



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
31.07.2024 Bulletin 2024/31

(51) International Patent Classification (IPC):
A24F 40/40 (2020.01)

(21) Application number: **23153768.9**

(52) Cooperative Patent Classification (CPC):
A24F 40/40

(22) Date of filing: **27.01.2023**

(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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

(71) Applicant: **JT International SA**
1202 Geneva (CH)

(72) Inventor: **LEHOCKY, Juraj**
83102 Bratislava (SK)

(74) Representative: **Appleyard Lees IP LLP**
15 Clare Road
Halifax HX1 2HY (GB)

(54) **AEROSOL GENERATION DEVICE WITH PRESSING MECHANISM**

(57) There is disclosed an aerosol generation device (100) comprising: a main device body (102) comprising a consumable article receiving region (104) and a pressing mechanism (106); and a mouthpiece (112), wherein the mouthpiece (112) is moveable in a linear manner relative to the main device body (102) in a first direction (114) to transition from an open configuration to a closed configuration, and in a second direction (116) to transition from the closed configuration to the open configuration, the first and second directions (114, 116) being parallel, or close to parallel, to a longitudinal axis (118) of the main device body (102), wherein: the pressing mechanism (106) comprises a rotatable member (304) and a pressing member (302); the pressing member (302) is configured to apply a pressing force in the first direction (114) to a consumable article (108) received in the consumable article receiving region (104), when the mouthpiece (112) is in the closed configuration; the pressing mechanism (106) is configured such that the pressing member (302) is actionable to apply the pressing force to the received consumable article (108), by rotation of the rotatable member (304) caused by the linear movement of the mouthpiece (112) in the first direction (114) to transition from the open configuration to the closed configuration.

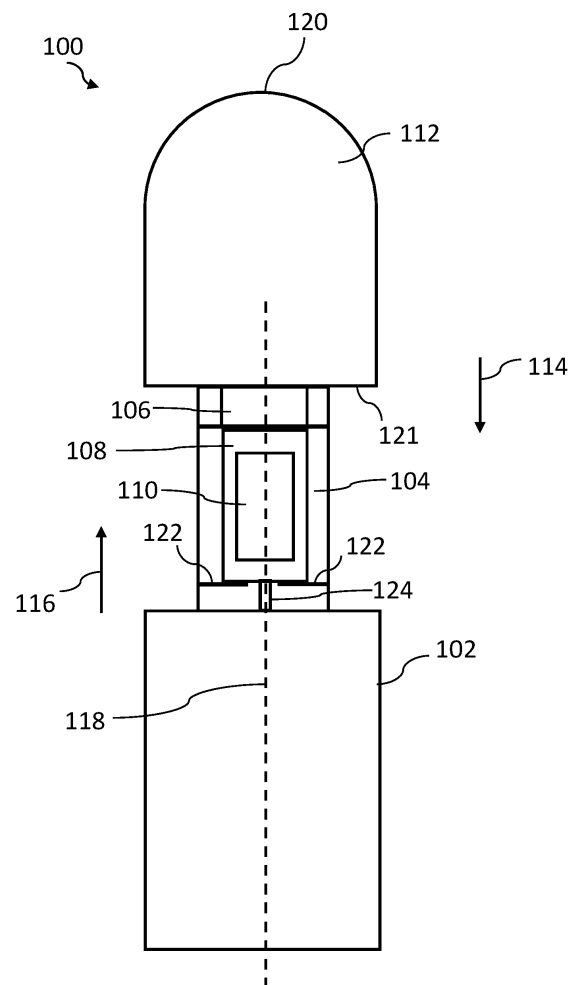


Figure 1

Description

[0001] The present disclosure relates to an aerosol generation device, a holding system for an aerosol generation device, and a method of manufacturing an aerosol generation device.

Background

[0002] Various devices and systems are available that heat aerosol precursor material to release aerosol/vapour for inhalation. For example, these devices and systems do not rely on burning the aerosol precursor material. In some examples, e-cigarettes vaporize an e-liquid from a consumable article to an inhalable vapour/aerosol. In some other examples, there is a device which heats a solid aerosol precursor material to generate an aerosol.

[0003] In some examples, there may be provided a device comprising a receiving region for receiving a consumable article. For example, the contents of the consumable article may be heated in order to release the aerosol/vapour.

[0004] However, it is challenging to securely hold the consumable article in the consumable article receiving region. For example, the consumable article may be held such that there is reduced thermal and/or electrical contact between the consumable article and another component of the aerosol generation device.

[0005] For example, there may not be a seal between components.

[0006] It is an object of the present invention to overcome at least some of the above-mentioned problems.

Summary

[0007] According to a first aspect of the present disclosure, there is provided an aerosol generation device comprising: a main device body comprising a consumable article receiving region and a pressing mechanism; and a mouthpiece, wherein the mouthpiece is moveable in a linear manner relative to the main device body in a first direction to transition from an open configuration to a closed configuration, and in a second direction to transition from the closed configuration to the open configuration, the first and second directions being parallel, or close to parallel, to a longitudinal axis of the main device body, wherein: the pressing mechanism comprises a rotatable member and a pressing member; the pressing member is configured to apply a pressing force in the first direction to a consumable article received in the consumable article receiving region, when the mouthpiece is in the closed configuration; the pressing mechanism is configured such that the pressing member is actionable to apply the pressing force to the received consumable article, by rotation of the rotatable member caused by the linear movement of the mouthpiece in the first direction to transition from the open configuration to the closed configuration.

[0008] Advantageously, the pressing mechanism functions based on linear movements of the mouthpiece. This provides that the linear movement of the mouthpiece that would take place during normal use of such a device is leveraged to operate another mechanism for providing a pressing force to the consumable article. Advantageously, the pressing mechanism converts the linear motion of the mouthpiece into a rotational motion of the rotatable member. This provides for a space efficient mechanism within the device, which may be a handheld device. Furthermore, advantageously, the described device removes the need to provide a separately operated mechanism (for example, which a user would need to operate separately to merely moving the mouthpiece between configurations).

[0009] Optionally, the pressing mechanism is configured: such that the pressing member is actionable to reduce the pressing force, by rotation of the rotatable member caused by the linear movement of the mouthpiece in the second direction to transition from the closed configuration to the open configuration; and to have ceased application of the pressing force when the mouthpiece is in the open configuration.

[0010] Advantageously, the pressing mechanism is operable in two directions. Accordingly, when there is the reverse transition (from the closed configuration to the open configuration), the pressing mechanism operates to relieve the pressing force. Accordingly, no steps additional to moving the mouthpiece are needed to release the pressing mechanism.

[0011] Optionally, when the mouthpiece is in the open configuration, the consumable article receiving region is exposed such that the consumable article is removable from, and insertable into, the consumable article receiving region.

[0012] Advantageously, the movement of the mouthpiece allows access for the consumable article to be inserted and removed. When combined with the functioning of the pressing mechanism, no pressing force is being applied in the open configuration so that the consumable article can readily be inserted or removed. This provides easy/efficient use of the device.

[0013] Optionally, the aerosol generation device is configured to securely hold the consumable article within the consumable article receiving region via the application of the pressing force by the pressing member in the closed configuration.

[0014] Advantageously, securely holding the consumable article allows efficient use of the consumable article. For example, undesired movement of the consumable article within the device is avoided. The consumable article can be held in an expected position for being supplied heat and the like.

[0015] Optionally, the pressing mechanism is configured to press a part of the consumable article against the main device body, via the application of the pressing force by the pressing member when in the closed configuration, such that electrical and/or thermal contact is established.

lished between the consumable article and the main device body.

[0016] Advantageously, the pressing mechanism can facilitate a functional connection between the consumable article and the device. For example, efficient thermal contact may allow for efficient heat transfer to the consumable article for generation of aerosol. For example, efficient electrical contact may allow for the intended delivery of electrical power to the consumable article, where relevant. By applying pressing force to establish such thermal/electrical contact, relatively more reliable thermal/electrical contact may be established so the device can function reliably.

[0017] Optionally, the rotatable member is configured to rotate about a rotation axis, the rotatable member comprising: an elongate rotatable portion arranged such that a longitudinal axis of the elongate rotatable portion coincides with the rotation axis; and a pivotable portion which extends away from the rotation axis and is configured to pivot about the rotation axis.

[0018] Advantageously, there is provided a structure in which a pivotable portion extends away from the rotation axis. The pivotable portion can be connected to other component in order to transfer motion to those other components.

[0019] Optionally, the pressing member is connected to the pivotable portion such that the pressing member moves linearly in the first direction during a transition from the open configuration to the closed configuration.

[0020] Advantageously, motion is transferred to the pressing member in a manner that the pressing member can apply the pressing force in the first direction. Advantageously, the pressing member does not simply pivot in correspondence with the pivotable portion. Instead, the pressing member moves in the first direction when the mouthpiece moves towards the closed configuration. Accordingly, the pressing member moves in the first direction in a linear manner. This advantageously provides the pressing force in an optimal direction, for example, to press down on the consumable article (e.g., against a component underneath the consumable article) so as to hold the consumable article in place.

[0021] Optionally, the pressing mechanism comprises a lever member fixed to the rotatable member, and moveably connected to the mouthpiece at a pivotable end portion of the lever member, wherein the pivotable end portion is configured to pivot about the rotation axis to rotate the elongate rotatable portion to apply or to remove the pressing force.

[0022] Advantageously, there is provided a lever member which can effectively be manipulated in order to cause rotation of the elongate rotatable member. The connection to the mouthpiece at the pivotable end portion provides for the movement of the mouthpiece to be transferred to the pivotable end portion, and therefore to the elongate rotatable member.

[0023] Optionally, the mouthpiece comprises a guiding rail, and the pivotable end portion is movably connected

to the guiding rail; and the pivotable end portion is configured to move along the guiding rail during a transition between the open configuration and the closed configuration such that the pivotable end portion pivots about the rotation axis.

[0024] Advantageously, there is provided a structure fixed to the mouthpiece which guides the pivotable end portion to pivot in response to the linear motion of the mouthpiece. For example, the guiding rail may be shaped such that the open configuration corresponds to the contact between the guiding rail and the pivotable end portion at a position on the guiding rail corresponding to a first pivot position. The guiding rail may be shaped such that the closed configuration corresponds to the contact between the guiding rail and the pivotable end portion at a position on the guiding rail corresponding to a second pivot position different to the first pivot position. For example, the contact point moves as the pivotable end portion moves along the guiding rail when the mouthpiece moves in the first and second directions.

[0025] Optionally, the pressing member is movably connected to an alignment structure configured to control the motion of the pressing member such that the pressing member moves in a direction parallel to the longitudinal axis of the main device body, towards and away from the main device body.

[0026] Advantageously, the alignment structure provides a way to ensure linear movement of the pressing member in the first and second directions by controlling the motion of the pressing member. Linear movement of the pressing member may optimally apply the pressing force in the desired direction.

[0027] Optionally, a transition of the mouthpiece from the open configuration to the closed configuration urges the pressing mechanism to transition from a release configuration to a pressing configuration; and a transition of the mouthpiece from the closed configuration to the open configuration urges the pressing mechanism to transition from the pressing configuration to the release configuration.

[0028] Advantageously, the transition of the mouthpiece that take place during use, correspond to transitions of the pressing mechanism which complement the configuration of the mouthpiece. For example, there is a correspondence between the open configuration and the release configuration so that when the device is opened up, the consumable article can be inserted or removed. Conversely, for example, there is a correspondence between the closed configuration and the pressing configuration so that when the device is closed, the consumable article has the pressing force applied to it to hold it in place.

[0029] Optionally, the pressing mechanism is configured to form a fluid seal positioned between an aerosol outlet of the consumable article and an aerosol passage-way of the aerosol generation device, via the application of the pressing force by the pressing member when the mouthpiece is in the closed configuration, such that aer-

osol is inhibited from escaping an aerosol flow path between the aerosol outlet and the aerosol passageway.

[0030] Advantageously, a fluid seal may be formed such that the aerosol can be transferred from the consumable article in the desired manner without escaping where it is not intended. Such a seal may provide for reduced waste in terms of aerosol, and may aide in avoiding damage to components, or components becoming unclean due to the presence of aerosol within the device where it is not intended.

