

(19)



(11)

EP 3 393 934 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
25.09.2019 Bulletin 2019/39

(51) Int Cl.:
B65D 85/10 ^(2006.01) **B65D 83/02** ^(2006.01)
B65D 81/24 ^(2006.01)

(21) Application number: **16810435.4**

(86) International application number:
PCT/EP2016/081794

(22) Date of filing: **19.12.2016**

(87) International publication number:
WO 2017/108716 (29.06.2017 Gazette 2017/26)

(54) SEALED CONTAINER FOR DISPENSING CONSUMER GOODS

VERSIEGELTER BEHÄLTER ZUR AUSGABE VON VERBRAUCHSGÜTERN

RÉCIPIENT ÉTANCHE PERMETTANT DE DISTRIBUER DES BIENS DE CONSOMMATION

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **23.12.2015 EP 15202505**

(43) Date of publication of application:
31.10.2018 Bulletin 2018/44

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Description

[0001] The present invention relates to a container for a plurality of consumer goods, wherein the container is configured to dispense one or more of the consumer goods while keeping the remaining consumer goods sealed within the container. Containers according to the present invention find particular application as containers for elongate consumer goods, such as aerosol-generating articles.

[0002] Consumer goods are typically supplied from a manufacturer to a consumer in a package or container to protect the consumer goods during transit. In some cases, the package or container is desirably sealed to substantially maintain the environment in which the consumer goods are packaged. For example, some consumer goods are moisture-sensitive and in such cases it may be desirable or necessary to either retain moisture within the container or prevent moisture entering the container from the ambient environment.

[0003] Aerosol-generating articles, such as cigarettes, are an example of consumer goods for which it may be desirable to seal them within a container at the point of manufacture to prevent excess ingress of moisture into the aerosol-generating articles from the ambient environment. For example, aerosol-generating articles, such as cigarettes, typically comprise an aerosol-forming substrate, such as tobacco. It is often desirable to prevent uptake of moisture by the aerosol-forming substrate from the ambient environment after manufacture and before delivery to a consumer.

[0004] Furthermore, a number of aerosol-generating articles in which tobacco is heated rather than combusted have been proposed in the art. For example, WO-A2-2009/022232 discloses an aerosol-generating article comprising a combustible heat source, an aerosol-forming substrate downstream of the combustible heat source, and a heat-conducting element around and in contact with a rear portion of the combustible heat source and an adjacent front portion of the aerosol-forming substrate. In addition to preventing uptake of moisture by the aerosol-forming substrate, it may also be desirable to prevent the uptake of moisture by the combustible heat source in such aerosol-generating articles.

[0005] To protect aerosol-generating articles from the ambient environment, a bundle of such articles are typically sealed within a container, usually comprising an inner liner housed within a hinged lid box. However, such containers are often useful for providing an effective barrier between the aerosol-generating articles and the ambient environment only until the box and the inner liner are first opened. Typically, once a conventional container for aerosol-generating articles has been opened for the first time, the effectiveness of any seal may be significantly reduced.

[0006] WO 2011/138184 A1 describes a package for smoking articles, comprising a body having front, rear and opposing side walls and a lid, having respective front,

rear and opposing side walls. The back wall of the lid is hinged to the back wall of the body. The package has an interior lifting element for urging one or more cigarettes towards an access aperture in the package. The interior lifting element comprises a pull tab, which is arranged to latch on an inner surface of the lid as the lid is moved in an opening direction from a substantially closed position towards a substantially open position.

[0007] WO 2013/190568 A1 describes a package for smoking articles having an air-tight locking and lifting mechanism. The package comprises a partition member affixed to the inner surface of the casing space to split the casing space into multiple air-tight chambers, pushing members each inserted and placed into each chamber, and a cover member composed of tearing portions located and positioned in relation to the respective chambers. After inserting the smoking articles into the respective chambers to rest on the pushing members, the cover member is air-tightly affixed to the casing member to seal the open top face of the casing member in such a way that the smoking articles in the respective chambers are forcibly pressed against resilient action of the respective pushing members to be in a compressed state in each chamber. Therefore, the package is capable of maintaining freshness of the smoking articles by preventing exposure of the smoking articles retained inside the package to the atmosphere and automatically lifting the smoking articles from the package casing.

[0008] It would be desirable to provide a sealed container for consumer goods, wherein one or more consumer goods can be removed from the container without substantially compromising the sealing of the remaining consumer goods within the container.

[0009] According to the present invention there is provided a container for consumer goods, the container comprising a housing for receiving a plurality of consumer goods, the housing comprising an aperture for dispensing consumer goods from the housing. The container further comprises a first sealing flap comprising a first edge secured to the housing adjacent a first side of the aperture and a second edge extending across a first part of the aperture. The container also comprises a second sealing flap comprising a first edge secured to the housing adjacent a second side of the aperture and a second edge extending across a second part of the aperture, wherein the second edges of the first and second flaps are biased towards each other to form a seal across the aperture for sealing the plurality of consumer goods within the housing. The container comprises a dispensing mechanism for dispensing the plurality of consumer goods through the aperture when activated by a consumer, the dispensing mechanism configured so that actuation of the dispensing mechanism advances one of the consumer goods between the second edges of the first and second sealing flaps and through the aperture. The first and second sealing flaps are configured so that the second edges of the first and second sealing flaps are biased towards each other after each of the consumer goods is

dispensed so that the consumer goods remaining in the housing are re-sealed within the container.

[0010] By combining a pair of sealing flaps and a dispensing mechanism containers according to the present invention can advantageously dispense one or more consumer goods from the container without compromising the sealing of the remaining consumer goods within the container. In particular, a consumer can dispense consumer goods from the container one at a time only when they are needed, while keeping the rest of the consumer goods sealed within the container.

[0011] The aperture may be an elongate aperture having a ratio of length to width of at least 2 to 1. An elongate aperture may be advantageous in embodiments in which the container is used to house and dispense a plurality of elongate consumer goods. For example, in embodiments in which the container houses a plurality of elongate aerosol-generating articles, each article may be dispensed through the aperture so that its first and second ends are advanced through the aperture substantially simultaneously. In such embodiments, a consumer can grasp the dispensed article at a central portion of the article, compared to aerosol-generating articles received within a conventional hinged lid box, which are typically removed from the box by grasping a mouth end of each article. Removing the articles by grasping a central portion of each article rather than a mouth end may be preferable to facilitate hygienic removal of the articles from the container.

[0012] In any of the embodiments described above, the first and second sealing flaps may be formed from a resilient material. The term "resilient material" is used herein to describe a material that may be deformed or deflected from its original shape or position upon the application of a force to the resilient material, and wherein the resilient material returns substantially to its original shape or position upon removal of the force.

[0013] Forming the first and second sealing flaps from a resilient material may advantageously facilitate re-sealing of the aperture after each of the consumer goods is dispensed. For example, the first and second sealing flaps may be formed from a resilient material configured to deform and allow a consumer good to pass between the first and second sealing flaps and through the aperture when the consumer good is dispensed, and wherein the first and second sealing flaps return substantially to their original shapes and positions to re-seal the aperture after the dispensed consumer good has been removed.

