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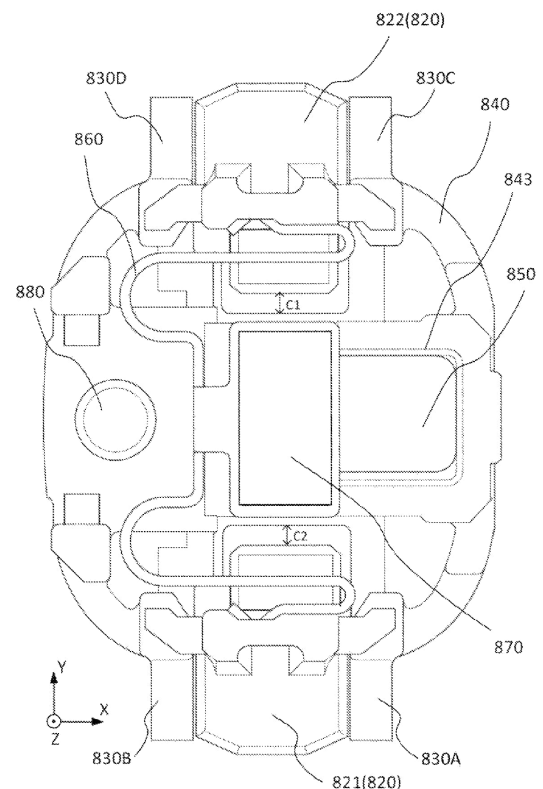
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(54) **FLAVOR INHALER AND FLAVOR GENERATING SYSTEM**

(57) This flavor inhaler comprises a housing and a lid assembly that is capable of moving in a first direction, wherein: the lid assembly comprises an urging member and a movable member capable of moving relative to the lid assembly; the urging member and the movable member are configured to move integrally with the lid assembly; and the urging member is configured to urge the movable member in a second direction intersecting in the first direction.

[Fig. 25]



Description

TECHNICAL FIELD

[0001] The present invention relates to a flavor inhaler and a flavor generating system.

BACKGROUND ART

[0002] Heat-not-burn flavor inhalers, which heat a material comprising a flavor source to generate an aerosol, etc. without burning the material, are conventionally known. Such a flavor inhaler may have a movable lid (see PTL 1 to 4).

CITATION LIST

PATENT LITERATURE

[0003]

PTL 1: CN 211268652 U
PTL 2: CN 216165172 U
PTL 3: CN 218245680 U
PTL 4: CN 219020198 U

SUMMARY OF INVENTION

TECHNICAL PROBLEM

[0004] In the electronic heating inhaler of PTL 1, a slider of a slide cover assembly has a protrusion that fits into a groove. In the smoking set of PTL 2, a protrusion on a slidable bracket is configured to engage with a cutout to restrict movement of the bracket. In the heat-not-burn smoking article of PTL 3, a slider on a protective sliding cover is provided with a protruding portion that fits into a groove. In the aerosol generating device of PTL 4, in a slide cover assembly, a slidable bracket has resilient arms on which positioning blocks are formed, and the positioning blocks are configured to enter and exit grooves. However, the sliders of PTL 1 to 4 have structural constraints, such as the need for a member that comes into contact with a guide to be resilient.

[0005] In view of the above, one objective of the present invention is to provide a flavor inhaler and a flavor generating system having a movable lid that allows for a more flexible configuration.

SOLUTION TO PROBLEM

[0006] According to a first aspect, a flavor inhaler is provided. The flavor inhaler comprises a housing and a lid assembly that is capable of moving in a first direction, wherein: the lid assembly comprises an urging member and a movable member capable of moving relative to the lid assembly; the urging member and the

movable member are configured to move integrally with the lid assembly; and the urging member is configured to urge the movable member in a second direction intersecting in the first direction.

[0007] According to the first aspect, a flavor inhaler having a movable lid that allows for a more flexible configuration can be provided

[0008] The gist of a second aspect lies in the first aspect, wherein the second direction is substantially perpendicular to the first direction.

[0009] According to the second aspect, urging the movable member in a direction substantially perpendicular to the direction of movement of the lid assembly allows the movement of the lid assembly to be adjusted more stably using the movable member.

[0010] The gist of a third aspect lies in the first aspect or the second aspect, wherein the housing is provided with a guide portion, and the movable member is configured to be capable of moving along the guide portion.

[0011] According to the third aspect, the movement of the lid assembly can be adjusted by utilizing contact between the guide portion and the movable member.

[0012] The gist of a fourth aspect lies in the third aspect, wherein the guide portion is a groove formed in an outer surface of the housing.

[0013] According to the fourth aspect, the guide portion can guide the lid assembly using a simple configuration by utilizing the shape of the groove.

[0014] The gist of a fifth aspect lies in the third aspect or the fourth aspect, wherein the lid assembly further comprises a contacting portion configured to be capable of moving along the guide portion, and at least one of the contacting portion and the movable member is configured to contact the guide portion.

[0015] According to the fifth aspect, a more flexible design is possible and the need for precise molding of the contacting portion and the movable member can be reduced, thereby allowing the lid assembly, etc., to be manufactured efficiently.

[0016] The gist of a sixth aspect lies in any one of the third to fifth aspects, wherein the lid assembly is provided with a pair of the movable members, and the pair of movable members are arranged respectively on both sides of the lid assembly along the second direction.

[0017] According to the sixth aspect, the lid assembly can be configured to receive resistance from both sides of the lid assembly via the movable members, thereby allowing the lid assembly to be moved more stably.

[0018] The gist of a seventh aspect lies in any one of the first to sixth aspects, wherein the urging member comprises a leaf spring.

[0019] According to the seventh aspect, the lid assembly can be configured compactly, and the urging member can urge the movable member more stably.

[0020] The gist of an eighth aspect lies in any one of the first to seventh aspects, wherein the lid assembly further comprises a magnet, and the flavor inhaler

further comprises a magnetic sensor that detects the magnetic field of the magnet.

[0021] According to the eighth aspect, in the flavor inhaler, the position of the lid assembly can be detected, and control can be performed using information relating to the position of the lid assembly.

[0022] The gist of a ninth aspect lies in the eighth aspect, wherein: the lid assembly further comprises a supporting portion that supports the magnet, and a cover that covers the magnet; and the supporting portion and the cover are fastened together by means of a fastening member.

[0023] According to the ninth aspect, the lid assembly can securely support the magnet so that it does not fall out of the lid assembly.

[0024] The gist of a tenth aspect lies in any one of the first to ninth aspects, wherein: the housing has an opening through which a flavor generating article can be inserted; and the lid assembly is configured to be capable of moving between a closed position covering at least part of the opening and an open position in which the flavor generating article can be inserted into the opening.

[0025] According to the tenth aspect, it is possible to inhibit contamination by foreign matter through the opening through which the flavor generating article can be inserted. Furthermore, since the lid assembly comprises the movable member and the urging member, it is possible to enable the opening to be opened and closed more stably while making the flavor inhaler more compact.

[0026] The gist of an 11th aspect lies in any one of the first to tenth aspects, wherein the movable member is configured to be located in a recess formed in the outer surface of the housing in at least one of the open position and the closed position.

[0027] According to the 11th aspect, displacement of the lid assembly from the open position or the closed position as a result of an unintended contact or impact by the user can be inhibited.

[0028] According to a 12th aspect, a flavor generating system is provided. The flavor generating system comprises the flavor inhaler according to any one of the first to 11th aspects, and a flavor generating article.

[0029] According to the 12th aspect, it is possible to provide a flavor inhaler and a flavor generating system having a movable lid that allows for a more flexible configuration.

BRIEF DESCRIPTION OF DRAWINGS

[0030]

Fig. 1 is an oblique view showing a flavor generating system according to an embodiment.

Fig. 2 is an oblique view showing a flavor inhaler according to an embodiment.

Fig. 3 is a cross-sectional view showing the flavor

inhaler as viewed in the direction of the arrows 3-3 in fig. 2.

Fig. 4 is an exploded oblique view of the flavor inhaler.

Fig. 5 is an oblique view of a chamber.

Fig. 6 is a cross-sectional view showing the chamber as viewed in the direction of the arrows 6-6 in fig. 5.

Fig. 7A is a cross-sectional view showing the chamber as viewed in the direction of the arrows 7A-7A in fig. 6.

Fig. 7B is a cross-sectional view showing the chamber as viewed in the direction of the arrows 7B-7B in fig. 6.

Fig. 8 is a cross-sectional view of the chamber containing a flavor generating article.

Fig. 9 is an exploded oblique view of a flavor generating article according to an embodiment.

Fig. 10 is a schematic cross-sectional side view of the flavor generating article according to the embodiment.

Fig. 11 is an exploded oblique view of a flavor generating article according to another embodiment.

Fig. 12 is a cross-sectional view of the flavor inhaler showing an insertion guide member.

Fig. 13 is a cross-sectional side view showing the insertion guide member.

Fig. 14 is a bottom view showing the insertion guide member.

Fig. 15 is a schematic cross-sectional side view including a heating portion and the chamber.

Fig. 16 is a cross-sectional view showing the chamber, etc., as viewed in the direction of the arrows 16-16 in fig. 15.

Fig. 17 is an oblique view showing a flavor generating assembly.

Fig. 18 is an oblique view of an intermediate body including the flavor generating assembly and a case portion.

Fig. 19 is a front view showing an outer case.

Fig. 20 is a side view showing the outer case.

Fig. 21 is a plan view showing the outer case.

Fig. 22 is an exploded oblique view showing an upper member and a lid assembly.

Fig. 23 is an oblique view showing the lid assembly.

Fig. 24 is a plan view showing an upper base portion on which the lid assembly is disposed.

Fig. 25 is a plan view of the lid assembly omitting the cover.

Fig. 26A is a cross-sectional view showing a first guide portion.

Fig. 26B is a cross-sectional view showing a second guide portion.

Fig. 27A is a schematic cross-sectional view illustrating a movable member in a closed position.

Fig. 27B is a schematic cross-sectional view illustrating the movable member in an open position.

Fig. 28 is a plan view showing an urging member.
 Fig. 29 is an exploded oblique view of the lid assembly.
 Fig. 30 is a schematic cross-sectional view illustrating detection of the position of the lid assembly.
 Fig. 31 is a conceptual view illustrating how the flavor generating assembly is accommodated in the case.

DESCRIPTION OF EMBODIMENTS

[0031] Embodiments of the present invention will be described below with reference to the drawings. In the drawings described below, identical or corresponding components are assigned the same reference symbols and duplicate descriptions will not be given. Dimensions of parts in the drawings below are altered, as appropriate, for ease of understanding.

[0032] Fig. 1 is an oblique view showing a flavor generating system 1000 according to an embodiment of the present invention. Fig. 2 is an oblique view showing a flavor inhaler 200 according to an embodiment of the present invention. The flavor generating system 1000 is constructed by applying a flavor generating article 100 to a flavor inhaler 200 including a heating portion 40, discussed hereinafter. The flavor generating article 100 is at least partially accommodated in the flavor inhaler 200 via an insertion opening 210.

[0033] An X-Y-Z orthogonal coordinate system may be applied to the drawings described in the present specification for convenience of description. In this coordinate system, the Z-axis is oriented vertically upward, the X-Y plane is arranged cutting across the flavor inhaler 200 in a horizontal direction, and the Y-axis is arranged extending from a side face to a rear face of the flavor inhaler 200. The Z-axis direction may also refer to a direction of insertion of the flavor generating article 100 which is accommodated in a chamber 50 to be described later. Furthermore, the X-axis direction may also refer to a device longitudinal direction in a plane orthogonal to the insertion direction of the flavor generating article 100. The Y-axis direction may also refer to a device short-side direction in a plane orthogonal to the insertion direction of the flavor generating article 100.

[0034] The flavor inhaler 200 is configured to generate an aerosol containing a flavor by, for example, heating a stick-type flavor generating article 100 including a flavor source containing an aerosol source. As an example, the flavor generating article 100 comprises, on a tip end side in the Z-axis negative direction, a smokable material that contains a flavor source such as tobacco, and an aerosol source, and also comprises a filter in another part. Examples of aerosol sources that may be cited include glycerol, propylene glycol, triacetin, 1,3-butanediol, and mixtures thereof. The flavor generating article 100 is configured to be heated by means of a heat-not-burn flavor inhaler 200 to generate a flavor.

The flavor inhaler 200 is preferably of a heat-not-burn tobacco type.

[0035] It should be noted that, in the embodiments, the flavor generating article 100 is described as being stick-shaped, but the flavor generating article used in the flavor inhaler 200 is not limited to that shape. For example, the flavor generating article may also be configured to contain a cartridge accommodating a liquid aerosol source. Furthermore, this cartridge may include a heater.

[0036] As shown in fig. 1 and fig. 2, the flavor inhaler 200 comprises an upper member 204, an outer case 410, an outer panel 520 and a lid 208. The movable lid 208 is disposed in the upper member 204. The lid 208 is preferably a sliding cover. The outer case defines a portion of an outer face of the flavor inhaler 200 and is sized to fit in a user's hand. When the user is using the flavor inhaler 200, the user can inhale the aerosol while holding the flavor inhaler 200 in their hand.

[0037] The outer case 410 is preferably formed from a metal such as aluminum, magnesium or titanium, or an alloy containing aluminum, magnesium or titanium, etc., from the viewpoint of efficiently dissipating heat from the heating portion 40 to the outside. However, the outer case 410 is not limited to the above materials and may also be made of a resin, for example, and it is possible to select any suitable material, such as, in particular, polycarbonate (PC), ABS (acrylonitrile-butadiene-styrene) resin, PEEK (polyether ether ketone), or a polymer alloy containing multiple types of polymers.

[0038] The upper member 204 includes the insertion opening 210 for accepting the flavor generating article 100, and the lid 208 is slidably attached to the upper member 204 so as to close the insertion opening 210. Specifically, the lid 208 is configured to be capable of moving along an outer face of the upper member 204 between a closed position for closing the insertion opening 210 of the upper member 204, and an open position (the position shown in fig. 1 and fig. 2) for opening the insertion opening 210. For example, the user can manually operate the lid 208 to move the lid 208 between the closed position and the open position. By this means, the lid 208 can permit or restrict access of the flavor generating article 200 to the inside of the flavor inhaler 200.

[0039] The upper member 204 preferably comprises at least one of a metal and a resin such as PC. The metal contained in the upper member 204 can be aluminum, magnesium or titanium, or an alloy comprising aluminum, magnesium or titanium, etc. However, the upper member 204 is not limited to the above materials, and it is possible to select any suitable material, such as ABS resin, PEEK, or a polymer alloy containing multiple types of polymers. From the viewpoint of achieving a uniform aesthetic appearance, it is preferable that the material of the upper member 204 is the same as the material of the outer case 410. Conversely, from the viewpoint of making the insertion opening

210 stand out, it is preferable that the material of the upper member 204 is different from the material of the outer case 410.

[0040] In the flavor generating system 1000, air drawn in by the user is introduced from the insertion opening 210 into the flavor inhaler 200, flows through the chamber 50 in the Z-axis negative direction, and is supplied to an upstream-side end face of the flavor generating article 100. That is to say, the flavor generating system 1000 shown in fig. 1 has what is known as a counterflow-type air flow path. It should be noted that the air flow path is not limited to a counterflow-type, and may equally be what is known as a bottom-flow-type air flow path, in which air is supplied into the chamber 50 from a vent port formed in a bottom portion of the chamber 50, and is supplied to the upstream-side end face of the flavor generating article 100.

[0041] The internal structure of the flavor inhaler 200 according to an embodiment of the present invention will be described next. Fig. 3 is a cross-sectional view showing the flavor inhaler 200 as viewed in the direction of the arrows 3-3 shown in fig. 2. As shown in fig. 3, a power source portion 20, an atomizing portion 30, and a control portion 80 are provided in an internal space of flavor inhaler 200. An inner case 420 and inner panel 510 will be described later.

[0042] The control portion 80 comprises a board 81. The board 81 may include a microprocessor, etc., for example, and may control the supply of power from the power source portion 20 to the atomizing portion 30. This enables the control portion 80 to control heating of the flavor generating article 100 by the atomizing portion 30. In addition, the control portion 80 includes a communication element 82 such as a Bluetooth (registered trademark) interface. The control portion 80 can communicate with an external device via the communication element 82.

[0043] The power source portion 20 comprises a battery 21 which is electrically connected to the board 81 of the control portion 80. The power source 21 is a rechargeable battery such as a lithium ion secondary battery or a non-rechargeable battery, for example. The battery 21 is electrically connected to the atomizing portion 30 via the board 81. This allows the battery 21 to supply power to the atomizing portion 30 to heat the flavor generating article 100 appropriately.

[0044] The atomizing portion 30 comprises: the chamber 50, which extends in the longitudinal direction of the flavor generating article 100; the heating portion 40, which surrounds part of the chamber 50; a heat insulating portion 32; and a substantially cylindrical insertion guide member 34. The chamber 50 has a tubular shape for accommodating the flavor generating article 100. It should be noted that the chamber 50 may also have what is known as an elliptical shape having a major diameter and a minor diameter in a cross section perpendicular to the longitudinal direction of the flavor inhaler 200. The chamber 50 is preferably formed from

a material that is heat resistant and has a low coefficient of thermal expansion, and may, for example, be formed from a metal such as stainless steel, a resin such as PEEK, glass, or ceramic.

[0045] The heating portion 40 is configured to contact an outer circumferential face of the chamber 50 to heat the flavor generating article 100 accommodated in the chamber 50. The heating portion 40 may be a heat generating body that generates heat by means of electric power from the power source portion 20, which is to say that the temperature thereof rises. The heating portion 40 may be a sheet-like heater such as a film heater. The heating portion 40 may be provided so as to contact the outer circumferential face of the chamber 50, or may be provided on an inner face of the chamber 50. Here, the length of the heating portion 40 in the longitudinal direction is 10 mm, for example. The heater constituting the heating portion 40 may comprise a heating wire. The heater is disposed outside the chamber 50, which functions as an accommodating portion for accommodating the flavor generating article, and is configured to heat the flavor generating article 100 accommodated in the chamber 50 from outside the flavor generating article 100. The flavor inhaler 200 is thus preferably an external heating type flavor inhaler. It should be noted that the heating portion 40 is an induction coil disposed in the flavor inhaler 200, and may be configured to inductively heat a susceptor disposed in the flavor generating article 100. Alternatively, the heating portion 40 may be a microwave radiation source disposed in the flavor inhaler 200, and may be configured to heat a microwave absorber such as water or glycerin contained in the flavor generating article 100 by means of microwaves. Also, the flavor inhaler 200 may be of an internal heating type, in which case the heating portion 40 may be a pin-type or blade-type heater.

[0046] The heat insulating portion 32 is disposed surrounding the chamber 50 and the heating portion 40 and suppresses dissipation of heat to the outside of the chamber 50. The heat insulating portion 32 may be an aerogel, for example. A heat diffusing member such as a graphite sheet may be disposed between the heat insulating portion 32 and the chamber 50. The heat diffusing member may be disposed between the heat insulating portion 32 and the heating portion 40, such as a film heater, or may be disposed between the heating portion 40, such as a film heater, and the chamber 50. The insertion guide member 34 is formed from a resin material such as PEEK, PC or ABS, for example, and is provided between the lid 208, in the closed position, and the chamber 50. The insertion guide member 34 communicates with the outside of the flavor inhaler 200 when the lid 208 is in the open position, guiding insertion of the flavor generating article 100 into the chamber 50 when the flavor generating article 100 is inserted into the insertion guide member 34.

[0047] The flavor inhaler 200 may further include a

terminal 90. The terminal 90 may be an interface for connecting the flavor inhaler 200 to an external power source, for example. If the battery 21 is a rechargeable battery, connecting an external power source to the terminal 90 allows a current to flow from the external power source to the battery 21, thereby charging the battery 21. Furthermore, data relating to the operation of the flavor inhaler 200 may also be sent to an external device by connecting a data transmission cable to the terminal 90.

[0048] Fig. 4 is an exploded oblique view of the flavor inhaler 200. The flavor inhaler 200 has a flavor generating assembly 300, a case portion 400 and a panel portion 500. The case portion 400 comprises an outer case 410 and an inner case 420. The panel portion 500 comprises the inner panel 510, and the outer panel 520. It should be noted that the inner case 420 may be configured as part of the flavor generating assembly 300. In the illustrated example, the case portion 400 comprises two cases, the outer case 410 and the inner case 420, but the number of cases of the case portion 400 is not particularly limited and may be one or three or more. Also, in the illustrated example, the panel portion 500 comprises two panels, but the number of panels of the panel portion 500 is not particularly limited, and may be one or three or more.

[0049] The flavor generating assembly 300 is an assembly that includes the heating portion 40 (fig. 3) and the control portion 80. Preferably, the flavor generating assembly 300 additionally includes the chamber 50 or the power source portion 20. The flavor generating assembly 300 has a chassis 310. In the flavor generating assembly 300, the power source portion 20, the atomizing portion 30, the board 81 and a flexible printed circuit board (FPC, fig. 17), etc., are arranged on the chassis 310, which serves as a supporting body or a base. The flavor generating assembly 300 is configured such that each part is stably supported while ensuring electrical connection between the parts. The flavor generating assembly 300 is preferably stick-shaped in order to facilitate insertion thereof into the case portion 400.

[0050] The outer case 410 extends in its longitudinal direction and has a first end 414, a second end 416 on the opposite side to the first end 414 in the longitudinal direction, and a side face 415 extending from the first end 414 side to the second end 416 side. A first opening portion 411 is formed in the end face at the first end 414, and a second opening portion 412 is formed in the side face 415. The first opening portion 411 and the second opening portion 412 are connected to form one opening. The outer case 410 accommodates the inner case 420 and the flavor generating assembly 300.

[0051] The inner case 420 is a case arranged inside the outer case 410 and accommodates the flavor generating assembly 300. The inner case 420 is arranged to facilitate insertion of the flavor generating assembly 300 and to more stably support the flavor generating assembly 300. As shown in fig. 4, the inner case 420

has a bottom member 421. The bottom member 421 has an upper face 422 supporting the flavor generating assembly 300 and is configured such that the terminal 90 passes therethrough. The upper face 422 preferably extends substantially horizontally. The second end 416 of the outer case 410 is curved from the perspective of aesthetics or ease of holding, but the presence of the bottom member 421 allows the flavor generating assembly 300 to be more stably supported.

[0052] The material of the inner case 420 is not particularly limited, and may contain, for example, a resin material such as PC, PEEK, or ABS, or a metal. The metal contained in the inner case 420 may be aluminum, magnesium or titanium, or an alloy including aluminum, magnesium or titanium, etc. It should be noted that the flavor inhaler 200 does not need to include the inner case 420, and the outer case 410 may be a single case that accommodates the flavor generating assembly 300.

[0053] The flavor generating assembly 300 is accommodated in the case portion 400 in such a way that the board 81 is disposed on the second opening portion 412 side. The board 81 preferably defines a portion of the face of the flavor generating assembly 300 on the second opening portion 412 side. This inhibits situations in which the board 81 or elements in the vicinity of the board 81 come into contact with and damage the case portion 400 or the like when the flavor generating assembly 300 is inserted into the case portion 400. Also, even if the communication element 82 (fig. 3) is disposed close to the board 81, the flavor inhaler 200 can be made compact since communication is unlikely to be obstructed by the case portion 400 or the like. Furthermore, the board 81 can be accessed after the flavor generating assembly 300 has been inserted into the case portion 400. For example, the board 81 can be attached to or detached from the flavor generating assembly 300 accommodated in the case portion 400, and elements can be added to or removed from the board 81 by soldering or the like.

[0054] In the flavor generating assembly 300, the atomizing portion 30 including the heating portion 40 is preferably disposed on the opposite side of the board 81 to the second opening portion 412 side. The heating portion 40 is preferably disposed on the opposite side to the second opening portion 412 side with respect to a central axis Ax2 (fig. 17) extending in the longitudinal direction of the flavor generating assembly 300. This allows heat to be dissipated efficiently from the heating portion 40 via the case portion 400. It is more preferable that the outer case 410 and/or the inner case 420 contains a metal such as aluminum, magnesium, or titanium, or an alloy containing aluminum, magnesium, or titanium, etc., since this promotes heat dissipation.

[0055] The upper member 204 is disposed on the first opening portion 411 side of the flavor generating assembly 300. Preferably, the lid 208 disposed in the upper member 204 is capable of moving between a

position corresponding to the insertion opening 210 through which the flavor generating article 100 is inserted and a position corresponding to the board 81, in coordinates on a plane perpendicular to the longitudinal direction. If a magnet that moves integrally with the lid 208 is disposed on the lid 208, a mechanism for detecting the position of the lid 208 can be made compact by disposing a magnetic sensor on the board 81.

[0056] The panel portion 500 is configured to cover the second opening portion 412. The inner panel 530A is a panel that corresponds to the shape of the second opening portion 412 and that extends in the longitudinal direction of the outer case 410 so as to cover the second opening portion 412. The inner panel 510 is disposed inward of the outer panel 520. The outer panel 520 is configured to cover at least a portion of the inner panel 510. The outer panel 520 is preferably removably attached to the inner panel 510 or the like. In the illustrated example, the outer panel 520 is attracted to the inner panel 510 by means of magnetic force, as discussed hereinbelow. In addition, the outer panel 520 has a protrusion 524, and the protrusion 524 is inserted into a recessed portion, not shown, of the upper member 204 to more stably hold the outer panel 520 and facilitate attachment of the outer panel 520.

[0057] The inner panel 510 and the outer panel 520 may be formed from resin or metal, for example. Each of the inner panel 510 and the outer panel 520 may be formed partly from resin and partly from metal. The resin contained in the inner panel 510 or the outer panel 520 is, for example, PC, ABS resin, PEEK or a polymer alloy. The metal contained in the inner panel 510 or the outer panel 520 may be aluminum, magnesium or titanium, an alloy containing aluminum, magnesium or titanium, or stainless steel, for example.

