 340 of the tray 300. In variations to the embodiment illustrated in Figure 4 onwards, the first and second side tabs 630, 640 of the wall 600 may be respectively directly affixed to the front and rear portions 310, 320 of the tray 300. In still further variations, the wall 600 may not be fixed to the rest of the tray 300, or may be omitted.

In some variations to the embodiment illustrated in Figure 4 onwards, the first axis A1-A1 is non-parallel or orthogonal or oblique to the second axis A2-A2 and/or to the third axis A3-A3 and/or to the fourth axis A4-A4. In some variations to the embodiment illustrated in Figure 4 onwards, the second axis A2-A2 is non-parallel or orthogonal or oblique to the third axis A3-A3 and/or to the fourth axis A4-A4. In some variations to the embodiment illustrated in Figure 4 onwards, the third axis A3-A3 is non-parallel or orthogonal or oblique to the fourth axis A4-A4.

In some variations to the embodiment illustrated in Figure 4 onwards, the first end 401 of the member 400 is hinged to the first end 301 of the tray 300, such as to the rear portion 320 of the tray 300 at the first end 301 of the tray 300. In some variations to the embodiment illustrated in Figure 4 onwards, the first end 401 of the member 400 is hinged to the rear portion 320 of the tray 300 at a position on the tray 300 as close to the second end 502 of the base portion 500 as is the first end 301 of the tray 300. In some variations to the embodiment illustrated in Figure 4 onwards, the first end 401 of the member 400 is hinged to a portion of the tray 300 other than the rear portion 320 of the tray 300, such as to the front portion 310 of the tray 300 or to one of the first and second side portions 330, 340 of the tray 300.
In some variations to the embodiment illustrated in Figure 4 onwards, the position on the lid 200 at which the second end 402 of the member 400 is connected to the lid 200 is equidistant between the proximal end 201 of the lid 200 and the portion (which may be the distal end 202 of the lid 200) of the lid 200 furthest from the proximal end 201 of the lid 200, or is closer to the proximal end 201 of the lid 200 than to the portion (which may be the distal end 202 of the lid 200) of the lid 200 furthest from the proximal end 201 of the lid 200. In some variations to the embodiment illustrated in Figure 4 onwards, the position on the lid 200 is equidistant between the proximal end 201 of the lid 200 and the first plane when the opening 570 defined by the base portion 500 is closed by the lid 200, or is closer to the proximal end 201 of the lid 200 than to the first plane when the opening 570 defined by the base portion 500 is closed by the lid 200. In some variations to the embodiment illustrated in Figures 4 onwards, the first distance between the position on the lid 200 and the portion (which may be the distal end 202 of the lid 200) of the lid 200 furthest from the proximal end 201 may be any of about 0%, about 10%, about 25%, about 33%, about 50%, about 75%, about 100%, about 200%, about 300%, about 400% and about 500% of the second distance between the position on the lid 200 and the proximal end 201, and, when the opening 570 defined by the base portion 500 is closed by the lid 200, the third distance between the position on the lid 200 and the first plane may be any of about 0%, about 10%, about 25%, about 33%, about 50%, about 75%, about 100%, about 200%, about 300%, about 400% and about 500% of the second distance. Thus, in some embodiments, the position on the lid 200 may be at the portion (which may be the distal end 202 of the lid 200) of the lid 200 furthest from the proximal end 201 and/or may lie in the first plane when the opening 570 defined by the base portion 500 is closed by the lid 200.

In some variations to the embodiment illustrated in Figure 4 onwards, the hinge 403 is closer to the second end 402 of the member 400 than to the first end 401 of the member 400, or is equidistant between the first and second ends 401, 402 of the member 400. In some variations to the embodiment illustrated in Figure 4 onwards, the hinge 403 is a hinge other than a living hinge, such as a barrel hinge. In some such variations, the first and second portions 410, 420 of the member 400 are non-unitary parts connected by the hinge 403. In some variations to the embodiment illustrated in Figure 4 onwards, the hinge 403 is omitted, so that the member 400 is free of hinges between the first and second ends 401, 402 of the member 400.

In some variations to the embodiment illustrated in Figure 4 onwards, the distance between the third axis A3-A3 and the first end 401 of the member 400 is less than or equal to the distance
between the first end 301 of the tray 300 and the position on the tray 300 at which the first end 401 of the member 400 is connected to the tray 300. However, optionally the distance between the third axis A3-A3 and the first end 401 of the member 400 is no less than the distance between the first end 301 of the tray 300 and the position on the tray 300 at which the first end 401 of the member 400 is connected to the tray 300.

In some variations to the embodiment illustrated in Figure 4 onwards, when the tray 300 is at the second position relative to the base portion 500, the tray 300 may project no further from the cavity 560 defined by the base portion 500 than when the tray 300 is at the first position. Thus, in some embodiments, the tray 300 may not project from the 560 when at either of the first and second positions.