[0014] Suitable resilient materials for forming the first and second sealing flaps include graphene, one or more rubbers, one or more silicones, and combinations thereof. Suitable rubbers include natural rubber, chloroprene rubber, ethylene propylene diene rubber, acrylonitrile butadiene rubber, hydrogenated nitrile butadiene rubber, chlorosulfonated polyethylene rubber, and combinations thereof. Suitable silicones include one or more polydimethylsiloxanes. The resilient material may comprise a low-friction additive, such as polytetrafluoroethylene.

[0015] The resilient material forming each of the first and second sealing flaps may be an elastic material.

[0016] In embodiments in which the first and second sealing flaps are formed from a resilient material, preferably each of the first and second sealing flaps has a curved shape so that the second edges of the sealing flaps are biased together. Forming each of the first and second sealing flaps with a curved shape and biased towards each other may advantageously facilitate a reliable seal between the first and second sealing flaps.

[0017] In embodiments in which each of the first and second sealing flaps has a curved shape, preferably each of the first and second sealing flaps has a concave surface facing towards an exterior of the housing and a convex surface facing towards an interior of the housing. Such an arrangement of curved first and second sealing flaps can facilitate the movement of consumer goods between the first and second sealing flaps as they are advanced through the aperture. Such an arrangement of curved first and second sealing flaps can minimise or prevent the ingress of foreign materials into the housing.

[0018] In any of the embodiments described above, the container may further comprise an inner liner for receiving the plurality of consumer goods, the inner liner contained within the housing. The inner liner comprises an opening adjacent the aperture, wherein the first and second sealing flaps cooperate with the inner liner to form a continuous seal between the sealing flaps and the edge of the inner liner opening. Providing an inner liner may advantageously facilitate sealing of the consumer goods within the container. For example, the housing may be constructed from a rigid material to protect the consumer goods from mechanical damage and the inner liner may be formed from a more flexible material that may be less effective in providing such mechanical protection but more effective in providing a seal around the consumer goods.

[0019] The inner liner may be formed integrally with the first and second sealing flaps. That is, first and second ends of the inner liner may be secured to the housing adjacent the aperture so that a first portion of the inner liner adjacent the first end forms the first sealing flap and a second portion of the inner liner adjacent the second end forms the second sealing flap.

[0020] The inner liner may be formed separately from the first and second sealing flaps, the inner liner comprising a first portion connected to the second edge of the first sealing flap and a second portion connected to the second edge of the second sealing flap.

[0021] The inner liner may comprise first and second portions biased towards each other, the inner liner opening extending between the first and second portions. Preferably, each of the first and second portions comprises a protrusion spaced apart from the aperture so that the protrusions on the first and second end portions form a restriction that facilitates step-wise dispensing of the consumer goods through the aperture. In particular, as each consumer good is dispensed through the aper-

ture, the restriction created by the protrusions in the inner liner may grasp the next consumer good to be dispensed and retain it adjacent the inner liner opening ready for dispensing. This arrangement may therefore provide a reliable and consistent dispensing of each successive consumer good.

[0022] Preferably, the protrusions in the first and second portions of the inner liner are sufficiently spaced apart from the aperture so that the first and second sealing flaps and the first and second portions of the inner liner can come together to seal the remaining consumer goods within the container, even when a consumer good is retained in the restriction created by the protrusions in the inner liner.

[0023] When using a restriction to facilitate a step-wise dispensing of consumer goods through the aperture, it may be advantageous to use the container for dispensing consumer goods having a substantially circular, oval or elliptical cross-sectional shape, such as aerosol-generating articles having a substantially circular cross-sectional shape. In particular, the curved surface of such consumer goods may facilitate the movement of successive consumer goods through the restriction created by the protrusions.

[0024] The inner liner may be formed from a sheet material and each protrusion may be formed separately and secured to the sheet material. For example, each protrusion may comprise a strip of material secured to the sheet material.

[0025] The inner liner may be formed from a sheet material and each protrusion may be formed by depositing a second material onto discrete areas of the sheet material.

[0026] The inner liner may be formed from a sheet material and each protrusion may be formed by a discrete portion of the sheet material having a greater thickness than areas of the sheet material adjacent to the protrusion.

[0027] In any of the embodiments in which the container comprises an inner liner, suitable materials for forming the inner liner include graphene, one or more rubbers, one or more silicones, and combinations thereof. Suitable rubbers include natural rubber, chloroprene rubber, ethylene propylene diene rubber, acrylonitrile butadiene rubber, hydrogenated nitrile butadiene rubber, chlorosulfonated polyethylene rubber, and combinations thereof. Suitable silicones include one or more polydimethylsiloxanes. The inner liner material may comprise a low-friction additive, such as polytetrafluoroethylene.

[0028] The material forming the inner liner may be an elastic material.

[0029] In any of the embodiments described above, the dispensing mechanism may comprise a piston arranged to slide within the housing and towards the aperture, wherein the container is configured to receive a plurality of consumer goods between the aperture and the piston. To dispense the consumer goods, a consumer may apply a force to the piston to advance the consumer

goods towards the aperture. Using a piston to advance the plurality of consumer goods towards the aperture can advantageously facilitate even distribution of the force applied by a consumer across the consumer goods or parts of consumer goods in contact with the piston.

[0030] In those embodiments in which the container comprises an inner liner, and open end of the inner liner may be secured to the piston to form a seal between the inner liner and the piston. The inner liner is preferably formed from a flexible material to accommodate the movement of the piston within the housing.

[0031] The aperture may be provided at a first end of the housing and the housing may further comprise a housing opening at a second end of the housing, opposite the first end. To advance the piston and the consumer goods towards the aperture, a consumer may apply a force to the piston through the housing opening.

[0032] The housing may comprise an elongate slot extending along a first wall of the housing, wherein the dispensing mechanism further comprises a button positioned outside of the housing and a shaft extending through the elongate slot, and wherein the shaft comprises a first end connected to the button and a second end connected to the piston. To advance the piston and the consumer goods towards the aperture, a consumer can slide the button and the shaft along the elongate slot and towards the aperture.

[0033] The button may be connected directly to the shaft, or the button may be connected to the shaft via one or more intervening components.

[0034] The shaft may be connected directly to the piston, or the shaft may be connected to the piston via one or more intervening components.

[0035] Preferably, the elongate slot has a first end spaced apart from a first end of the first wall and a second end spaced apart from a second end of the first wall so that the shaft is captive within the elongate slot.

[0036] The dispensing mechanism may further comprise a plurality of ratchet teeth provided on an inner surface of the first wall of the housing and extending parallel to the elongate slot, and a pawl extending between the shaft and the piston to connect the second end of the shaft to the piston. The pawl is biased towards the plurality of ratchet teeth, and the pawl engages successive ratchet teeth as the piston is advanced towards the aperture. Configuring the pawl to engage successive ratchet teeth as the piston advances towards the aperture may advantageously prevent sliding movement of the piston away from the aperture. Therefore, the ratchet mechanism may retain the piston in the correct position ready to dispense the next consumer good.