[0058] The upper member 204 has first connecting portions 91 for connecting to the outer case 410, the inner case 420, the flavor generating assembly 300, or at least one panel of the panel portion 500. The first connecting portions 91 may have an engagement portion, such as a claw portion, and engage with other members, may have a fastening portion such as a screw hole and connect with other members by fastening, may have a fitting portion such as a protruding portion or a recessed portion and connect with other members by fitting, or may have an adhesive applied face and connect with other members by adhesion. Alternatively, the first connecting portions 91 may have a magnetic member or a magnet and be attracted to another member by means of a magnetic force. In the illustrated example, the first connecting portions 91 are claw portions and are configured to engage with the outer case 410 or the inner case 420. The first connecting portions 91 make it possible to assemble the flavor inhaler 200 more reliably and easily.

[0059] At least one panel included in the panel portion 500 may have second connecting portions 514, 526. The inner panel 510 has second connecting por-

tions 514 for connecting to the upper member 204, the outer case 410, the inner case 420, the flavor generating assembly 300, or the outer panel 520, which is another of the at least one panels. The second connecting portions 514 may have an engagement portion, such as a claw portion, and engage with other members, may have a fastening portion such as a hole through which a screw passes and connect with other members by fastening, may have a fitting portion such as a protruding portion or a recessed portion and connect with other members by fitting, or may have an adhesive applied face and connect with other members by adhesion. Alternatively, the second connecting portions 514 may have a magnetic member or a magnet and be attracted to another member by means of a magnetic force. In fig. 4, the second connecting portions 514A are holes through which screws pass, and the inner panel 510 is configured to be fastened to the flavor generating assembly 300 using screws. Furthermore, the second connecting portions 514B are magnetic members that are configured to be attracted to the second connecting portions 526, which are magnets on the outer panel 520. The second connecting portions 514 make it possible to assemble the flavor inhaler 200 more reliably and easily.

[0060] The outer panel 520 includes the second connecting portions 526 for removable connection to the upper member 204, the outer case 410, the inner case 420, the flavor generating assembly 300, or the inner panel 510, which is another of the at least one panels. The second connecting portions 526 may have an engagement portion, such as a claw portion, and engage with other members, may have a fastening portion such as a hole through which a screw passes and connect with other members by fastening, may have a fitting portion such as a protruding portion or a recessed portion and connect with other members by fitting, or may have an adhesive applied face and connect with other members by adhesion. Alternatively, the second connecting portions 526 may have a magnetic member or a magnet and be attracted to another member by means of a magnetic force. In fig. 4, the second connecting portions 526 are magnets, and are configured to be attracted to the magnetic members 514B of the inner panel 510. In fig. 4, the second connecting portions 526 provided on the face of the outer panel 520 on the inner panel 510 side are shown schematically by dashed lines. The magnets may be arranged on the inner panel 510, but are preferably disposed on the outer panel 520 to reduce the risk of adversely affecting elements in the vicinity of the board 81. The second connecting portions 526 make it possible to assemble the flavor inhaler 200 more reliably and easily.

[0061] The outer case 410 has third connecting portions 417 for connecting to the upper member 204, the inner case 420, the flavor generating assembly 300, or at least one panel of the panel portion 500. The third connecting portions 417 may have an engagement por-

tion, such as a claw portion, and engage with other members, may have a fastening portion such as a hole through which a screw passes and connect with other members by fastening, may have a fitting portion such as a protruding portion or a recessed portion and connect with other members by fitting, or may have an adhesive applied face and connect with other members by adhesion. Alternatively, the third connecting portions 417 may have a magnetic member or a magnet and be attracted to another member by means of a magnetic force. In fig. 4, the third connecting portions 417 are recessed portions and are configured to connect by fitting to projecting portions of the inner case 420. The third connecting portions 417 make it possible to assemble the flavor inhaler 200 more reliably and easily.

[0062] The inner case 420 has fourth connecting portions 423 for connecting to the upper member 204, the outer case 410, the flavor generating assembly 300, or at least one panel of the panel portion 500. The fourth connecting portions 423 may have an engagement portion, such as a claw portion, and engage with other members, may have a fastening portion such as a hole through which a screw passes and connect with other members by fastening, may have a fitting portion such as a protruding portion or a recessed portion and connect with other members by fitting, or may have an adhesive applied face and connect with other members by adhesion. Alternatively, the fourth connecting portions 423 may have a magnetic member or a magnet and be attracted to another member by means of a magnetic force. In fig. 4, the fourth connecting portions 423 are protruding portions and are configured to connect by fitting to recessed portions of the outer case 420. The fourth connecting portions 423 make it possible to assemble the flavor inhaler 200 more reliably and easily.

[0063] As discussed hereinabove, the flavor inhaler 200 may include at least one panel of the panel portion 500 which is disposed on the second opening portion 412 side of the flavor inhaler 200, and/or the upper member 204 which is located on the first end 414 side and in which the movable lid 208 is disposed. As a result, the first opening portion 411 or the second opening portion 412 can be covered, and the parts of the flavor generating assembly 300 that are exposed in the first opening portion 411 or the second opening portion 412 can be protected.

[0064] As shown in fig. 4, the flavor inhaler 200 may have a tactile switch 380 and a display portion 390. The tactile switch 380 has an ON state when pressed and an OFF state when not pressed, and is configured to generate different electrical signals in a circuit on the board 81 in the ON state and the OFF state. For example, the tactile switch 380 is configured to energize the circuit in the ON state and not energize the circuit in the OFF state. The tactile switch 380 functions as an input portion for accepting input from the user.

[0065] The display portion 390 has at least one of a

light source, such as a light emitting diode, and a screen consisting of a plurality of pixels. In the illustrated example, the inner panel 510 has through-holes 512 that penetrate through in the thickness direction, and the outer panel 520 has window portions 522 in positions facing the through-holes 512 in the thickness direction. The display portion 390 is configured such that translucent display window portions forming optical paths are inserted into the through-holes 512, and is configured to emit light to the outside of the flavor inhaler 200 through the translucent window portions 522 of the outer panel 520.

[0066] Also, in the present embodiment, at least the part of the inner panel 510 in the vicinity of the through-holes 512 and at least the part of the outer panel 520 in the vicinity of the window portions 522 are configured to be elastically deformable under a pressing force from the user. Furthermore, the tactile switch 380 is disposed facing the display portion 390 in the thickness direction of the inner panel 510, and is configured such the tactile switch 380 switches between an ON state and an OFF state under a pressing force from the user.

[0067] It should be noted that, instead of or in addition to the tactile switch 380, the flavor inhaler 200 may include any interface, such as a button or a touch panel, that accepts input from the user. Also, the form of the display portion 390 and the optical path are not particularly limited to the above example, provided that the user is able to acquire information via the display portion 390.

[0068] Fig. 5 is an oblique view of the chamber 50. Fig. 6 is a cross-sectional view of the chamber 50 as viewed in the direction of the arrows 6-6 shown in fig. 5. Fig. 7A is a cross-sectional view of the chamber 50 as viewed in the direction of the arrows 7A-7A shown in fig. 6. Fig. 7B is a cross-sectional view of the chamber 50 as viewed in the direction of the arrows 7B-7B shown in fig. 6. Fig. 8 is a cross-sectional view, as viewed in the direction of the arrows 7B-7B, of a state in which the flavor generating article 100 has been disposed in a desired position within the chamber 50.

[0069] As shown in fig. 5 and fig. 6, the chamber 50 may be a tubular member including a chamber opening 52 into which the flavor generating article 100 is inserted, and a tubular side wall portion 60 that accommodates the flavor generating article 100.

[0070] As shown in fig. 6 and fig. 7, the side wall portion 60 includes contacting portions 62 and spaced-apart portions 66. When the flavor generating article 100 is disposed in a desired position within the chamber 50, the contacting portions 62 contact or press a portion of the flavor generating article 100, and the spaced-apart portions 66 are spaced apart from the flavor generating article 100. It should be noted that, in the present disclosure, "a desired position within the chamber 50" refers to a position in which the flavor generating article 100 is heated appropriately, or the position of the flavor generating article 100 when the

user inhales flavor. The contacting portions 62 each have an inner surface 62a and an outer surface 62b. The spaced-apart portions 66 each have an inner surface 66a and an outer surface 66b. The heating portion 40 is disposed on the outer surfaces 62b of the contacting portions 62. The heating portion 40 is preferably disposed on the outer surfaces 62b of the contacting portions 62 without a gap. It should be noted that the heating portion 40 may contain an adhesive layer. In this case, the heating portion 40 containing the adhesive layer is preferably disposed on the outer surfaces 62b of the contacting portions 62 without a gap.

[0071] As shown in fig. 5 and 6, the outer surfaces 62b of the contacting portions 62 are planar. Since the outer surfaces 62b of the contacting portions 62 are planar, if strip-shaped electrodes connected to the heating portion 40 are disposed on the outer surfaces 62b of the contacting portions 62, flexing of the electrodes can be suppressed. As shown in fig. 6 and fig. 7, the inner surfaces 62a of the contacting portions 62 are planar. Furthermore, as shown in fig. 6 and fig. 7, the contacting portions 62 have a uniform thickness.

[0072] As shown in fig. 5 and fig. 6, the chamber 50 preferably has a cylindrical non-holding portion 54 between the chamber opening 52 and the side wall portion 60. In a state in which the flavor generating article 100 is positioned in a desired position in the chamber 50, gaps may be formed between the non-holding portion 54 and the flavor generating article 100. Furthermore, as shown in fig. 5 and fig. 6, the chamber 50 preferably has chamber guide portions 58 having tapered surfaces 58a that connect the inner surface of the non-holding portion 54 and the inner surfaces 62a of the contacting portions 62.

[0073] As shown in fig. 5, fig. 6 and fig. 7B, the chamber 50 has two contacting portions 62 in the circumferential direction of the chamber 50, and the two contacting portions 62 face each other and are substantially parallel to each other. The distance between the inner surfaces 62a of the two contacting portions 62 is, at least partially, preferably less than the width of the part of the flavor generating article 100 that is disposed between the contacting portions 62 when inserted into the chamber 50.

[0074] As shown in Fig. 7B, the inner surfaces 66a of the spaced-apart portions 66 may have an overall arc-shaped cross-section in a plane orthogonal to the longitudinal direction (Z-axis direction) of the chamber 50. Furthermore, the spaced-apart portions 66 are arranged so as to be adjacent to the contacting portions 62 in the circumferential direction.

[0075] As shown in fig. 6 and 7A, a step 560 is formed in the bottom portion 56 of the chamber 50. The step 560 is configured to expose at least a portion of the end face of the flavor generating article 100. Furthermore, the bottom portion 56 may support a portion of the flavor generating article 100 such that the exposed end face of the flavor generating article 100

communicates with voids 67 (see fig. 8) discussed hereinafter. The step 560 is not limited to the illustrated shape provided that air can be introduced into the flavor generating article 100.

[0076] Fig. 8 is a cross-sectional view at the same position as in fig. 7B, in a state in which the flavor generating article 100 is disposed in the desired position within the chamber 50. As shown in fig. 8, when the flavor generating article 100 is disposed in the desired position within the chamber 50, the flavor generating article 100 may come into contact with and be pressed by the contacting portions 62 of the chamber 50. Meanwhile, voids 67 are formed between the flavor generating article 100 and the spaced-apart portions 66. The voids 67 may provide communication between the chamber opening 52 and the end face of the flavor generating article 100 positioned within the chamber 50. This allows air that has flowed in from the chamber opening 52 to pass through the voids 67 and flow into the inside of the flavor generating article 100. In other words, air flow paths (the voids 67) are formed between the flavor generating article 100 and the spaced-apart portions 66.

[0077] Fig. 9 is an exploded oblique view of the flavor generating article 100. Furthermore, fig. 10 is a schematic cross-sectional side view of the flavor generating article 100. As shown in fig. 9 and fig. 10, the flavor generating article 100 comprises: a flavor source 221 for generating a flavor; and a tip-end plug 112 disposed on the upstream side of the flavor source 221. More specifically, in the illustrated example, the flavor generating article 100 comprises, in order from the tip-end side (i.e., the opposite side to a mouthpiece): the tip-end plug 112; a flavor-generating portion 220; a hollow tube portion 132; a hollow filter 240; and a filter plug 250. These five components are joined by using an outer plug wrap 280, an outer plug wrap 260, and a tipping paper 270.

[0078] The flavor-generating portion 220 is disposed adjacently downstream of the tip-end plug 112. The flavor-generating portion 220 comprises: the flavor source 221, and a wrapping paper 222 wrapped around the flavor source 221. There is no particular restriction on the form of the flavor-generating portion 220 provided that it has a well-known form, and it is normally in a form in which the flavor source 221 is wrapped with the wrapping paper 222. The flavor-generating portion 220 is formed by wrapping the flavor source 221 with the wrapping paper 222 so that the flavor source 221 is on the inside.

[0079] The flavor source 221 may include at least one of a flavoring such as menthol and a natural material such as tobacco. The flavor source 221 may contain a tobacco filler. The tobacco filler is not particularly restricted, and may comprise at least one of tobacco shreds and tobacco sheets obtained by processing tobacco shreds into sheets. The flavor-generating portion 220 may contain an aerosol source. There is no parti-

cular limitation as to the type of aerosol source, and extracts from various types of natural products and/or components thereof may be selected depending on the purpose of use.

[0080] There is no particular restriction on the configuration of the wrapping paper 222 used in the flavor generating article 100, and it may take a general form. Specifically, the wrapping paper may comprise pulp as its main component, for example. Pulps which may be used include wood pulps such as softwood pulp and hardwood pulp, flax pulp, hemp pulp, sisal pulp, and esparto, etc., and it is possible to use a pulp which is generally used in a wrapping paper for a tobacco product, and the wrapping paper may be obtained by a papermaking process employing one or more of these pulps. These pulps may be used alone, or several types of pulps may be combined in any proportions for use. Forms of pulp which may be used include chemical pulp, ground pulp, chemiground pulp, and thermo-mechanical pulp, etc. which are obtained by means of kraft digestion, acid/neutral/alkaline sulfite digestion, and soda digestion, etc.

[0081] As shown in fig. 9 and 10, the tip-end plug 112 is positioned at the tip end of the flavor generating article 100 and is configured to cover the end portion of the flavor source 221. This makes it possible to prevent the flavor source 221 from falling out from the flavor generating article 100. Specifically, the tip-end plug 112 comprises a first filler material 211, and a first inner plug wrap 212 wrapped around the first filler material 211. The tip-end plug 112 may further include an aerosol source carried by the first filler material 211.

[0082] There is no particular restriction on the material of the first inner plug wrap 212 and a well-known material may be used. The first inner plug wrap 212 may contain a filler such as calcium carbonate, or the like. There is no particular restriction on the thickness of the first inner plug wrap 212, and it is normally 20 μm -140 μm , preferably 30 μm -130 μm , and more preferably 30 μm -120 μm . There is no particular restriction on the basis weight of the first inner plug wrap 212, but it is normally 20 gsm-100 gsm, preferably 22 gsm-95 gsm, and more preferably 23 gsm-90 gsm. Furthermore, the first inner plug wrap 212 may be coated or uncoated, but is preferably coated with a desired material from the viewpoint of allowing functions other than strength and structural rigidity to be imparted.

[0083] As shown in fig. 9, the flavor generating article 100 preferably has a downstream portion 130 disposed on the downstream side of the flavor source 221. In this case, the vapor or aerosol generated by the flavor source 221 can be cooled and filtered in the downstream portion 130. Specifically, the downstream portion 130 preferably includes the filter plug 250. This enables the vapor or aerosol generated by the flavor source to be cooled and filtered in the filter plug 250.

[0084] The filter plug 250 is positioned in the end portion, on the mouthpiece side, of the flavor generat-

ing article 100. The filter plug 250 comprises a second filler material 251, and a second inner plug wrap 252 wrapped around the second filler material 251. There is no particular restriction as to the filter material used in the second filler material 251, provided that it has the general functions of a filter. Examples of general functions of the filter which may be cited include adjusting the amount of air which is mixed when the aerosol, etc. is drawn in, lightening the flavor, and lightening nicotine and tar, etc., but the filter material used in the second filler material 251 need not have all of these functions. Furthermore, in an electrically heated tobacco product, which generates fewer components and tends to have a lower filling ratio of tobacco filler than a cigarette product, an important function of the filter also lies in preventing the tobacco filler from falling out, while controlling a filtration function.

[0085] A material produced by means of a production method, discussed hereinafter, for example, may be used for the filter material constituting the second filler material 251 of the filter plug 250, and it is also possible to use a commercially available product. Furthermore, there is no particular restriction on the form of the filter plug 250, and it is possible to form a plain filter comprising a single filter segment, or a multi-segment filter comprising multiple filter segments, such as a dual filter or a triple filter, or the like.

[0086] There is no particular restriction on the form of the second filler material 251 constituting the filter plug 250, and a well-known form may be adopted. For example, a component obtained by processing cellulose acetate tow into a cylindrical shape may be used as the second filler material 251. In the case of a filter filled with cellulose acetate tow, triacetin may be added in an amount of 5 wt%-10 wt% with respect to the weight of the cellulose acetate tow, in order to improve filter hardness. Furthermore, a paper filter filled with sheet-like paper pulp may also be used instead of the acetate filter.

[0087] The filter plug 250 may include the second inner plug wrap 252 (wrapping paper) wrapped around the second filler material 251, discussed hereinafter, from the viewpoint of improving strength and structural rigidity. There is no particular restriction on the form of the second inner plug wrap 252, and it may include a seam comprising one or more lines of adhesive. There is no particular limitation as to the adhesive, but it may comprise a vinyl acetate-based adhesive or a hot-melt adhesive, and the hot-melt adhesive may comprise polyvinyl alcohol. Furthermore, if the filter segment comprises two or more segments, the second inner plug wrap 252 is preferably wrapped around both of these two or more segments.

[0088] There is no particular restriction on the material of the second inner plug wrap 252, and a well-known material may be used, and it may furthermore include a filler such as calcium carbonate, etc. There is no particular restriction on the thickness of the second inner

plug wrap 252, and it is normally 20 μm -140 μm , preferably 30 μm -130 μm , and more preferably 30 μm -120 μm . There is no particular restriction on the basis weight of the second inner plug wrap 252, but it is normally 20 gsm-100 gsm, preferably 22 gsm-95 gsm, and more preferably 23 gsm-90 gsm. Furthermore, the second inner plug wrap 252 may be coated or uncoated, but is preferably coated with a desired material from the viewpoint of allowing functions other than strength and structural rigidity to be imparted.

[0089] As shown in fig. 9 and fig. 10, the hollow filter 240 and the filter plug 250 may be connected by the outer plug wrap 260 (outside wrap paper), for example. The outer plug wrap 260 may be a cylindrical paper, for example.

[0090] The downstream portion 130 may further comprise the hollow tube portion 132 and the hollow filter 240. The hollow filter 240 is disposed adjacently downstream of the hollow tube portion 132. The hollow filter 240 may comprise: a filtration material 241 having one or more hollow portions; and a third inner plug wrap 242 wrapped around the filtration material 241. There is no particular restriction on the third inner plug wrap 242, and the same plug wrap as used in cigarettes may, for example, be used. The third inner plug wrap 242 may be omitted. Furthermore, the hollow filter 240 may be omitted.

[0091] The hollow tube portion 132 is a rod-shaped member which is adjacently interposed between the flavor-generating portion 220 and the hollow filter 240 or the filter plug 250 (when there is no hollow filter 240), and is normally provided with a cavity which is cylindrical or the like, the circumferential cross section thereof forming a hollow (enclosed space). The length of the hollow tube portion 132 in the long axis direction may be appropriately varied according to the size of the product, but it is normally 15 mm or greater and preferably 20 mm or greater, and is normally 40 mm or less, preferably 35 mm or less, and more preferably 30 mm or less. By setting the length of the hollow tube portion 132 in the long axis direction at or above the above-mentioned lower limit, it is possible to ensure a sufficient cooling effect and to obtain a pleasant flavor, and by setting the length at or below the above-mentioned upper limit, it is possible to inhibit loss caused by adhesion of the generated vapor and aerosol to an inner wall of the hollow tube portion 132.

[0092] As shown in fig. 9 and 10, the hollow tube portion 132 may be provided with air flow holes vf (also referred to as a "ventilation filter" in this technical field) which are in the circumferential direction and concentric. The presence of the air flow holes vf allows air to flow into the hollow tube portion 132 from the outside during use, and enables a reduction in the temperature of air and components flowing in from the flavor-generating portion 220. The air flow holes vf may be provided in a region lying at least 4 mm in the direction of the hollow tube portion 132 side from a boundary between

the hollow tube portion 132 and the hollow filter 240 or the filter plug 250 (when there is no hollow filter 240). In this case, the air flow holes vf can not only enhance the cooling capability of the hollow tube portion 132, but also can also suppress stagnation of components generated by means of heating inside the hollow tube portion 132, and increase the amount of delivery of those components. It should be noted that when an aerosol source is used in the flavor-generating portion 220, a vapor containing the aerosol source and the tobacco flavor component generated as a result of the flavor generating article 100 being heated is liquefied by a reduction in temperature caused by contact with external air, making it possible to promote aerosol generation.

[0093] There is no particular restriction on the configuration of the outer plug wrap 280, and it may take a general form. Specifically, the outer plug wrap 280 may comprise pulp as its main component, for example. Pulps which may be used include wood pulps such as softwood pulp and hardwood pulp, flax pulp, hemp pulp, sisal pulp, and esparto, etc., and it is possible to use a pulp which is generally used in a wrapping paper for a tobacco article, and the outer plug wrap 280 may be obtained by a papermaking process employing one or more of these pulps. These pulps may be used alone, or several types of pulps may be combined in any proportions for use. Forms of pulp which may be used include chemical pulp, ground pulp, chemiground pulp, and thermomechanical pulp, etc. which are obtained by means of kraft digestion, acid/neutral/alkaline sulfite digestion, and soda digestion, etc. It should be noted that a commercially available article may be used for the outer plug wrap 280. There is no particular restriction on the shape of the outer plug wrap 280, and it may have a square or rectangular shape, for example. The outer plug wrap 280 may include at least one of a filler, an auxiliary agent, and a coating agent.

[0094] There is no particular restriction on the configuration of the tipping paper 270, and it may take a general form. Specifically, the tipping paper 270 may comprise pulp as its main component, for example. Pulps which may be used include wood pulps such as softwood pulp and hardwood pulp, flax pulp, hemp pulp, sisal pulp, and esparto, etc., and it is possible to use a pulp which is generally used in a wrapping paper for a tobacco article, and the tipping paper 270 may be obtained by a papermaking process employing one or more of these pulps. These pulps may be used alone, or several types of pulps may be combined in any proportions for use. Forms of pulp which may be used include chemical pulp, ground pulp, chemiground pulp, and thermomechanical pulp, etc. which are obtained by means of kraft digestion, acid/neutral/alkaline sulfite digestion, and soda digestion, etc. It should be noted that a commercially available article may be used for the tipping paper 270. There is no particular restriction on the shape of the tipping paper 270, and it may have a

square or rectangular shape, for example. Furthermore, the flavor generating article 100 may include one tipping paper 270, but it may equally include multiple tipping papers 270. The tipping paper 270 may include at least one of a filler, an auxiliary agent, a coating agent, and a lip-release material that assists in easy separation, substantially without adhesion, of the lips and the tipping paper 270 when the user holds the mouthpiece of the flavor generating article 100 in their mouth.

[0095] A mode of joining of the components constituting the flavor generating article 100 will be described next. In fig. 9, gaps are provided between the components to make it easier to see how the components are joined, but the components of the actual flavor generating article 100 are adjacent without gaps, as shown in fig. 10. In the flavor generating article 100 shown in fig. 9, the five components are joined by using the outer plug wrap 280, the outer plug wrap 260, and the tipping paper 270. Specifically, as shown in fig. 9, the outer plug wrap 280 joins the tip-end plug 112, the flavor-generating portion 220, and the hollow tube portion 132. Here, the outer plug wrap 280 is wound so as to cover the whole of the tip-end plug 112 and the flavor-generating portion 220, and part of the hollow tube portion 132. This joined body will be referred to as a first joined body 285. Furthermore, the outer plug wrap 260 is wound so as to join the hollow filter 240 and the filter plug 250 while also covering same in their entirety. This joined body will be referred to as a second joined body 265. The tipping paper 270 further joins the first joined body 285 and the second joined body 265. Here, the tipping paper 270 covers the whole of the second joined body 265 and part of the first joined body 285, while exposing the first joined body 285 at its upstream end. It should be noted that in the example shown in fig. 9, the outer plug wrap 280 exposes the hollow tube portion 132 at its downstream end, without covering the hollow tube portion 132 as far as its downstream end, but the hollow tube portion 132 may equally be covered as far as its downstream end. In this case, perforations are preferably provided in the outer plug wrap 280 and the tipping paper 270 at positions directly above the air flow holes v_f provided in the hollow tube portion 132. As a result, the air flow holes v_f are preferably provided so as to penetrate through the tipping paper 270, the outer plug wrap 280, and the hollow tube portion 132.

[0096] Fig. 11 is an exploded oblique view of a flavor generating article 100 according to another embodiment. The flavor generating article 100 shown in fig. 11 differs from the flavor generating article 100 shown in fig. 9 and 10 only in the mode of joining thereof. In the flavor generating article 100 shown in fig. 11, the five components are joined by using the outer plug wrap 280, the outer plug wrap 260, and the tipping paper 270. Specifically, as shown in fig. 11, the outer plug wrap 280 is wound so as to join the tip-end plug 112 and the flavor-generating portion 220 while also cover-

ing same in their entirety. This joined body will be referred to as a first joined body 285. Furthermore, in the example shown in fig. 11, the outer plug wrap 260 is wound so as to join the hollow filter 240 and the filter plug 250 while also covering same in their entirety. This joined body will be referred to as a second joined body 265. The tipping paper 270 further joins the first joined body 285, the hollow tube portion 132, and the second joined body 265. Here, the tipping paper 270 covers the whole of the hollow tube portion 132 and the second joined body 265, and part of the first joined body 285, while exposing the first joined body 285 at its upstream end. The five components may be joined in a form such as shown in fig. 11. It should be noted that in fig. 11, the outer plug wrap 280 covers the flavor-generating portion 220 as far as its downstream end, but the outer plug wrap 280 may equally expose the flavor-generating portion 220 at its downstream end, without covering the flavor-generating portion 220 as far as its downstream end.