[0031] Optionally, the mouthpiece comprises a guiding structure configured to guide the pressing mechanism towards applying the pressing force in the first direction during a transition from the open configuration to the closed configuration, and to guide the pressing mechanism to remove the pressing force during a transition from the closed configuration to the open configuration.

[0032] Advantageously, the guiding structure helps to transfer the linear motion of the mouthpiece to the pressing mechanism in a manner such that the pressing force is either applied or removed depending on the configuration of the mouthpiece.

[0033] According to a second aspect of the present invention, there is provided a holding system configured to be deployed in an aerosol generation device to releasably hold in position a consumable article within the aerosol generation device, the holding system comprising: a pressing mechanism comprising a rotatable member and a pressing member, the pressing member configured to apply, in use, a pressing force to the consumable article in a first direction relative to a main device body of the aerosol generation device, the first direction being parallel, or close to parallel, to a longitudinal axis of the main device body; and a guiding structure fixed to a mouthpiece of the aerosol generation device, wherein: in use, the pressing mechanism is movably connected to the guiding structure such that a transition of the mouthpiece in the first direction in a linear manner from an open configuration to a closed configuration causes rotation of the rotatable member to thereby action the pressing member such that a transition of the pressing mechanism from a release configuration in which the pressing force is not applied to a pressing configuration in which the pressing force is applied occurs.

[0034] Advantageously, the holding system provides the advantages discussed above in relation to the aerosol generation device with the pressing mechanism. The holding system may be deployed on an aerosol generation device so as to realise the advantages.

[0035] According to a third aspect of the present invention, there is provided a method of manufacturing an aerosol generation device, the aerosol generation device comprising: a main device body comprising a consumable article receiving region and a pressing mechanism; and a mouthpiece, wherein the mouthpiece is moveable in a linear manner relative to the main device body in a first direction to transition from an open configuration to a closed configuration, and in a second direction to tran-

sition from the closed configuration to the open configuration, the first and second directions being parallel, or close to parallel, to a longitudinal axis of the main device body, wherein: the pressing mechanism comprises a rotatable member and a pressing member; wherein the method comprises: configuring the pressing member to apply a pressing force in the first direction to a consumable article received in the consumable article receiving region, when the mouthpiece is in the closed configuration; and configuring the pressing mechanism such that the pressing member is actionable to apply the pressing force to the received consumable article, by rotation of the rotatable member caused by the linear movement of the mouthpiece in the first direction to transition from the open configuration to the closed configuration.

[0036] Advantageously, manufacturing the aerosol generation device according to said method provides a device with the above-described advantages.

[0037] According to a fourth aspect of the present invention, there is provided a method of use of the device according to the first aspect, the the method comprising: linearly moving the mouthpiece in the first direction to transition from the open configuration to the closed configuration to cause rotation of the rotatable member to thereby action the pressing member to apply the pressing force in the first direction to a consumable article received in the consumable article receiving region.

Brief Description of the Drawings

[0038] Examples of the present disclosure will now be described with reference to the drawings, in which:

Figure 1 is a schematic front on view of an aerosol generation device in a first configuration, according to examples;

Figure 2 is a schematic front on view of the aerosol generation device in a second configuration, according to examples;

Figure 3 is a schematic side view of a pressing mechanism in a first configuration, according to a first set of examples;

Figure 4 is a schematic side view of the pressing mechanism in a second configuration, according to the first set of examples;

Figure 5 is a schematic plan view of the pressing mechanism, according to the first set of examples;

Figure 6 is a schematic side internal view of a mouthpiece, according to examples;

Figure 7 is a schematic perspective internal view of the mouthpiece, according to examples;

Figure 8 is a schematic cross section view of a pressing member or a guiding rail connected respectively to a first slidable connector or a second slidable connector, according to examples;

Figure 9 is a schematic plan view of the pressing mechanism, according to a second set of examples;

Figure 10 is a schematic side view of the pressing

mechanism, according to the second set of examples;

Figure 11 is a schematic perspective view of a consumable article and a pressing member, according to the second set of examples;

Figure 12 is a schematic cross-sectional view of an aerosol passageway and a seal layer, according to examples;

Figure 13 is a schematic side view of the device 100, according to examples;

Figure 14 is a schematic perspective view of a receiving region structure, according to examples;

Figure 15 is a schematic plan view of the pressing mechanism, according to a third set of examples; and

Figure 16 is a schematic side view of a tube with two different components attached thereto, according to examples.

Detailed Description

[0039] As used herein, the term "aerosol precursor material", "vapour precursor material" or "vaporizable material" may refer to a smokable material which may for example comprise nicotine or tobacco and a vaporising agent. The aerosol precursor material is configured to release an aerosol when heated. Tobacco may take the form of various materials such as shredded tobacco, granulated tobacco, tobacco leaf and/or reconstituted tobacco. Nicotine may be in the form of nicotine salts. Suitable aerosol precursor materials include: a polyol such as sorbitol, glycerol, and glycols like propylene glycol or triethylene glycol; a non-polyol such as monohydric alcohols, acids such as lactic acid, glycerol derivatives, esters such as triacetin, triethylene glycol diacetate, triethyl citrate, glycerin or vegetable glycerin. In some examples, the aerosol precursor material is substantially a liquid that holds or comprises one or more solid particles, such as tobacco.

[0040] As used herein, the term "aerosol generation device" is synonymous with "aerosol provision device" or "device" may include a device configured to heat an aerosol precursor material and deliver an aerosol to a user. The device may be portable. "Portable" may refer to the device being for use when held by a user. The device may be adapted to generate a variable amount of aerosol, which can be controlled by a user input.

[0041] As used herein, the term "aerosol" may include a suspension of vaporizable material as one or more of: solid particles; liquid droplets; gas. Said suspension may be in a gas including air. Aerosol herein may generally refer to/include a vapour. Aerosol may include one or more components of the vaporizable material.

[0042] Figure 1 is a schematic front on view of an aerosol generation device 100, according to examples. The aerosol generation device 100 (hereafter "device 100") comprises a main device body 102 (hereafter body 102). The body 102 comprises a consumable article receiving

region 104 and a pressing mechanism 106. The consumable article receiving region 104 (hereafter, receiving region 104) is a region of the device 100 configured to receive a consumable article 108 comprising precursor material 110. For example, the receiving region 104 is a region of the device 100 where, when the consumable article 108 is received therein, heat may be supplied to the consumable article 108 in a manner so that aerosol is generated.

[0043] The device 100 comprises a mouthpiece 112. The mouthpiece 112 is moveable in a linear manner relative to the body 102 in a first direction 114 to transition from an open configuration to a closed configuration. In the examples of Figure 1, the open configuration of the mouthpiece 112 is shown. The mouthpiece 112 is also moveable in a linear manner in a second direction 116 from the closed configuration to the open configuration. In Figure 1, there is shown a longitudinal axis 118 of the body 102. The longitudinal axis 118 of the body 102 is an axis aligned with the longest spatial dimension of the body 102 (in other words, the length of the body 102). For example, the longitudinal axis 118 extends between an end of the body 102 closest to the mouthpiece 112 and an end of the body 102 opposite to the mouthpiece 112. The first and second directions 114, 116 are parallel to, or close to parallel to, the longitudinal axis 118 of the body 102. In other words, the mouthpiece 112 moves in a manner parallel to (or close to parallel to) the longitudinal axis 118. The mouthpiece 112 move linearly along the longitudinal axis 118 of the body 102, for example.

[0044] For example, the mouthpiece 112 may be movably connected to the body 102 in a manner such that the movement of the mouthpiece 112 is restricted to linear movement in the first and second directions 114, 116. It will be appreciated that there are various ways of providing such a moveable connection, such as a sliding mechanism, a mechanism comprising bearings, a mechanism where each component inserts into another, and the like.

[0045] Figure 2 is a schematic front on view of the device 100 in the closed configuration, according to examples. In the closed configuration, the receiving region 104 may no longer be exposed. In other words, the mouthpiece 112 may encapsulate the receiving region 104 via the mouthpiece 112 and the body 102 when in the closed configuration.

[0046] Regions of the device 100, or the components of the device 100 may be referred to as proximal or distal herein. When in use, a user may draw aerosol into the user's mouth from a proximal end 120 of the mouthpiece 112. The proximal end 120 is the part of the mouthpiece 112 most proximal to the user's mouth. Similarly, a region of a component may be referred to as distal if it is distal from the user's mouth during use. For example, a distal end of a component is opposite to the proximal end of said component.

[0047] In the closed configuration, a distal end 121 of the mouthpiece 112 may contact a part of the body 102

more distal than the receiving region 104, for example.

[0048] As described, the body 102 comprises a pressing mechanism 106. For example, the pressing mechanism 106 comprises a rotatable member and a pressing member (as described in further detail below). The pressing member is configured to apply a pressing force in the first direction 114 to the consumable article 108 received in the receiving region 104, when the mouthpiece 112 is in the closed configuration. As described using specific examples below, the pressing mechanism 106 is configured such that the pressing member is actionable to apply the pressing force to the received consumable article 108, by rotation of the rotatable member caused by the linear movement of the mouthpiece 112 in the first direction 114 to transition from the open configuration to the closed configuration.

[0049] In other words, when the mouthpiece 112 is moved linearly along the longitudinal axis 118 towards the closed configuration, this linear movement causes the rotatable member to rotate. The rotation of the rotatable member causes the pressing member to apply the pressing force in the first direction 114.

[0050] Advantageously, the pressing mechanism 106 functions based on linear movements of the mouthpiece 112. This provides that the linear movement of the mouthpiece 112 that would take place during normal use of such a device is leveraged to operate another mechanism for providing a pressing force to the consumable article 108. Advantageously, the pressing mechanism 106 converts the linear motion of the mouthpiece 112 into a rotational motion of the rotatable member 304. This provides for a space efficient mechanism within the device, which may be a handheld device. Furthermore, advantageously, the described device removes the need to provide a separately operated mechanism (for example, which a user would need to operate separately to merely moving the mouthpiece between configurations).

[0051] In some examples, the pressing mechanism 106 is configured such that the pressing member is actionable to reduce the pressing force, by rotation of the rotatable member caused by the linear movement of the mouthpiece 112 in the second direction 116 to transition from the closed configuration to the open configuration. In some examples, the pressing mechanism 106 is configured to have ceased application of the pressing force when the mouthpiece 112 is in the open configuration.

[0052] Figure 3 is a first schematic side view of components of the pressing mechanism 106, according to examples. In these examples, there is a pressing member 302 and a rotatable member 304. When the rotatable member 304 rotates, it causes the pressing member 302 to move in the first direction 114 or the second direction 116 depending on the direction of rotation. In the examples of Figure 3, when the mouthpiece 112 moves in the first direction 114, the rotatable member 304 rotates as shown by arrow 306. The rotation as shown by arrow 306 causes the pressing member 302 to move in the first direction 114 as well.

[0053] When the mouthpiece 112 has moved in the first direction enough to achieve the closed configuration, the pressing member 302 has moved far enough in the first direction 114 to be applying the pressing force to the consumable article 108. For example, the pressing member 302 contacts and presses down against the consumable article 108.

[0054] Figure 4 is a second schematic side view of components of the pressing mechanism 106, according to examples. When the mouthpiece 112 moves in the second direction 116, the rotatable member 304 rotates as indicated by arrow 308. The rotation as shown by arrow 308 causes the pressing member 302 to move in the second direction 116 as well. It will be appreciated that the rotatable member 304 is functionally connected to the pressing member 302 (as described in further detail below), such that rotation of the rotatable member 304 corresponds to movement in the first and second directions 114, 116 of the pressing member 302.

[0055] For example, the movement of the pressing member 302 in the second direction 116 reduces the pressing force. In use, the movement of the pressing member 302 in the second direction 116 is movement away from the consumable article 108. In the examples of Figure 4, the mouthpiece 112 has moved far enough in the second direction 116 so as to achieve the open configuration. In this case, the pressing member 302 has moved far enough in the second direction 116 so as to have ceased application of the pressing force. For example, in the open configuration in use, the pressing member 302 no longer contacts the consumable article 108.