[0037] Preferably, the pawl is a flexible pawl and the dispensing mechanism is configured so that pushing the button towards the first wall disengages the flexible pawl from the ratchet teeth to permit sliding movement of the piston away from the aperture. Such an arrangement is advantageous in embodiments in which the container may be refilled with additional consumer goods as it al-

lows the piston to be reset to its maximum distance from the aperture. Preferably, the flexible pawl is substantially perpendicular to the shaft and comprises a first end connected to the shaft and a second end connected to the piston. In such embodiments, the flexible pawl may deflect about its connection to the piston at its second end when the button is pushed towards the first wall of the housing.

[0038] In any of the embodiments described above, the container may further comprise a moveable panel moveable between a closed position for sealing a plurality of consumer goods within the container and an open position in which one or more consumer goods can be inserted into the container.

[0039] The moveable panel may be retained in the closed position by an interference fit.

[0040] The moveable panel may be retained in the closed position by a locking mechanism.

[0041] The moveable panel may be connected to the housing. The container may be configured so that one or more consumer goods can be inserted into the container through an opening in the housing when the moveable panel is in the open position, and wherein the moveable panel covers the opening when the moveable panel is in the closed position. A seal may be provided on at least one of the housing and the moveable panel so that the seal is received between the housing and the moveable panel when the moveable panel is in the closed position. The moveable panel may be connected to the housing along a hinge, wherein the moveable panel is moveable about the hinge between the open and closed positions.

[0042] In those embodiments in which the dispensing mechanism comprises a piston, the moveable panel may be connected to the piston. The container may be configured so that one or more consumer goods can be inserted into the container through an opening in the piston when the moveable panel is in the open position, and wherein the moveable panel covers the opening when the moveable panel is in the closed position. A seal may be provided on at least one of the piston and the moveable panel so that the seal is received between the piston and the moveable panel when the moveable panel is in the closed position. The moveable panel may be connected to the piston along a hinge, wherein the moveable panel is moveable about the hinge between the open and closed positions.

[0043] In any of the embodiments described above, the housing may be formed from a substantially rigid material. Suitable materials for forming the housing include one or more plastics, one or more metals, and combinations thereof. The housing material may comprise stainless steel. The housing material may comprise 304 stainless steel. The housing material may comprise 316 stainless steel.

[0044] One or more coating materials may be provided on the housing material. Suitable coating materials include inks, lacquers, one or more rubbers, one or more

silicones, and combinations thereof.

[0045] In any of the embodiments described above, the container may further comprise a cover moveable between an open position in which a consumer can access the aperture of the housing and a closed position in which the cover substantially covers the aperture of the housing.

[0046] The cover may be retained in the closed position by an interference fit.

[0047] The cover may be retained in the closed position by a locking mechanism.

[0048] Preferably, the cover is connected to the housing when the cover is in the closed position. The cover may remain attached to the housing when the cover is in the open position.

[0049] The cover may be pivotably connected to the housing so that the cover may be pivoted between the open and closed positions.

[0050] The cover may be slidably connected to the housing so that the cover may slide between the open and closed positions.

[0051] The cover may be removably connected to the housing when the cover is in the closed position, wherein the cover is detachable from the housing so that the cover is in the open position when the cover is detached from the housing.

[0052] The cover may be formed from a substantially rigid material. Suitable materials for forming the cover include one or more plastics, one or more metals, and combinations thereof. The cover material may comprise stainless steel. The cover material may comprise 304 stainless steel. The cover material may comprise 316 stainless steel.

[0053] One or more coating materials may be provided on the cover material. Suitable coating materials include inks, lacquers, one or more rubbers, one or more silicones, and combinations thereof.

[0054] In any of the embodiments described above, the container may further comprise a plurality of consumer goods received within the container. The plurality of consumer goods is received within the housing and, where present, inside the inner liner.

[0055] The plurality of consumer goods may be a plurality of elongate consumer goods each having a ratio of length to width of at least 2 to 1, particularly in those embodiments in which the aperture in the housing is an elongate aperture having a ratio of length to width of at least 2 to 1.

[0056] Each of the consumer goods may comprise a first end and a second end, wherein the plurality of elongate consumer goods is arranged within the container so that the length of each of the consumer goods is substantially parallel to the aperture, and wherein the first and second ends of each of the consumer goods are advanced through the aperture substantially simultaneously each time one of the consumer goods is dispensed from the container.

[0057] As described above, configuring the container

so that the first and second ends of each of the elongate consumer goods is advanced through the aperture substantially simultaneously may be advantageous. In particular, dispensing the consumer goods in this manner may enable a consumer to grasp the dispensed article at a central portion of the article, which may be advantageous in embodiments in which it is desirable for a consumer to avoid touching the ends of the article. For example, each of the consumer goods may be an aerosol-generating article comprising a mouth end, wherein it is desirable for a consumer to avoid touching the mouth end to achieve hygienic removal of the article from the container. Each of the consumer goods may be an aerosol-generating article comprising a combustible heat source at an upstream end of the article, wherein it is desirable for a consumer to avoid touching the upstream end to minimise the risk of damaging the combustible heat source.

[0058] In any of the embodiments described above in which the container comprises a plurality of consumer goods received within the container, the plurality of consumer goods may be a plurality of aerosol-generating articles.

[0059] The aerosol-generating articles may comprise conventional filter cigarettes.

[0060] Each aerosol-generating article may comprise a combustible heat source positioned at an upstream end of the article, an aerosol-forming substrate positioned downstream of the combustible heat source, and a mouthpiece downstream of the aerosol-forming substrate and positioned at a mouth end of the aerosol-generating article.

[0061] The terms "upstream" and "downstream" as used herein refer to relative positions along the aerosol-generating article defined with reference to the direction in which air is drawn through the article by a user. Thus, the mouth end is downstream from the upstream end.

[0062] The combustible heat source is preferably a solid heat source, and may comprise any suitable combustible fuel including, but not limited to, carbon and carbon-based materials containing aluminium, magnesium, one or more carbides, one or more nitrides and combinations thereof. Solid combustible heat sources for heated aerosol-generating articles and methods for producing such heat sources are known in the art and described in, for example, US-A-5,040,552 and US-A-5,595,577. Typically, known solid combustible heat sources for heated aerosol-generating articles are carbon-based, that is they comprise carbon as a primary combustible material.

[0063] The combustible heat source is preferably a blind combustible heat source. As used herein, the term 'blind' describes a heat source that does not comprise any airflow channels.

[0064] The aerosol-forming substrate may be a solid aerosol-forming substrate. Alternatively, the aerosol-forming substrate may comprise both solid and liquid components. The aerosol-forming substrate may comprise a tobacco-containing material containing volatile to-

bacco flavour compounds, which are released from the substrate upon heating. Alternatively, the aerosol-forming substrate may comprise a non-tobacco material. The aerosol-forming substrate may further comprise one or more aerosol formers. Examples of suitable aerosol formers include, but are not limited to, glycerine and propylene glycol.

[0065] In some embodiments, the aerosol-forming substrate is a rod comprising a tobacco-containing material.