[0097] It should be noted that the form of the flavor generating article 100 is not particularly limited to the example discussed hereinabove, provided that the heating portion 40 can heat the flavor generating article 100 inserted into the flavor inhaler 200 to generate flavor. For example, the flavor generating article 100 does not need to include the tip-end plug 112.

[0098] As shown in fig. 1, when the flavor generating article 100 has been suitably inserted into the chamber 50 of the flavor inhaler 200, part of the flavor generating article 100 may be exposed to the outside of the flavor inhaler 200. Specifically, in the state shown in fig. 1, part or all of the second joined body 265 shown in fig. 9 or fig. 11 may be exposed to the outside of the flavor inhaler 200. Furthermore, in the state shown in fig. 1, part of the hollow tube portion 132 shown in fig. 9 or fig. 11 may be exposed to the outside of the flavor inhaler 200. In this case, the air flow holes v_f formed in the hollow tube portion 132 may be exposed to the outside of the flavor inhaler 200, or may be positioned on the inside of the flavor inhaler 200 (upstream of the insertion opening 210 for insertion of the flavor generating article 100). The air flow holes v_f formed in the hollow tube portion 132 are preferably located on the inside of the flavor inhaler 200 so that the air flow holes v_f cannot easily be blocked by the user.

[0099] Fig. 12 is a drawing showing a lateral cross-section of the chamber 50 and the insertion guide member 34, parallel to the insertion direction of the flavor generating article 100. The tubular insertion guide member 34 is located on the insertion opening 210 side of the chamber 50, and the interior of the insertion guide member 34 communicates with the interior of the chamber 50. The flavor inhaler 200 may have a tubular gasket 36 that is disposed radially outward, with respect to the central axis Ax_1 of the chamber 50, of the end portion of the chamber 50 on the chamber opening 52 side. The gasket 36 has a rib 37

on its inner circumferential surface on the chamber 50 side, and is configured such that a projecting portion 53 of the chamber 50 that projects radially outward from the tip end of the chamber 50 on the chamber opening 52 side is supported by the rib 37. The projecting portion 53 is further pressed in the insertion direction by an end face of the insertion guide member 34 from the opposite side to the rib 37.

[0100] The flavor inhaler 200 may have a sealing member 38 located between the gasket 36 and the insertion guide member 34. This makes it possible to inhibit undesirable components such as sidestream smoke generated by the heating performed by the heating portion 40 from adversely affecting equipment, etc., inside the flavor inhaler 200. The sealing member 38 is preferably disposed in contact with the inner circumferential surface of the gasket 36 and the outer circumferential surface of the insertion guide member 34. The sealing member 38 preferably contains fluororubber, and more preferably comprises an O-ring containing fluorine rubber, from the viewpoint of having low gas permeability.

[0101] Fig. 13 and 14 are a lateral cross-section and a bottom view showing an example of the insertion guide member 34. The insertion guide member 34 has a pair of first protruding portions 334A and a pair of second protruding portions 334B. Fig. 13 is a cross-sectional view of the insertion guide member 34 cut along the central axis Ax1, showing the arrangement of the first protruding portions 334A and the second protruding portions 334B in the insertion direction of the flavor generating article 100. Figure 14 is a bottom view of the insertion guide member 34, showing the arrangement of the first protruding portions 334A and the second protruding portions 334B in the circumferential direction of the flavor generating article 100. As in the illustrated example, the chamber 50 and the insertion guide member 34 are preferably arranged coaxially. By arranging the first protruding portions 334A and the second protruding portions 334B spaced apart from one another, the range of contact between the flavor generating article 100 and the insertion guide member 34 is reduced. As a result, when the flavor generating article 100 is pulled out after flavor inhalation, breaking or bending of the flavor generating article 100 can be inhibited.

[0102] As shown in fig. 13 and 14, the shape of the first protruding portions 334A and the shape of the second protruding portions 334B are different. As shown in fig. 13, the pair of first protruding portions 334A extend along the central axis Ax1, and in a cross-section of the insertion guide member 34 that passes through the central axis Ax1, the first protruding portions 334A each have an inclined portion 336 that approaches the central axis Ax1 with increasing distance toward the chamber 50 side in the insertion direction. The inclined portions 336 may be substantially linear or may be arc-shaped. Preferably, the inclined portions 336 have a

convex shape that faces in the radially inward direction. The first protruding portions 334A press and grip the inserted flavor generating article 100 from both sides.

[0103] As shown in fig. 14, the pair of second protruding portions 334B have an inner circumferential surface that is curved along an imaginary circle 326 centered on the central axis Ax1. The second protruding portions 334B preferably have a concave shape that faces in the radially inward direction in this way. The second protruding portions 334B can restrict the angle of the flavor generating article 100 when the flavor generating article 100 is pulled out after flavor inhalation, thereby inhibiting breaking or bending of the flavor generating article 100. From the viewpoint of preventing the angle of the flavor generating article 100 from being excessively restricted and thus making it difficult to pull the flavor generating article 100 out, the radius of the imaginary circle 326 is preferably greater than the radius of the flavor generating article 100. It should be noted that the form of the insertion guide member 34 is not particularly limited provided that the flavor generating article 100 can be inserted into the chamber 50 and flavor inhalation is possible.

[0104] Fig. 15 is an enlarged cross-sectional view including the heating portion 40 and the chamber 50. Fig. 15 shows a cross-section parallel to the insertion direction of the flavor generating article 100. Fig. 16 is a cross-sectional view perpendicular to the insertion direction, as viewed in the direction of the arrows 16-16 shown in fig. 15. As shown in fig. 15 and fig. 16, the atomizing portion 30 comprises a first heat insulating portion 361 constituting the heat insulating portion 32, sealing portions 362, a fixing portion 363, and a sensor 391.

[0105] The first heat insulating portion 361 is disposed so as to cover at least a portion of the chamber 50 and suppresses dissipation of heat to outside of the chamber 50. The first heat insulating portion 361 has a multilayer structure in which a heat-resistant sheet-like heat insulating member 364 is wound in multiple layers around the tubular part of the chamber 50. Here, the sheet-like heat insulating member 364 is a glass fiber sheet that includes aerogel particles, for example a member obtained by coating a glass fiber sheet with aerogel ink and drying the aerogel ink, and has a heat resistant temperature of approximately 350°C and a thermal conductivity of approximately 25 mW/mK.

[0106] Aerogel inhibits heat conduction because internal pores are partitioned into spaces smaller than the mean free path of air (approximately 70 nm), so air convection is not possible. It should be noted that the mean pore size is preferably approximately 50 nm or less. Furthermore, aerogel has a low density and therefore suppresses heat conduction. In other words, aerogel provides high thermal insulation by virtue of the structure described above. It should be noted that the aerogel may include, for example, a silica aerogel, a carbon aerogel, or a porous structure comprising

fumed silica, etc.

[0107] Here, the innermost surface of the first heat insulating portion 361 is in contact with the chamber 50 and/or the heating portion 40, and the outermost surface of the first heat insulating portion 361 is spaced
5 apart from the inner surface of the case portion 400. Furthermore, the first heat insulating portion 361 has a multilayer structure in which the single sheet-like heat insulating member 364 is wound consecutively in six layers around the tubular part of the chamber 50.

[0108] In other words, the first heat insulating portion 361 is configured by first bringing one end of the sheet-like heat insulating member 364 into contact with the outer circumferential surface of the prepared chamber 50 and/or the heating portion 40, and then continuously wrapping the sheet-like heat insulating member 364
10 around the tubular part of the chamber 50 for six layers. Here, the first heat insulating portion 361 may have a multilayer structure in which the sheet-like heat insulating member 364 is wound, for example, in 3 to 7 layers.

[0109] The sealing portions 362 are disposed to cover both ends of the first heat insulating portion 361 in the longitudinal direction of the flavor inhaler 200. The sealing portions 362 reduce the ingress of air into the first heat insulating portion 361. The sealing portions 362 may, for example, be a sponge washer formed from foam having a closed-cell structure that does not allow air to pass through. Since a sponge washer formed from foam with a closed-cell structure has a certain degree of softness, the fit can be improved in comparison with a case in which silicone rings or the like are used as the sealing portions 362. Furthermore, using sponge washers formed from foam having a closed-cell structure as the sealing portions 362 makes it possible to inhibit shedding of powder from the first insulating portion 361 compared with foam having an open-cell structure. There is no particular restriction on the material of the sponge washers constituting the sealing portions 362, and it may, for example, contain a resin such as silicone resin. The sponge washers constituting the sealing portions 362 may be formed with incisions to facilitate attachment.

[0110] The fixing portion 363 is disposed to cover the first heat insulating portion 361 and the sealing portions 362, and fixes the first heat insulating portion 361 and the sealing portions 362. The fixing portion 363 may be a resin film, for example a heat shrinkable tube or a polyimide (PI) film. The fixing portion 363 presses and fixes the first heat insulating portion 361 and the sealing portions 362 against the chamber 50. In fig. 15, the fixing portion 363 is omitted from the illustration.

[0111] The sensor 391 is disposed between the layers of the first heat insulating portion 361 and measures the temperature of the chamber 50. The sensor 391 may be a temperature sensor such as a thermistor or a thermocouple. The temperature of the chamber 50 measured by the sensor 391 is output to the control portion 80 in order to control heating of the flavor gen-

erating article 100 by the atomizing portion 30. As shown in fig. 15, the sensor 391 has a lead 392 that is electrically connected to the control portion 80. The lead 392 extending from between the layers of the first insulating portion 361 may be pressed against the chamber 50 by the sealing portion 362. Pressing the lead 392 against the chamber 50 by means of the sealing portion 362 makes it possible to inhibit movement of the lead 392 and deformation of the first insulating portion 361, even if a force is applied to the lead 392, since the sealing portion 362 holds the lead 392.

[0112] It should be noted that the form of the first insulating portion 361 and the sealing portions 362 is not particularly limited to the example discussed hereinabove, provided that the flavor generating article 100 inserted into the flavor inhaler 200 can be heated by the heating portion 40 and flavor can be inhaled by the user.

[0113] Fig. 17 is an oblique view showing the flavor generating assembly 300. Fig. 18 is an oblique view showing an intermediate body 700 comprising the flavor generating assembly 300 and the case portion 400 in which the flavor generating assembly 300 is accommodated. As shown in fig. 17, the flavor generating assembly 300 comprises the power source portion 20, the atomizing portion 30, the control portion 80, the terminal 90, the chassis 310, a bracket 320, and a flexible printed circuit board (FPC) 330. The flavor generating assembly 300 compactly integrates multiple parts of the flavor inhaler 200, making it possible to make the flavor inhaler 200 compact and to facilitate assembly of the flavor inhaler 200. Although there is no particular restriction on the parts of the flavor inhaler 200 that are included in the flavor generating assembly 300, the flavor generating assembly 300 preferably includes the heating portion 40 and the control portion 80, and more preferably also includes at least one of the power source portion 20 and the chamber 50. Since the power source portion 20 and the chamber 50 are components of the flavor inhaler 200 that have a relatively large volume, integrating these components into the flavor generating assembly 300 allows the flavor inhaler 200 to be made more compact.

[0114] As shown in fig. 18, in the flavor inhaler 200, the flavor generating assembly 300 is positioned so as to face the first opening portion 411 in the longitudinal direction of the outer case 410 and to face the second opening portion 412 perpendicular to the longitudinal direction of the outer case 410. This allows the flavor generating assembly 300 to be easily inserted into the case portion 400 using a simple configuration while preventing the adverse effects of contact between the members arranged on the second opening portion 412 side of the flavor generating assembly 300 and the case portion 400.

[0115] As shown in fig. 17, the flavor generating assembly 300 has a central axis Ax2 that extends in the longitudinal direction. As can be seen from fig. 3 and

fig. 17, the communication element 82 is located on the second opening portion 412 side of the central axis Ax2. This allows electromagnetic waves from the communication element 82 to pass more easily through the second opening portion 412, further reducing the risk of communication being obstructed by the case portion 400, etc.

[0116] As shown in fig. 18, the board 81 is preferably disposed on the second opening portion 412 side of the flavor generating assembly 300. The board 81 is preferably located in the flavor generating assembly 300 on the second opening portion 412 side of the central axis Ax2. This makes it possible to prevent adverse effects such as damage to the elements of the control portion 80 resulting from contact with the case portion 400 when the flavor generating assembly 300 is inserted into the case portion 400, and also makes it possible to reduce the risk of communication being obstructed by the case 400, etc., even if the communication element 82 (fig. 3) is disposed near the board 81, thereby allowing the flavor inhaler 200 to be made more compact.

[0117] The chassis 310 functions as a supporting body for each part of the flavor generating assembly 300. There is no particular limitation as to the material constituting the chassis 310, but the chassis 310 may comprise a resin such as PC or a metal, etc.

[0118] The bracket 320 is configured to hold members such as the board 81, and to prevent detachment thereof. In the illustrated example, the bracket 320 is attached to the chassis 310. The material constituting the bracket 320 is not particularly limited, but the bracket 320 can, for example, comprise a metal such as stainless steel. The bracket 320 may be configured to cover a portion of the board 81.

[0119] In the illustrated example, the leads from the heating portion 40, the battery 21, the board 81 and the terminal 90 are electrically connected via the FPC 330. Using the FPC 330 allows the flavor generating assembly 300 to be made light and compact. The FPC 330 can be electrically connected to any electrical or electronic components of the flavor generating assembly 300.

[0120] Fig. 19 is a front view of the outer case 410, fig. 20 is a side view of the outer case 410, and fig. 21 is a plan view of the outer case 410. The outer case 410 has an opening 413, and the opening 413 is an opening obtained by connecting the first opening portion 411 formed at the first end 414 of the outer case 410 and the second opening portion 412 formed in the side face 415. The side face 415 is formed so as to surround a central axis Ax3 extending in the longitudinal direction of the outer case 410, and defines the outer circumferential surface of the outer case 410.

[0121] The first opening portion 411 is formed at the first end 414 such that the central axis Ax3 passes through the first opening portion 411. In other words, the first opening portion 411 opens in the longitudinal

direction toward the upper member 204. The first opening portion 411 is located in the end face of the first end 414, and the end face is formed so as to intersect the central axis Ax3, as shown in fig. 20.

[0122] The first opening portion 411 has dimensions that allow the flavor generating assembly 300 to be inserted into the outer case 410 through the first opening portion 411. The maximum width of the first opening portion 411 in a direction perpendicular to the longitudinal direction is preferably greater than the maximum width of the flavor generating assembly 300 in the same direction. The first opening portion 411 is preferably configured such that the flavor generating assembly 300 can be inserted in the longitudinal direction.

[0123] The second opening portion 412 has dimensions that prevent the flavor generating assembly 300 that has been inserted into the outer case 410 from falling out through the second opening portion 412. This ensures that the flavor generating assembly 300 that has been inserted into the outer case 410 through the first opening portion 411 is stably held within the case portion 400, and facilitates subsequent assembly work.

[0124] As shown in fig. 19, the width of the second opening portion 412 perpendicular to the longitudinal direction of the outer case 410 is a first width W1. The direction in which this first width W1 is measured is defined as the width direction. Furthermore, as shown in fig. 17, the width of the flavor generating assembly 300 in this width direction is a second width W2. At a certain position in the longitudinal direction of the outer case 410, the first width W1 is preferably less than the second width W2. This makes it possible to more reliably prevent the flavor generating assembly 300 that has been inserted into the outer case 410 from falling out through the second opening portion 412. For example, the first width W1 can be less than the second width W2 at a position, in the longitudinal direction, where the chamber 50 is present, the board 81 is present, the chassis 310 is present, or the power supply portion 20 is present. It should be noted that the outer case 410 may have at least one protrusion that protrudes in the width direction from the side wall 415 along the second opening portion 412. For example, the protrusions may be provided so as to protrude in the width direction from the opening edge portion of the side wall 415 that meets the second opening portion 412. The position and shape of the protrusions is not particularly restricted, but they are preferably provided on both sides of the second opening portion 412 in the width direction, and such a pair of protrusions may be provided at one or more positions in the insertion direction. Such a configuration makes it possible to further inhibit the flavor generating assembly 300 falling out from the case portion 400, and to prevent the inner panel 510 from entering the interior of the outer case 410 as a result of an impact or the like.

[0125] As shown in fig. 19, the second opening por-

tion 412 extends from the first end 414 side toward the second end 416 side. The second opening portion 412 preferably extends in the longitudinal direction of the outer case 410. The length of the outer case 410 in the longitudinal direction is defined as a first length L1, and the length of the second opening portion 412 in the longitudinal direction is defined as a second length L2. The position of the upper end of the second opening portion 412 may, for example, be set to an upper limit height that can be set such that the flavor generating assembly 300 does not pass through the second opening portion 412 during insertion.

[0126] The second length L2 is preferably greater than 50% of the first length L1, more preferably greater than 60% thereof, still more preferably greater than 70% thereof, and even more preferably greater than 80% thereof. The greater the second length L2, the more reliably it is possible to inhibit adverse effects such as damage resulting from contact between the members disposed on the second opening portion 412 side of the flavor generating assembly 300 and the case portion 400 when the flavor generating assembly 300 is inserted into the case portion 400. The second opening portion 412 may extend toward the second end 416 side beyond the distal end of the board 81 on the second end 416 side, from the viewpoint of protecting the board 81 and the surrounding elements. From a similar viewpoint, the second length L2 may be set on the basis of the position of the board 81.

[0127] As shown in fig. 19, the outer case 410 may have a third connecting portion 417. In the illustrated example, the third connection 417 is a recessed portion formed in the inner circumferential surface of the outer case 410, and is configured to fit together with a protruding portion (not shown) formed in the outer circumferential surface of the inner case 420. As discussed hereinabove, the form of the third connecting portion 417 is not particularly limited, and it may connect to another member by engagement or fastening, for example.

[0128] As shown in fig. 21, the outer case 410 may have a terminal insertion opening 419 through which an external terminal to be connected to the terminal 90 is inserted. The terminal insertion opening 419 is formed in the second end 416. The position and size of the terminal insertion opening 419 are not particularly restricted. For example, the terminal insertion opening 419 may equally be formed in the side face 415.

[0129] Fig. 22 is an exploded oblique view including the upper member 204 and the lid 208. The lid 208 is configured to be capable of moving in a direction intersecting the insertion direction of the flavor generating article 100. As shown in fig. 22, the upper member 204 may include a cap portion 207 and an upper base portion 209. The upper member 204 constitutes at least a part of the housing of the flavor inhaler 200. The upper member 204 may also be referred to as a first end side member that is disposed on the first end 414 side of the

outer case 410. Hereinafter, in the insertion direction of the flavor generating article 100, the side on which the insertion opening 210 is disposed (the Z-axis positive side) is referred to as the upper side, and the side on which the second end 416 of the outer case 410 is disposed (the Z-axis negative side) is referred to as the lower side. In the illustrated example, protruding portions 814, etc. of the lid 208, discussed hereinafter, are located between the cap portion 207 and the upper base portion 209 to restrict movement of the lid 208 in the insertion direction. This allows the upper base portion 209 to have a simpler configuration than in a case in which a slider that movably supports the lid is provided in the upper base portion, and allows the flavor inhaler 200 to be made more compact.

[0130] The material of the cap portion 207 is not particularly restricted, and may contain at least one of a metal and a resin. The metal contained in the cap portion 207 may be aluminum, magnesium or titanium, or an alloy including aluminum, magnesium or titanium, etc. The cap portion 207 may, for example, comprise anodized aluminum. The cap portion 207 and the upper base portion 209 may define a recessed portion in which at least part of the lid 208 is accommodated (see fig. 1 and 2). As shown in fig. 22, the cap portion 207 may have a cap opening 206, and the cap opening 206 may be the opening of this recessed portion.

[0131] The material of the upper base portion 209 is not particularly restricted, and may comprise at least one of a resin and a metal. If the lid 208 includes a magnet 850, as discussed hereinbelow, it is preferable that the upper base portion 209 does not contain a material that shields against magnetism. The upper base portion 209 may, for example, comprise PC. The upper base portion 209 preferably defines the insertion opening 210 for the flavor generating article 100, as shown in fig. 22. Furthermore, the upper base portion 209 may have a supporting surface 290 that supports the lid 208, and the supporting surface 290 may include the bottom surface of the recessed portion of the upper member 204. The supporting surface 290 may restrict movement of the lid 208 in the insertion direction during movement thereof.

[0132] Fig. 23 is an oblique view showing the lid 208 according to the present embodiment. Fig. 24 is a plan view of the upper base portion 209 in which the lid 208 is disposed on the supporting surface 290. As shown in fig. 23, the lid 208 may be formed as a lid assembly 800 comprising a plurality of members, and this case will be described below. As shown in fig. 23, the lid assembly 800 may include a cover 810, movable members 820 and contacting portions 830. The movable members 820 may include a first movable member 821 and a second movable member 822.

[0133] In the example shown in fig. 22 and 24, the lid assembly 800 is configured to move with a slightly downward tilt, approximately in the device longitudinal direction (X-axis direction). In fig. 24, the direction of

movement of the lid assembly 800 is shown schematically by the arrow Ar1. In the example in fig. 24, the lid assembly 800 is disposed in the closed position, and when moved to the positive side in the X-axis direction, it moves to the open position in which the insertion opening 210 is exposed to allow insertion of the flavor generating article 100. Hereinafter, simply referring to the "direction of movement" refers to the direction of movement of the lid assembly 800, and the direction perpendicular to the direction of movement and the direction of insertion of the flavor generating article 100 is referred to as the transverse direction. The direction of movement of the lid assembly 800 is not particularly limited to the illustrated example. For clarity, in fig. 23 and fig. 25 discussed hereinafter, the coordinate axes are set, by way of example, for a case in which the direction of movement is the X-axis and the transverse direction is the Y-axis.

[0134] The flavor inhaler 200 according to the present embodiment may be configured such that the upper member 204, which is the housing, includes the insertion opening 210, which is an opening through which the flavor generating article 100 can be inserted, and the lid assembly 800 is capable of moving between the closed position covering at least a part of the insertion opening 210, and the open position in which the flavor generating article 100 can be inserted into the insertion opening 210. This makes it possible to inhibit the ingress of foreign matter from the insertion opening 210. Furthermore, since the lid assembly 800 includes the movable member 820 and an urging member 860, discussed hereinafter, it is possible to enable the insertion opening 210 for the flavor generating article 100 to be opened and closed more stably while reducing the size of the flavor inhaler 200.

[0135] The cover 810 protects the members included in the lid assembly 800. The material of the cover 810 is not particularly restricted, and may contain at least one of a metal and a resin. The metal contained in the cover 810 may be aluminum, magnesium or titanium, or an alloy including aluminum, magnesium or titanium, etc. The cover 810 may, for example, comprise anodized aluminum. As shown in fig. 23, the cover 810 may include a cover main body 811 and protruding portions 814.

[0136] As shown in fig. 23, the cover main body 811 may include an upper plate 812 and a cover side wall 813. The upper plate 812 is preferably configured such that the user can move the lid assembly 800 while touching the upper plate 812 with a finger. The cover side wall 813 is preferably configured to surround each member inside the lid assembly 800. The shape of the cover main body 811 is not particularly limited, and the entire cover main body 811 may, for example, be composed of a curved surface.

[0137] The projecting portions 814 are configured to cover part of the contacting portions 830, from the viewpoint of aesthetics or protection of the contacting

portions 830. As shown in fig. 23, the protruding portions 814 may include protruding portions 814A, 814B, 814C and 814D. As shown in fig. 24, the protruding portions 814A and 814B may protrude from the cover side wall 813 in the transverse direction and be located on both sides of the first movable member 821 in the direction of movement. The protruding portions 814C and 814D may protrude from the cover side wall 813 in the transverse direction and be located on both sides of the second movable member 822 in the direction of movement.

[0138] The protruding portion 814A is located both above a contacting portion 830A, discussed hereinafter, and on the side of the contacting portion 830A on the opposite side to the first movable member 821 in the direction of movement. The protruding portion 814B is located both above a contacting portion 830B, discussed hereinafter, and on the side of the contacting portion 830B on the opposite side to the first movable member 821 in the direction of movement. The protruding portion 814C is located both above a contacting portion 830C, discussed hereinafter, and on the side of the contacting portion 830C on the opposite side to the second movable member 822 in the direction of movement. The protruding portion 814D is located both above a contacting portion 830D, discussed hereinafter, and on the side of the contacting portion 830D on the opposite side to the second movable member 822 in the direction of movement. It should be noted that, although four protruding portions 814 are shown in the illustrated example, the number of protruding portions 814 is not particularly limited, and may be one to three or five or more.

[0139] The side wall of the protruding portion 814A on the opposite side to the first movable member 821 in the movement direction may abut an open position stopper 715 (fig. 24) in the open position. The side wall of the protruding portion 814C on the opposite side to the second movable member 822 in the movement direction may abut an open position stopper 725 in the open position. At least one of the open position stoppers 715 and 725 may be an inner wall of the upper base portion 209. Thus, a configuration may be adopted in which movement of the lid assembly 800 in the movement direction at the open position is restricted by contact between the side walls of the protruding portions 814 farthest toward the open position side and the open position stoppers 715 and 725. This makes it possible for movement of the lid assembly 800 in the open position to be restricted more reliably, and, for example, for detection of the magnet 850 in the open position to be performed more stably.