[0056] In this manner, when the pressing member 302 is caused to move in the first direction 114, which in use is towards the consumable article 108, the pressing force may be applied by the pressing member 302 to the consumable article 108.

[0057] Advantageously, the pressing mechanism 106 is operable in two directions. Accordingly, when there is the reverse transition (from the closed configuration to the open configuration), the pressing mechanism 106 operates to relieve the pressing force. Accordingly, no steps additional to moving the mouthpiece 112 are needed to release the pressing mechanism 106.

[0058] In some examples, when the mouthpiece 112 is in the open configuration, the receiving region 104 is exposed such that the consumable article 108 is removable from, and insertable into, the receiving region 104. Figure 1 shows examples in which the mouthpiece 112 is in the open configuration. The receiving region 104 is exposed to a degree (by virtue of the mouthpiece 112 having moved in the second direction 116 away from the body 102) such that the consumable article 108 can be inserted or removed.

[0059] For example, the purpose of the open configuration is to allow access to the receiving region 104. The mouthpiece 112 can be moved linearly along the longitudinal axis 118 to allow/close off access to the receiving

region 104.

[0060] Advantageously, the movement of the mouth-piece 112 allows access for the consumable article 108 to be inserted and removed. When combined with the functioning of the pressing mechanism 106, no pressing force is being applied in the open configuration so that the consumable article 108 can readily be inserted or removed. This provides easy/efficient use of the device 100.

[0061] There may be various reasons for applying a pressing force to the consumable article 108 received in the receiving region 104. In some examples, the device 100 is configured to securely hold the consumable article 108 within the receiving region 104 via the application of the pressing force by the pressing member 302 in the closed configuration. For example, in the examples of Figure 1, the body 102 comprises a contact portion 122. The contact portion 122 forms a boundary to the receiving region 104. The contact portion 122 is on the opposite side of the received consumable article 108 than the pressing mechanism. The contact portion 122 comprises one or more surfaces against which the distal end of the consumable article 108 rests (or is pressed). When the pressing mechanism 106 applies the pressing force in the second direction 116 to the consumable article 108, the consumable article 108 is pressed between the pressing member 302 and the contact portion 122.

[0062] In some examples, the contact portion 122 is simply a single flat surface. In some examples, the contact portion 122 consists of more than one surface. As an example, in Figure 1, the contact portion 122 consists of two surfaces which contact the distal end of the consumable article 108.

[0063] For example, the consumable article 108 is securely held within the receiving region 104 by being pressed between the pressing member 302 and the contact portion 122.

[0064] Advantageously, securely holding the consumable article 108 allows efficient use of the consumable article 108. For example, undesired movement of the consumable article 108 within the device is avoided. The consumable article 108 can be held in an expected position for being supplied heat and the like.

[0065] Additionally, or alternatively, to using the pressing force to hold the consumable article 108 in position, the pressing force may be utilised to establish thermal and/or electrical contact, in some examples. In some examples, the pressing mechanism 106 is configured to press a part of the consumable article 108 against the body 102, via the application of the pressing force by the pressing member 302 when in the closed configuration, such that electrical and/or thermal contact is established between the consumable article 108 and the body 102.

[0066] For example, the body 102 may contain an electrical power source such as a battery. For example, it may be desired that electrical power is delivered to the consumable article 108 via an electrical contact 124 comprised as part of the body 102. For example, the con-

sumable article 108 may require a supply of electrical power to perform a function such as to heat the precursor material 110. In other examples, the contact 124 may be a thermal contact 124. For example, the thermal contact 124 may be a heater. For example, the pressing mechanism may facilitate establishment of thermal contact between the heater 124 and the consumable article 108. For example, the heater 124 delivers heat to the consumable article 108 for heating the precursor material 110.

[0067] In the examples of Figure 1, the electrical/thermal contact 124 extends further in the second direction 116 than the contact portion 122 against which the consumable article 108 rests. In this manner, as the consumable article is pressed down (in the first direction 114) towards the contact portion 122, contact with the electrical/thermal contact 124 is established. For example, the electrical/thermal contact 124 is arranged at a position so that it contacts the consumable article 108. In some examples, there is a gap (or the like) in the contact portion 122 through which the electrical/thermal contact 124 can extend towards the consumable article.

[0068] In some examples, the contact portion 122 is omitted, and the consumable article 108 is simply pressed against the electrical/thermal contact 124.

[0069] Advantageously, the pressing mechanism 106 can facilitate a functional connection between the consumable article 108 and the device 100. For example, efficient thermal contact may allow for efficient heat transfer to the consumable article for generation of aerosol. For example, efficient electrical contact may allow for the intended delivery of electrical power to the consumable article, where relevant. By applying pressing force to establish such thermal/electrical contact, relatively more reliable thermal/electrical contact may be established so the device can function reliably.

[0070] More specific examples of the pressing mechanism 106 will now be described. In some examples, the rotatable member 304 is configured to rotate about a rotation axis. Figure 5 is a schematic plan view of the rotatable member 304 and the pressing member 302, according to examples. The rotatable member 304 comprises an elongate rotatable portion 502 arranged such that a longitudinal axis of the elongate rotatable portion 502 coincides with the rotation axis 504. In these examples, the rotatable member 304 comprises a pivotable portion which extends away from the rotation axis 504. In these examples, there are two pivotable portions 506. Any number of pivotable portions 506 may be provided. When the elongate rotatable portion 502 rotates about the rotation axis 504, the pivotable portions 506 pivot about the rotation axis 504 in a corresponding direction.

[0071] For example, the elongate rotatable portion 502 is connected to the rest of the body 102 in a manner so that it can rotate about the rotation axis 504. For example, the elongate pivotable portion 502 may be mounted to the rest of the body 102 via a rigid frame 501 which allows rotation about the rotation axis 504. For example, the

frame 501 may be a structure which positions the rotatable member 304 in the desired position with respect to the receiving region 104. For example, the frame 501 may comprise one or more through holes through which the elongate rotatable portion 502 passes, and the elongate rotatable portion 502 can rotate within said through holes.

[0072] Figure 13 is a schematic side view of the device 100, according to examples. In these examples there is a receiving region structure 1302 which defines a part of the boundary of the receiving region 104. The receiving region structure 1302 effectively provides a support structure in which the consumable article 108 can sit. The receiving region structure 1302 is open on a side from which the consumable article 108 may be inserted. There is also depicted the rigid frame 501, which is rigidly connected to the remainder of the body 102. Figure 14 is a schematic perspective view of the receiving region structure 1302. The receiving region structure 1302 comprises one or more openings 1402. In some examples, the rigid frame 501 and the rotatable member 304 may be provided on opposite sides of the receiving region structure 1302. For example, the one or more openings 1402 are configured to allow for parts of the rigid frame 501 which connect to the rotatable member 304 to pass through from the rigid frame side of the receiving region structure 1302 over to the rotatable member side of the receiving region structure 1302.

[0073] In these examples, the pressing member 302 is connected to the pivotable portions 506 such that the pressing member 302 moves in the first direction 114 during a transition from the open configuration to the closed configuration. During this transition, the elongate rotatable portion 502 is caused to rotate about the rotation axis 504. This causes the pivotable portions 506 to correspondingly pivot about the rotation axis 504. The pivotable portions 506 are attached to the pressing member 302, and their pivoting causes the pressing member 302 to also move in the first direction. In Figure 5, the first direction 114 points into the page and is indicated by a cross in a circle representing the tail of an arrow. In Figure 5, the second direction 116 points out of the page and is indicated by a dot in a circle representing the head of an arrow.

[0074] It should be noted that the pressing member 302 moves in the first and second directions 114, 116. There is substantially (within acceptable tolerances) no component of the motion of the pressing member 302 corresponding to pivoting about the rotation axis 504. In other words, the motion of the pressing member 302 is linear and parallel to the longitudinal axis 118 of the device 100, which points into and out of the page in the orientation of Figure 5.

[0075] Accordingly, the pivotable portions 506 are attached in a moveable manner to the pressing member 302. In the examples of Figure 5, the pivotable portions 506 are attached to the pressing member 302 via first slidable connectors 508. The first slidable connectors

508 slide with respect to the pressing member 302 as shown by arrows 509 and 511. In these examples, there is a pair of first slidable connectors 508 (for example, the number of first slidable connectors may correspond to the number of pivotable portions 506). The slidable connection between the first slidable connectors 508 and the pressing member 302 is described in further detail further below with respect to Figure 8.

[0076] For example, the first slidable connectors 508 each comprise a through hole through which a part of the corresponding pivotable portion 506 passes. For example, the part passing through the through hole in the respective first slidable connector 508 rotates within said through hole. As the pivotable portions 506 pivot and the first slidable connectors 508 slide with respect to the pressing member, the part of the pivotable portions 506 passing through the through holes rotate within the through holes. It will be appreciated that if the pressing member 302 is to move linearly and the pivotable portions 506 are to move pivotably, then the pivotable portions 506 should also pivot with the respect to the pressing member 302. Rotation within the through holes of the first slidable connectors 508 facilitates this. For example, when comparing Figure 3 and 4, it can be seen that the angle of the pivotable portions 506 relative to the pressing member 302 (and the first slidable connectors 508) changes with rotation of the elongate rotatable member 502.

[0077] In some examples, the pressing member 302 is moveably connected to an alignment structure configured to control the motion of the pressing member 302 such that the pressing member 302 moves in a direction parallel to the longitudinal axis 118 of the body 102. The alignment structure is any kind of structure which constrains the motion of the pressing member 302 such that the motion is limiting to linear motion in the first and second directions 114, 116, for example.

[0078] Figures 3, 4 and 5 show a particular example of the alignment structure. In these examples, there is a pair of alignment poles 310 fixed to the pressing member 302. There is also an alignment plate 312 with alignment through holes for the alignment poles 310 to pass through. The alignment plate 312 remains stationary relative to the body 102 while the pressing member 302 moves. In Figure 5, the alignment plate 312 is shown in dashed line and components behind are shown in solid line. The alignment plate 312 is shown with an offset relative to the pressing member 302 for clarity, and an offset may or may not exist in examples. There is a pair of alignment through holes 510 through which the alignment poles 310 pass. The more tightly fitting the alignment poles 310 are in the alignment through holes 510, the more strictly the movement of the pressing member 302 can be constrained. The alignment poles 310 move through the alignment through holes 510 as the pressing member 302 moves in the first and second direction 114, 116.

[0079] Advantageously, there is provided a structure

in which a pivotable portion extends away from the rotation axis. The pivotable portion can be connected to other component in order to transfer motion to those other components.

[0080] Advantageously, motion is transferred to the pressing member 302 in a manner that the pressing member 302 can apply the pressing force in the first direction 114. Advantageously, the pressing member 302 does not simply pivot in correspondence with the pivotable portion 506. Instead, the pressing member 302 moves in the first direction when the mouthpiece 112 moves towards the closed configuration. Accordingly, the pressing member moves in the first direction in a linear manner. This advantageously provides the pressing force in an optimal direction, for example, to press down on the consumable article (e.g., against a component underneath the consumable article) so as to hold the consumable article in place.

[0081] Advantageously, the alignment structure provides a way to ensure linear movement of the pressing member 302 in the first and second directions 114, 116 by controlling the motion of the pressing member 302. Linear movement of the pressing member may optimally apply the pressing force in the desired direction.

[0082] In some examples, the pressing mechanism 106 comprises a lever member fixed to the rotatable member. In the examples of Figures 3, 4 and 5, the rotatable member 304 is fixed to a lever member 314. The pressing mechanism 106 may comprise one or more lever members. In these examples, the pressing mechanism 106 comprises two members 314 fixed to opposite sides of the elongate rotatable portion 502 (see Figure 5, for example).

[0083] In examples, each of the one or more lever members 314 is moveably connected to the mouthpiece 112 at a pivotable end portion 316 of the lever member 314. In these examples, the pivotable end portion 316 is configured to pivot about the rotation axis 504 to rotate the elongate rotatable portion 502 to apply or to remove the pressing force. In other words, the pivotable end portion 316 is configured to be manipulated in order to achieve rotation of the elongate rotatable member 502 in a desired manner. Hereafter, examples are in the context of two lever members 314 each with a pivotable end portion 316.