[0066] The mouthpiece may comprise a filter. For example, the mouthpiece may comprise a filter plug having one or more segments. Where the mouthpiece comprises a filter plug, preferably the filter plug is a single segment filter plug. The filter plug may comprise one or more segments comprising cellulose acetate, paper or other suitable known filtration materials, or combinations thereof. Preferably, the filter plug comprises filtration material of low filtration efficiency.

[0067] Each aerosol-generating article may be substantially cylindrical in shape. Each aerosol-generating article may be substantially elongate. Each aerosol-generating article has a length and a circumference substantially perpendicular to the length.

[0068] Each aerosol-generating article may be circumscribed by an outer wrapper of, for example, cigarette paper, which has low air permeability.

[0069] The mouthpiece may be circumscribed by tipping paper.

[0070] The invention will be further described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a perspective cross-sectional view of a container in accordance with the present invention;

Figure 2 shows a top view of the container of Figure 1; Figure 3 shows a front view of the container of Figure 1;

Figure 4 shows a bottom view of the container of Figure 1;

Figure 5 shows a side view of the container of Figure 1;

Figure 6 and 7 are detailed cross-sectional views of the dispensing mechanism of the container of Figure 1; and

Figures 8 and 9 show partial cross-sectional views of the container of Figure 1 and illustrating the dispensing of a consumer good from the container.

[0071] Figures 1 to 5 show a container 10 of consumer goods according to the present invention. The container 10 comprises a housing 12 and an inner liner 14 received within the housing 12. A plurality of consumer goods 16 comprising a plurality of aerosol-generating articles is received within the inner liner 12. An aperture 18 is provided at the top of the housing 12, the container 10 configured to dispense the consumer goods 16 through the aperture

18. Optionally, a removable cover 19 can be attached to the top of the housing 12 to protect the aperture 18.

[0072] A first sealing flap 20 and a second sealing flap 22 are connected to the housing 12 adjacent the aperture 18, each sealing flap 20, 22 connected along a first edge to the housing 12. A first portion 24 of the inner liner 14 is connected to a second edge of the first sealing flap 20 and a second portion 26 of the inner liner 14 is connected to a second edge of the second sealing flap 22. The first and second sealing flaps 20, 22 are curved and formed from a resilient material so that they are biased towards each other. Similarly, the first and second portions 24, 26 of the inner liner 14 are curved and formed from a resilient material so that they are biased towards each other. Therefore, when none of the consumer goods 16 are being dispensed through the aperture 18, the first sealing flap 20 and the first portion 24 of the inner liner 14 are biased towards the second sealing flap 22 and the second portion 26 of the inner liner 14 so that the first and second sealing flaps 20, 22 and the first and second portions 24, 26 of the inner liner 14 cover the aperture 18 and seal the consumer goods 16 within the container, as shown in Figure 2.

[0073] To facilitate dispensing of the consumer goods 16 through the aperture 18, the container 10 comprises a dispensing mechanism 28 for advancing the consumer goods 16 towards the aperture 18. As shown most clearly in Figures 3, 6 and 7, the dispensing mechanism 28 comprises a piston 30 slidably received within the housing 12 and a button 32 positioned outside the housing 12. The button 32 is connected to a shaft 34 that extends through an elongate slot 36 in a wall of the housing 12. The shaft 34 is connected to the piston 30 by a flexible pawl 38, the flexible pawl 38 engaging a series of ratchet teeth 40 provided on an inner surface of the housing 12 and extending parallel to the elongate slot 36. A low friction material 42, such as polytetrafluoroethylene, may be provided between the piston 30 and the inner surface of the housing 12.

[0074] To dispense a consumer good 16 from the container 10, a consumer can push the button 32 along the elongate slot 36 to advance the piston 30 and the consumer goods 16 towards the aperture 18. As the dispensing mechanism 28 advances towards the aperture 18 and each consumer good 16 is dispensed, the flexible pawl 38 engages successive ratchet teeth 40 so that the dispensing mechanism 28 remains in position and ready to dispense the next consumer good 16.

[0075] During dispensing of each consumer good 16, the piston 30 pushes the plurality of consumer goods 16 towards the aperture 18 so that the consumer good 16 positioned closest to the aperture 18 is advanced between the first and second sealing flaps 20, 22 and the first and second portions 24, 26 of the inner liner 14, as shown in Figures 8 and 9 (for illustrative purposes, only the top and bottom portions of the container 10 are shown in Figures 8 and 9).

[0076] The first and second portions 24, 26 of the inner

liner 14 may each be provided with a protrusion 44, the protrusions 44 on the first and second portions 24, 26 forming a restriction in the opening at the top of the inner liner 14. During dispensing of a consumer good 16, the next consumer good 16 in the container 10 is received in the restriction and grasped between the protrusions 44 so that the consumer good 16 remains adjacent the aperture 18 for dispensing during a subsequent actuation of the dispensing mechanism 28.

[0077] Once all of the consumer goods 16 have been dispensed from the container 10, the dispensing mechanism 28 can be reset and the container 10 refilled with a further plurality of consumer goods 16. To reset the dispensing mechanism 28, a consumer can push the button 32 towards the housing 12 to deflect the flexible pawl 38 and disengage the flexible pawl 38 from the ratchet teeth 40. With the flexible pawl 38 disengaged from the ratchet teeth 40, the piston 30 can be returned to the bottom of the housing 12 by sliding the button 32 along the elongate slot 36 away from the aperture 18.

[0078] After resetting the dispensing mechanism 28, the container can be refilled by opening a moveable panel 46 connected to the piston 30 by a hinge. Specifically, the moveable panel 46 is pivotable about the hinge between a closed position in which the moveable panel 46 covers an opening extending through the piston 30 and an open position in which consumer goods 16 can be inserted into the housing 12 through the opening extending through the piston 30. To retain the moveable panel 46 in the closed position a locking mechanism 48 is provided on the moveable panel 46. The locking mechanism 48, the moveable panel 46 and the opening extending through the piston 30 are accessible via an opening 50 in the bottom of the housing 12.