[0140] The side wall of the protruding portion 814B on the opposite side to the first movable member 821 in the movement direction may abut a closed position stopper 716 in the closed position. The side wall of the protruding portion 814D on the opposite side to the second movable member 822 in the movement direc-

tion may abut a closed position stopper 726 in the closed position. At least one of the closed position stoppers 716 and 726 may be an inner wall of the upper base portion 209. Thus, a configuration may be adopted in which movement of the lid assembly 800 in the movement direction at the closed position is restricted by contact between the side walls of the protruding portions 814 farthest toward the closed position side and the closed position stoppers 716 and 726. This makes it possible for movement of the lid assembly 800 in the closed position to be restricted more reliably, and, for example, for adverse effects such as the insertion opening 210 not being adequately covered to be suppressed. It should be noted that the insertion opening 210 is preferably completely covered in the closed position. This makes it possible to suppress an unnatural impression or a loss of aesthetic appearance.

[0141] It should be noted that the cover main body 811 may equally be configured to abut the stoppers in the open position or the closed position to restrict movement of the lid assembly 800. However, by adopting a configuration in which the protruding portions 814 abut the open position stoppers 715, 725 or the closed position stoppers 716, 726 in at least one of the open position and the closed position, without the cover main body 811 abutting the stoppers, it is possible for wear of the surface of the cover main body 811, resulting in loss of aesthetic appearance, to be suppressed. Here, it is considered that wear of the surface of the protruding portions 814 is less noticeable than wear of the surface of the cover 811.

[0142] As shown in fig. 24, the upper base portion 209 may have guide portions 7. The guide portions 7 may include a first guide portion 710 and a second guide portion 720, which are a pair of guide portions 7 located on both sides of the lid assembly 800 in the transverse direction. As shown in fig. 24, the first guide portion 710 and the second guide portion 720 may be formed so as to extend in the direction of movement and face each other in the transverse direction. Each guide portion 7 is preferably a groove formed in the outer surface of the upper base portion 209, which is the housing. This allows the lid assembly 800 to be guided using a simple configuration by utilizing the shape of the grooves.

[0143] The contacting portions 830 (fig. 23) are configured to be capable of moving along the guide portions 7. The contacting portions 830 may be configured to come into contact with the guide portions 7 to restrict movement of the lid assembly 800 in the transverse direction. The contacting portions 830 are preferably in slidable contact with the guides 7. As shown in fig. 24, the contacting portions 830 may be formed protruding from the cover side wall 813 in the transverse direction. The contacting portions 830 may be configured such that they do not need to come into contact with the guide portions 7 at all times. The contacting portions

830 and/or the movable members 820 may be configured to come into contact with the guide portions 7. This allows for a more flexible design and also reduces the need for precision molding of the contacting portions 830 and the movable members 820, thereby enabling efficient manufacture of the lid assembly 800 and the upper member 204.

[0144] As shown in fig. 23, the contacting portions 830 may include a contacting portion 830A, a contacting portion 830B, a contacting portion 830C, and a contacting portion 830D. As shown in fig. 23, the contacting portions 830A and 830B may be located on both sides of the first movable member 821 in the direction of movement. The contacting portions 830C and 830D may be located on both sides of the second movable member 822 in the direction of movement. The contacting portions 830 extend from a lid base portion 840 (fig. 25), discussed hereinafter, but the form of the contacting portions 830 is not particularly limited, and they may be formed on the cover 810. It should be noted that although four contacting portions 830 are shown in the illustrated example, the number of contacting portions 830 is not particularly limited and may be one to three, or five or more.

[0145] Fig. 25 is a plan view of the lid assembly 800 omitting the cover 810. The lid assembly 800 has an urging member 860 that urges the movable members 820. The movable members 820 and the urging member 860 are attached to the lid assembly 800 so as to move integrally with the lid assembly 800. Here, the indication that the members "move integrally" means that the members move in conjunction with the movement of the lid assembly 800 and are not in contact with or supported by any part of the flavor inhaler 200 other than the lid assembly 800. As can be seen from fig. 24 and 25, the movable members 820 may be configured to be capable of moving relative to the lid assembly 800 in a direction that intersects the direction of movement while moving integrally with the lid assembly 800 in the direction of movement. Here, capable of moving "relative to the lid assembly 800" means capable of moving relative to part of the lid assembly 800 excluding the movable members 820, or relative to a central axis that extends perpendicular to the direction of movement of the lid assembly 800 and the transverse direction. The movable members 820 may be capable of moving relative to the urging member 860 or the lid base portion 840.

[0146] As shown in fig. 25, the lid assembly 800 may include the lid base portion 840 that supports the movable members 820 and the urging member 860. The lid base portion 840 may support at least one of the first movable member 821, the second movable member 822 and the urging member 860. The lid base portion 840 may be configured to support the movable members 820 and the urging member 860 on its upper surface, with the lower surface of the lid base portion 840 in contact with the supporting surface 290 of the upper

base portion 209.

[0147] As shown in fig. 25, the urging member 860 is configured to urge the movable members 820 in an urging direction (corresponding to an example of a second direction) that intersects the direction of movement of the lid assembly 800 (corresponding to an example of a first direction). As shown in fig. 24, the movable members 820 can restrict movement of the lid assembly 800 by being urged to come into contact with the guide portions 7. The movable members 820 are preferably configured to be capable of moving along the guide portions 7. This allows the movement of the lid assembly 800 to be adjusted by utilizing contact between the guide portions 7 and the movable members 820, for example the lid assembly 800 can be made less liable to shift from a desired position, such as the open position or the closed position, by utilizing the fact that the lid assembly 800 moves while the urged movable members 820 are in contact with the wall surfaces of the guide portions 7. As shown in fig. 25, the urging direction of the urging member 860 is preferably substantially perpendicular to the direction of movement of the lid assembly 800, is more preferably substantially perpendicular to the direction of movement and the insertion direction of the flavor generating article 100, and is even more preferably the transverse direction. This allows for more stable adjustment of the movement of the lid assembly 800.

[0148] In the present embodiment, the urging member 860 urges the movable members 820 in the urging direction intersecting the direction of movement, allowing for a more flexible configuration compared, for example, to a configuration in which the urging member comes into direct contact with the guide portions 7. For example, since the urging member 860 does not need to come into contact with the guide portions 7, a material and shape more suitable for urging can be selected. Also, since the movable members 820 do not necessarily need to be elastic, a material and shape suitable for allowing movement relative to the guide portions 7, in particular sliding contact, can be selected. In the present embodiment, the flavor inhaler 200 can be made compact since the mechanism for sliding, such as the urging member 860 and the movable members 820, is disposed outside the housing formed by the upper member 204, in particular inside the lid assembly 800.

[0149] As shown in fig. 25, the lid assembly 800 may include the first movable member 821 and the second movable member 822 as a pair of movable members 820. The first movable member 821 and the second movable member 822 may be arranged on both sides of the lid assembly 800 along the urging direction. This allows the lid assembly 800 to be configured to receive resistance from both sides of the lid assembly 800 via the movable members 820, thereby allowing the lid assembly 800 to be moved more stably. As shown in fig. 25, there may be gaps C2 and C1 between the first movable member 821 and the second movable mem-

ber 822, respectively, and the lid base portion 840 in the urging direction. Each of the first movable member 821 and the second movable member 822 may be configured to be capable of moving the width of the gap C1 and the width of the gap C2 in the urging direction.

[0150] As shown in fig. 25, the movable members 820 may each be in the shape of a plate extending in the direction of movement and in the transverse direction. The shape of the movable members 820 is not particularly limited, provided that they are capable of moving integrally with the lid assembly 800 and are capable of moving relative to the lid assembly 800 in the urging direction. The material of the movable members 820 is not particularly restricted, and may include at least one of a resin and a metal, preferably including at least one of polyoxymethylene (POM) and PC. POM is more preferred for the movable members 820 from the viewpoint of being less susceptible to wear and generating less noise when the lid assembly 800 is moved.

[0151] As shown in fig. 24, the first guide portion 710 may have an intermediate portion 711, a closed position recess 712 and an open position recess 713. The second guide portion 720 may have an intermediate portion 721, a closed position recess 722 and an open position recess 723. The intermediate portion 711, the closed position recess 712, and the open position recess 713 may be positioned so as to face the intermediate portion 721, the closed position recess 722, and the open position recess 723, respectively, in the transverse direction.

[0152] Fig. 26A and 26B are schematic cross-sectional views of the upper base portion 209 parallel to the XY plane at the location where the guide portions 7 are present in the Z-axis direction. In the example in fig. 26A, the closed position recess 712 is a recess in the side wall constituting the first guide portion 710 with which the first movable member 821 comes into contact when the lid assembly 800 is in the closed position. The open position recess 713 is a recess in the side wall constituting the first guide portion 710 with which the first movable member 821 comes into contact when the lid assembly 800 is in the open position. In the direction of movement, an intermediate portion 711 is located between the closed position recess 712 and the open position recess 713, and the side wall constituting the intermediate portion 711 is offset toward the lid assembly 800 from at least one of the closed position recess 712 and the open position recess 713. Preferably, the first movable member 821 is located in the closed position recess 712 in the closed position and in the open position recess 713 in the open position. This makes it possible to inhibit displacement of the lid assembly 800 from the open position or the closed position due to unintentional contact or impact, etc. by the user.

[0153] In the example in fig. 26B, the closed position recess 722 is a recess in the side wall constituting the

second guide portion 720 with which the second movable member 822 comes into contact when the lid assembly 800 is in the closed position. The open position recess 723 is a recess in the side wall constituting the second guide portion 720 with which the second movable member 822 comes into contact when the lid assembly 800 is in the open position. In the direction of movement, an intermediate portion 721 is located between the closed position recess 722 and the open position recess 723, and the side wall constituting the intermediate portion 721 is offset toward the lid assembly 800 from at least one of the closed position recess 722 and the open position recess 723. Preferably, the second movable member 8212 is located in the closed position recess 722 in the closed position and in the open position recess 723 in the open position.

[0154] As shown in fig. 26A, the first guide portion 710 may have an inclined surface 714A between the intermediate portion 711 and the closed position recess 712 in the direction of movement. The inclined surface 714A may be inclined relative to the direction of movement and the transverse direction so as to face toward the closed position. The inclined surface 714A can guide the urged first movable member 821, which is in contact with the inclined surface 714A, toward the closed position. As a result, if the lid assembly 800 is displaced from the closed position due to unintended contact or impact, etc., by the user, a force acts to return it to the closed position, thereby further suppressing displacement of the lid assembly 800 from the closed position. From a similar viewpoint, as shown in fig. 26B, the second guide portion 720 may have an inclined surface 724A between the intermediate portion 721 and the closed position recess 722 in the direction of movement. The inclined surface 724A may be inclined relative to the direction of movement and the transverse direction so as to face toward the closed position. The inclined surface 724A can guide the urged second movable member 822, which is in contact with the inclined surface 724A, toward the closed position.

[0155] As shown in fig. 26AA the first guide portion 710 may have an inclined surface 714B between the intermediate portion 711 and the open position recess 713 in the direction of movement. The inclined surface 714B may be inclined relative to the direction of movement and the transverse direction so as to face toward the open position. The inclined surface 714B guides the urged first movable member 821, which is in contact with the inclined surface 714B, toward the open position. As a result, if the lid assembly 800 is displaced from the open position due to unintended contact or impact, etc., by the user, a force acts to return it to the open position, thereby further suppressing displacement of the lid assembly 800 from the open position. From a similar viewpoint, as shown in fig. 26B, the second guide portion 720 may have an inclined surface 724B between the intermediate portion 721 and the

open position recess 723 in the direction of movement. The inclined surface 724B may be inclined relative to the direction of movement and the transverse direction so as to face toward the open position. The inclined surface 724B guides the urged second movable member 822, which is in contact with the inclined surface 724B, toward the open position. It should be noted that by adjusting the inclination of the inclined surface 714A, etc., a click mechanism that makes a clicking sound can also be obtained.

[0156] As discussed hereinabove, the movable members 820 according to the present embodiment may be configured to be located in recesses R (closed position recesses 721, 722 or open position recesses 713, 723) formed in the guide portions 7, which are the outer surface of the housing, in at least one of the open position and the closed position. It should be noted that the positions, shape and number of recesses R formed in the guide portions 7 are not particularly limited. For example, recesses R may also be provided in the guide portions 7 such that the lid assembly 800 is not readily displaced from a desired position other than the open position and the closed position. Furthermore, either of the first guide portion 710 or the second guide portion 720 may have no recesses R or inclinations. In this case, there may be only one movable member 820. Furthermore, the number of movable members 820 is not particularly limited, and may be three or more, with multiple movable members 820 arranged on at least one side of the lid assembly 800, for example.

[0157] Fig. 27A is a schematic cross-sectional view illustrating an example of the first movable member 821 in the closed position. As shown in fig. 27A, the first movable member 821 may have a contacting edge 823 that contacts the recess R in the open position and the closed position. The contacting edge 823 preferably extends in the direction of movement. The first movable member 821 may have an inclined edge 824A that contacts the inclined surface 714A in the closed position. The inclined edge 824A is formed so as to be inclined from the direction of movement. The inclined edge 824A is preferably located on the open position side of the first movable member 821 in the direction of movement. The inclined edge 824A may have a shape corresponding to the inclined surface 714A of the first guide member 710. More specifically, it is preferable that the inclined edge 824A and the inclined surface 714A are substantially parallel to one another in a plane that includes the direction of movement and the transverse direction. For example, the angle between the inclined edge 824A and the inclined surface 714A in a plane that includes the direction of movement and the transverse direction can be set to no more than 5 degrees. This allows the lid assembly 800 to be held in the closed position more stably.

[0158] As shown in fig. 27A, the protruding portion 814B abuts the closed position stopper 716 in the closed position, thereby restricting movement of the lid

assembly 800 in the direction of movement. Here, when the protruding portion 814B abuts the closed position stopper 716, it is preferable that the contacting edge 823 contacts the closed position recess 712 and the inclined edge 824A contacts the inclined surface 714A or faces the inclined surface 714A across a small gap. In this way, the protruding portion 814B and the first movable member 821 have shapes corresponding to the closed position stopper 716, the closed position recess 712 and the inclined surface 714A, thereby holding the lid assembly 800 in a more precise position in the closed position. From a similar viewpoint, it is preferable that, in the closed position, the protruding portion 814D (fig. 24) and the second movable member 822 have shapes corresponding to the closed position stopper 726, the closed position recess 722 (fig. 26B) and the inclined surface 724A.

[0159] Fig. 27A is a schematic cross-sectional view illustrating an example of the first movable member 821 in the open position. As shown in fig. 27B, the first movable member 821 may have an inclined edge 824B that contacts the inclined surface 714B in the open position. The inclined edge 824B is formed so as to be inclined from the direction of movement. The inclined edge 824B is preferably located on the closed position side of the first movable member 821 in the direction of movement. The inclined edge 824B may have a shape corresponding to the inclined surface 714B of the first guide member 710. More specifically, it is preferable that the inclined edge 824B and the inclined surface 714B are substantially parallel to one another in a plane that includes the direction of movement and the transverse direction. For example, the angle between the inclined edge 824B and the inclined surface 714B in a plane that includes the direction of movement and the transverse direction can be set to no more than 5 degrees. This allows the lid assembly 800 to be held in the open position more stably.

[0160] As shown in fig. 27B, the protruding portion 814A abuts the open position stopper 715 in the open position, thereby restricting movement of the lid assembly 800 in the direction of movement. Here, when the protruding portion 814A abuts the open position stopper 715, it is preferable that the contacting edge 823 contacts the open position recess 713 and the inclined edge 824B contacts the inclined surface 714B or faces the inclined surface 714B across a small gap. In this way, the protruding portion 814A and the first movable member 821 have shapes corresponding to the open position stopper 715, the open position recess 713 and the inclined surface 714B, thereby holding the lid assembly 800 in a more precise position in the open position. From a similar viewpoint, it is preferable that, in the open position, the protruding portion 814C (fig. 24) and the second movable member 822 have shapes corresponding to the open position stopper 725, the open position recess 723 (fig. 26B) and the inclined surface 724B.

[0161] Fig. 28 is a plan view of the urging member 860. As shown in fig. 28, the urging member 860 may have a first arm 861, a second arm 862 and an attachment portion 863. The first arm 861 and the second arm 862 may have flexibility in the transverse direction, and may have a shape obtained by folding a plate-shaped or rod-shaped metal member. The first arm 861 may have a first arm contacting portion 8610 on the first movable member 821 side in the transverse direction, and the first arm contacting portion 8610 may be configured to contact the first movable member 821. The second arm 862 may have a second arm contacting portion 8620 on the second movable member 822 side in the transverse direction, and the second arm contacting portion 8620 may be configured to contact the second movable member 822. As shown in fig. 25 and 28, the attachment portion 863 may be a plate-shaped member that extends along the direction of movement and the transverse direction, and may be configured such that the lower surface thereof is supported by the lid base portion 840.

[0162] As shown in fig. 28, the urging member 860 is preferably a leaf spring. Including a leaf spring in the urging member 860 allows the lid assembly 800 to be made compact and enables the movable members 820 to be urged more stably. It should be noted that the shape of the urging member 860 is not particularly limited to the illustrated example. Furthermore, the position and number of the urging member 860 are not particularly limited, and the lid assembly 800 may have a plurality of urging members 860 that urge the first movable member 821 or the second movable member 822, respectively.

[0163] Fig. 29 is an exploded oblique view of the lid assembly 800. As shown in fig. 25 and 29, the lid assembly 800 may include a magnet 850. The magnet 850 is preferably configured to move integrally with the lid assembly 800.

[0164] Fig. 30 is a schematic cross-sectional view illustrating detection of the position of the lid assembly 800. As shown in fig. 30, the inhalation device 200 may have a magnetic sensor 83 for detecting the magnetic field of the magnet 850. This allows the control portion 80 to detect the position of the lid assembly 800 and to perform control using information relating to the position of the lid assembly 800. For example, to prevent unintentional heating by the user, the control portion 80 can prevent the heating portion 40 from heating when the lid assembly 800 is in the closed position. The magnetic sensor 83 can be disposed below the upper base portion 209, and is preferably provided on the board 81 from the viewpoint of compactly configuring the flavor inhaler 200. The magnetic sensor 83 may be provided in at least one position in the direction of movement of the lid assembly 800 indicated by arrow Ar1.

[0165] As shown in fig. 25 and 29, the lid assembly 800 may have a fastening member 880 that fastens the cover 810 and the lid base portion 840 together. For

example, the fastening member 880 may comprise a screw. As shown in fig. 29, the cover 810 may be disposed so as to cover the magnet 850. Furthermore, the lid base portion 840 may function as a supporting portion for supporting the magnet 850. Such a configuration allows the magnet 850 to be firmly supported so that it does not fall out of the lid assembly 800. For example, if control is performed such that heating is possible only when the lid assembly 800 is in the open position, then if the magnet 850 falls out of the lid assembly 800, it may not be possible to detect that the lid assembly is in the open position, and heating may not be possible. Thus, it may be important to ensure that the magnet 850 does not fall out of the lid assembly 800 as this may affect the control of the control portion 80. As shown in fig. 29, the lid base portion 840 may have a magnet accommodating portion 843 that has a side wall surrounding the magnet 850 and that accommodates the magnet 850. Furthermore, the lid base portion 840 may be formed with a base portion through-hole 844 through which the fastening member 880 passes.

[0166] As shown in fig. 25 and 29, the lid assembly 800 may have adhesive tape 870 for bonding the cover 810 and the urging member 860. It should be noted that the lid assembly 800 may have a cushion (not shown) located between the magnet 850 and the cover 810. For example, this cushion penetrates through the attachment portion 863 (fig. 28) of the urging member 860 and is disposed so as to be compressed between the magnet 850 and the cover 810. This makes it possible to inhibit positional displacement of the urging member 860 in the X and Y directions, and to reduce the transmission of impacts on the cover 810 to members inside the lid assembly 800, such as the urging member 860. In this case, the adhesive tape 870 may be located between the cushion and the urging member 860.

[0167] A method for manufacturing the flavor inhaler 200 will now be described. This manufacturing method includes at least the following first to fourth steps. The first step to the fourth step are performed in numerical order. In the first step, the case portion 400, including the outer case 410, and the flavor generating assembly 300 are prepared.

[0168] In the second step, the inner case 420 is inserted into the outer case 410. The inner case 420 is preferably inserted through the first opening portion 411 of the outer case 410. The inner case 420 may be fixed to the inside of the outer case 410 by engagement using claw members (not shown), by fitting using fitting portions, or by bonding using an adhesive. It is to be noted that if the flavor inhaler 200 does not include the inner case 420, the second step may be omitted. Alternatively, the inner case 420 may be inserted into the outer case 410 in the third step as part of the flavor generating assembly 300.

[0169] In the third step, the flavor generating assembly

300 is inserted into the case portion 400. The flavor generating assembly 300 is inserted into the outer case 410 through the first opening portion 411, and the flavor generating assembly 300 is mounted inside the outer case 410.

[0170] Fig. 31 is an oblique view showing the third step schematically. Fig. 31 schematically shows the point at which the flavor generating assembly 300 is moving in the insertion direction toward the outer case 410 in which the inner case 420 has been disposed. The flavor generating assembly 300 may be inserted into the outer case 410 from the end on the opposite side to the insertion opening 210 for the flavor generating article 100 (the end on which the terminal 90 is formed). In the illustrated example, the terminal 90 is inserted into a through-hole formed in the bottom member 421 of the inner case 420 so that the terminal 90 can be connected to an external terminal (not shown) inserted from the terminal insertion opening 419 of the outer case 410. When the flavor generating assembly 300 is inserted into the outer case 410, the intermediate body 700 (fig. 18) is obtained.

[0171] In the fourth step, other members included in the flavor inhaler 200 are attached to the intermediate body 700 comprising the flavor generating assembly 300 and the outer case 410. For example, the upper member 204, the inner panel 510 and the outer panel 520 are attached to the intermediate body 700. It should be noted that removable members such as the outer panel 520 may not be attached to the flavor inhaler 200 during the manufacturing stage, and may be provided as accessories.

[0172] Embodiments of the present invention have been described above, but the present invention is not limited to those embodiments, and various modifications are possible within the scope of the technical concept disclosed in the claims, specification and drawings. Moreover, any shape or material not directly stated in the specification or the drawings also falls within the scope of the technical concept of the invention of the present application provided that the action and effect of the invention of the present application are exhibited thereby.

[0173] According to a first aspect of the present invention, a flavor inhaler comprises a housing and a lid assembly that is capable of moving in a first direction, wherein: the lid assembly comprises an urging member and a movable member capable of moving relative to the lid assembly; the urging member and the movable member are configured to move integrally with the lid assembly; and the urging member is configured to urge the movable member in a second direction intersecting in the first direction.

[0174] According to a second aspect of the present invention, in the first aspect, the second direction is substantially perpendicular to the first direction.

[0175] According to a third aspect of the present invention, in the first or second aspect, the housing is

provided with a guide portion, and the movable member is configured to be capable of moving along the guide portion.

[0176] According to a fourth aspect of the present invention, in the third aspect, the guide portion is a 5 groove formed in an outer surface of the housing.

[0177] According to a fifth aspect of the present invention, in the third or fourth aspect, the lid assembly further comprises a contacting portion configured to be 10 capable of moving along the guide portion, and at least one of the contacting portion and the movable member is configured to contact the guide portion.

[0178] According to a sixth aspect of the present invention, in any one of the third to fifth aspects, the lid assembly is provided with a pair of the movable members, and the pair of movable members are arranged 15 respectively on opposite sides of the lid assembly along the second direction.

[0179] According to a seventh aspect of the present invention, in any one of the first to sixth aspects, the 20 urging member is a leaf spring.

[0180] According to an eighth aspect of the present invention, in any one of the first to seventh aspects, the lid assembly further comprises a magnet, and the flavor 25 inhaler further comprises a magnetic sensor that detects the magnetic field of the magnet.

[0181] According to a ninth aspect of the present invention, in the eighth aspect: the lid assembly further comprises a supporting portion that supports the magnet, and a cover that covers the magnet; and the supporting 30 portion and the cover are fastened together by means of a fastening member.

[0182] According to a tenth aspect of the present invention, in any one of the first to ninth aspects: the housing has an opening through which a flavor generating 35 article can be inserted; and the lid assembly is configured to be capable of moving between a closed position covering at least part of the opening and an open position in which the flavor generating article can be inserted into the opening.

[0183] According to an eleventh aspect of the present invention, in any one of the first to tenth aspects, the movable member is configured to be located in a 40 recess formed in the outer surface of the housing in at least one of the open position and the closed position.

[0184] According to a twelfth aspect of the present invention, a flavor generating system comprises the flavor inhaler according to any one of the first to eleventh 45 aspects, and a flavor generating article.