[0084] For example, the pivotable end portions 316 are connected to the mouthpiece 112 in a manner such that the described linear movement of the mouthpiece 112 causes the pivotable end portions 316 to pivot in the desired manner (which is to apply or relieve the pressing force).

[0085] In some examples, the mouthpiece 112 comprises a guiding structure configured to guide the pressing mechanism 106 towards applying the pressing force in the first direction 114 during a transition from the open configuration to the closed configuration, and to guide the pressing mechanism 106 to remove the pressing force during a transition from the closed configuration to

the open configuration. In the following description, specific examples of the guiding structure, which examples comprise guiding rails fixed to the mouthpiece 112, are described.

[0086] In some examples the mouthpiece 112 comprises a guiding rail, and the pivotable end portion is movably connected to the guiding rail. For example, the pivotable end portion is configured to move along the guiding rail during a transition between the open configuration and the closed configuration such that the pivotable end portion pivots about the rotation axis 504.

[0087] For example, the mouthpiece 112 may comprise a number of guiding rails corresponding to the number of lever members 314. Reference may hereafter be made to a singular guiding rail, however, it should be appreciated that the examples of the Figures comprise two guiding rails, one for each of the two lever members 314.

[0088] The guiding rail is configured (for example, by virtue of its shape) to guide the pivotable end portion 316 to pivot about the rotation axis 504 as the mouthpiece 112 linearly moves in the first and second directions 114, 116. For example, the pivotable end portion 316 tracks along the guiding rail and follows the shape of the guiding rail in order to pivot depending on which portion of the guiding rail it is connected to.

[0089] Figure 6 is a schematic side view of the mouthpiece 112, according to examples. Figure 7 is a schematic perspective view of the mouthpiece 112, according to examples. The body of the mouthpiece 112 is shown in dashed line and some internal components/structures are shown. In these examples, the mouthpiece 112 comprises the guiding rails 602. The guiding rails are an example of the described guiding structure. Referring to Figure 6, the greatest spatial extent of the guiding rails is in the first/second direction 114, 116. However, the guiding rails 602 also extends with respect to a transverse axis 604 perpendicular to the first and second directions 114, 116. The transverse axis 604 is also perpendicular to the rotation axis 504, which in the orientation of Figure 6 points into the page.

[0090] In the examples shown in the Figures, the guiding rails 602 are s-shaped. When the pivotable end portions 316 track along the guiding rails 602, the pivotable end portions 316 are cause to move along the transverse axis 604. The movement of the pivotable end portions 316 with respect to the transverse axis 604 corresponds to pivoting of the pivotable end portions 316 about the rotation axis 504. For example, the shape of the guiding rails 602 may be selected in accordance with the desired motion of the pivotable end portions 314.

[0091] In the examples of Figure 7, some parts of the pressing mechanism 106 are shown. It should be noted that the parts of the pressing mechanism 106 shown in Figure 7 are simplified and some features are omitted for clarity of depiction. In examples, the pressing mechanism may include any combination of the described features.

[0092] In these examples, the pivotable end portions

316 connect to the guiding rails 602 via second slidable connectors 702. The second slidable connectors 702 are connected to the respective guiding rails 602 in a slidable manner such that the second slidable connectors 702 can move along the guiding rails when the mouthpiece 112 moves linearly in the first and second directions 114, 116. The second slidable connectors 702 maintain connection with the respective guiding rails 602 as they move along the guiding rails 602.

[0093] As previously described with reference to Figure 5, there are first slidable connectors 508 which are slidably connected to the pressing member 302. In some examples, the second slidable connectors 702 may connect in the same manner to the guiding rails 602 as the first slidable connectors 508 connect to the pressing member 302. In some examples, the manner of slidably connecting is different. In the following, specific examples of slidable connection are described, which may be utilised for one or both of the first and second slidable connectors 508, 702.

[0094] Figure 8 is a schematic cross-sectional view of a guiding rail 602 or the pressing member 302 connected to a second slidable connector 702 or a first slidable connector 508, as the case may be. In these examples, the guiding rail 602/pressing member 302 comprises a channel 802. The first/second slidable connector 508/702 comprises a protrusion 804. The channel 802 and the protrusion 804 have a shape such that the protrusion 804 can be received in the channel 802.

[0095] The protrusion 804 slides within and along the channel 802 as the first/second slidable connector 508/702 moves along the pressing member/guiding rail 302/602. For example, the protrusion 804 may be received in the channel 802 in a manner such that the protrusion 804 does not detach during normal sliding movement of the slidable connector in question with respect to the component to which it is attached.

[0096] In the examples of Figure 8, the width of the channel 802 increases with depth. In other words, the channel 802 becomes larger in width deeper into the channel 802. Also, for example, the protrusion 804 is shaped such that the end of the protrusion 804 further from the remainder of the first/second slidable connector 508/702 has a greater width than a part of the protrusion closer to the remainder of the slidable connector. For examples, the protrusion increases in width further away from the rest of the slidable connector in question. Accordingly, the slidable connector does not detach in the direction 806 from the guiding rail/pressing member 602/302. In the examples of Figure 8, the sliding movement would be in the directions in and out of the page in the orientation shown.

[0097] Referring to Figures 1 and 6, when the mouthpiece 112 is in the open configuration, the second slidable connectors 702 are positioned towards the distal ends 606 of the guiding rails 602. The distal ends 606 of the guiding rails 602 are the ends closest to the body 102. In this configuration, the pressing mechanism 106 may

be as depicted in Figure 4, for example. In other words, when the second slidable connectors 702 are towards the distal ends 606 of the guiding rails 602, the lever members 314 are pivoted such that the pressing force is not being applied to the consumable article 108.

[0098] Referring to Figures 2 and 6, when the mouthpiece 112 is in the closed configuration, the second slidable connectors 702 are positioned towards the proximal ends 608 of the guiding rails 602. The proximal ends 608 of the guiding rails 602 are the ends farthest from the body 102 (closest to the proximal end 120 of the mouthpiece 112). In this configuration, the pressing mechanism 106 may be as depicted in Figure 3, for example. In other words, when the second slidable connectors 702 are towards the proximal ends 608 of the guiding rails 602, the lever members 314 are pivoted such that the pressing force is being applied to the consumable article 108.

[0099] Advantageously, the guiding structure helps to transfer the linear motion of the mouthpiece to the pressing mechanism in a manner such that the pressing force is either applied or removed depending on the configuration of the mouthpiece.

[0100] Advantageously, there is provided a lever member 314 which can effectively be manipulated in order to cause rotation of the elongate rotatable member 502. The connection to the mouthpiece 112 at the pivotable end portion 316 provides for the movement of the mouthpiece 112 to be transferred to the pivotable end portion 316, and therefore to the elongate rotatable member 502.

[0101] Advantageously, there is provided a structure fixed to the mouthpiece which guides the pivotable end portion 316 to pivot in response to the linear motion of the mouthpiece 112. For example, the guiding rail 602 may be shaped such that the open configuration corresponds to the contact between the guiding rail and the pivotable end portion at a position on the guiding rail corresponding to a first pivot position. And, the guiding rail may be shaped such that the closed configuration corresponds to the contact between the guiding rail and the pivotable end portion at a position on the guiding rail corresponding to a second pivot position different to the first pivot position. For example, the contact point moves as the pivotable end portion moves along the guiding rail when the mouthpiece moves in the first and second directions.

[0102] For example, a transition of the mouthpiece 112 from the open configuration to the closed configuration urges the pressing mechanism to transition from a release configuration to a pressing configuration. Also, for example, a transition of the mouthpiece 112 from the closed configuration to the open configuration urges the pressing mechanism 106 to transition from the pressing configuration to the release configuration. The pressing configuration is a configuration in which the pressing force is being applied to the consumable article 108. The release configuration is a configuration in which the pressing force has been removed, or reduced enough

so that that consumable article 108 can be removed from the receiving region 104, for example.

[0103] For example, the configuration of the pressing mechanism 106 shown in Figure 4 may be a release configuration, and the configuration of the pressing mechanism 106 shown in Figure 3 may be a pressing configuration.

[0104] Advantageously, the transition of the mouthpiece 112 that take place during use, correspond to transitions of the pressing mechanism 106 which complement the configuration of the mouthpiece. For example, there is a correspondence between the open configuration and the release configuration so that when the device 100 is opened up, the consumable article 108 can be inserted or removed. Conversely, for example, there is a correspondence between the closed configuration and the pressing configuration so that when the device 100 is closed, the consumable article 108 has the pressing force applied to it to hold it in place.

[0105] In some examples, the pressing mechanism 106 is configured to form a fluid seal positioned between an aerosol outlet of the consumable article and an aerosol passageway of the aerosol generation device. The fluid seal is formed via the application of the pressing force by the pressing member 302 when the mouthpiece 112 is in the closed configuration, such that aerosol is inhibited from escaping an aerosol flow path between the aerosol outlet and the aerosol passageway.

[0106] Figure 9 is a schematic plan view of the pressing mechanism 106 configured to provide a fluid seal, according to examples. Figure 10 is a schematic side view of the pressing mechanism configured to provide a fluid seal, according to examples. Figure 11 is a schematic perspective view of the consumable article 108 and the pressing member 302 configured to provide a fluid seal, according to examples.

[0107] In these examples, the consumable article 108 comprises the aerosol outlet 1102. Aerosol generated by heating the precursor material 110, for example, exits via the aerosol outlet 1102. The pressing member 302 comprises an opening (not shown) such as a hole in the region of the pressing member 302 covering the aerosol outlet 1102. There is provided an aerosol passageway 902, which may be integrally formed with the pressing member 302, or otherwise connected to the pressing member 302, where the opening to receive the aerosol is positioned. For example, where not integral, the aerosol passageway 902 is connected to the pressing member 302 in a manner so as to create a fluid seal. For example, it is intended that aerosol exit the consumable article 108 from the aerosol outlet 1102, passes through the opening in the pressing member 302 and into the aerosol passageway 902.

[0108] In the examples of Figure 9, the pressing member 302 is a somewhat square shape and there is only one pivotable portion 506. However, the functioning of the pressing mechanism 106 of these examples is the same as described above.

[0109] In these examples, when the mouthpiece 112 is in the closed configuration and the pressing mechanism 106 is in the pressing configuration, the pressing member 302 is pressed down against the consumable article such that a fluid seal is formed around the aerosol outlet 1102. Accordingly, in the pressing configuration, the majority of/all of the aerosol passes into the aerosol passageway 902.

[0110] In these examples, the pivotable portion 506 connects to the pressing member 302 via a connector 904. The connector 904 may or may not be slidably connected to the pressing member 302. For examples the connector 904 has a through hole for a portion of the pivotable portion 506 to pass through. For example, the portion of the pivotable portion 506 passing through the through hole can rotate within the through hole. This facilitates the pressing member 302 to move in the first and second directions 114, 116 as the elongate rotatable portion 502 rotates about the rotation axis 504 and the pivotable portion 506 pivots about the rotation axis 504.

[0111] The application of the pressing force when the mouthpiece is in the closed configuration causes the pressing member 302 to press against the consumable article 108 such that aerosol is inhibited from escaping an aerosol flow path between the aerosol outlet 1102 and the aerosol passageway 902. For example, aerosol is inhibited from escaping from between the surfaces of the consumable article 108 and the pressing member 302 which contact each other.

[0112] In the examples of Figures 10 and 11, the pressing member 302 does not contact the consumable article 108 directly. In these examples, there is provided a seal layer 1002 positioned between the pressing member 302 and the consumable article 108. The seal layer 1002 may comprise a resiliently deformable material such as silicone, among others, for example. For example, the seal layer 1002 is configured to compress and deform when the pressing mechanism 106 is in the pressing configuration. The compression and deformation is caused by the seal layer 1002 being squeezed between the consumable article 108 and the remainder of the pressing member 302. The consumable article 108 has a rigid surface against which the seal layer 1002 is pressed. For example, the surface of the consumable article 108 in the vicinity of the aerosol outlet 1102 is rigid to facilitate the formation of the seal. In this way, the seal layer 1002 forms close contact with the remainder of the pressing member 302 and the consumable article 108 in a manner such that a fluid seal is formed between the aerosol outlet 1102 and the aerosol passageway 902. In one example, the seal layer 1002 comprises one or more O-rings to aid with alignment and reduce leakage.