Claims

1. A container (10) for consumer goods (16), the container (10) comprising:

a housing (12) for receiving a plurality of consumer goods (16), the housing (12) comprising an aperture (18) for dispensing consumer goods (16) from the housing (12);

a first sealing flap (20) comprising a first edge secured to the housing (12) adjacent a first side of the aperture (18) and a second edge extending across a first part of the aperture (18);

a second sealing flap (22) comprising a first edge secured to the housing (12) adjacent a second side of the aperture (18) and a second edge extending across a second part of the aperture (18), wherein the second edges of the first and second flaps (20, 22) are biased towards each other to form a seal across the aperture (18) for sealing the plurality of consumer goods (16) within the housing (12); and

- a dispensing mechanism (28) for dispensing the plurality of consumer goods (16) through the aperture (18) when activated by a consumer, wherein the dispensing mechanism (28) is configured so that actuation of the dispensing mechanism (28) advances one of the consumer goods (16) between the second edges of the first and second sealing flaps (20, 22) and through the aperture (18), and wherein the first and second sealing flaps (20, 22) are configured so that the second edges of the first and second sealing flaps (20, 22) are biased towards each other after each of the consumer goods (16) is dispensed so that the consumer goods (16) remaining in the housing (12) are re-sealed within the container (10).
2. A container (10) according to claim 1, wherein the aperture (18) is an elongate aperture having a ratio of length to width of at least 2 to 1.
 3. A container (10) according to claim 1 or 2, wherein the first and second sealing flaps (20, 22) are formed from a resilient material.
 4. A container (10) according to claim 3, wherein each of the first and second sealing flaps (20, 22) has a curved shape so that the second edges of the sealing flaps (20, 22) are biased together.
 5. A container (10) according to any preceding claim, further comprising an inner liner (14) for receiving the plurality of consumer goods (16) and contained within the housing (12), the inner liner (14) comprising an opening adjacent the aperture (18), wherein the first and second sealing flaps (20, 22) cooperate with the inner liner (14) to form a continuous seal between the sealing flaps (20, 22) and the edge of the inner liner opening.
 6. A container (10) according to claim 5, wherein the inner liner (14) comprises first and second portions (24, 26) biased towards each other, the inner liner opening extending between the first and second portions (24, 26), and wherein each of the first and second portions (24, 26) comprises a protrusion (44) spaced apart from the aperture (18) so that the protrusions (44) on the first and second portions (24, 26) form a restriction that facilitates step-wise dispensing of the consumer goods (16) through the aperture (18).
 7. A container (10) according to any preceding claim, wherein the dispensing mechanism (28) comprises a piston (30) arranged to slide within the housing (12) and towards the aperture (18), wherein the container (10) is configured to receive a plurality of consumer goods (16) between the aperture (18) and the piston (30).
 8. A container (10) according to claim 7, wherein the housing (12) comprises an elongate slot (36) extending along a first wall of the housing (12), wherein the dispensing mechanism (28) further comprises a button (32) positioned outside of the housing (12) and a shaft (34) extending through the elongate slot (36), and wherein the shaft (34) comprises a first end connected to the button (32) and a second end connected to the piston (30).
 9. A container (10) according to claim 8, further comprising:
 - a plurality of ratchet teeth (40) provided on an inner surface of the first wall and extending parallel to the elongate slot (36); and
 - a pawl (38) extending between the shaft (34) and the piston (30) to connect the second end of the shaft (34) to the piston (30), wherein the pawl (38) is biased towards the plurality of ratchet teeth (40), and wherein the pawl (38) engages successive ratchet teeth (40) as the piston (30) is advanced towards the aperture (18).
 10. A container (10) according to claim 9, wherein the pawl (38) is a flexible pawl and wherein the dispensing mechanism (28) is configured so that pushing the button (32) towards the first wall disengages the flexible pawl (38) from the ratchet teeth (40) to permit sliding movement of the piston (30) away from the aperture (18).
 11. A container (10) according to any preceding claim, further comprising a moveable panel (46) moveable between a closed position for sealing a plurality of consumer goods (16) within the container (10) and an open position in which one or more consumer goods (16) can be inserted into the container (10).
 12. A container (10) according to any preceding claim, further comprising a plurality of consumer goods (16) received within the container (10).
 13. A container (10) according to claim 12, wherein the plurality of consumer goods (16) is a plurality of elongate consumer goods each having a ratio of length to width of at least 2 to 1.
 14. A container (10) according to claim 13, wherein each of the consumer goods (16) comprises a first end and a second end, and wherein the plurality of elongate consumer goods (16) is arranged within the container (10) so that the length of each of the consumer goods (16) is substantially parallel to the aperture (18), wherein the first and second ends of each of the consumer goods (16) are advanced through

the aperture (18) substantially simultaneously each time one of the consumer goods (16) is dispensed from the container (10).

15. A container (10) according to claim 13 or 14, wherein the plurality of consumer goods (16) is a plurality of aerosol-generating articles.

Patentansprüche

1. Behälter (10) für Konsumgüter (16), wobei der Behälter (10) aufweist:

ein Gehäuse (12) zum Aufnehmen mehrerer Konsumgüter (16), wobei das Gehäuse (12) eine Aussparung (18) zum Abgeben von Konsumgütern (16) aus dem Gehäuse (12) aufweist; eine erste Dichtklappe (20), die eine erste Kante aufweist, die an dem Gehäuse (12) neben einer ersten Seite der Aussparung (18) befestigt ist, und eine zweite Kante, die sich über einen ersten Teil der Aussparung (18) hinweg erstreckt; eine zweite Dichtklappe (22), die eine erste Kante aufweist, die an dem Gehäuse (12) neben einer zweiten Seite der Aussparung (18) befestigt ist, und eine zweite Kante, die sich über einen zweiten Teil der Aussparung (18) hinweg erstreckt, wobei die zweiten Kanten der ersten und zweiten Klappen (20, 22) zueinander vorgespannt sind, um zum Abdichten der mehreren Konsumgüter (16) innerhalb des Gehäuses (12) eine Dichtung über die Aussparung (18) hinweg zu bilden; und einen Abgabemechanismus (28) zum Abgeben der mehreren Konsumgüter (16) durch die Aussparung (18), wenn dieser durch einen Verbraucher aktiviert wird, wobei der Abgabemechanismus (28) derart ausgelegt ist, dass das Betätigen des Abgabemechanismus (28) eines der Konsumgüter (16) zwischen den zweiten Kanten der ersten und zweiten Dichtklappen (20, 22) und durch die Aussparung (18) voranbewegt, und wobei die ersten und zweiten Dichtklappen (20, 22) derart ausgelegt sind, dass die zweiten Kanten der ersten und zweiten Dichtklappen (20, 22) zueinander vorgespannt sind, nachdem jedes der Konsumgüter (16) abgegeben ist, sodass die Konsumgüter (16), die in dem Gehäuse (12) verbleiben, innerhalb des Behälters (10) wieder abdichtet werden.

2. Behälter (10) nach Anspruch 1, wobei die Aussparung (18) eine längliche Aussparung mit einem Längen-Breiten-Verhältnis von mindestens 2 zu 1 ist.
3. Behälter (10) nach Anspruch 1 oder 2, wobei die ersten und zweiten Dichtklappen (20, 22) aus einem

elastischen Material gebildet sind.

4. Behälter (10) nach Anspruch 3, wobei jede der ersten und zweiten Dichtklappen (20, 22) eine geschwungene Form aufweist, sodass die zweiten Kanten der Dichtklappen (20, 22) zueinander vorgespannt sind.

5. Behälter (10) nach einem der vorstehenden Ansprüche, weiter aufweisend eine Innenauskleidung (14) zum Aufnehmen der mehreren Konsumgüter (16), die innerhalb des Gehäuses (12) enthalten ist, wobei die Innenauskleidung (14) eine Öffnung neben der Aussparung (18) aufweist, wobei die ersten und zweiten Dichtdeckel (20, 22) mit der Innenauskleidung (14) zusammenwirken, um eine kontinuierliche Dichtung zwischen den Dichtklappen (20, 22) und der Kante der Innenauskleidungsöffnung zu bilden.