In the embodiment illustrated in Figure 4 onwards, the first direction in which the tray 300 is movable relative to the base portion 500 is normal to the third plane or in the direction of a longitudinal axis of the base portion 500. In variations to the embodiment illustrated in Figure 4 onwards, the first direction may be orthogonal or oblique to the third plane and/or the longitudinal axis. In some variations, the tray 300 is not linearly movable relative to the base portion 500. In some variations, the tray 300 is non-linearly movable relative to the base portion 500.

In some variations to the embodiment illustrated in Figure 4 onwards, the first stop of the base portion 500 may have a different form to that discussed above. For example, in some variations the first stop may comprise a surface of a projection projecting from the front panel 110 of the shell 100, so that the first stop comprises a surface of a projection of the base portion 500. The projection may comprise a flap. In some variations to the embodiment illustrated in Figure 4 onwards, the second stop of the tray 300 may have a different form to that discussed above. For example, in some variations the second stop may comprise an edge of a hole in the tray 300 or a surface of the tray 300.

In some variations to the embodiment illustrated in Figure 4 onwards, the limiter may comprise a first limiter part that is comprised in the tray 300 and a second limiter part that is comprised in the base portion 500, and the first and second limiter parts may interact with each other to stop the movement of the tray 300 without having to come into contact with each other. For example, the first and second limiter parts may be in permanent contact with each other. For example, the first and second limiter parts may comprise opposite ends of a flexible or extendible
member permanently connected between the tray 300 and the base portion 500, e.g. the bottom portion 550 of the base portion 500.

In some variations to the embodiment illustrated in Figure 4 onwards, the limiter may be omitted. In some such embodiments, the tray 300 may be removable from the cavity 560 defined by the base portion 500, or may only prevented from being removed from the cavity 560 defined by the base portion 500 by the member 400 connecting the tray 300 to the base portion 500.

The various embodiments described herein are presented only to assist in understanding and teaching the claimed features. These embodiments are provided as a representative sample of embodiments only, and are not exhaustive and/or exclusive. It is to be understood that advantages, embodiments, examples, functions, features, structures, and/or other aspects described herein are not to be considered limitations on the scope of the invention as defined by the claims or limitations on equivalents to the claims, and that other embodiments may be utilised and modifications may be made without departing from the scope of the claimed invention. Various embodiments of the invention may suitably comprise, consist of, or consist essentially of; appropriate combinations of the disclosed elements, components, features, parts, steps, means, etc., other than those specifically described herein. In addition, this disclosure may include other inventions not presently claimed, but which may be claimed in future.
Claims:

1. A tobacco industry product container, comprising:
   a base portion having a front portion lying in a first plane and a rear portion, the base portion defining a cavity between the front and rear portions and an opening into the cavity from an exterior of the base portion;
   a lid for closing the opening and having a proximal end hinged to the rear portion;
   a tray movable within the cavity relative to the base portion; and
   a member having a first end hinged to the tray, and a second end hinged to the lid at a position on the lid no closer to the proximal end than to the first plane when the opening is closed by the lid.

2. The tobacco industry product container according to claim 1, wherein the position on the lid is no closer to the proximal end than to a portion of the lid furthest from the proximal end.

3. The tobacco industry product container according to claim 1 or claim 2, wherein the tray has a front portion and a rear portion, wherein the rear portion of the tray is closer to the rear portion of the base portion than is the front portion of the tray, and wherein the first end of the member is hinged to the rear portion of the tray.

4. A tobacco industry product container, comprising:
   a base portion defining a cavity and an opening into the cavity from an exterior of the base portion;
   a lid for closing the opening and having a proximal end hinged to the base portion;
   a tray movable within the cavity relative to the base portion; and
   a member having a first end hinged to the tray, and a second end hinged to the lid at a position on the lid no closer to the proximal end than to a portion of the lid furthest from the proximal end.

5. The tobacco industry product container according to claim 4, wherein the base portion has a front portion lying in a first plane and a rear portion, the cavity being between the front and rear portions, wherein the proximal end of the lid is hinged to the rear portion, and wherein the position on the lid is no closer to the proximal end than to the first plane when the opening is closed by the lid.
6. The tobacco industry product container according to claim 4 or claim 5, wherein the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, wherein the tray has a front portion and a rear portion, wherein the rear portion of the tray is closer to the rear portion of the base portion than is the front portion of the tray, and wherein the first end of the member is hinged to the rear portion of the tray.

7. The tobacco industry product container according to any one of the preceding claims, wherein the proximal end of the lid and a distal end of the lid are at opposed edges of the opening when the opening is closed by the lid.

8. The tobacco industry product container according to any one of the preceding claims, wherein the member has a hinge between the first and second ends.

9. A tobacco industry product container, comprising:
   a base portion defining a cavity and an opening into the cavity from an exterior of the base portion;
   a lid hinged to the base portion for closing the opening;
   a tray movable within the cavity relative to the base portion; and
   a member having a first end hinged to the tray, a second end hinged to the lid, and a hinge between the first and second ends.

10. The tobacco industry product container according to claim 8 or claim 9, wherein the hinge is closer to the first end of the member than to the second end of the member.