[0113] The aerosol passageway 902 is essentially a pipe. The aerosol passageway 902 may be used to deliver aerosol out of the device from the proximal end 120 of the mouthpiece 112, for example. In other examples, the mouthpiece 112 may comprise another passageway and the aerosol may pass from the aerosol passageway

902 to said passageway of the mouthpiece 112. An as an example, the tube of the aerosol passageway 902 may be inserted into a mouthpiece passageway tube, when the mouthpiece 112 is in the closed configuration. For example, the mouthpiece passageway tube delivers aerosol to an orifice at the proximal end 120 of the mouthpiece 112.

[0114] It will be appreciated that the seal layer 1002 will comprise a hole (and the like) to allow the aerosol to pass from the aerosol outlet 1102 to the aerosol passageway 902. Figure 12 is a schematic cross-sectional view of the aerosol passageway 902 in the form of a tube and the seal layer 1002.

[0115] Figure 12 is a schematic cross-sectional view of the aerosol passageway 902 and the seal layer 1002, according to examples. In these examples, the tube forming the aerosol passageway 902 comprises a flange 1202 at the end closest to the consumable article 108. The flange 1202 extends radially outwards, for example. The seal layer 1002 is shaped to cover the flange 1202. For example, the seal layer 1002 has a groove 1204 in an inner surface into which the flange 1202 is received. In Figure 12, there is shown a gap between the flange 1202 and the groove 1204. However, this gap is merely for clarity of depiction. In examples, the flange 1202 would be tightly fitting within the groove 1204. This should be considered by the reader when interpreting Figure 12. Similarly, relative dimensions of components may be different in examples to those depicted, and the depicted proportions are presented in this way merely for clarity of depiction and explanation of the relevant concepts.

[0116] In the examples of Figure 12, the pressing member 302 and the aerosol passageway 902 are not integral to one another, but separate components. The structure shown in Figure 12, for example, assists in forming the fluid seal. For example, the seal layer 1002 is pressed into the flange 1202 from opposite sides when the pressing mechanism 106 is in the pressing configuration. This aides in the seal layer 1002 forming a seal around the commencement of the aerosol passageway 902. Furthermore, in addition to the pressing member 302, the flange 1202 also presses the seal layer 1002 down onto the consumable article 108. Accordingly, the seal layer 1002 deforms and forms a seal around the entry into the aerosol passageway 902 and around the aerosol outlet 1102 when pressed against the rigid surface of the consumable article 1008 in the vicinity of the aerosol outlet 1102.

[0117] In some such examples, the seal layer 1002 comprises a seal flange 1206 which extends towards the consumable article 108 in use. For example, the rigid surface of the consumable article 108 in the vicinity of the aerosol outlet 1102 may comprise a groove corresponding with the seal flange 1206 and configured to receive the seal flange. Such a structure may further enhance the seal by interrupting the escape path of aerosol from between the rigid surface and the seal layer 1002, thereby enhancing the fluid seal.

[0118] It should be noted that the features described with respect to Figures 9 to 12 may be combined with any of the previously described features. For example, taking the structures shown in Figure 5, a third pivotable portion 506, and the aerosol passageway 902 may be added. Optionally, the seal layer 1002 of a size similar to or smaller than the pressing member 302 may be included. The connector 904 may be the same as or different to the first slidable connectors 508, for example. For example, the examples of Figures 9 to 12 may be used in conjunction with the described alignment structure. It will be appreciated that the examples of Figures 9 to 12 use the principals of the previously described examples to provide a fluid seal.

[0119] In some examples, there may be provided a combination of the described fluid seal features and the features described with respect to Figures 3 to 5 such that there are a plurality of pressing members. For example, there may be two pressing members. Figure 15 is a schematic plan view of a pressing mechanism 106, according to examples, which comprises a first pressing member 302a and a second pressing member 302b. Note that the alignment plate 312, while it may be present in these examples, is not depicted for clarity of illustration.

[0120] In the examples of Figure 15, there are three pivotable portions 506. One of the pivotable portions 506 is connected to the second pressing member 302b, and this pivotable portion is hereafter referred to as the fluid seal pivotable portion. In these examples, the fluid seal pivotable portion is of a different size to the other pivotable portions. In some examples, the fluid seal pivotable portion may connect to the elongate rotatable portion 502 at a different or similar angle as compared to the other pivotable portions 506. For example, the amount of pivoting undergone and the amount of pressing force applied by the respective pressing members may be varied/controlled by adjusting the size (length in extension away from the rotation axis 504) of the pivotable members and the angle of the pivotable members. The amount of pivoting and the amount of pressing force may be controlled may be controlled by adjusting the size and angle of the pivotable members in any of the described examples containing one or more pivotable members. As referred to herein, the angle of the pivotable members relates to where around the circumference of the elongate pivotable portion 502, the pivotable members attach. As a mere example to illustrate this point, Figure 16 shows two different components 1602 and 1604 attached at different points along the circumference of a tube 1600.

[0121] In these examples, the first pressing member 302a comprises an opening 1502 matching the shape of the second pressing member 302b such that the second pressing member 302b can fit within the opening 1502. These examples may incorporate any of the features described with respect to Figures 9 to 12, for example, the seal layer 1002 (not shown in Figure 15).

[0122] In these examples, the first pressing member 302a generally performs the task of holding the consum-

able article in position, whereas the main task of the second pressing member 302 is to form the fluid seal, for example. Advantageously, providing two separate pressing members can allow the pressing member to be configured such that more pressing force is applied by the second pressing member 302b to form the fluid seal, for example.

[0123] Advantageously, a fluid seal may be formed such that the aerosol can be transferred from the consumable article in the desired manner without escaping where it is not intended. Such a seal may provide for reduced waste in terms of aerosol, and may aid in avoiding damage to components, or components becoming unclean due to the presence of aerosol within the device where it is not intended.

[0124] Various features have been described in the context of the device 100. In accordance with the above-described principles, there may be provided a holding system configured to be deployed in an aerosol generation device to releasably hold in position a consumable article within the aerosol generation device. Such a holding system may comprise a pressing mechanism (for example the pressing mechanism 106 according to any of the described examples) comprising a rotatable member and a pressing member, the pressing member configured to apply, in use, a pressing force to the consumable article in a first direction relative to a main device body of the aerosol generation device, the first direction being parallel, or close to parallel, to a longitudinal axis of the main device body. In addition, the holding system may comprise a guiding structure (for example, the guiding rails according to any of the described examples) fixed to a mouthpiece of the aerosol generation device. For example, in the holding system, in use, the pressing mechanism is movably connected to the guiding structure such that a transition of the mouthpiece in the first direction in a linear manner from an open configuration to a closed configuration causes rotation of the rotatable member, to thereby action the pressing member such that a transition of the pressing mechanism from a release configuration to a pressing configuration occurs. In the release configuration, the pressing force is not applied, whereas in the pressing configuration the pressing force is applied.

[0125] Advantageously, the holding system provides the advantages discussed above in relation to the aerosol generation device with the pressing mechanism. The holding system may be deployed on an aerosol generation device so as to realise the advantages.

[0126] In accordance with the above-described principles, there may be provided a method of manufacturing an aerosol generation device. For example, the method is for manufacturing a device comprising a main device body comprising a consumable article receiving region and a pressing mechanism.

[0127] In addition, the method is for manufacturing a device comprising a mouthpiece, wherein the mouthpiece is moveable in a linear manner relative to the main device body in a first direction to transition from an open

configuration to a closed configuration, and in a second direction to transition from the closed configuration to the open configuration, the first and second directions being parallel, or close to parallel, to a longitudinal axis of the main device body. For example, the method involves manufacturing the pressing mechanism to comprise a rotatable member and a pressing member.

[0128] For example, the method comprises configuring the pressing member to apply a pressing force in the first direction to a consumable article received in the consumable article receiving region, when the mouthpiece is in the closed configuration. For example, the method also comprises configuring the pressing mechanism such that the pressing member is actionable to apply the pressing force to the received consumable article, by rotation of the rotatable member caused by the linear movement of the mouthpiece in the first direction to transition from the open configuration to the closed configuration.

[0129] Advantageously, manufacturing the aerosol generation device according to said method provides a device with the above-described advantages.

[0130] Various manufacturing techniques may be utilized in the method of manufacture. For example, certain components may comprise metal, and various known techniques of providing metal components may be deployed. For example, certain components may comprise plastics or other non-metallic materials and various techniques may be used to provide these components. For example, additive manufacture techniques, moulding techniques, and the like may be used. Various cutting, machining, etching, drilling techniques and the like may be used to create holes and gaps of the kinds described herein.

[0131] The above-described features may be utilized in use, when the user wishes to obtain aerosol from the device 100. For example, the user may linearly move the mouthpiece 112 in the first direction 114 to transition from the open configuration to the closed configuration to cause rotation of the rotatable member 304 to thereby action the pressing member 302 to apply the pressing force in the first direction 114 to a consumable article 108 received in the consumable article receiving region 104.

[0132] It is important to note that the various features described above may be used in various combinations. Although preferred embodiments have been shown and described, it will be appreciated by those skilled in the art that various changes and modifications might be made without departing from the scope of the invention, as defined in the appended claims and as described above.

Claims

1. An aerosol generation device (100) comprising:
 - a main device body (102) comprising a consumable article receiving region (104) and a pressing

mechanism (106); and
 a mouthpiece (112), wherein the mouthpiece (112) is moveable in a linear manner relative to the main device body (102) in a first direction (114) to transition from an open configuration to a closed configuration, and in a second direction (116) to transition from the closed configuration to the open configuration, the first and second directions (114, 116) being parallel, or close to parallel, to a longitudinal axis (118) of the main device body (102), wherein:

the pressing mechanism (106) comprises a rotatable member (304) and a pressing member (302);
 the pressing member (302) is configured to apply a pressing force in the first direction (114) to a consumable article (108) received in the consumable article receiving region (104), when the mouthpiece (112) is in the closed configuration;
 the pressing mechanism (106) is configured such that the pressing member (302) is actionable to apply the pressing force to the received consumable article (108), by rotation of the rotatable member (304) caused by the linear movement of the mouthpiece (112) in the first direction (114) to transition from the open configuration to the closed configuration.

2. The aerosol generation device (100) according to claim 1, wherein the pressing mechanism (106) is configured:

such that the pressing member (302) is actionable to reduce the pressing force, by rotation of the rotatable member (304) caused by the linear movement of the mouthpiece (112) in the second direction (116) to transition from the closed configuration to the open configuration; and to have ceased application of the pressing force when the mouthpiece (112) is in the open configuration.

3. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 the aerosol generation device (100) is configured to securely hold the consumable article (108) within the consumable article receiving region (104) via the application of the pressing force by the pressing member (302) in the closed configuration.
4. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 the pressing mechanism (106) is configured to press a part of the consumable article (108) against the main device body (102), via the application of the

pressing force by the pressing member (302) when in the closed configuration, such that electrical and/or thermal contact is established between the consumable article (108) and the main device body (102).

5. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 the rotatable member (304) is configured to rotate about a rotation axis, the rotatable member comprising:

an elongate rotatable portion (502) arranged such that a longitudinal axis of the elongate rotatable portion coincides with the rotation axis (504); and
 a pivotable portion (506) which extends away from the rotation axis (504) and is configured to pivot about the rotation axis (504).

6. The aerosol generation device (100) according to claim 5, wherein:
 the pressing member (302) is connected to the pivotable portion (506) such that the pressing member (502) moves linearly in the first direction (114) during a transition from the open configuration to the closed configuration.

7. The aerosol generation device (100) according to claim 6, wherein:
 the pressing mechanism (106) comprises a lever member (314) fixed to the rotatable member (304), and moveably connected to the mouthpiece (112) at a pivotable end portion (316) of the lever member (314), wherein the pivotable end portion (316) is configured to pivot about the rotation axis (504) to rotate the elongate rotatable portion (502) to apply or to remove the pressing force.

8. The aerosol generation device (100) according to claim 7, wherein:

the mouthpiece (112) comprises a guiding rail (602), and the pivotable end portion (316) is movably connected to the guiding rail (602); and the pivotable end portion (316) is configured to move along the guiding rail (602) during a transition between the open configuration and the closed configuration such that the pivotable end portion (316) pivots about the rotation axis (504).

9. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 the pressing member (302) is movably connected to an alignment structure configured to control the motion of the pressing member (302) such that the pressing member (302) moves in a direction parallel to the longitudinal axis (118) of the main device body

(102), towards and away from the main device body (102).

10. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 - a transition of the mouthpiece (112) from the open configuration to the closed configuration urges the pressing mechanism (106) to transition from a release configuration to a pressing configuration; and
 - a transition of the mouthpiece (112) from the closed configuration to the open configuration urges the pressing mechanism (106) to transition from the pressing configuration to the release configuration.
11. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 - the pressing mechanism (106) is configured to form a fluid seal positioned between an aerosol outlet (1102) of the consumable article (108) and an aerosol passageway (902) of the aerosol generation device (100), via the application of the pressing force by the pressing member (302) when the mouthpiece (112) is in the closed configuration, such that aerosol is inhibited from escaping an aerosol flow path between the aerosol outlet (1102) and the aerosol passageway (902).
12. The aerosol generation device (100) according to any one of the preceding claims, wherein:
 - the mouthpiece (112) comprises a guiding structure configured to guide the pressing mechanism (106) towards applying the pressing force in the first direction (114) during a transition from the open configuration to the closed configuration, and to guide the pressing mechanism (106) to remove the pressing force during a transition from the closed configuration to the open configuration.
13. A holding system configured to be deployed in an aerosol generation device (100) to releasably hold in position a consumable article (108) within the aerosol generation device (100), the holding system comprising:
 - a pressing mechanism (106) comprising a rotatable member (304) and a pressing member (302), the pressing member (302) configured to apply, in use, a pressing force to the consumable article (108) in a first direction (114) relative to a main device body (102) of the aerosol generation device (100), the first direction (114) being parallel, or close to parallel, to a longitudinal axis (118) of the main device body (102); and
 - a guiding structure fixed to a mouthpiece (112) of the aerosol generation device (100), wherein:

in use, the pressing mechanism (106) is movably connected to the guiding structure such that a transition of the mouthpiece (112) in the first direction (114) in a linear manner from an open configuration to a closed configuration causes rotation of the rotatable member (304) to thereby action the pressing member (302) such that a transition of the pressing mechanism (106) from a release configuration in which the pressing force is not applied to a pressing configuration in which the pressing force is applied occurs.

14. A method of manufacturing an aerosol generation device (100), the aerosol generation device (100) comprising:

- a main device body (102) comprising a consumable article receiving region (104) and a pressing mechanism (106); and
- a mouthpiece (112), wherein the mouthpiece (112) is moveable in a linear manner relative to the main device body (102) in a first direction (114) to transition from an open configuration to a closed configuration, and in a second direction to transition from the closed configuration to the open configuration, the first and second directions (114, 116) being parallel, or close to parallel, to a longitudinal axis (118) of the main device body (102),

wherein:

- the pressing mechanism (106) comprises a rotatable member (304) and a pressing member (302);

wherein the method comprises:

- configuring the pressing member (302) to apply a pressing force in the first direction (114) to a consumable article (108) received in the consumable article receiving region (104), when the mouthpiece (112) is in the closed configuration; and
- configuring the pressing mechanism (106) such that the pressing member (302) is actionable to apply the pressing force to the received consumable article (108), by rotation of the rotatable member (304) caused by the linear movement of the mouthpiece (112) in the first direction (114) to transition from the open configuration to the closed configuration.

15. A method of using an aerosol generation device according to any one of claims 1 to 12, the method comprising:
 - linearly moving the mouthpiece (112) in the first direction (114) to transition from the open configuration

to the closed configuration to cause rotation of the rotatable member (304) to thereby action the pressing member (302) to apply the pressing force in the first direction (114) to a consumable article (108) received in the consumable article receiving region (104). 5

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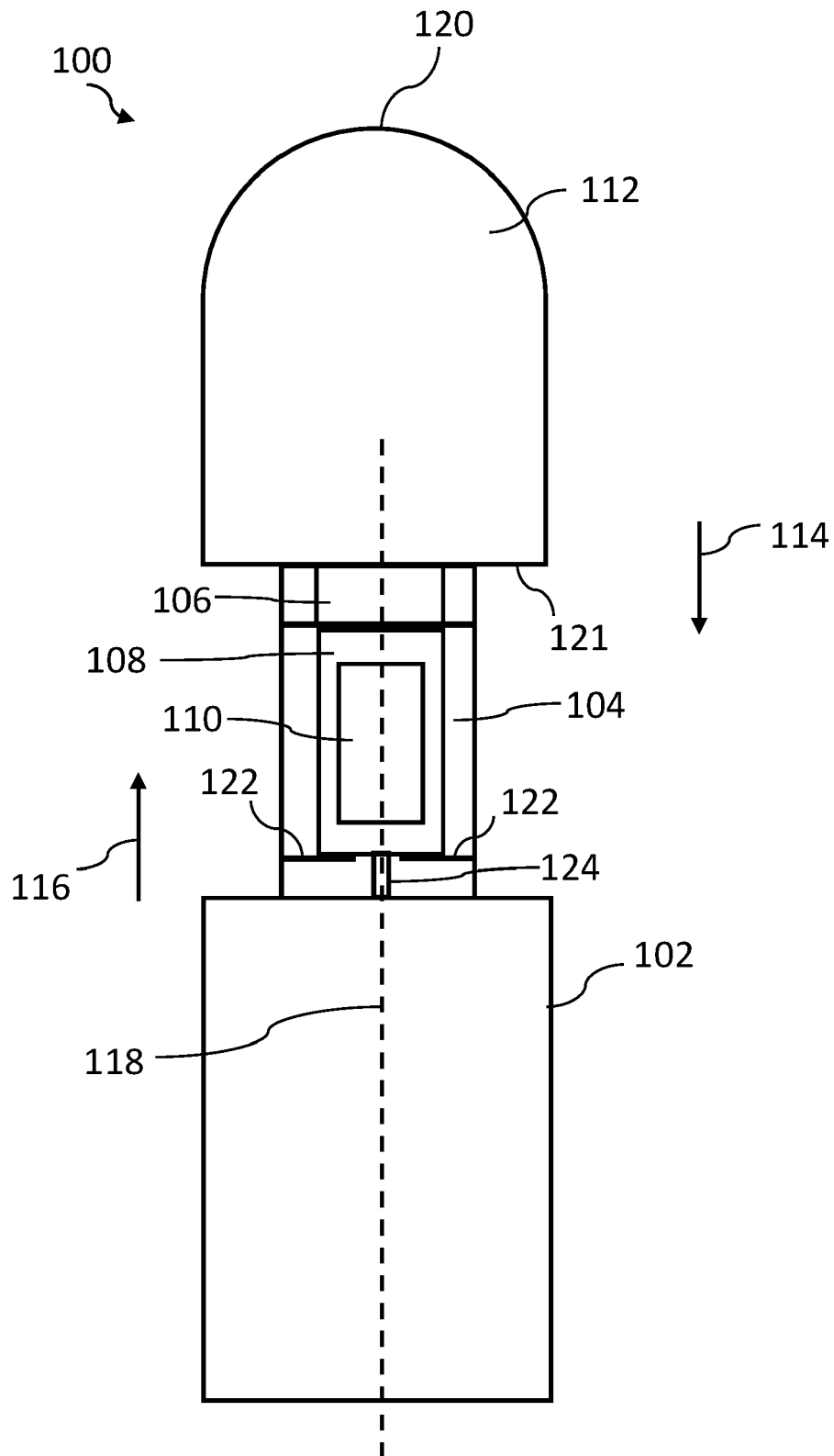


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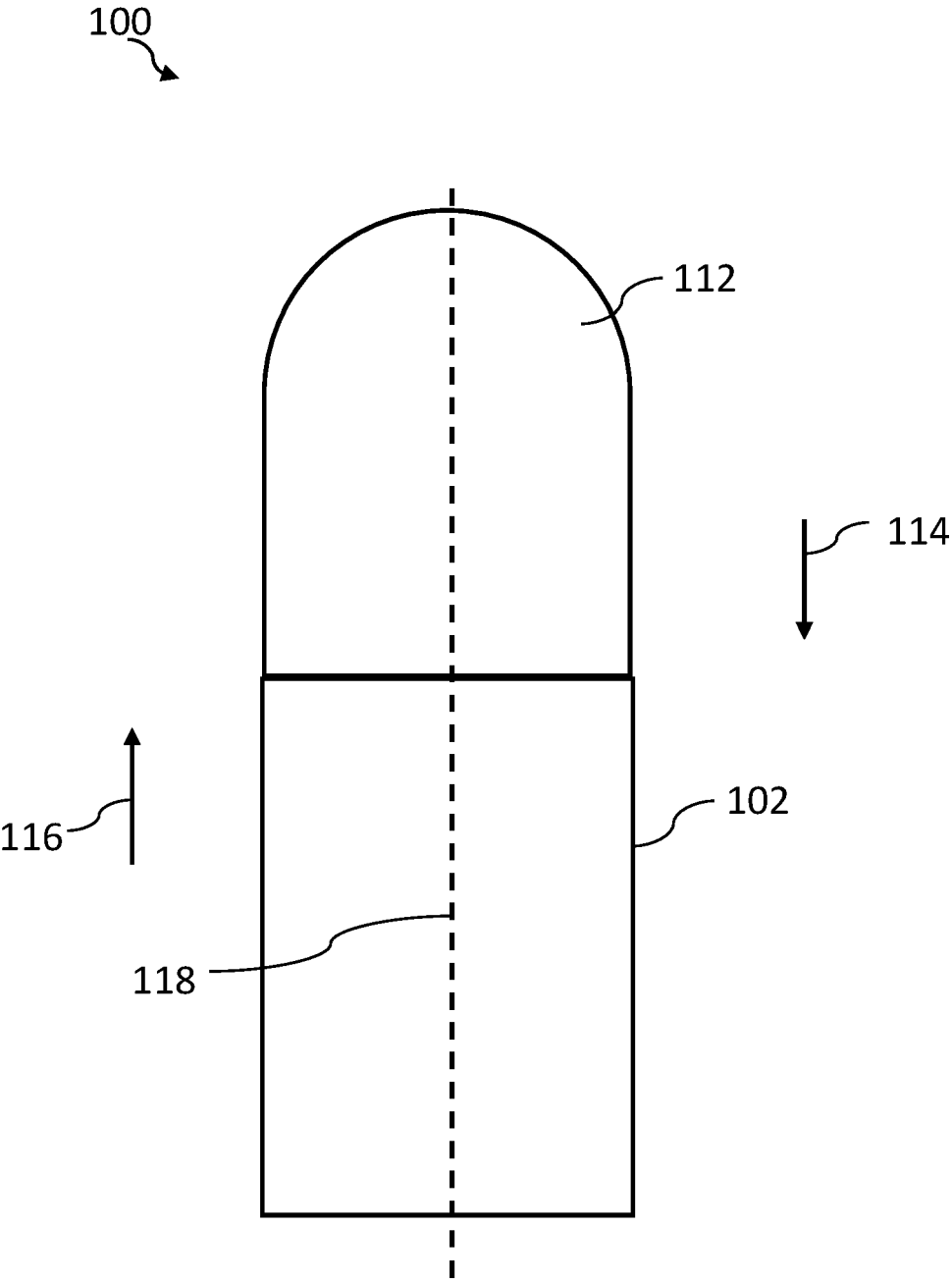