6. Behälter (10) nach Anspruch 5, wobei die Innenauskleidung (14) erste und zweite Abschnitte (24, 26) aufweist, die zueinander vorgespannt sind, und sich die Innenauskleidungsöffnung zwischen den ersten und zweiten Abschnitten (24, 26) erstreckt, und wobei jeder der ersten und zweiten Abschnitte (24, 26) einen Vorsprung (44) aufweist, der von der Aussparung (18) beabstandet ist, sodass die Vorsprünge (44) an den ersten und zweiten Abschnitten (24, 26) eine Beschränkung bilden, die das schrittweise Abgeben der Konsumgüter (16) durch die Aussparung (18) erleichtert.

7. Behälter (10) nach einem der vorstehenden Ansprüche, wobei der Abgabemechanismus (28) einen Kolben (30) aufweist, der derart angeordnet ist, dass er innerhalb des Gehäuses (12) und in Richtung der Aussparung (18) gleitet, wobei der Behälter (10) ausgelegt ist, mehrere Konsumgüter (16) zwischen der Aussparung (18) und dem Kolben (30) aufzunehmen.

8. Behälter (10) nach Anspruch 7, wobei das Gehäuse (12) einen länglichen Schlitz (36) aufweist, der sich entlang einer ersten Wand des Gehäuses (12) erstreckt, wobei der Abgabemechanismus (28) weiter einen Knopf (32) aufweist, der außerhalb des Gehäuses (12) positioniert ist, und eine Welle (34), die sich durch den länglichen Schlitz (36) erstreckt, und wobei die Welle (34) ein erstes Ende aufweist, das mit dem Knopf (32) verbunden ist, und ein zweites Ende, das mit dem Kolben (30) verbunden ist.

9. Behälter (10) nach Anspruch 8, weiter aufweisend: mehrere Ratschenzähne (40), die an einer Innenfläche der ersten Wand vorgesehen sind und sich parallel zu dem länglichen Schlitz (36) erstrecken; und

eine Sperrklinke (38), die sich zwischen der Welle (34) und dem Kolben (30) erstreckt, um das zweite Ende der Welle (34) mit dem Kolben (30) zu verbinden, wobei die Sperrklinke (38) zu mehreren Ratschenzähnen (40) vorgespannt ist, und wobei die Sperrklinke (38) in nachfolgende Ratschenzähne (40) eingreift, während der Kolben (30) in Richtung der Aussparung (18) transportiert wird.

10. Behälter (10) nach Anspruch 9, wobei die Sperrklinke (38) eine flexible Sperrklinke ist, und wobei der Abgabemechanismus (28) derart ausgelegt ist, dass das Drücken des Knopfes (32) in Richtung der ersten Wand die flexible Sperrklinke (38) von den Ratschenzähnen (40) löst, um eine Gleitbewegung des Kolbens (30) von der Aussparung (18) weg zu erlauben.

11. Behälter (10) nach einem der vorstehenden Ansprüche, weiter aufweisend eine flexible Trennwand (46), die zwischen einer geschlossenen Stellung zum Abdichten mehrerer Konsumgüter (16) innerhalb des Behälters (10) und einer geöffneten Stellung, in der ein oder mehrere Konsumgüter (16) in den Behälter (10) eingesetzt werden können, beweglich ist.

12. Behälter (10) nach einem der vorstehenden Ansprüche, weiter aufweisend mehrere Konsumgüter (16), die innerhalb des Behälters (10) aufgenommen sind.

13. Behälter (10) nach Anspruch 12, wobei die mehreren Konsumgüter (16) mehrere längliche Konsumgüter sind, von denen jedes ein Längen-Breiten-Verhältnis von mindestens 2 zu 1 aufweist.

14. Behälter (10) nach Anspruch 13, wobei jedes der Konsumgüter (16) ein erstes Ende und ein zweites Ende aufweist, und wobei die mehreren länglichen Konsumgüter (16) innerhalb des Behälters (10) derart angeordnet sind, dass die Länge von jedem der Konsumgüter (16) im Wesentlichen parallel zur Aussparung (18) ist, wobei die ersten und zweiten Enden von jedem der Konsumgüter (16) im Wesentlichen gleichzeitig jedes Mal durch die Aussparung (18) transportiert werden, wenn eines der Konsumgüter (16) aus dem Behälter (10) abgegeben wird.

15. Behälter (10) nach Anspruch 13 oder 14, wobei die mehreren Konsumgüter (16) mehrere aerosolerzeugende Artikel sind.

Revendications

1. Récipient (10) destiné à des biens de consommation (16), le récipient (10) comprenant :

un logement (12) pour la réception d'une pluralité de biens de consommation (16), le logement (12) comprenant une ouverture (18) pour la distribution des biens de consommation (16) du logement (12) ;

un premier rabat d'étanchéité (20) comprenant un premier bord fixé au logement (12) adjacent à un premier côté de l'ouverture (18) et un deuxième bord s'étendant sur une première partie de l'ouverture (18) ;

un deuxième rabat d'étanchéité (22) comprenant un premier bord fixé au logement (12) adjacent à un deuxième côté de l'ouverture (18) et un deuxième bord s'étendant sur une deuxième partie de l'ouverture (18), où les deuxièmes bords des premier et deuxième rabats (20, 22) sont sollicités l'un avec l'autre pour former un joint sur l'ouverture (18) afin de sceller la pluralité de biens de consommation (16) à l'intérieur du logement (12) ; et

un mécanisme de distribution (28) pour distribuer la pluralité de biens de consommation (16) sur l'ouverture (18) lorsqu'il est activé par un consommateur, où le mécanisme de distribution (28) est configuré de sorte que l'actionnement du mécanisme de distribution (28) fait avancer l'un des biens de consommation (16) entre les deuxièmes bords des premier et deuxième rabats d'étanchéité (20, 22) et sur l'ouverture (18), et où les premier et deuxième rabats d'étanchéité (20, 22) sont configurés de sorte que les deuxièmes bords des premier et deuxième rabats d'étanchéité (20, 22) sont sollicités l'un avec l'autre après la distribution de chacun des biens de consommation (16), de sorte que les biens de consommation (16) restant dans le logement (12) soient à nouveau scellés à l'intérieur du récipient (10).

2. Récipient (10) selon la revendication 1, dans lequel l'ouverture (18) est une ouverture allongée ayant un rapport de longueur à largeur d'au moins 2 à 1.

3. Récipient (10) selon la revendication 1 ou 2, dans lequel les premier et deuxième rabats d'étanchéité (20, 22) sont formés à partir d'un matériau élastique.

4. Récipient (10) selon la revendication 3, dans lequel chacun des premier et deuxième rabats d'étanchéité (20, 22) a une forme incurvée de sorte que les deuxièmes bords des rabats d'étanchéité (20, 22) sont sollicités ensemble.