11. The tobacco industry product container according to any one of claims 8 to 10, wherein the first end of the member is hinged to the tray for rotation about a first axis, and wherein the member has first and second portions connected by the hinge for rotation about an axis parallel to the first axis.

12. The tobacco industry product container according to any one of claims 8 to 11, wherein the hinge comprises a relatively weak portion of the member that is located between relatively strong portions of the member.
13. The tobacco industry product container according to any one of claims 8 to 12, wherein the hinge is a living hinge.

14. The tobacco industry product container according to any one of the preceding claims, wherein the opening is at a first end of the base portion, wherein the base portion has an opposite second end, wherein the tray has a first end furthest from the second end of the base portion, and wherein the first end of the member is hinged to the tray at a position on the tray that is closer to the second end of the base portion than is the first end of the tray.

15. The tobacco industry product container according to claim 14, when dependent on any one of claims 8 to 13, wherein the member has first and second portions connected by the hinge for rotation about an axis, and wherein a distance between the axis and the first end of the member is no less than a distance between the first end of the tray and the position on the tray.

16. The tobacco industry product container according to claim 9 or any one of the claims dependent on claim 9, wherein the lid has a proximal end hinged to the base portion, and wherein the second end is hinged to the lid at a position on the lid no closer to the proximal end than to a portion of the lid furthest from the proximal end.

17. The tobacco industry product container according to claim 9 or any one of the claims dependent on claim 9, wherein the base portion has a front portion lying in a first plane and a rear portion, the cavity being between the front and rear portions, wherein the lid has a proximal end hinged to the rear portion, and wherein the second end is hinged to the lid at a position on the lid no closer to the proximal end than to the first plane when the opening is closed by the lid.

18. The tobacco industry product container according to claim 9 or any one of the claims dependent on claim 9, wherein the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, wherein the tray has a front portion and a rear portion, wherein the rear portion of the tray is closer to the rear portion of the base portion than is the front portion of the tray, and wherein the first end of the member is hinged to the rear portion of the tray.

19. The tobacco industry product container according to claim 9 or any one of the claims dependent on claim 9, wherein the lid has a proximal end hinged to the base portion, and wherein
the proximal end of the lid and a distal end of the lid are at opposed edges of the opening when the opening is closed by the lid.

20. The tobacco industry product container according to any one of the preceding claims, wherein the first end of the member is hinged to the tray for rotation about a first axis, and the second end of the member is hinged to the lid for rotation about a second axis parallel to the first axis.

21. The tobacco industry product container according to any one of the preceding claims, wherein the tray is linearly movable in a first direction relative to the base portion between first and second positions, at which second position the tray projects further from the cavity than when the tray is at the first position.

22. The tobacco industry product container according to claim 21, comprising a limiter for limiting the extent to which the tray is linearly movable in the first direction relative to the base portion.

23. The tobacco industry product container according to any one of the preceding claims, wherein the opening is at a first end of the base portion, wherein the base portion has an opposite second end, and wherein the second end of the base portion has a hole therethrough connecting the cavity with the exterior of the base portion, through which hole the tray is contactable from the exterior of the base portion for pushing the tray within the cavity relative to the base portion.

24. The tobacco industry product container according to any one of the preceding claims, wherein the base portion has a front portion and a rear portion, the cavity being between the front and rear portions, and wherein the front and/or rear portion of the base portion has an aperture therethrough connecting the cavity with the exterior of the base portion, through which aperture the tray is contactable from the exterior of the base portion for moving the tray within the cavity relative to the base portion.

25. The tobacco industry product container according to claim 24, when dependent on claim 23, wherein the aperture extends from the hole.
26. The tobacco industry product container according to any one of the preceding claims, wherein the tray defines a cavity and an opening into the cavity, and wherein the tray comprises a divider dividing the cavity defined by the tray into first and second spaces.

27. A plurality of blanks, each of which comprises a sheet of material comprising one or more predetermined fold lines, wherein the blanks are foldable along the fold lines and locatable relative to each other to form the tobacco industry product container according to any one of the preceding claims.

28. A tobacco industry product container substantially as herein described with reference to Figures 1a to 1c, or Figures 2a to 2c, or Figures 3a to 3c, or Figures 4 to 17.

29. A plurality of blanks substantially as herein described with reference to Figures 15 to 17.
**Application No:** GB1417977.4  
**Examiner:** Mr Henry Nevell

**Claims searched:** 1-29  
**Date of search:** 6 January 2016

### Patents Act 1977: Search Report under Section 17

#### Documents considered to be relevant:

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<th>Category</th>
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| X        | 1, 2, 4, 7, 20-23, 27 | EP2325093 A  
(IMPRESSO TOBACCO) See particularly figures 1-6 |
| A        | -                  | US4240548 A  
(STIO) See figures 5 and 6 |
| A        | -                  | WO2013/068959 A  
(GD SPA) See fig 3 |
| A        | -                  | US3933299 A  
(SHIMADA) See fig 8 |

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### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC:

- Worldwide search of patent documents classified in the following areas of the IPC:
  - A24F; B65D

The following online and other databases have been used in the preparation of this search report:

- WPI, EPODOC, TXTE

### International Classification:

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