Figure 2

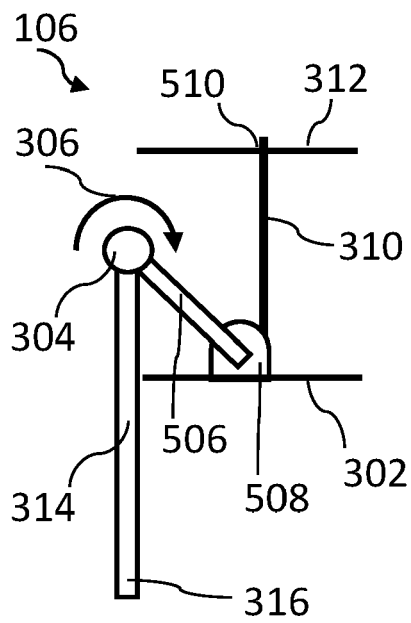


Figure 3

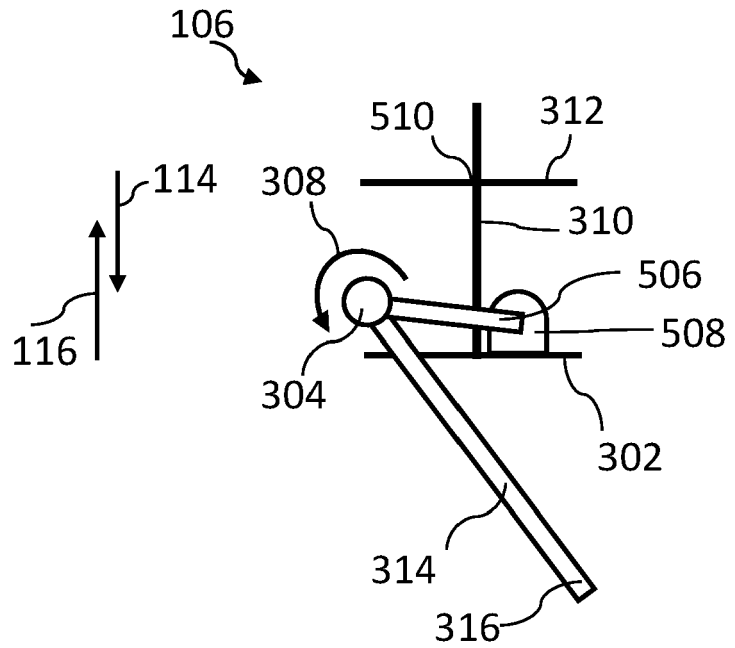


Figure 4

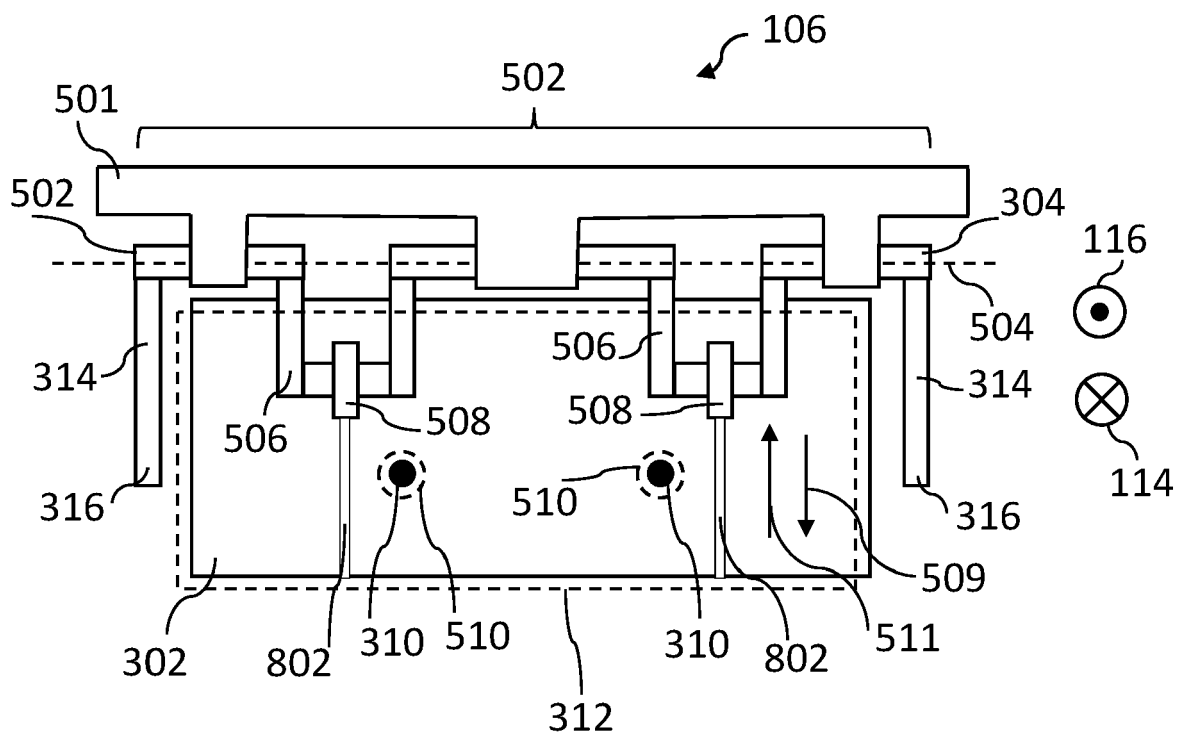


Figure 5

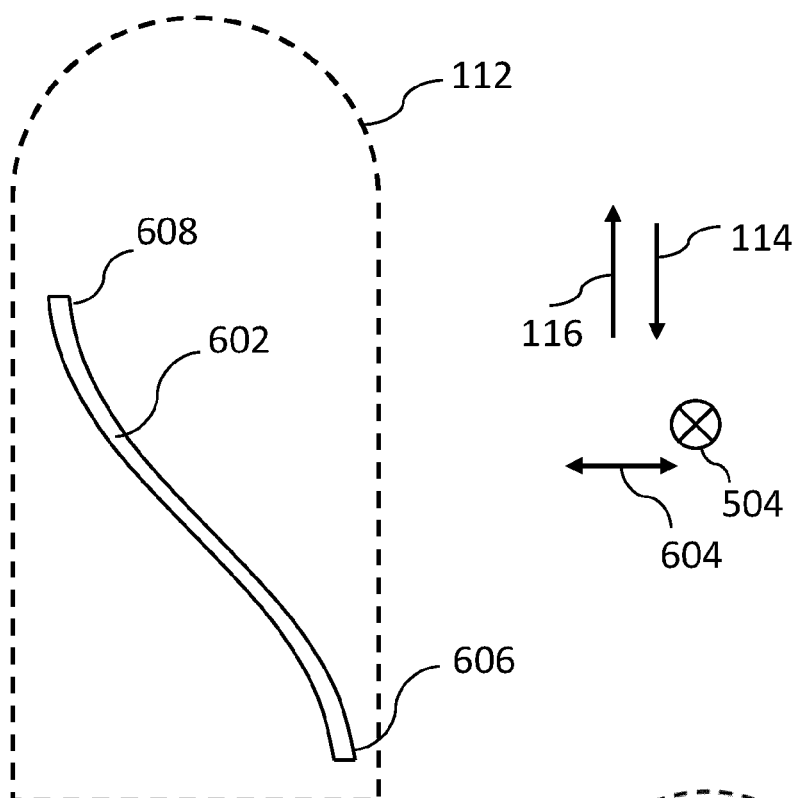


Figure 6

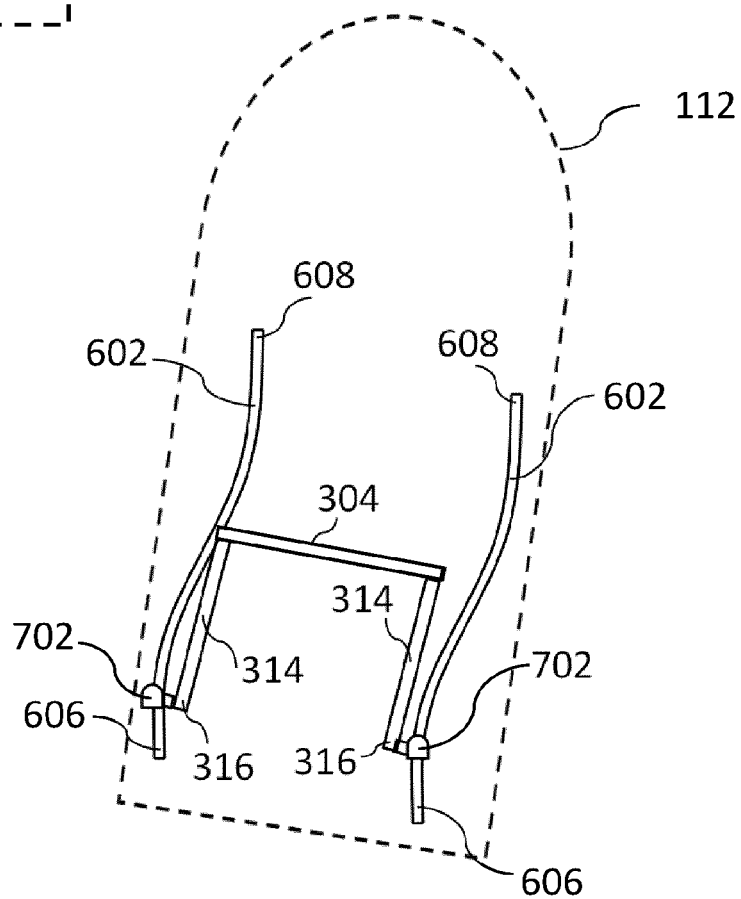


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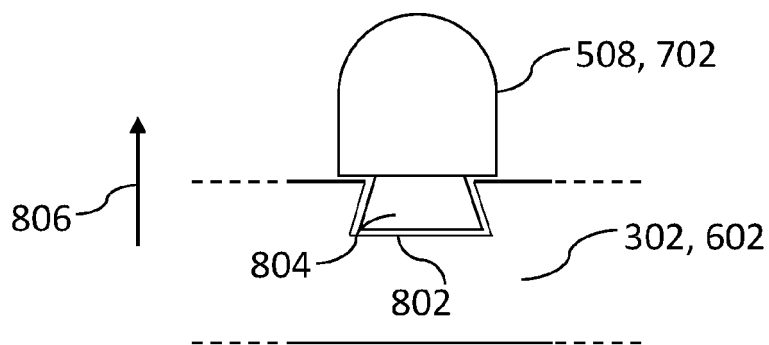