REFERENCE SIGNS LIST

[0185]

- 7: Guide portion
- 20: Power source portion
- 30: Atomizing portion
- 34: Insertion guide member

- 40: Heating portion
- 50: Chamber
- 80: Control portion
- 81: Board
- 83: Magnetic sensor
- 100: Flavor generating article
- 200: Flavor inhaler
- 204: Upper member
- 208: Lid
- 209: Upper base portion
- 300: Flavor generating assembly
- 310: Chassis
- 320: Gasket
- 330: Flexible printed circuit board
- 400: Case portion
- 410: Outer case
- 411: First opening portion
- 412: Second opening portion
- 413: Opening
- 414: First end of outer case
- 415: Side face of outer case
- 416: Second end of outer case
- 420: inner case
- 500: Panel portion
- 510: Inner panel
- 520: Outer panel
- 700: Intermediate body
- 710: First guide portion
- 711, 721: Intermediate portion
- 712, 722: Closed position recess
- 713, 723: Open position recess
- 720: Second guide portion
- 724A, 724B, 724C, 724D: Inclined surface
- 800: Lid assembly
- 810: Cover of lid assembly
- 814, 814A, 814B, 814C, 814D: Protruding portion
- 820: Movable member
- 821: First movable member
- 822: Second movable member
- 830, 830A, 830B, 830C, 830D: Contacting portion
- 840: Lid base portion
- 850: Magnet
- 860: Urging member
- 880: Fastening member
- 1000: Flavor generating system
- Ax1: Central axis of insertion guide member
- Ax2: Central axis of flavor generating assembly
- Ax3: Central axis of outer case
- R: Recess

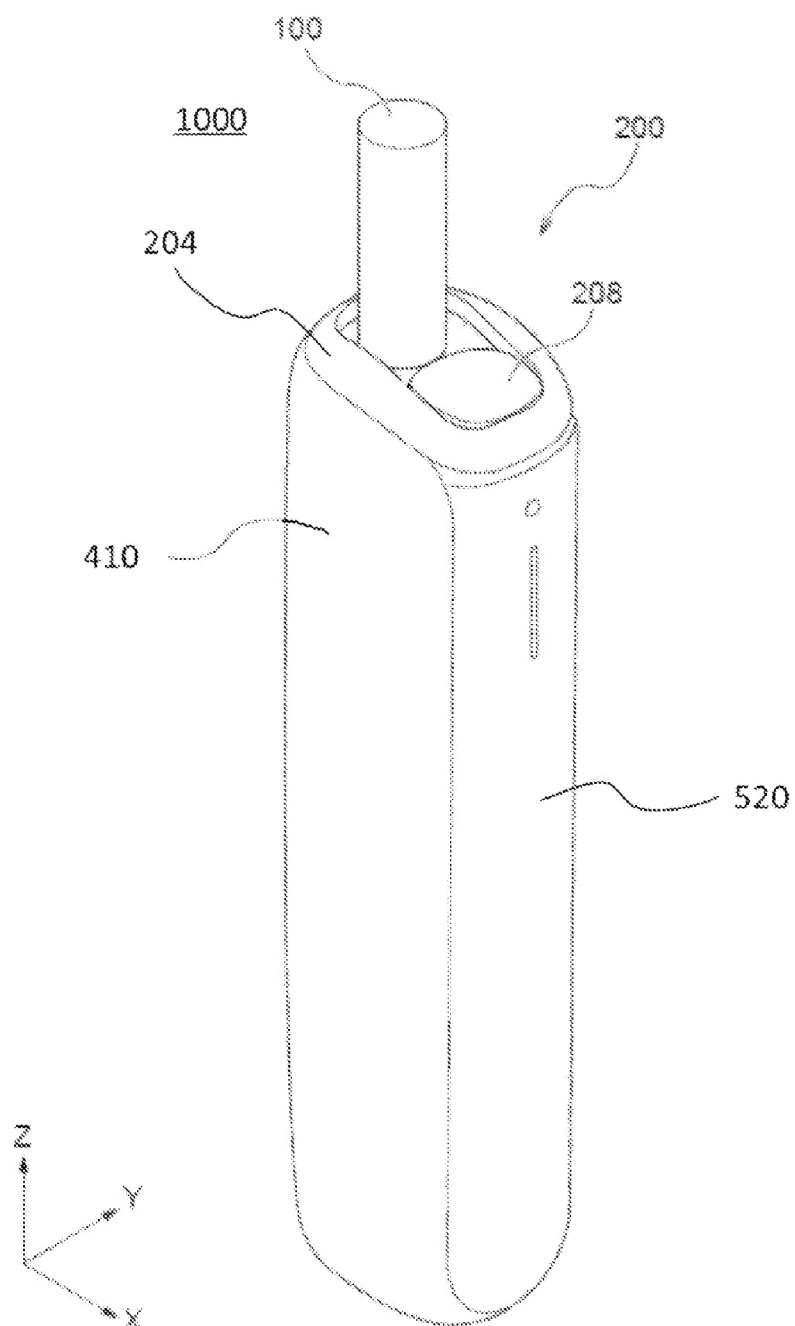
Claims

1. A flavor inhaler comprising a housing and 55 a lid assembly that is capable of moving in a first direction, wherein:

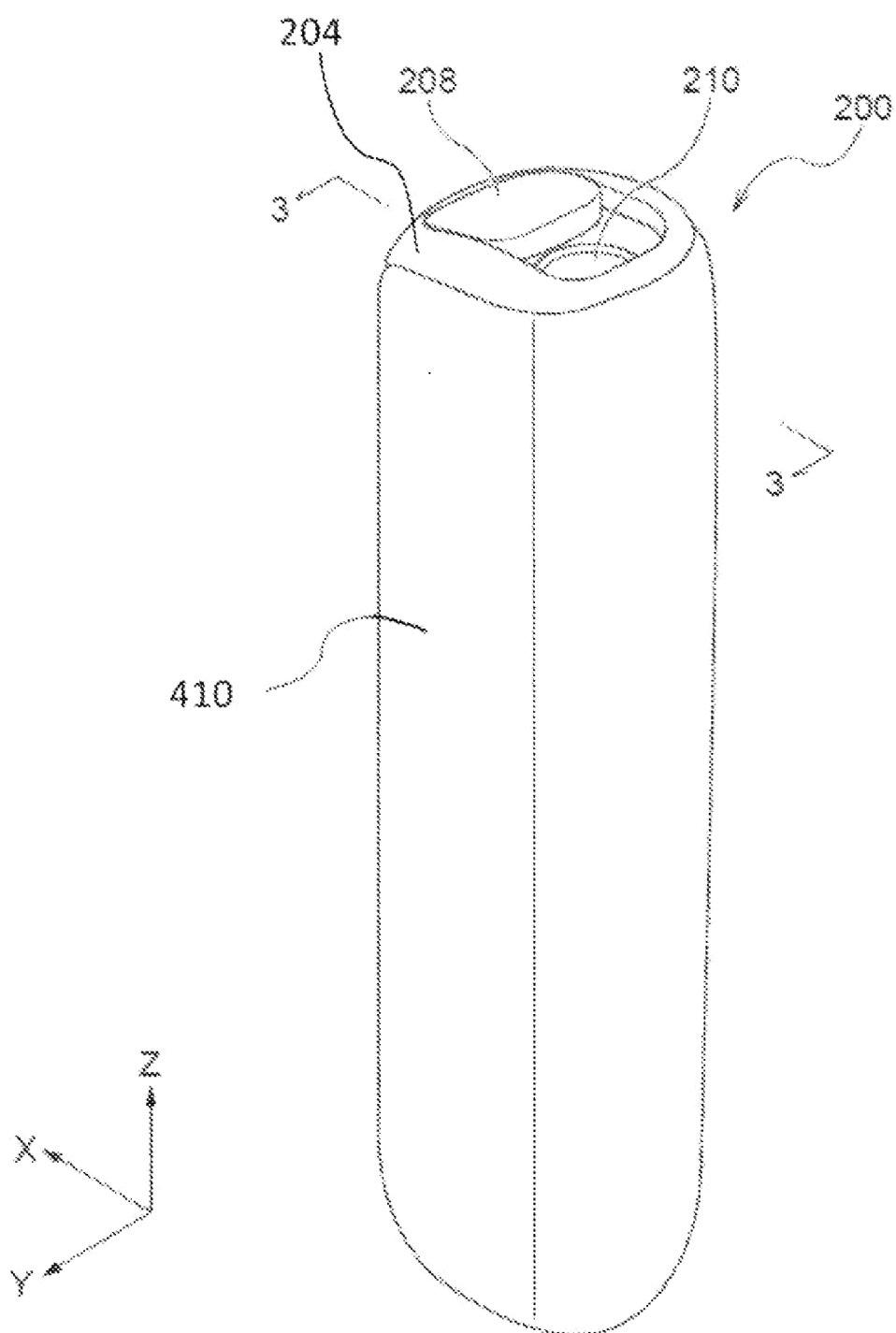
the lid assembly comprises an urging member

- and a movable member capable of moving relative to the lid assembly;
the urging member and the movable member are configured to move integrally with the lid assembly; and
the urging member is configured to urge the movable member in a second direction intersecting in the first direction.
2. The flavor inhaler as claimed in claim 1, wherein the second direction is substantially perpendicular to the first direction.
 3. The flavor inhaler as claimed in claim 1 or 2, wherein the housing is provided with a guide portion, and the movable member is configured to be capable of moving along the guide portion.
 4. The flavor inhaler as claimed in claim 3, wherein the guide portion is a groove formed in an outer surface of the housing.
 5. The flavor inhaler as claimed in claim 3 or 4, wherein the lid assembly further comprises a contacting portion configured to be capable of moving along the guide portion, and at least one of the contacting portion and the movable member is configured to contact the guide portion.
 6. The flavor inhaler as claimed in any one of claims 3 to 5, wherein the lid assembly is provided with a pair of the movable members, and the pair of movable members are arranged respectively on both sides of the lid assembly along the second direction.
 7. The flavor inhaler as claimed in any one of claims 1 to 6, wherein the urging member comprises a leaf spring.
 8. The flavor inhaler as claimed in any one of claims 1 to 7, wherein the lid assembly further comprises a magnet, and the flavor inhaler further comprises a magnetic sensor that detects the magnetic field of the magnet.
 9. The flavor inhaler as claimed in claim 8, wherein: the lid assembly further comprises a supporting portion that supports the magnet, and a cover that covers the magnet; and the supporting portion and the cover are fastened together by means of a fastening member.
 10. The flavor inhaler as claimed in any one of claims 1 to 9, wherein: the housing has an opening through which a flavor generating article can be inserted;
- and
the lid assembly is configured to be capable of moving between a closed position covering at least part of the opening and an open position in which the flavor generating article can be inserted into the opening.
11. The flavor inhaler as claimed in any one of claims 1 to 10, wherein the movable member is configured to be located in a recess formed in the outer surface of the housing in at least one of the open position and the closed position.
 12. A flavor generating system comprising the flavor inhaler according to any one of claims 1 to 11, and a flavor generating article.

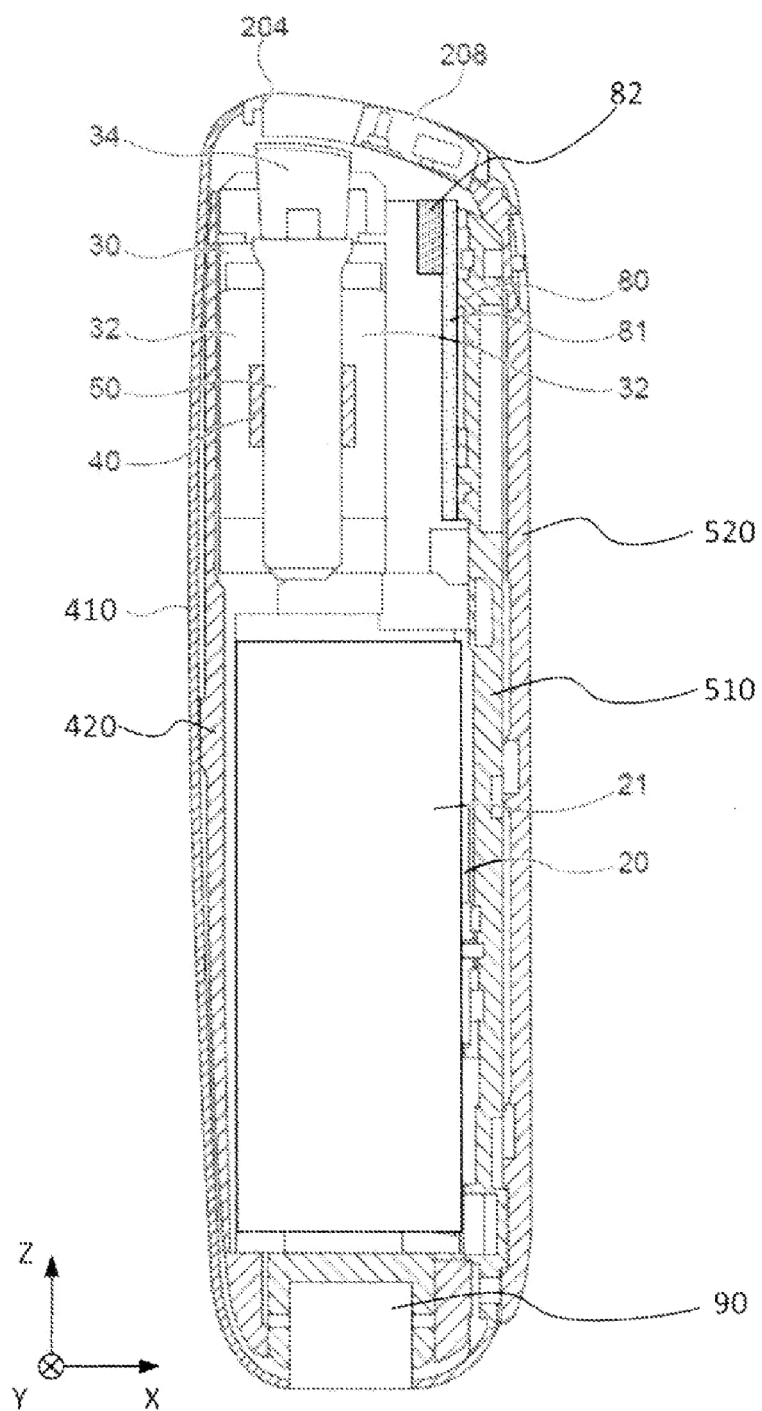
[Fig. 1]



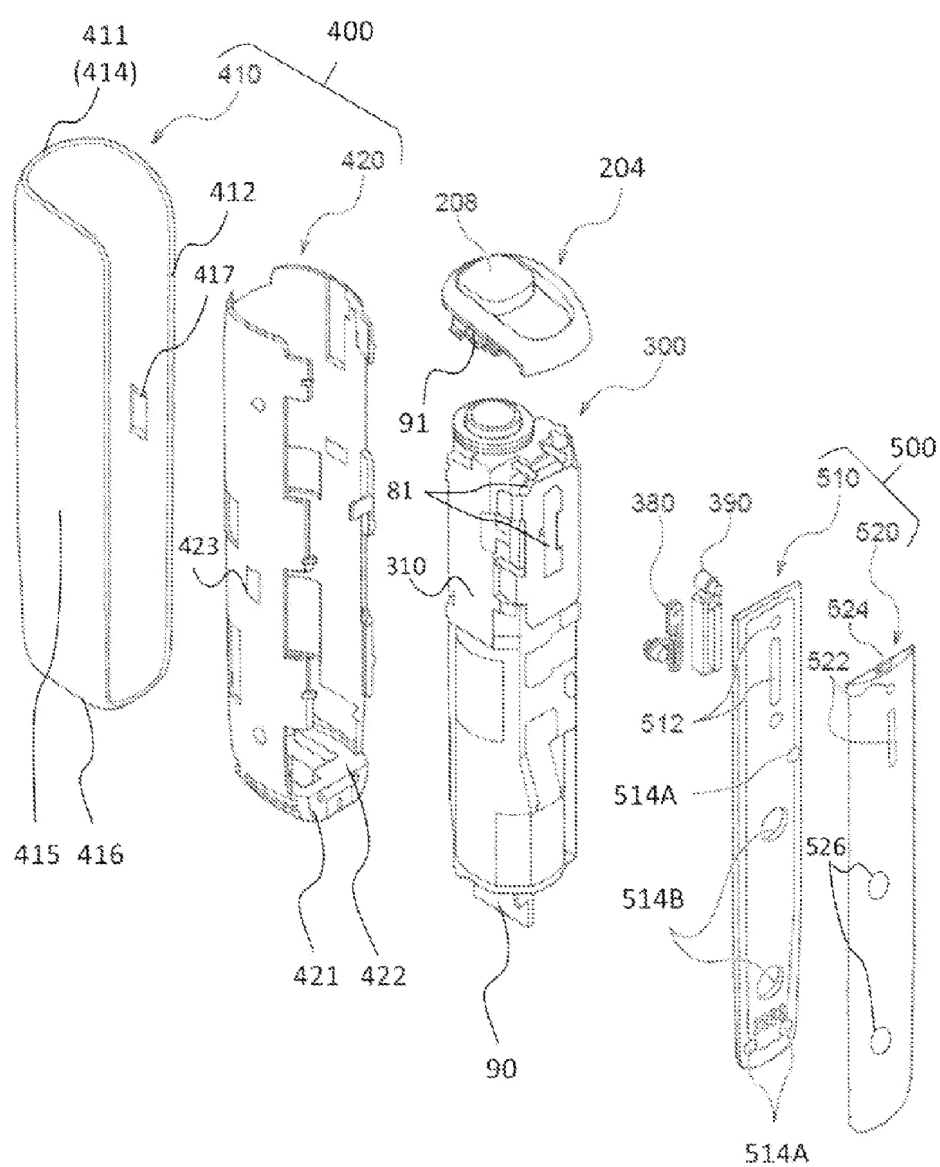
[Fig. 2]



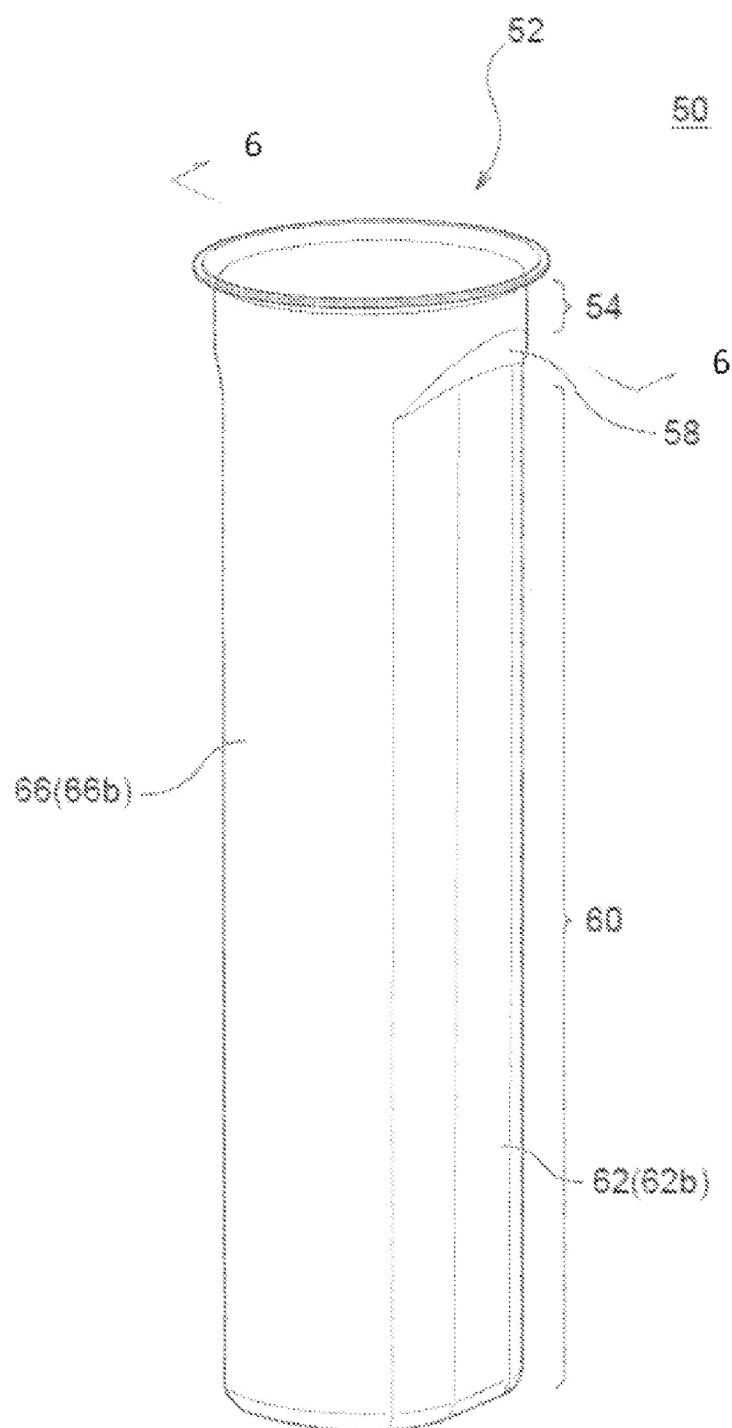
[Fig. 3]



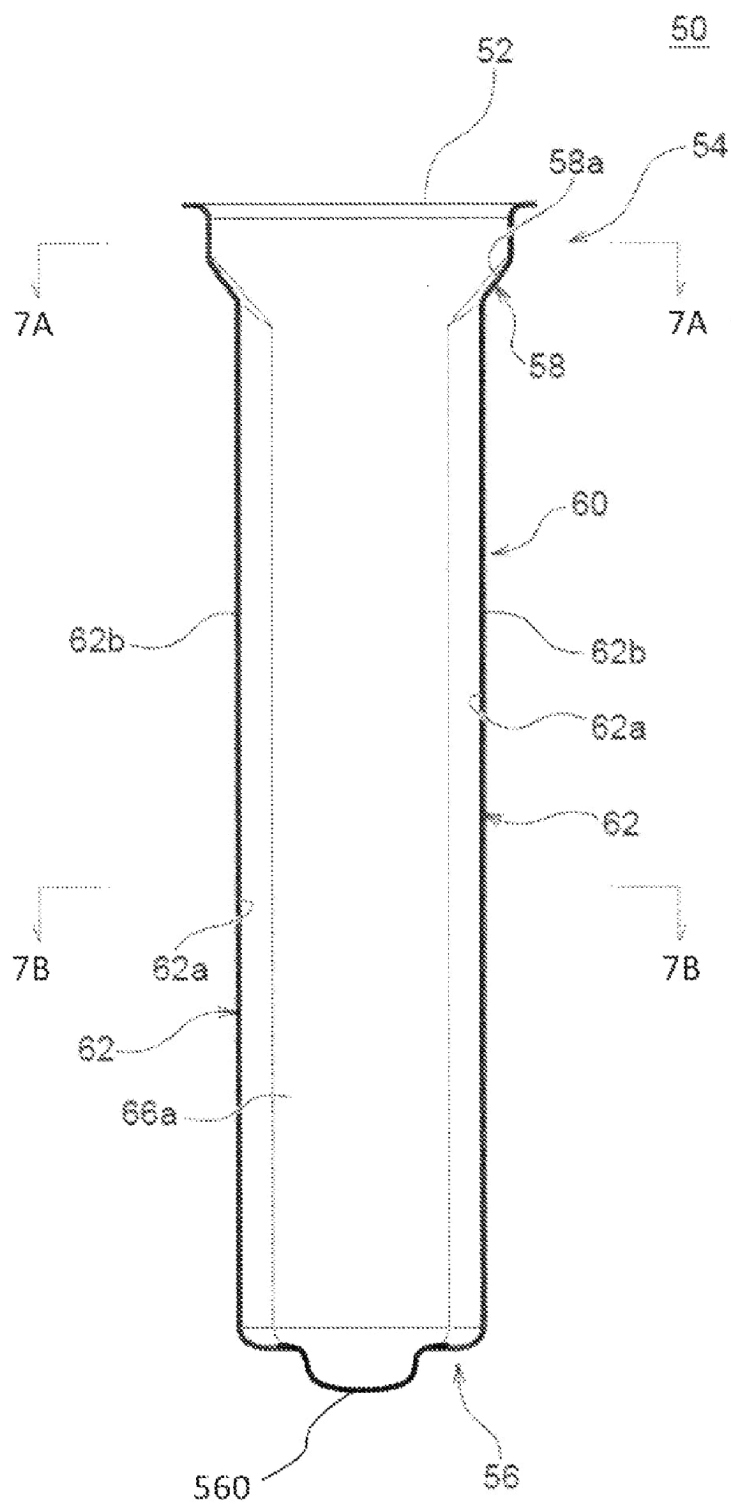
[Fig. 4]



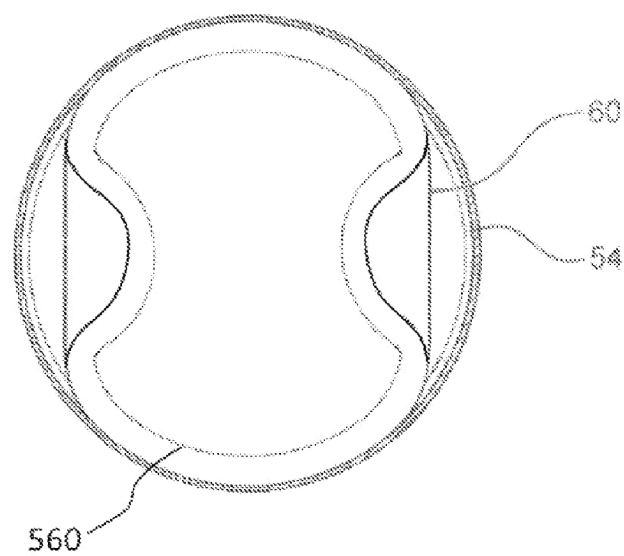
[Fig. 5]



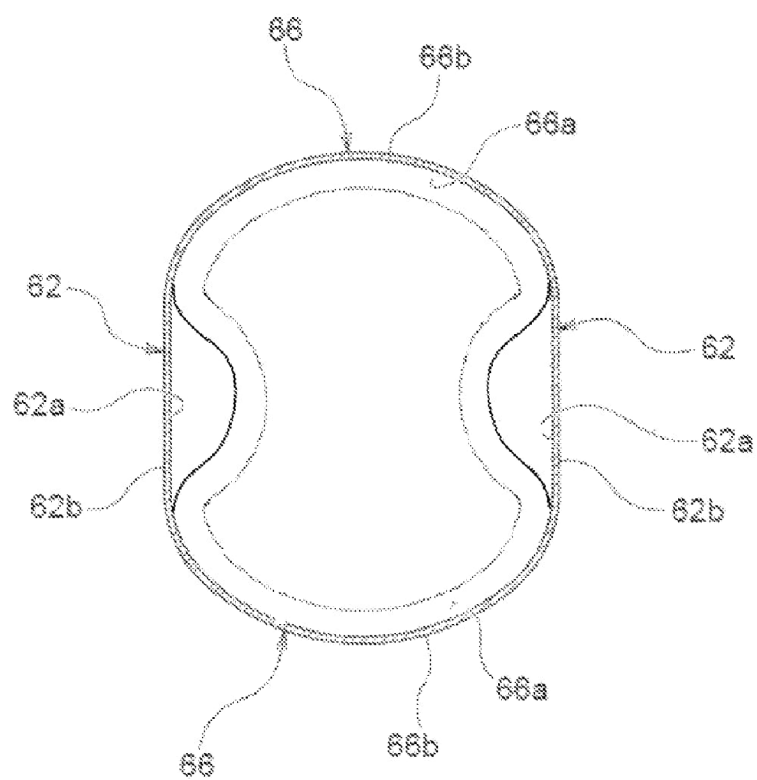
[Fig. 6]