5. Récipient (10) selon l'une quelconque des revendications précédentes, comprenant en outre un revêtement intérieur (14) pour la réception de la pluralité de biens de consommation (16) et contenus à l'intérieur du logement (12), le revêtement intérieur (14)

comprenant une ouverture adjacente à l'ouverture (18), dans lequel les premier et deuxième rabats d'étanchéité (20, 22) coopèrent avec le revêtement intérieur (14) pour former un joint continu entre les rabats d'étanchéité (20, 22) et le bord de l'ouverture du revêtement intérieur.

6. Récipient (10) selon la revendication 5, dans lequel le revêtement intérieur (14) comprend les première et deuxième portions (24, 26) sollicitées l'une avec l'autre, l'ouverture du revêtement intérieur s'étendant entre les première et deuxième portions (24, 26), et dans lequel chacune des première et deuxième portions (24, 26) comprend une saillie (44) espacée de l'ouverture (18) de sorte que les saillies (44) sur les première et deuxième portions (24, 26) forment une restriction qui facilite la distribution par étapes des biens de consommation (16) sur l'ouverture (18).
7. Récipient (10) selon l'une quelconque des revendications précédentes, dans lequel le mécanisme de distribution (28) comprend un piston (30) agencé pour coulisser à l'intérieur du logement (12) et vers l'ouverture (18), dans lequel le récipient (10) est configuré pour recevoir une pluralité de biens de consommation (16) entre l'ouverture (18) et le piston (30).
8. Récipient (10) selon la revendication 7, dans lequel le logement (12) comprend une fente allongée (36) s'étendant le long d'une première paroi du logement (12), dans lequel le mécanisme de distribution (28) comprend en outre un bouton (32) positionné à l'extérieur du logement (12) et un arbre (34) s'étendant sur la fente allongée (36), et dans lequel l'arbre (34) comprend une première extrémité connectée au bouton (32) et une deuxième extrémité connectée au piston (30).
9. Récipient (10) selon la revendication 8, comprenant en outre :
 - une pluralité de dents d'encliquetage (40) fournies sur une surface intérieure de la première paroi et s'étendant parallèles à la fente allongée (36) ; et
 - un cliquet (38) s'étendant entre l'arbre (34) et le piston (30) pour connecter la deuxième extrémité de l'arbre (34) au piston (30), où le cliquet (38) est sollicité vers la pluralité de dents d'encliquetage (40), et où le cliquet (38) vient en prise avec des dents d'encliquetage (40) successives lorsque le piston (30) avance vers l'ouverture (18).
10. Récipient (10) selon la revendication 9, dans lequel le cliquet (38) est un cliquet flexible et dans lequel

le mécanisme de distribution (28) est configuré de sorte que le fait de pousser le bouton (32) vers la première paroi désengage le cliquet flexible (38) des dents d'encliquetage (40) afin de permettre le mouvement coulissant du piston (30) loin de l'ouverture (18).

11. Récipient (10) selon l'une quelconque revendication précédente, comprenant en outre un panneau mobile (46) pouvant se déplacer entre une position fermée pour sceller une pluralité de biens de consommation (16) à l'intérieur du récipient (10) et une position ouverte dans laquelle un ou plusieurs biens de consommation (16) peuvent être insérées dans le récipient (10).
12. Récipient (10) selon une quelconque revendication précédente, comprenant en outre une pluralité des biens de consommation (16) reçus à l'intérieur du récipient (10).
13. Récipient (10) selon la revendication 12, dans lequel la pluralité de biens de consommation (16) est une pluralité de biens de consommation allongés chacun ayant un rapport de longueur à largeur d'au moins 2 à 1.
14. Récipient (10) selon la revendication 13, dans lequel chacun des biens de consommation (16) comprend une première extrémité et une deuxième extrémité, et dans lequel la pluralité de biens de consommation allongés (16) est agencée à l'intérieur du récipient (10) de sorte que la longueur de chacun des biens de consommation (16) est sensiblement parallèle à l'ouverture (18), de sorte que les première et deuxième extrémités de chacun des biens de consommation (16) avancent sur l'ouverture (18), de manière sensiblement simultanée chaque fois qu'un des biens de consommation (16) soit distribuée du récipient (10).
15. Récipient (10) selon les revendications 13 ou 14, dans lequel la pluralité de biens de consommation (16) est une pluralité d'articles de génération d'aérosol.