Figure 8

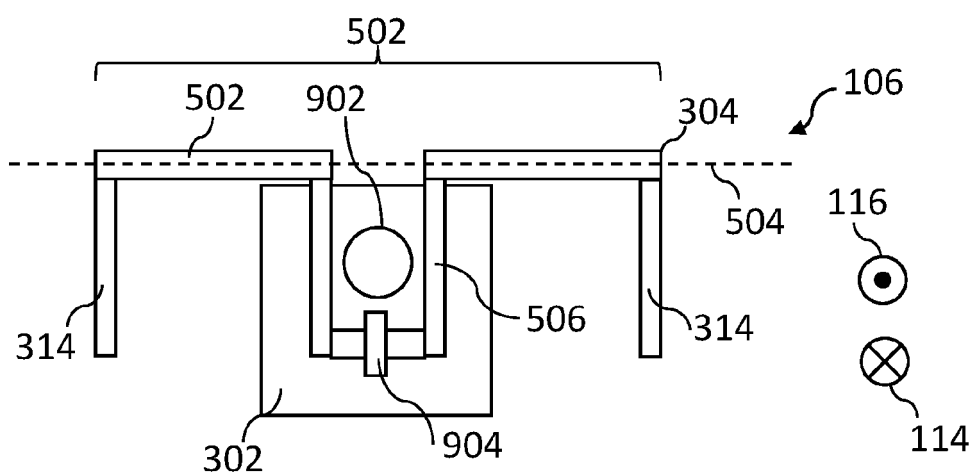


Figure 9

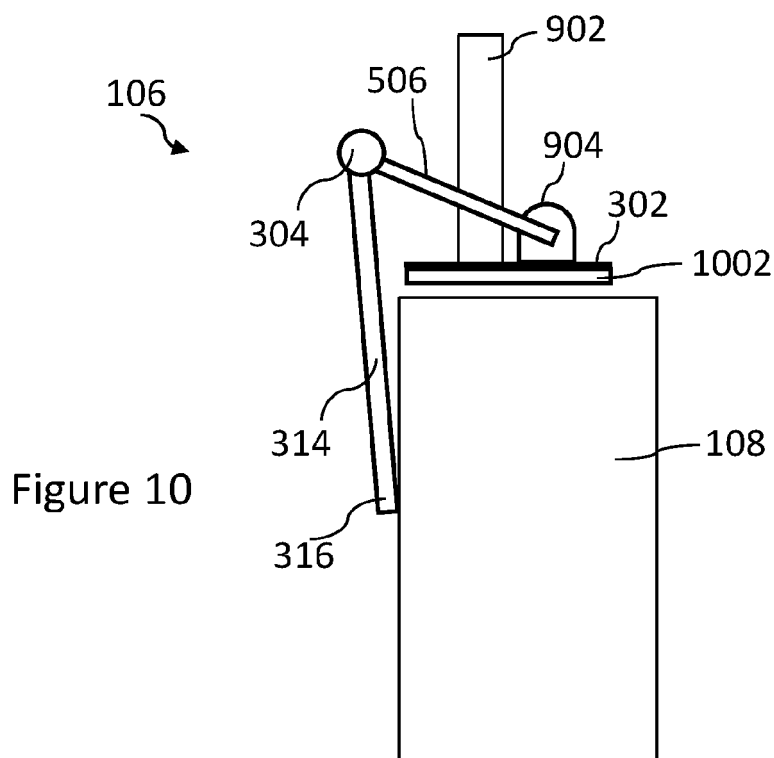


Figure 10

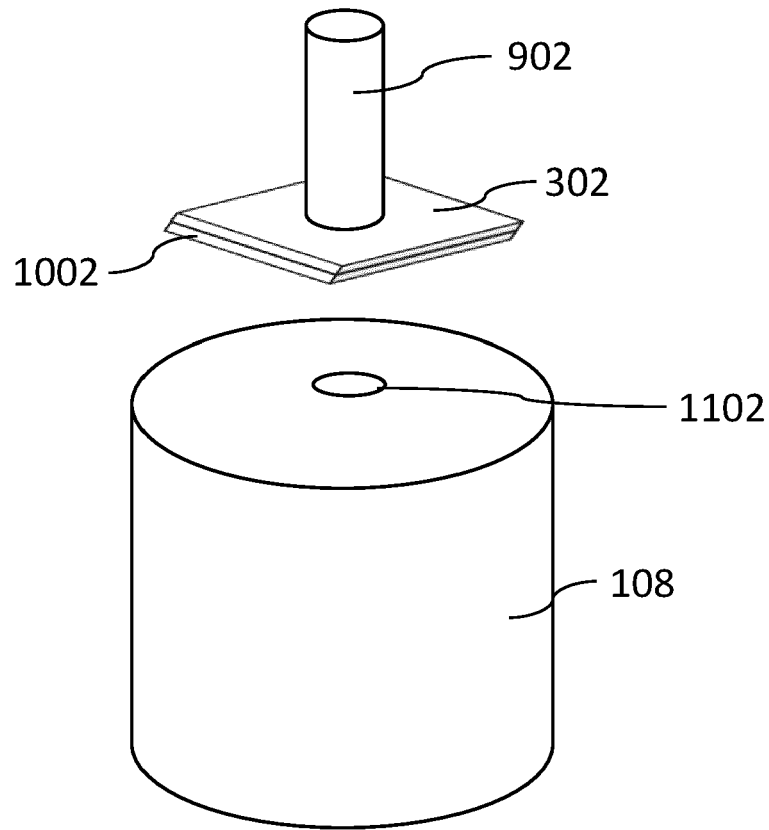


Figure 11

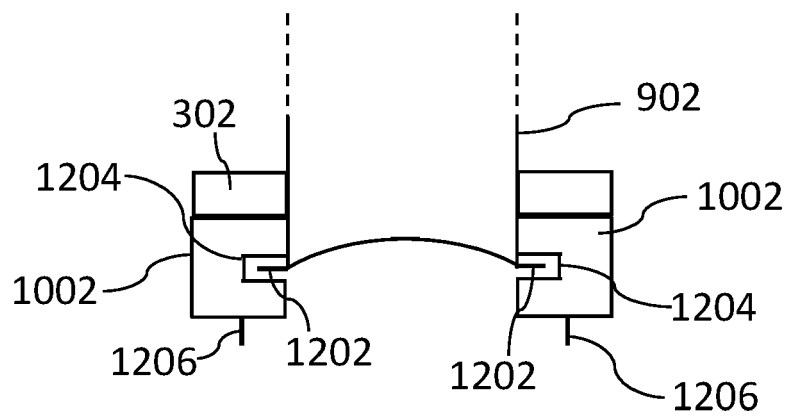


Figure 12

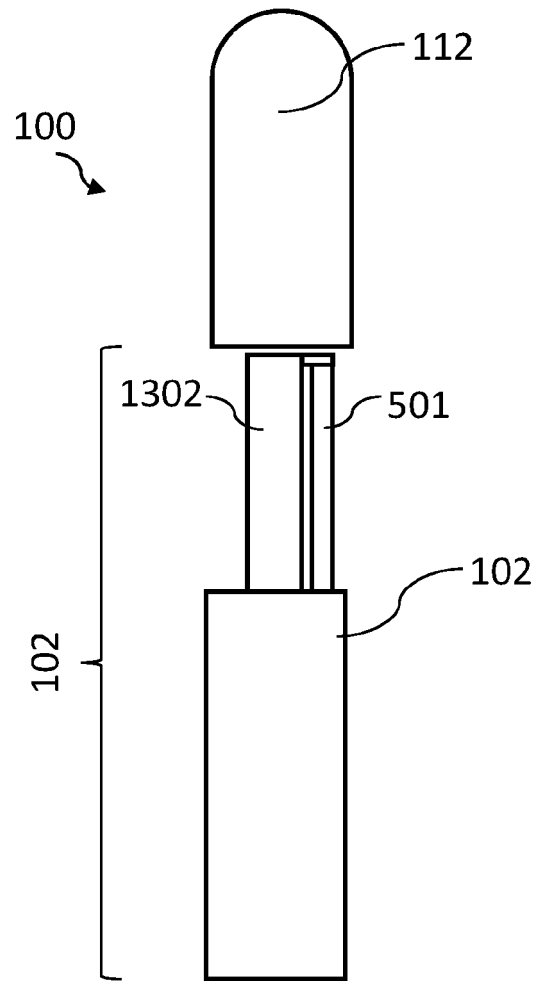


Figure 13

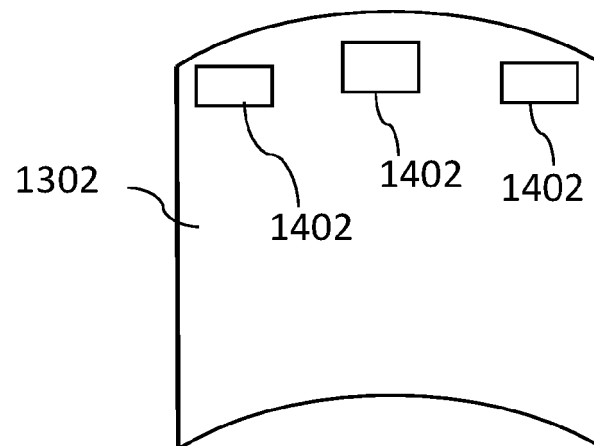


Figure 14

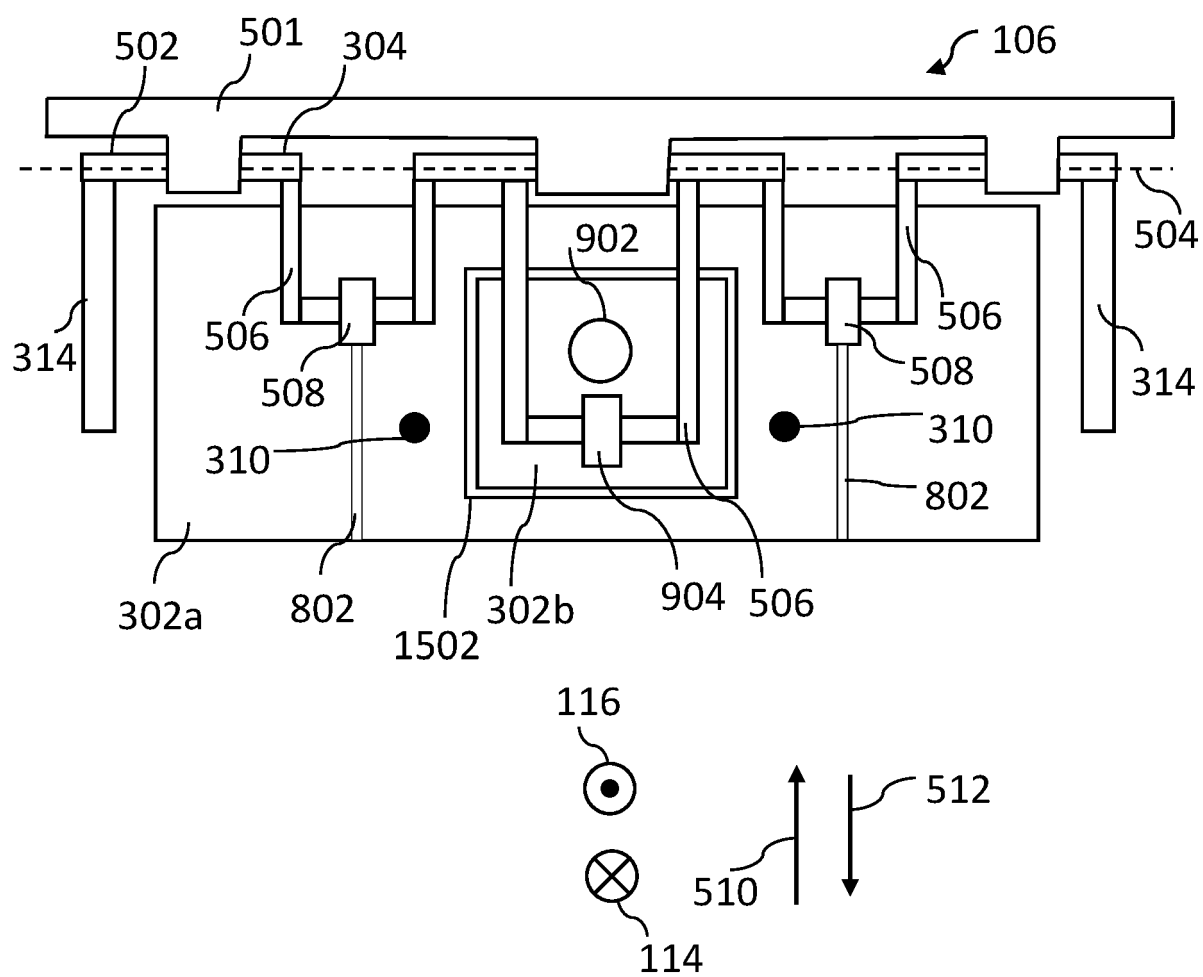


Figure 15

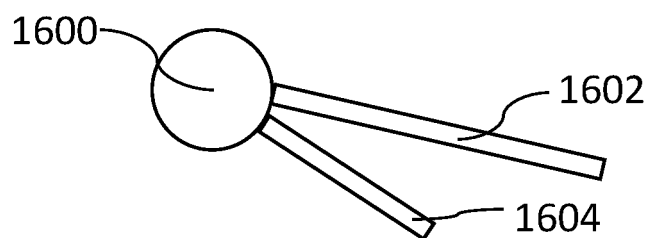


Figure 16



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Application Number

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X	US 2022/225669 A1 (HAWES ERIC [US] ET AL) 21 July 2022 (2022-07-21)	13	INV. A24F40/40
A	* figures * * paragraph [0004] * * paragraph [0078] - paragraph [0079] * * paragraph [0082] * * paragraph [0110] * * paragraph [0113] - paragraph [0115] * * paragraph [0123] - paragraph [0128] * -----	1-12, 14, 15	
X	US 2021/282459 A1 (YAMAGUCHI AKIRA [CH]) 16 September 2021 (2021-09-16)	13	
A	* figures * * paragraph [0075] - paragraph [0076] * * paragraph [0082] - paragraph [0085] * -----	1-12, 14, 15	
			TECHNICAL FIELDS SEARCHED (IPC)
			A24F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 July 2023	Examiner Kirchmayr, Katrin
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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