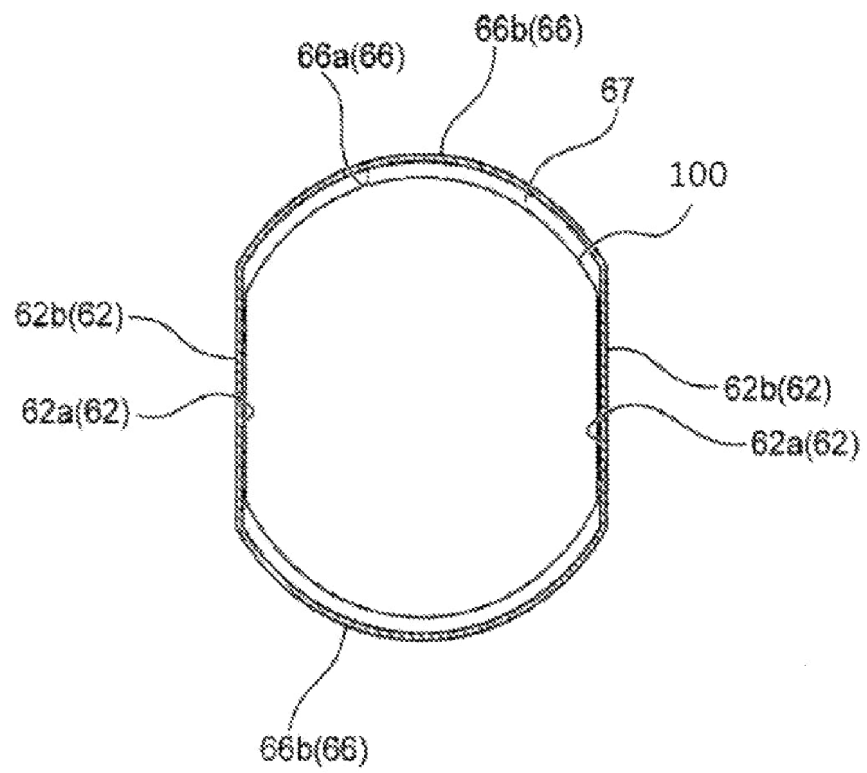
[Fig. 7A]



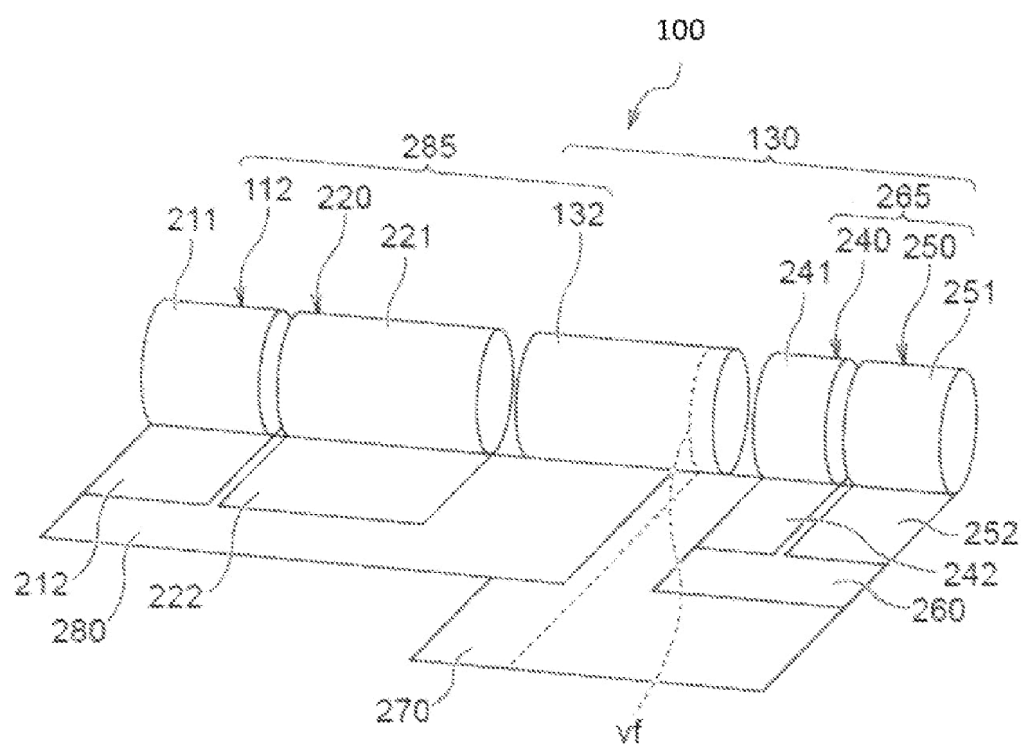
[Fig. 7B]



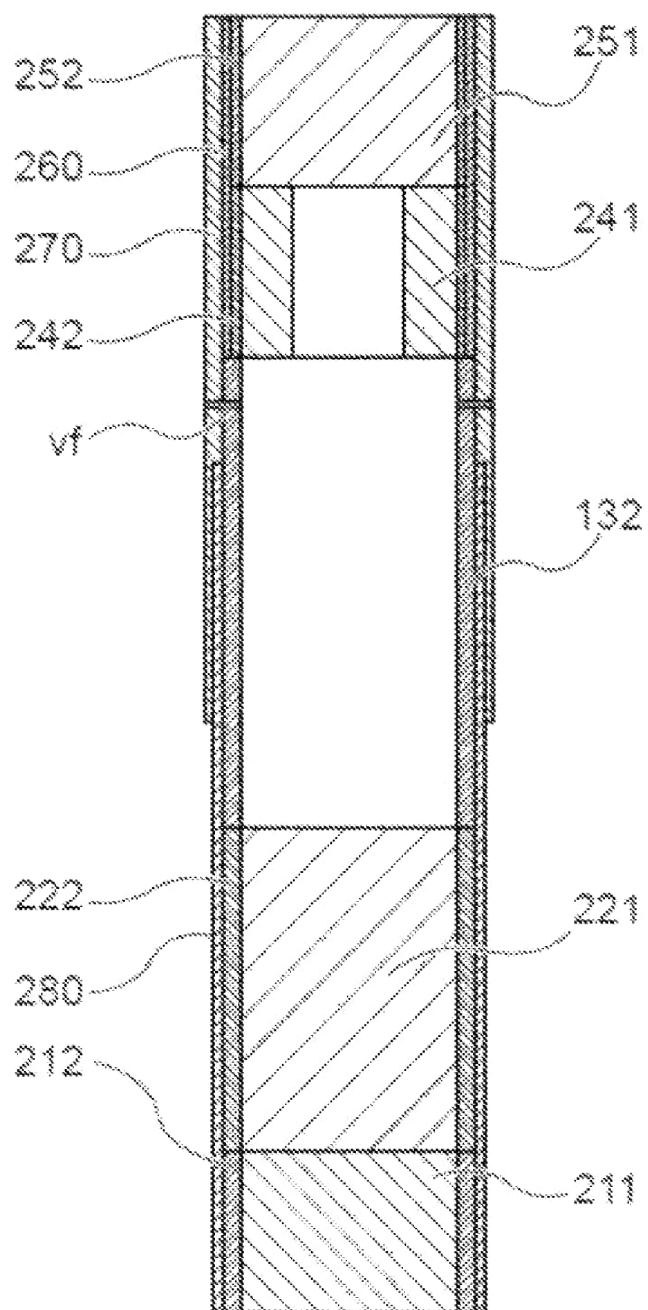
[Fig. 8]



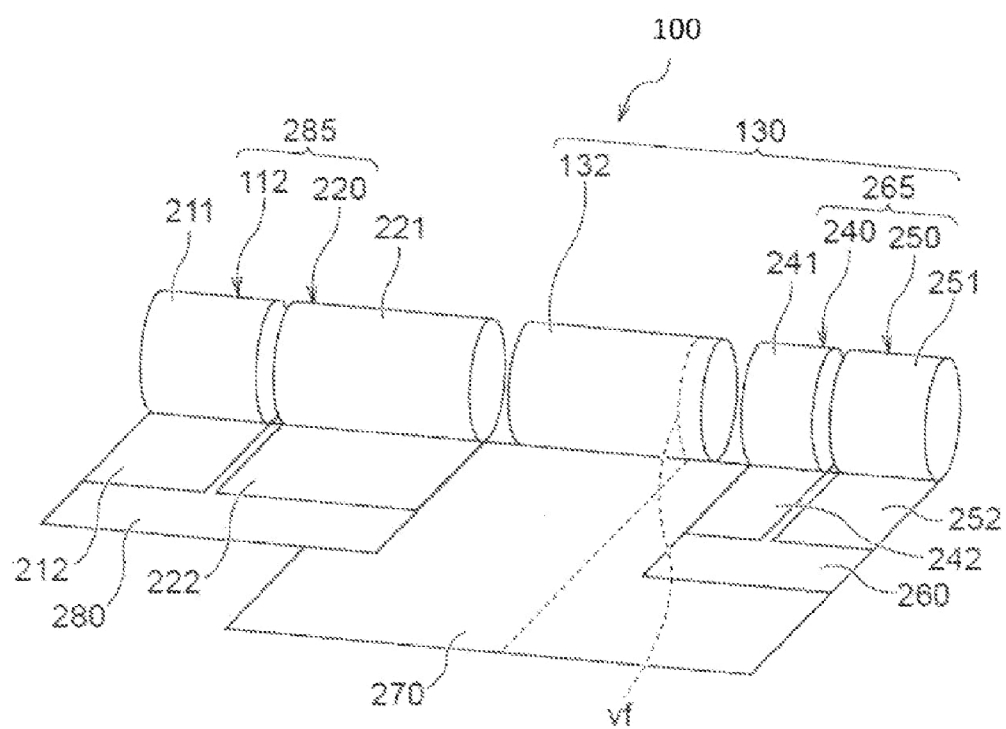
[Fig. 9]



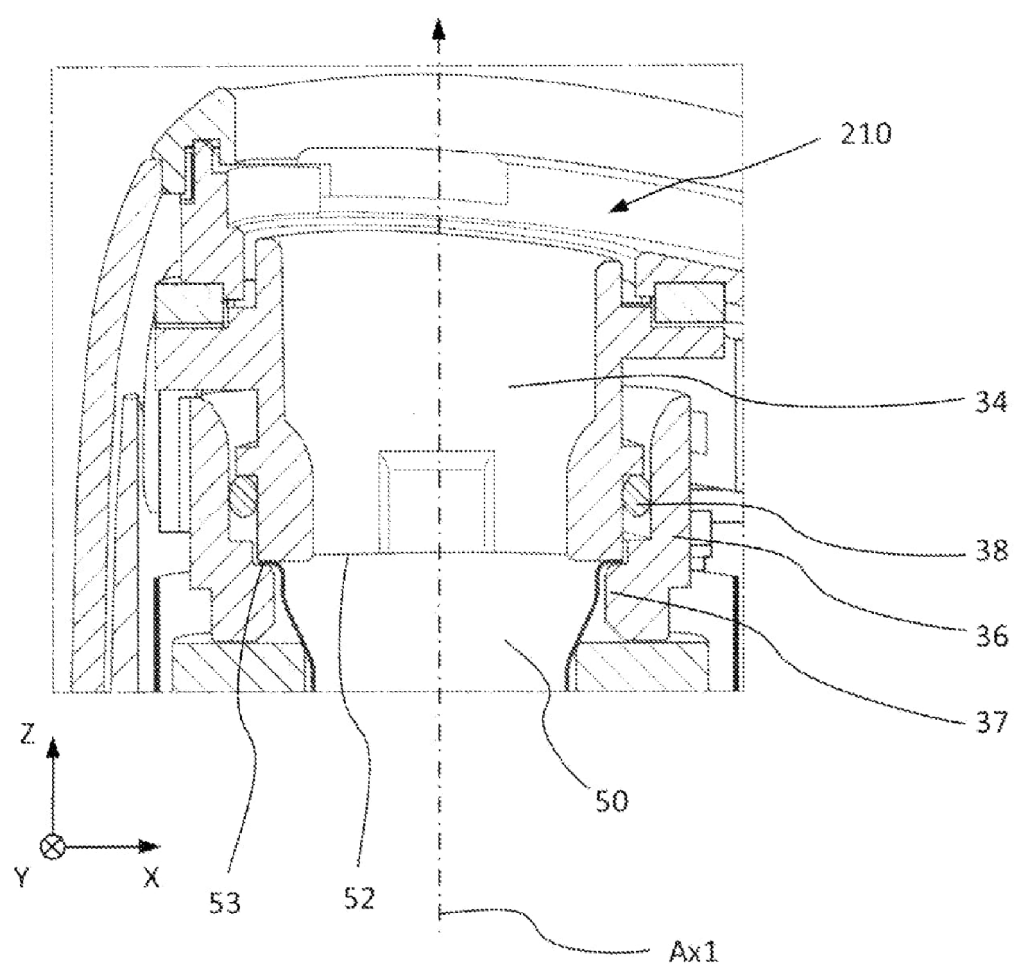
[Fig. 10]



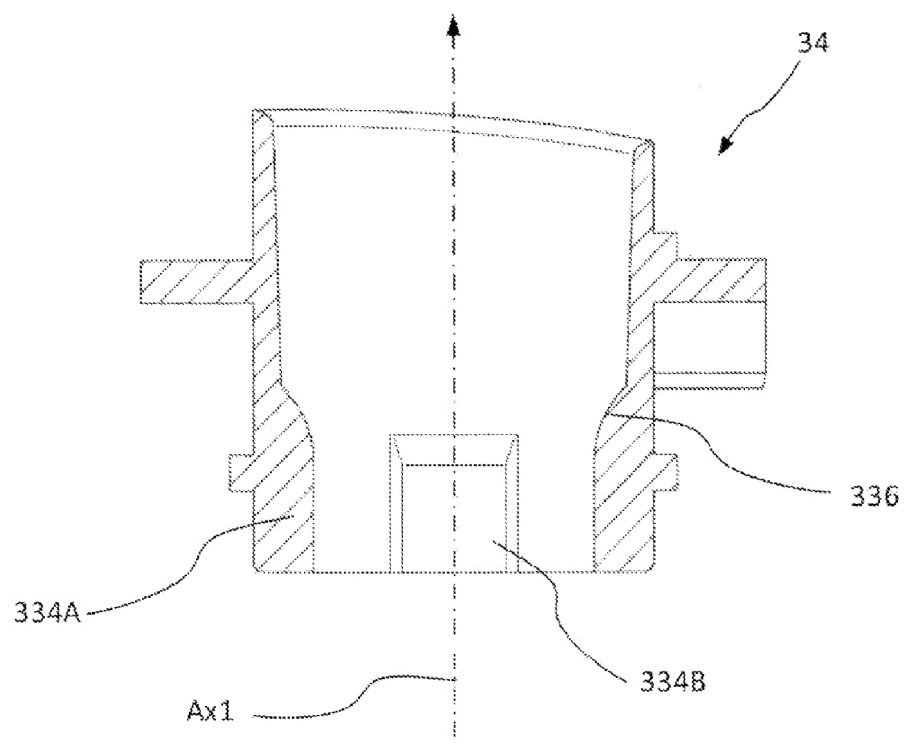
[Fig. 11]



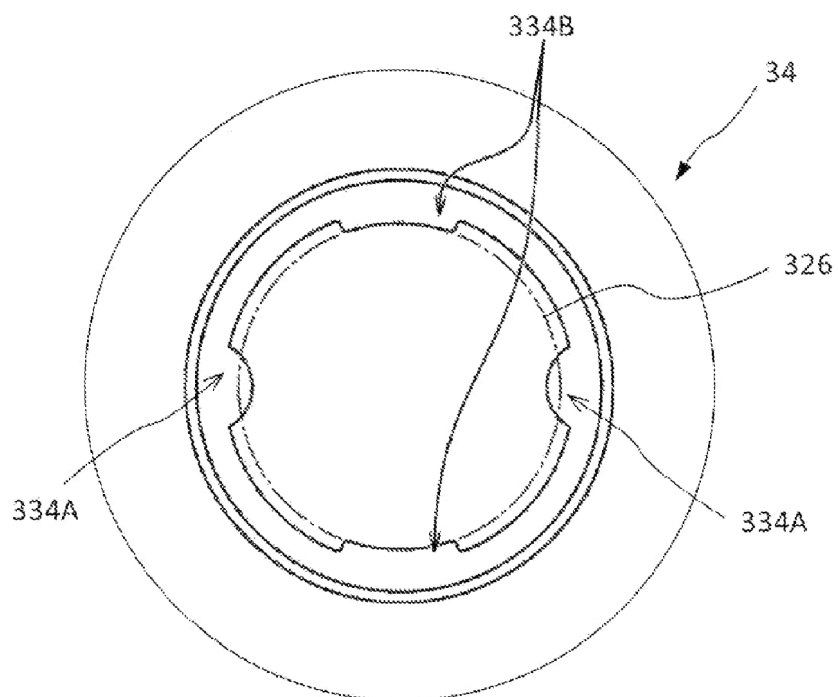
[Fig. 12]



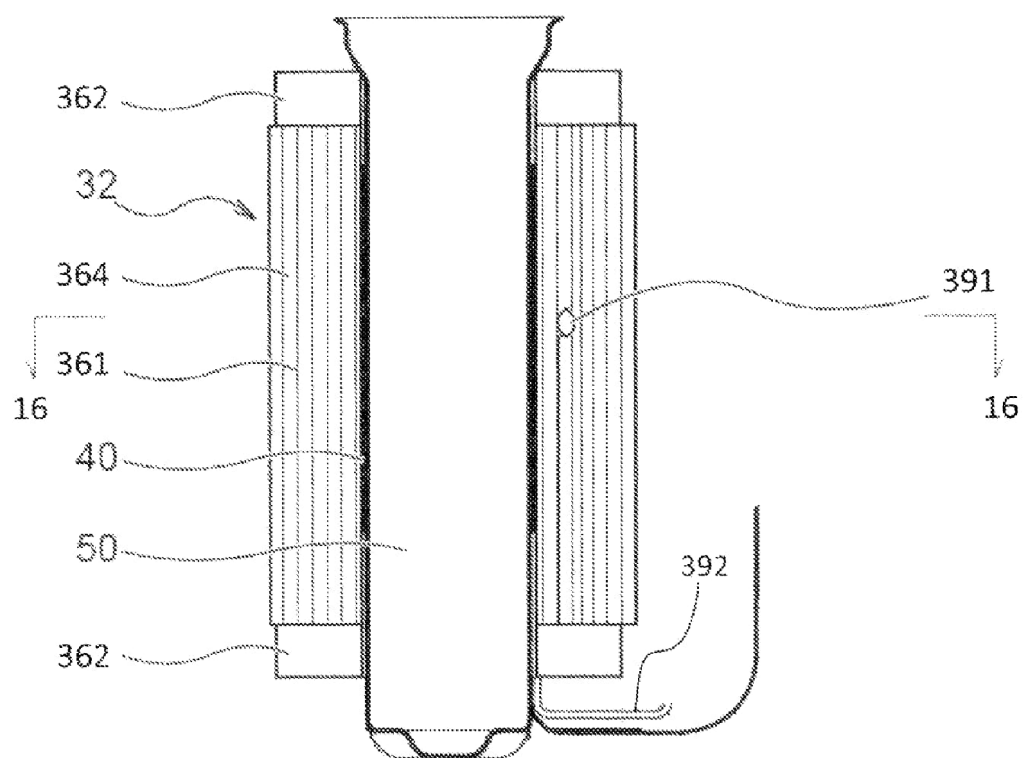
[Fig. 13]



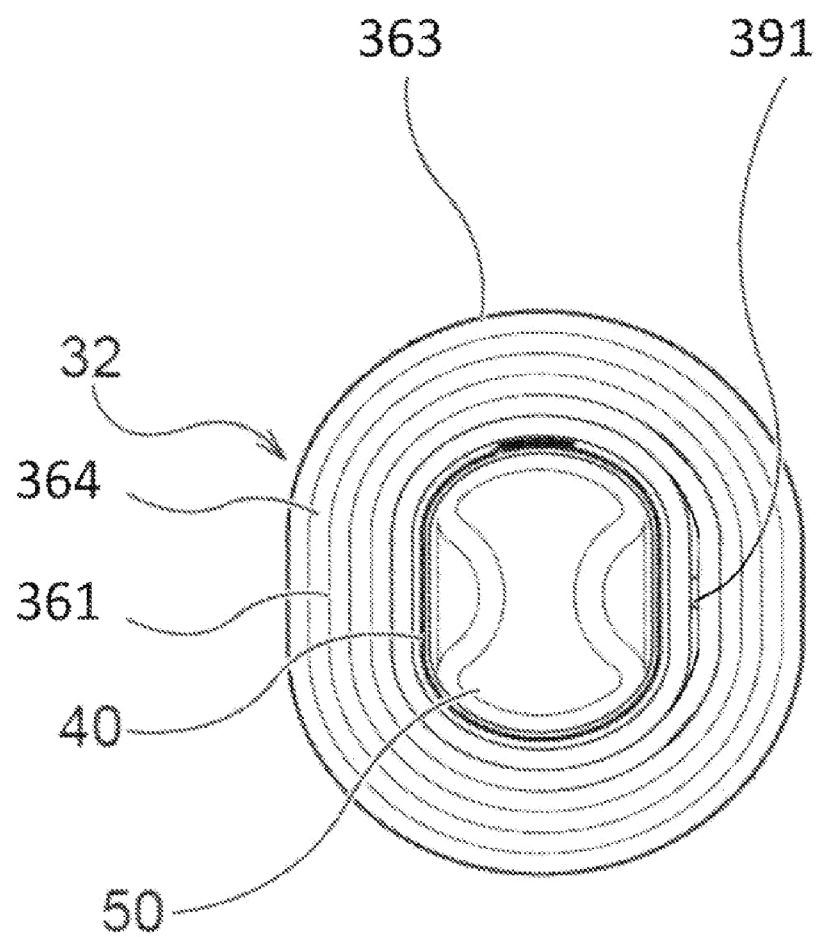
[Fig. 14]



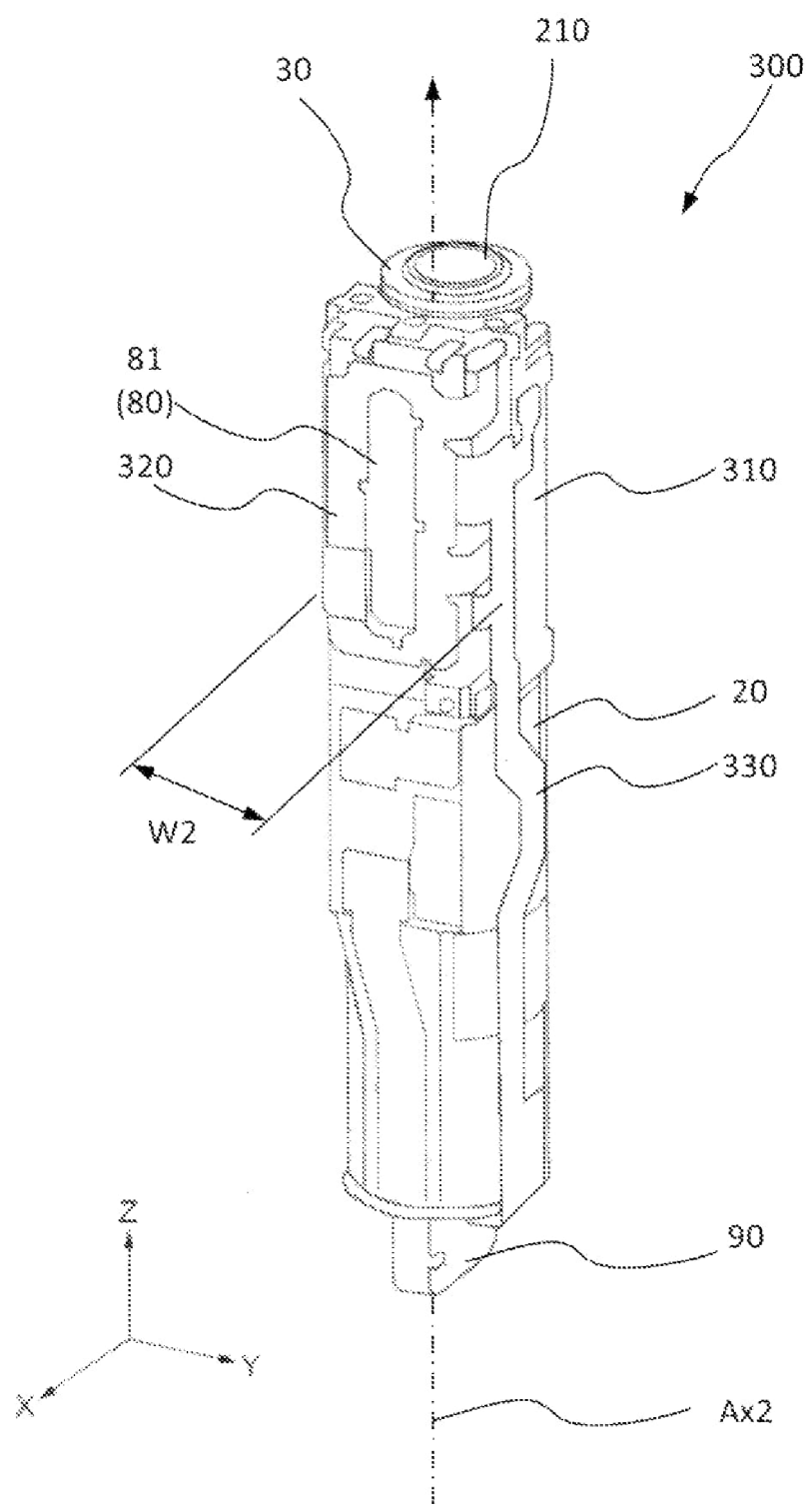
[Fig. 15]