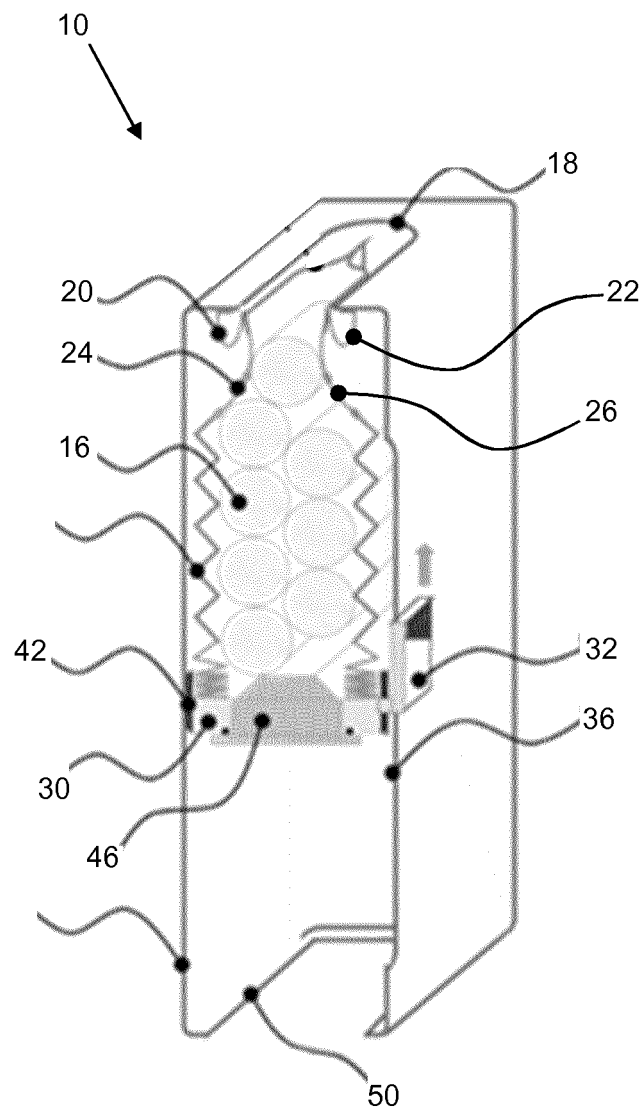


Figure 1

Figure 2

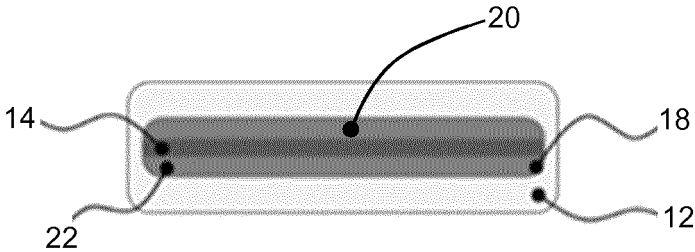


Figure 3

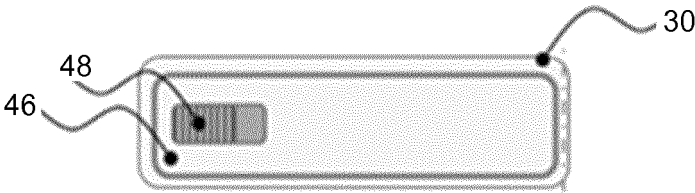
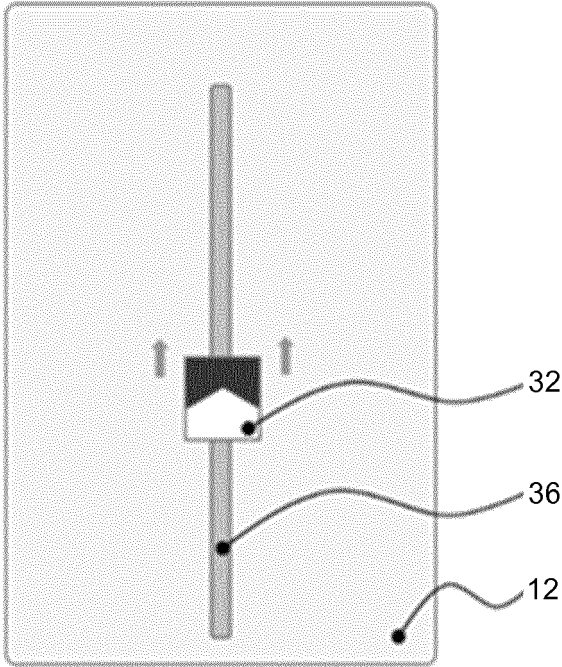


Figure 4

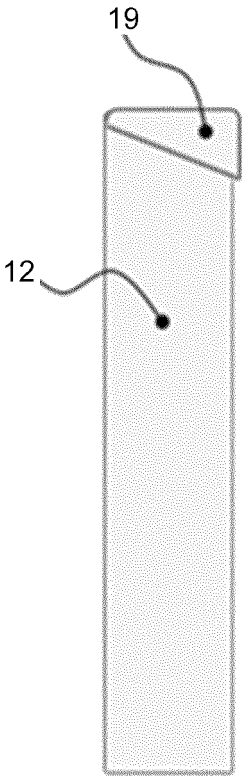


Figure 5

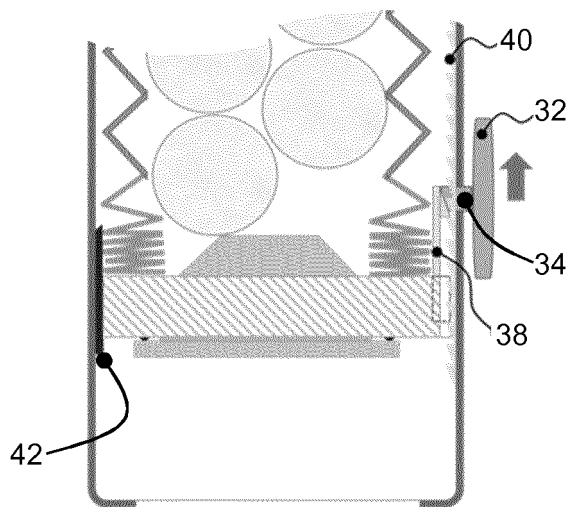


Figure 6

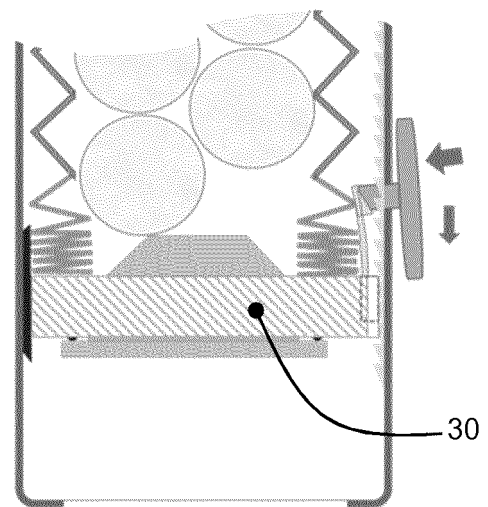


Figure 7

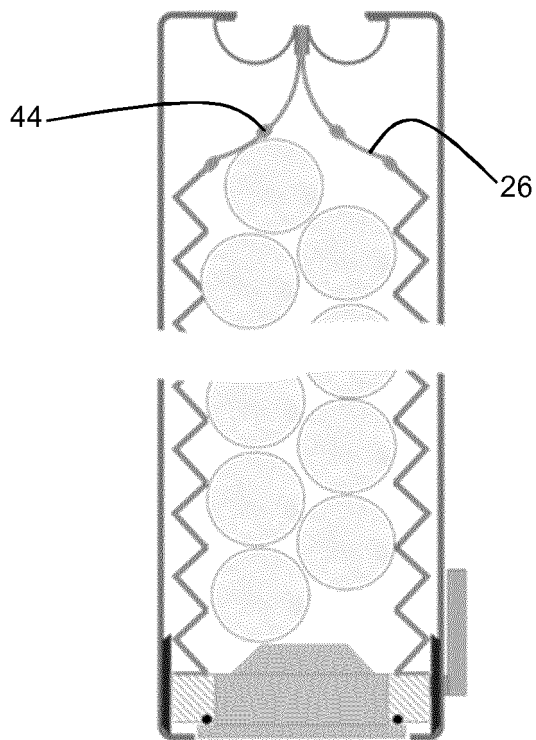


Figure 8

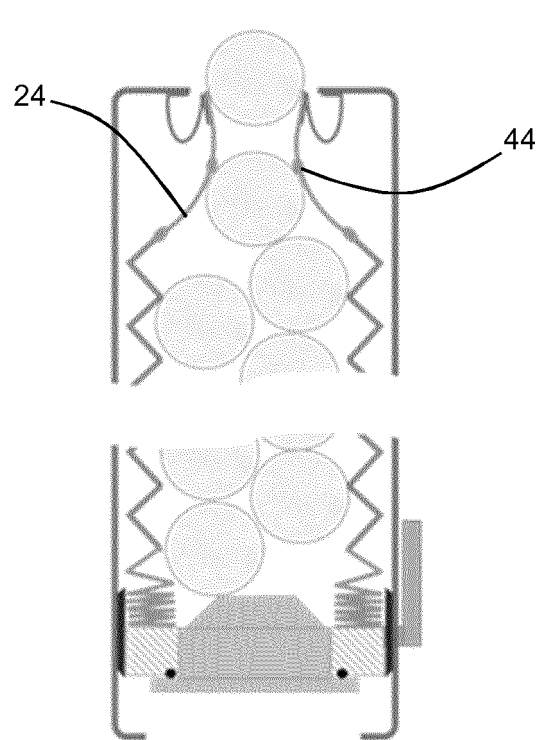


Figure 9

REFERENCES CITED IN THE DESCRIPTION

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