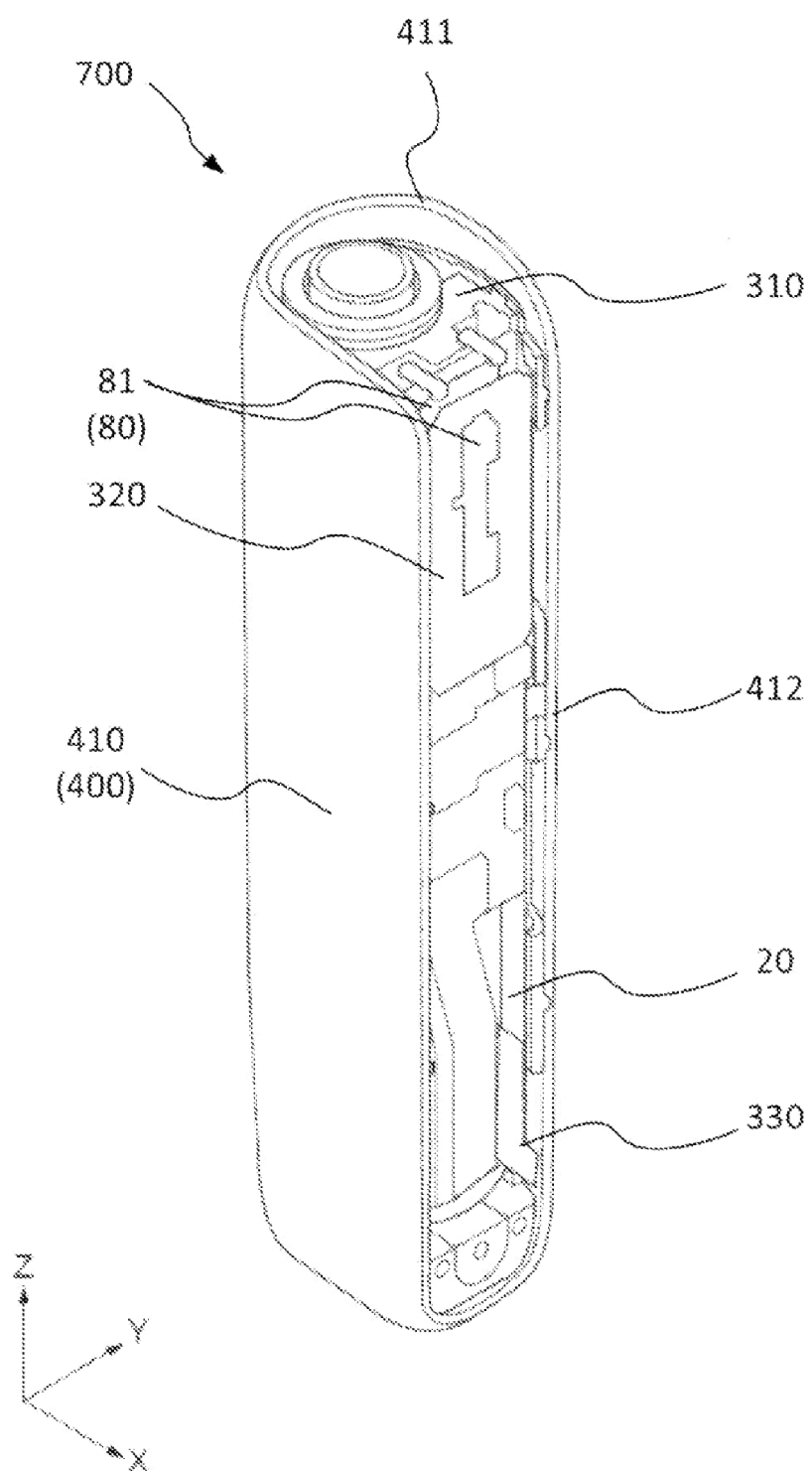
[Fig. 16]



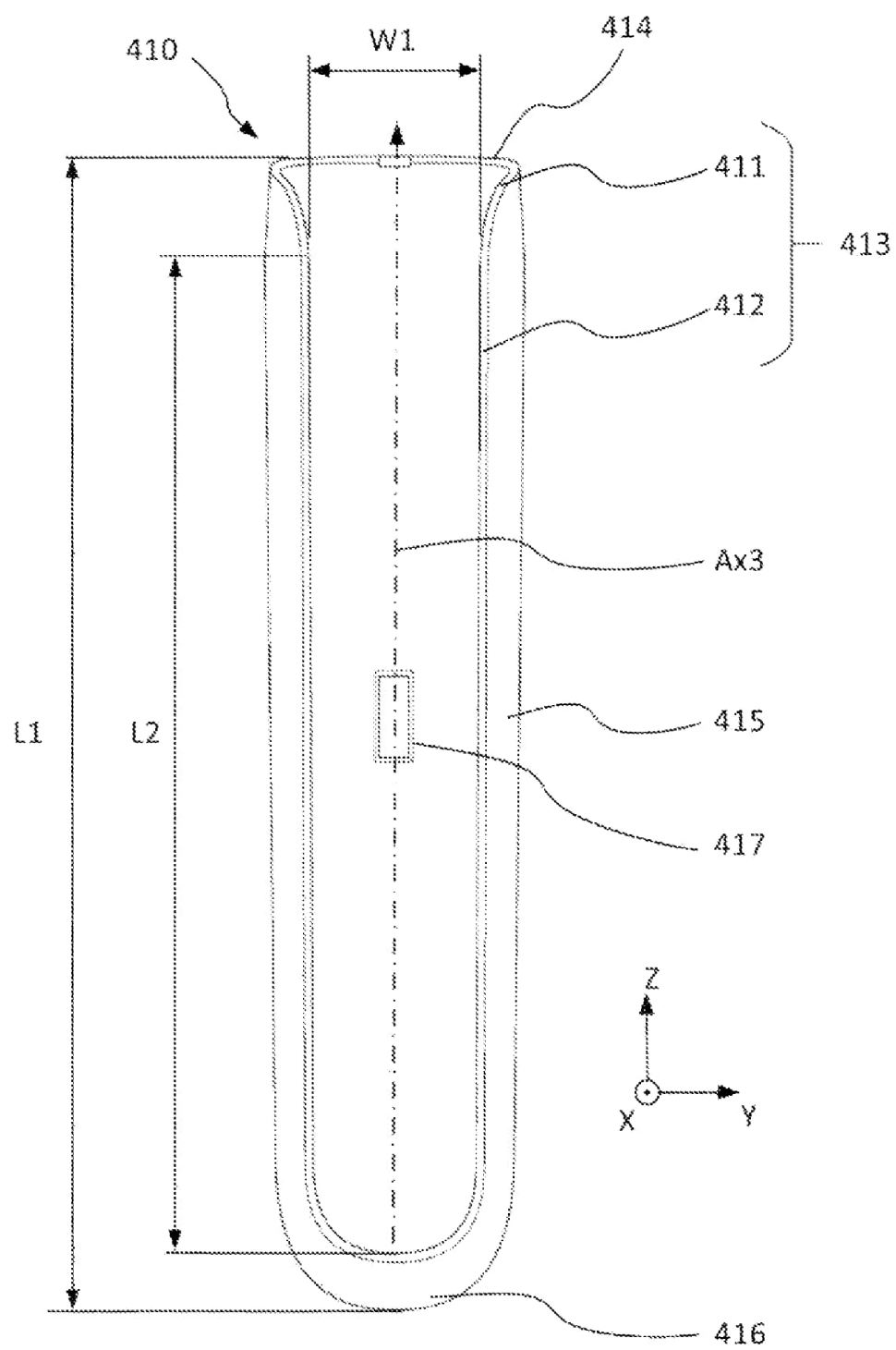
[Fig. 17]



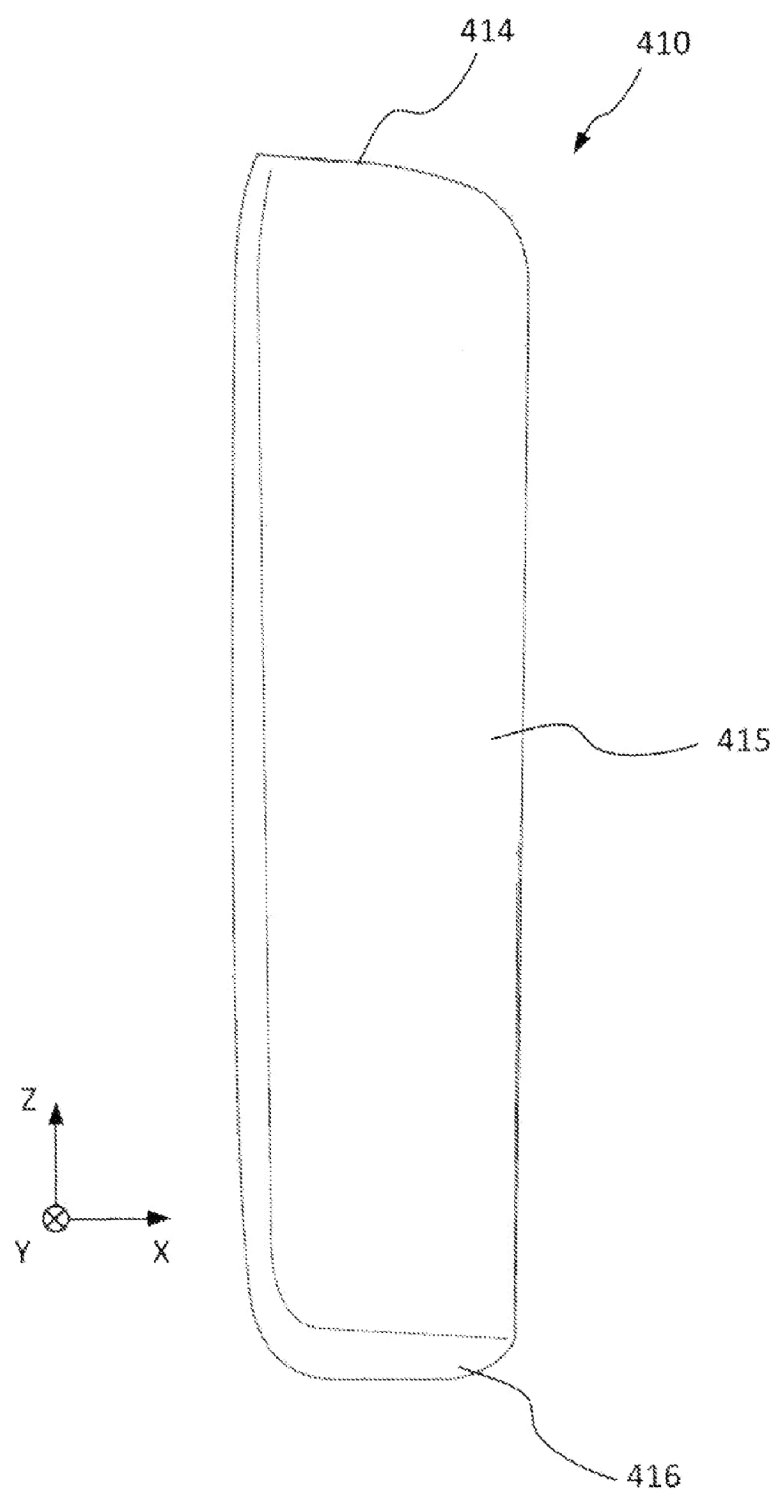
[Fig. 18]



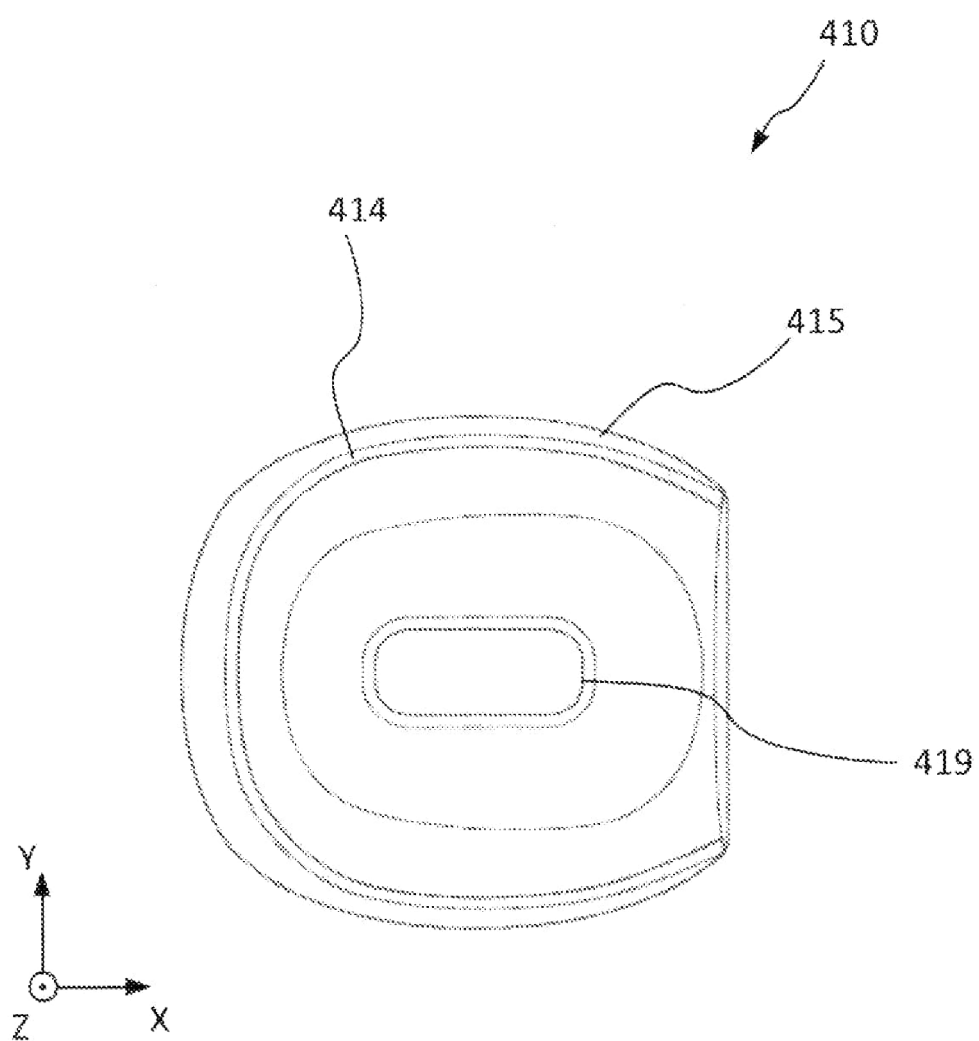
[Fig. 19]



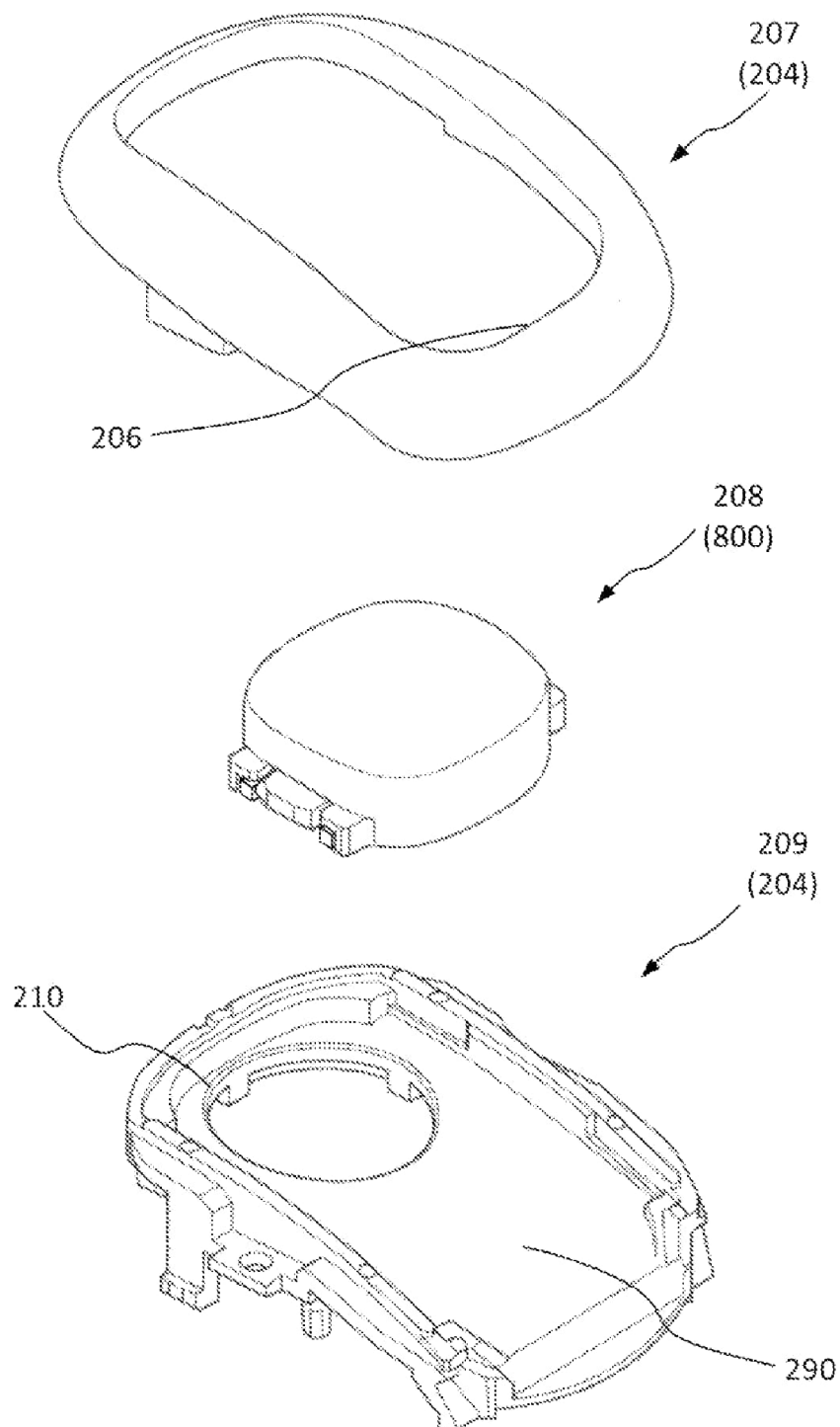
[Fig. 20]



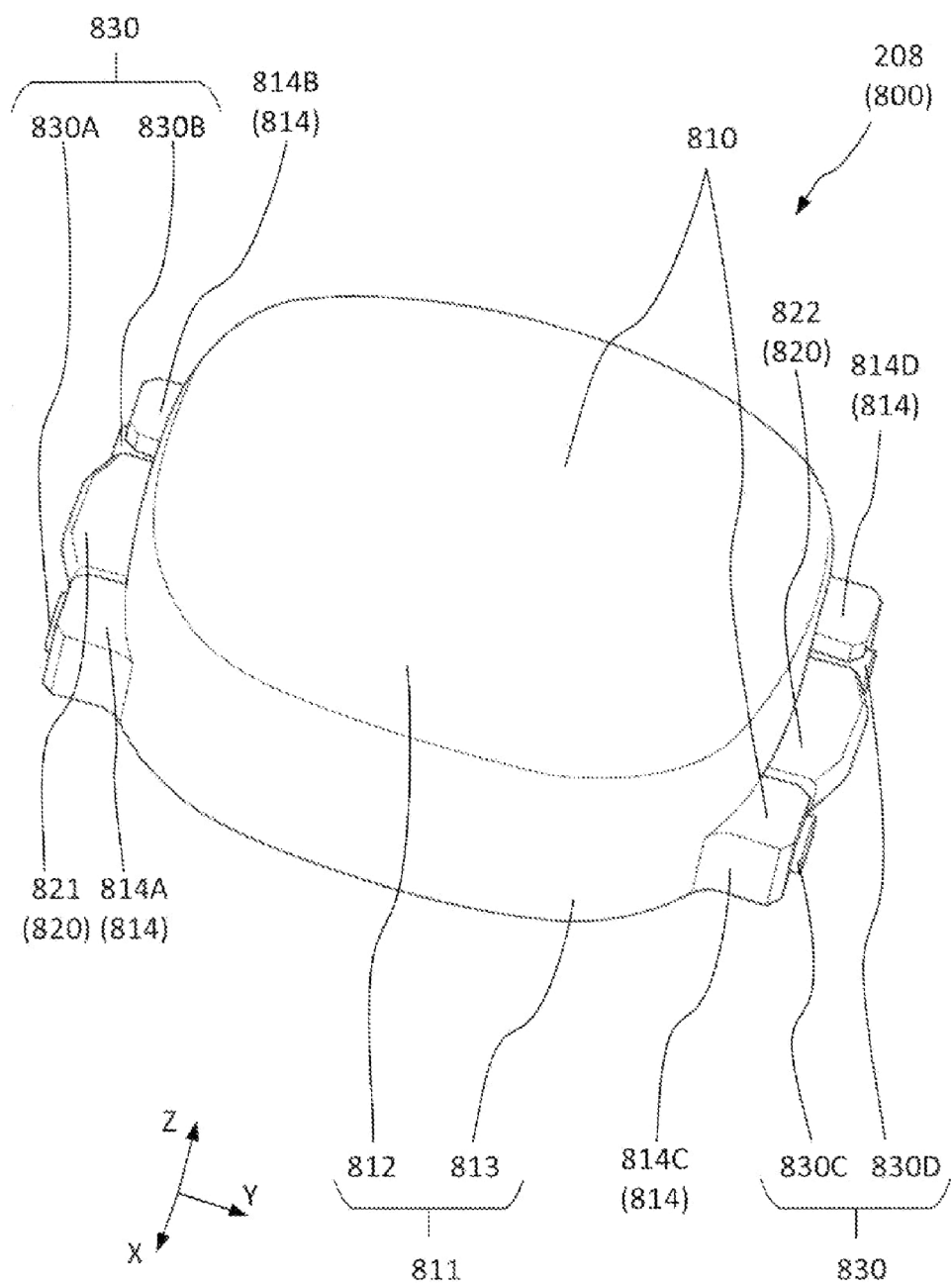
[Fig. 21]



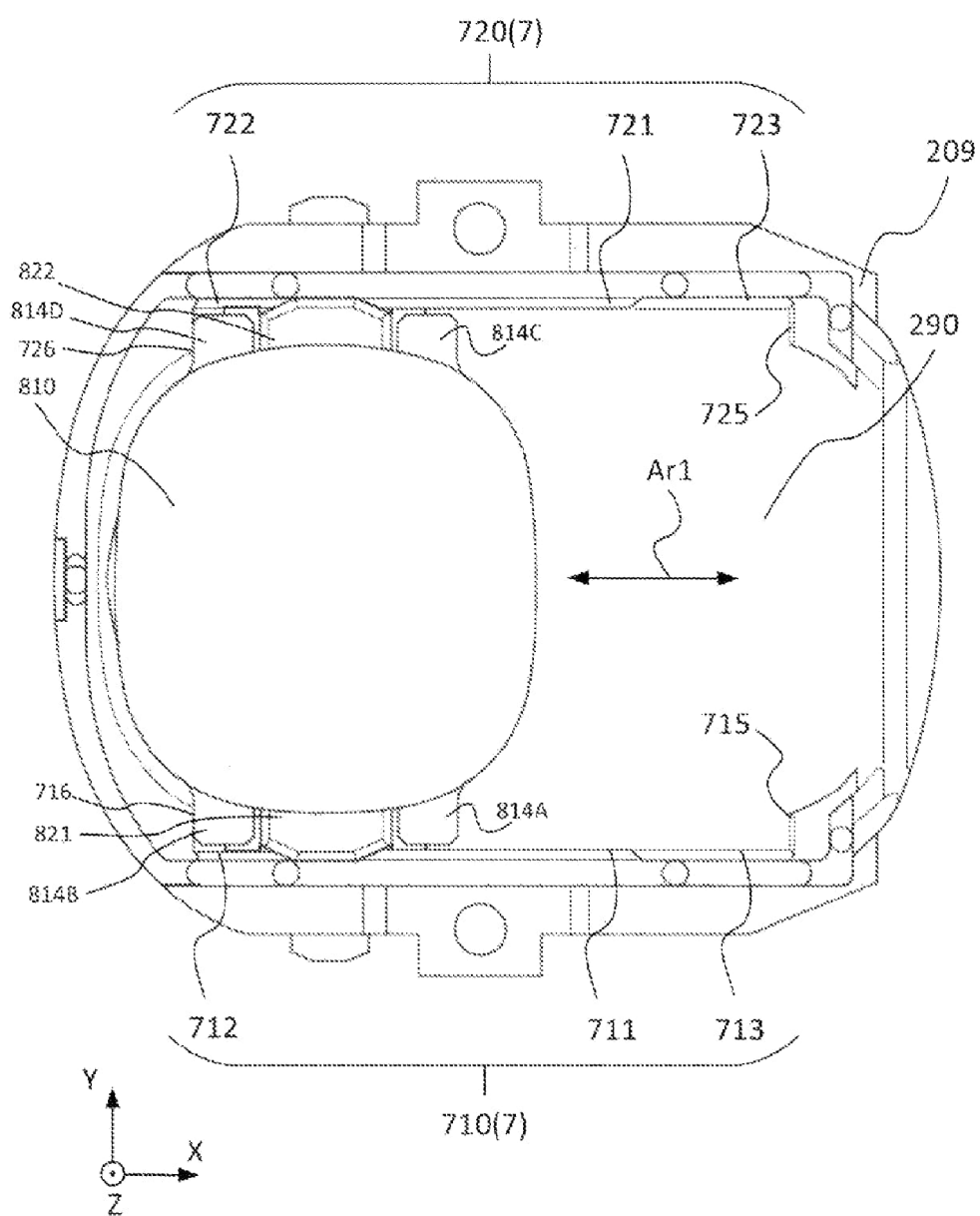
[Fig. 22]



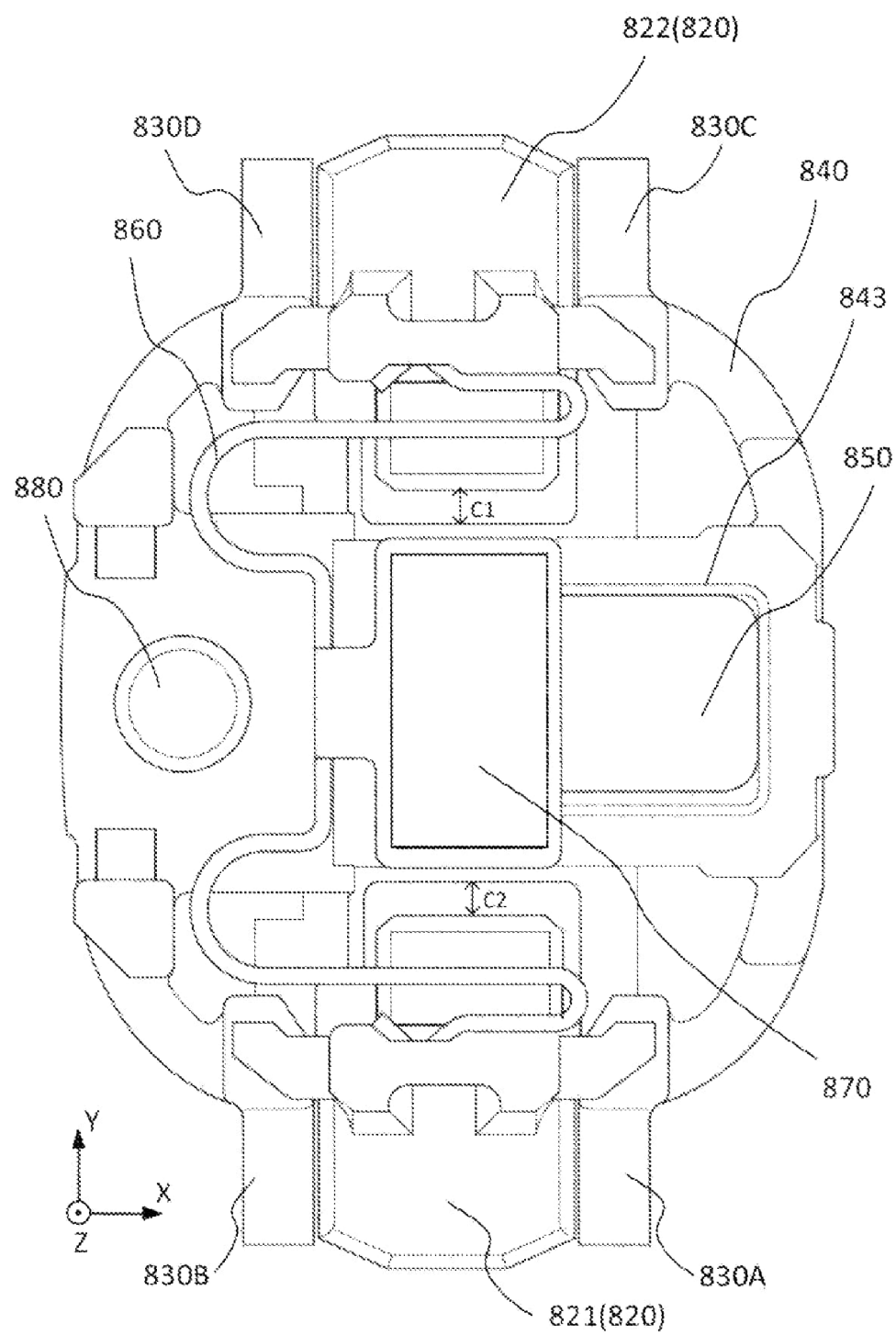
[Fig. 23]



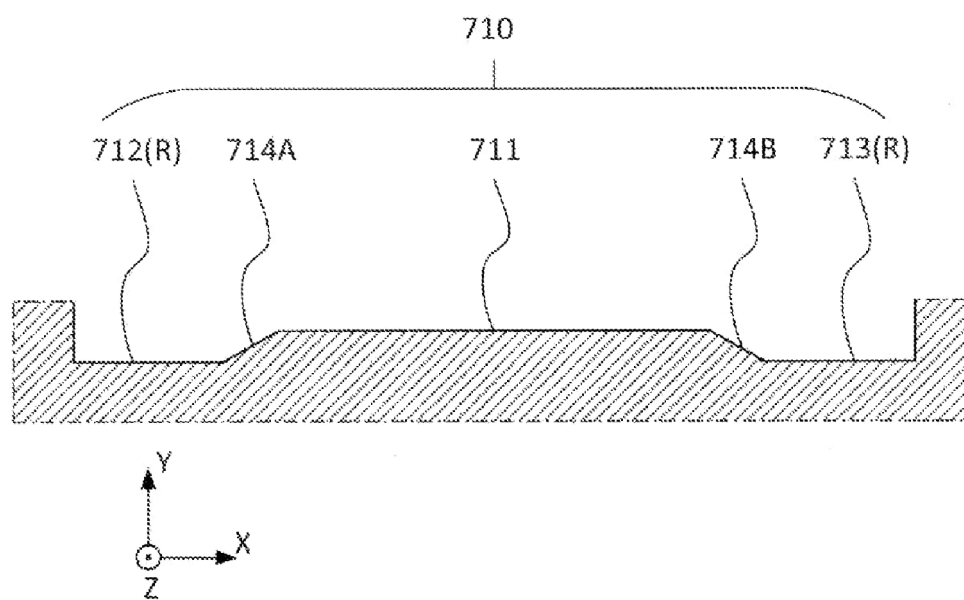
[Fig. 24]



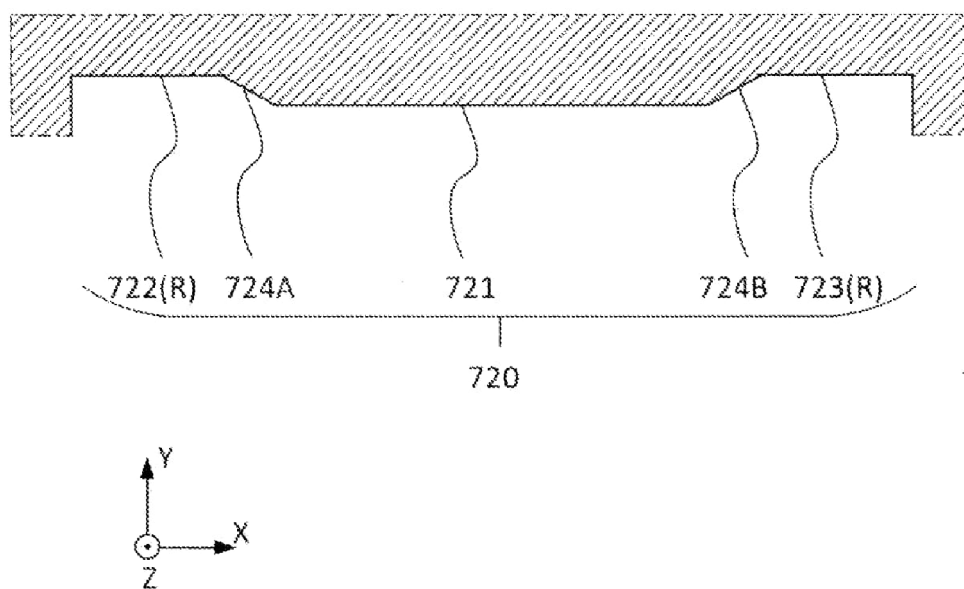
[Fig. 25]



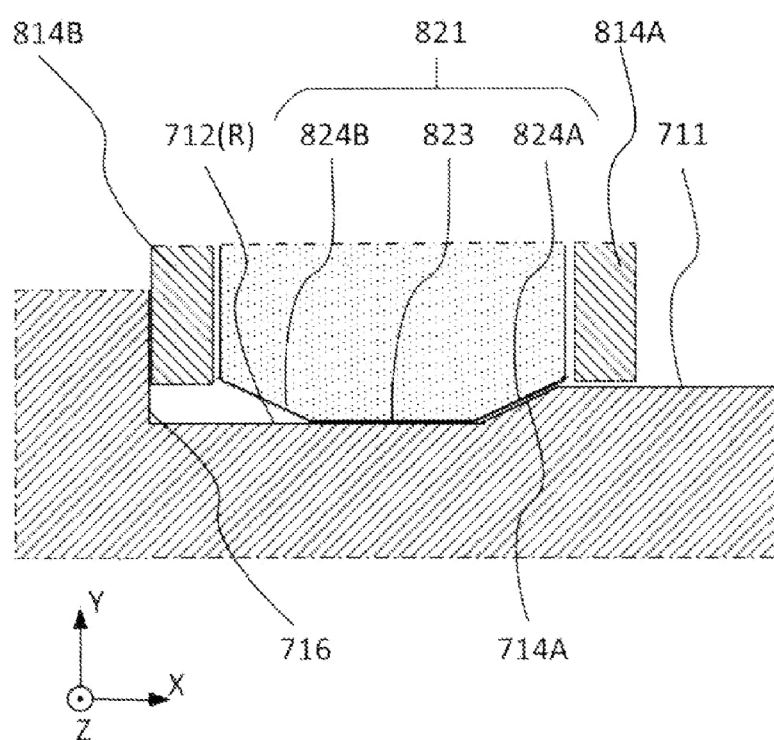
[Fig. 26A]



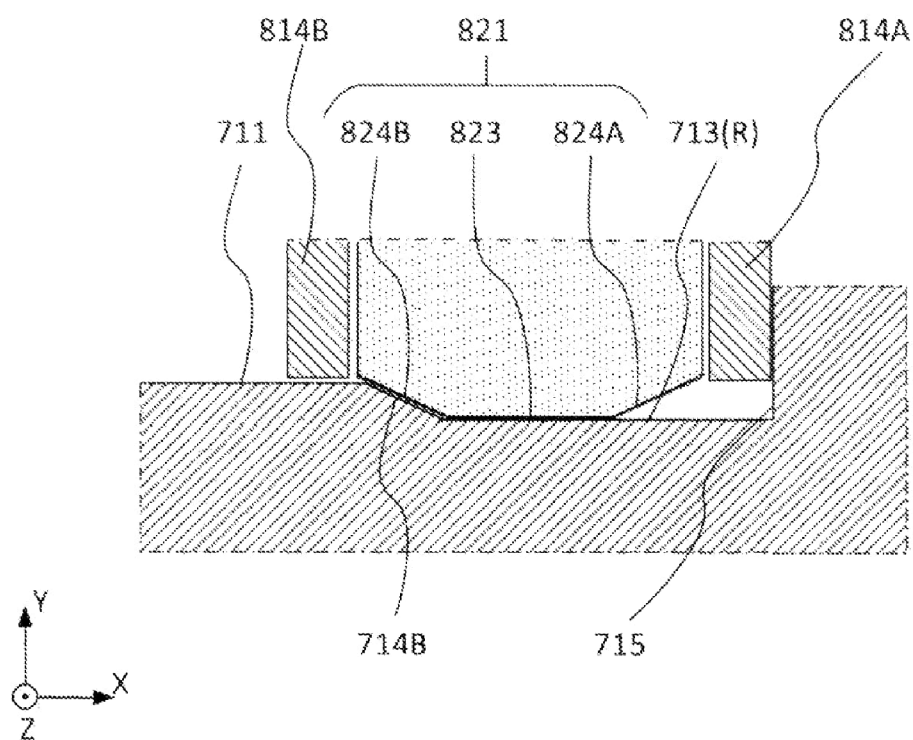
[Fig. 26B]



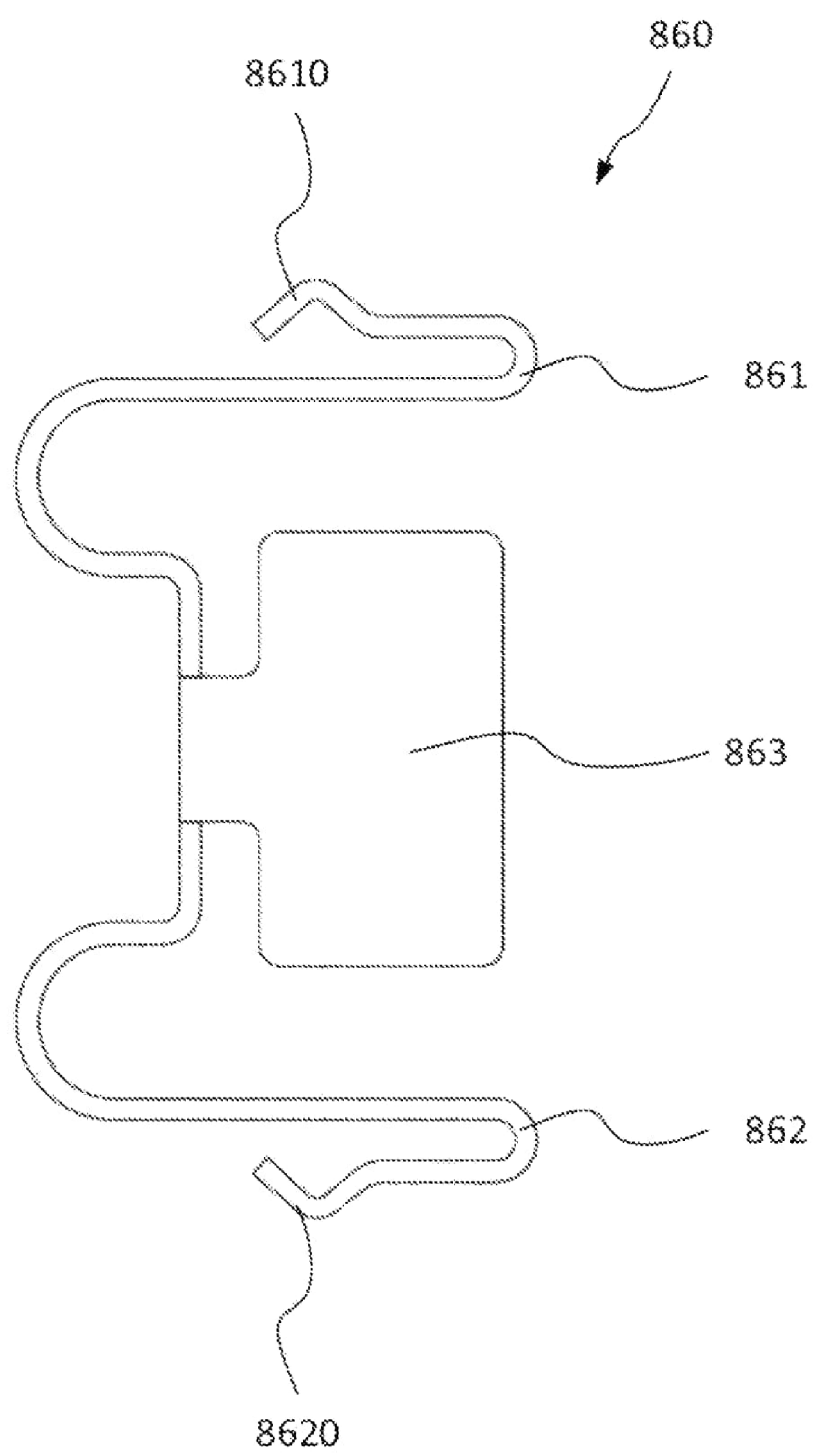
[Fig. 27A]



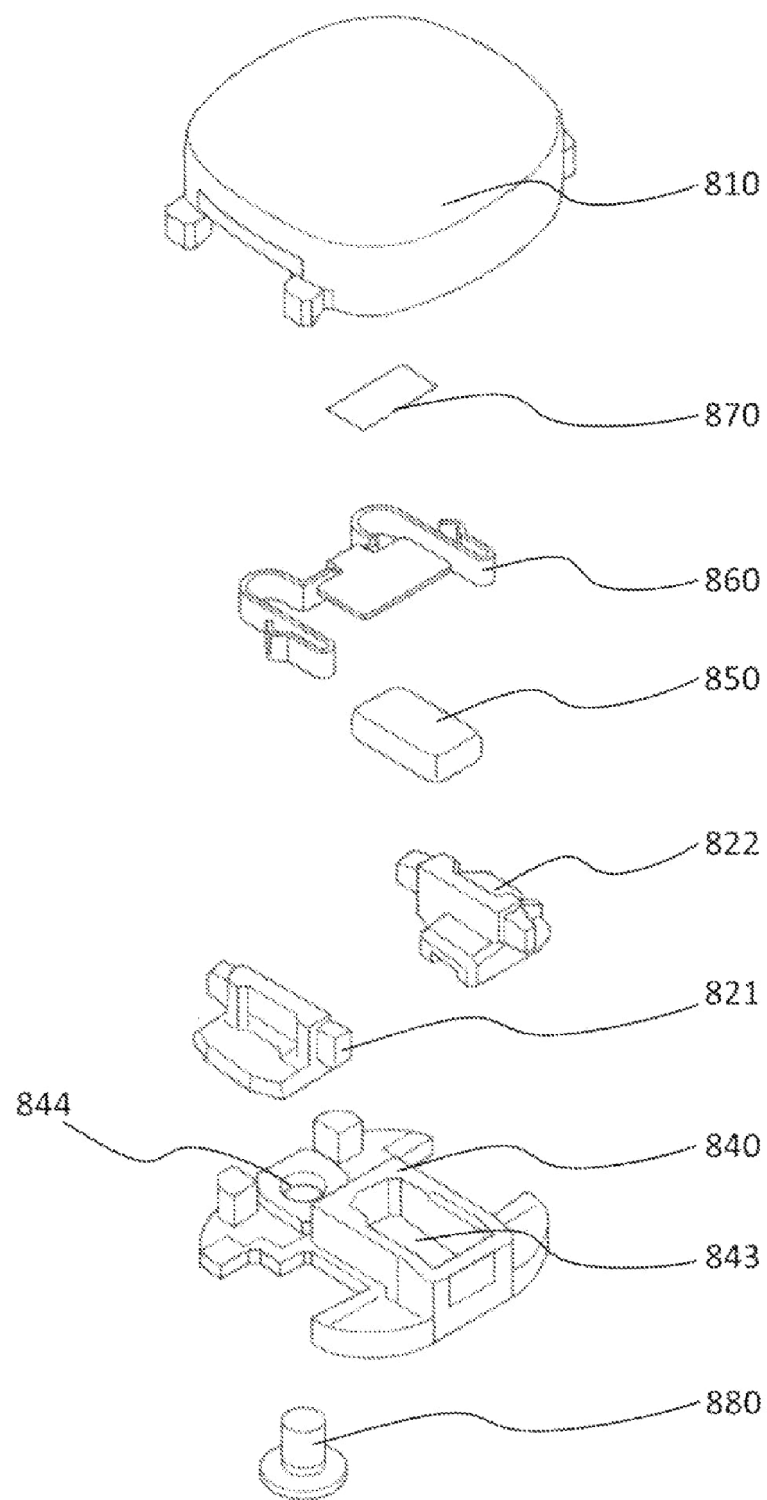
[Fig. 27B]



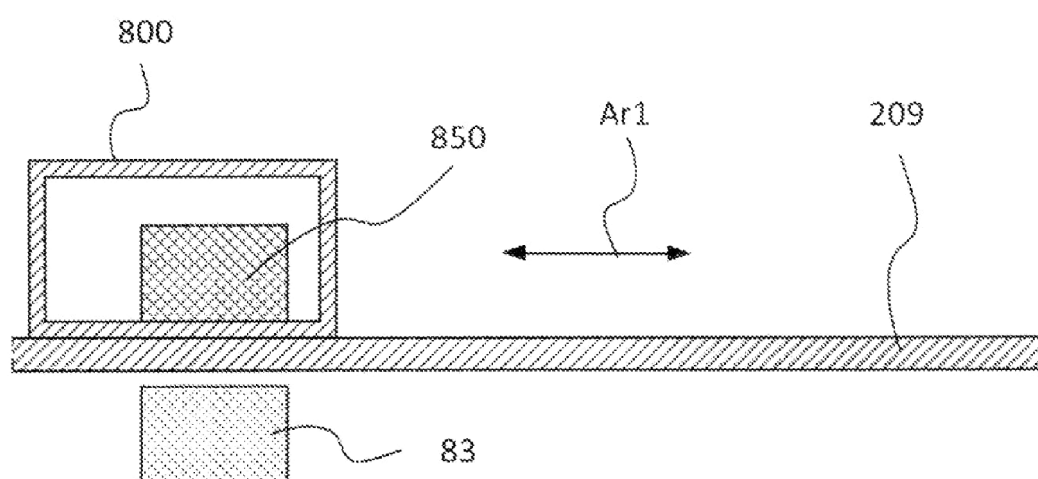
[Fig. 28]



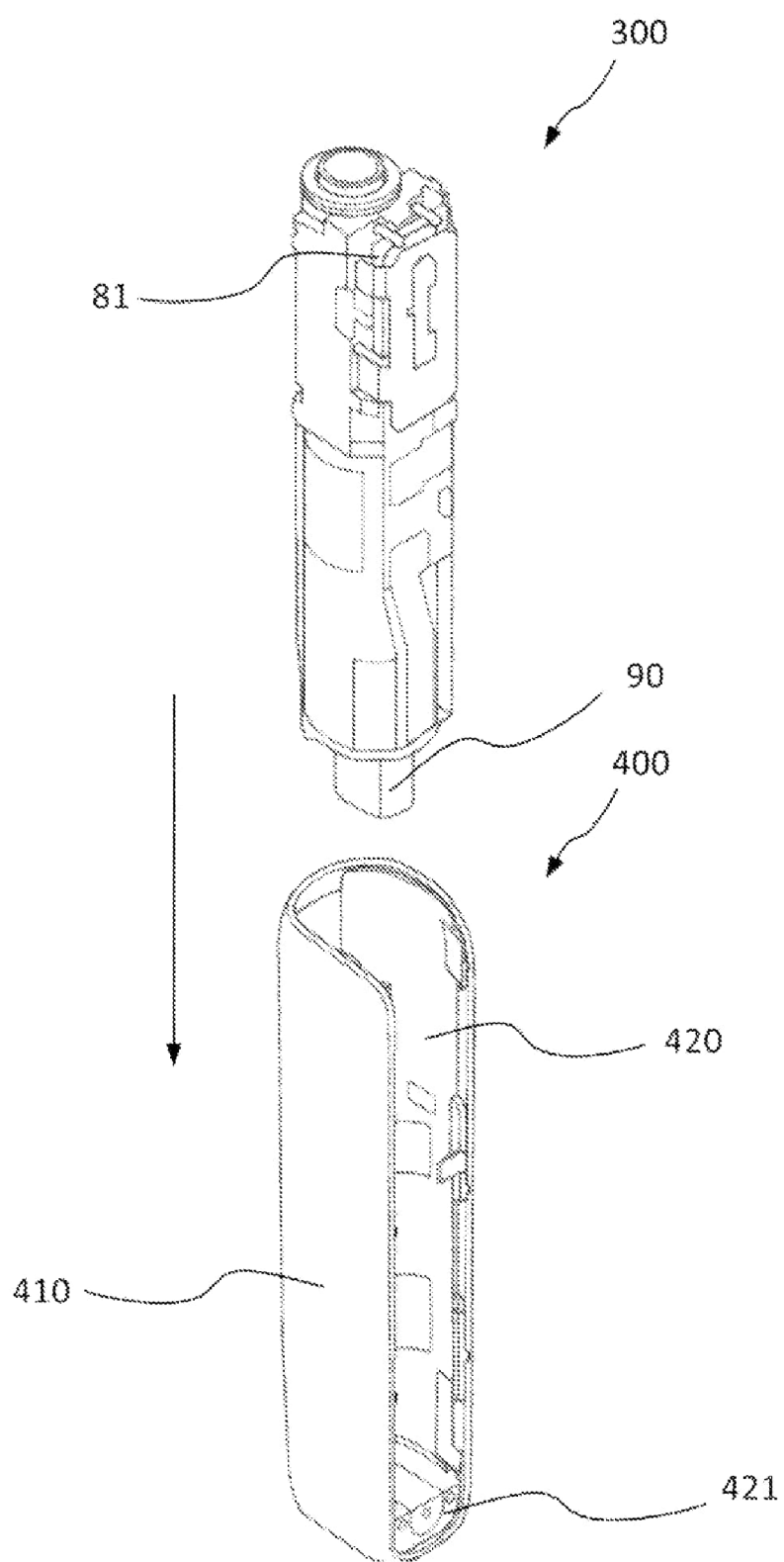
[Fig. 29]



[Fig. 30]



[Fig. 31]



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2023/044567

A. CLASSIFICATION OF SUBJECT MATTER**A24F 40/40**(2020.01)i

FI: A24F40/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A24F40/40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996
 Published unexamined utility model applications of Japan 1971-2024
 Registered utility model specifications of Japan 1996-2024
 Published registered utility model applications of Japan 1994-2024

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 111789291 A (CHINA TOBACCO HUNAN INDUSTRIAL CO., LTD.) 20 October 2020 (2020-10-20) paragraphs [0039]-[0048], fig. 1-10	1-7, 10-12
Y		8-12
Y	WO 2022/215153 A1 (JAPAN TOBACCO INC.) 13 October 2022 (2022-10-13) paragraph [0017]	8-12

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

18 January 2024

Date of mailing of the international search report

30 January 2024

Name and mailing address of the ISA/JP

Japan Patent Office (ISA/JP)
 3-4-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8915
 Japan

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/JP2023/044567

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN	111789291	A	20 October 2020	(Family: none)	
WO	2022/215153	A1	13 October 2022	TW 202239344	A

Form PCT/ISA/210 (patent family annex) (July 2022)

REFERENCES CITED IN THE DESCRIPTION

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- CN 211268652 U [0003]
- CN 216165172 U [0003]
- CN 218245680 U [0003]
- CN 219020198 U [0003]