



(11)

EP 4 825 215 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.10.2026 Bulletin 2026/43

(51) International Patent Classification (IPC):
A24F 40/44^(2020.01) A24F 40/10^(2020.01)

(21) Application number: **26166263.9**

(52) Cooperative Patent Classification (CPC):
A24F 40/44; A24F 40/10

(22) Date of filing: **20.03.2026**

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

(72) Inventors:
• **ZHU, Haoliang**
KY1-1111 Grand Cayman (KY)
• **DU, Jiajun**
KY1-1111 Grand Cayman (KY)
• **LEI, Zhiwen**
KY1-1111 Grand Cayman (KY)
• **FENG, Zhibin**
KY1-1111 Grand Cayman (KY)

(30) Priority: **20.03.2025 CN 202520498854 U**

(71) Applicant: **Smoore International Holdings Limited**
Grand Cayman, KY1-1111 (KY)

(74) Representative: **Winter, Brandl - Partnerschaft mbB**
Alois-Steinecker-Straße 22
85354 Freising (DE)

(54) **ATOMIZATION CORE, ATOMIZER, AND AEROSOL GENERATING APPARATUS**

(57) Embodiments of this application provide an atomization core, an atomizer, and an aerosol generating apparatus. The atomization core is configured to atomize an aerosol generating substrate to generate an aerosol. The atomization core includes a liquid inlet and an atomization assembly. The liquid inlet is configured to allow the aerosol generating substrate to enter the atomization core. The atomization assembly is configured to atomize the aerosol generating substrate. The atomization assembly includes a heating member and a first liquid guiding member configured to transfer the aerosol generating substrate. The first liquid guiding member is in liquid communication with the liquid inlet. The first liquid guiding member includes a first liquid guiding section, a second liquid guiding section, and a partition portion. The partition portion is arranged between the first liquid guiding section and the second liquid guiding section. A fluid transfer capability of the partition portion is lower than a fluid transfer capability of the first liquid guiding section and/or second liquid guiding section. The atomization core provided in the embodiments of this application helps alleviate a problem of a significant difference in taste, and may further alleviate a problem of liquid leakage caused by excessive liquid supply to the first liquid guiding section and/or the second liquid guiding section while improving taste stability.

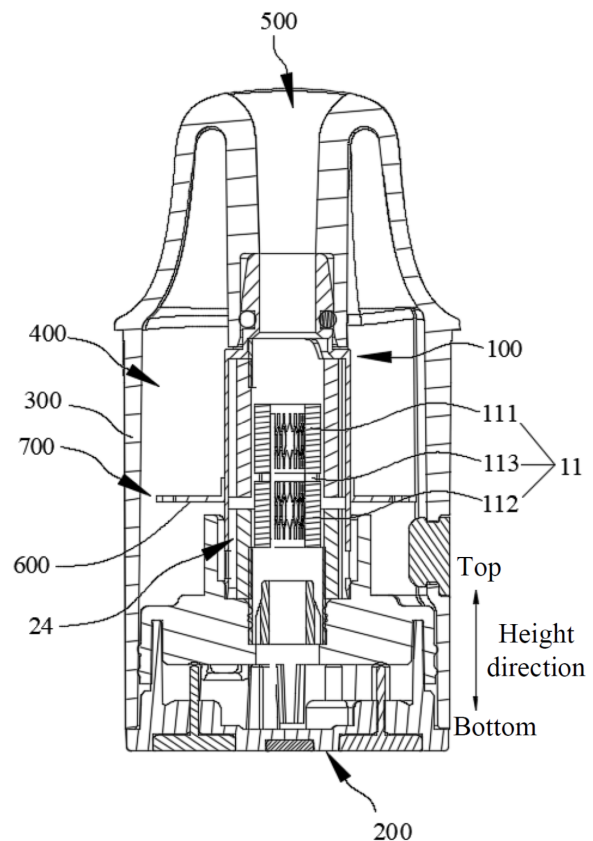


FIG. 2

Description

TECHNICAL FIELD

[0001] This application relates to the field of atomization technologies, and in particular, to an atomization core, an atomizer, and an aerosol generating apparatus.

BACKGROUND

[0002] An aerosol generating apparatus usually includes an atomizer and a power supply component electrically connected to the atomizer. The atomizer can atomize an aerosol generating substrate stored in a liquid storage cavity through ultrasonic atomization or heat-not-burn atomization under the electric drive of the power supply component, to form an aerosol for a user to use.

[0003] In the related art, during puffing, an amount of the aerosol generating substrate entering the atomization core needs to be appropriate. An excessive amount of the aerosol generating substrate may lead to a problem of liquid leakage, and an excessive amount of the aerosol generating substrate may result in an insufficient concentration of the generated aerosol, both of which may affect inhalation experience. In the related art, a problem of a significant difference in taste exists.

SUMMARY

[0004] In view of this, embodiments of this application are intended to provide an atomization core, an atomizer, and an aerosol generating apparatus, so as to alleviate a problem of a significant difference in taste.

[0005] To this end, a first aspect of the embodiments of this application provides an atomization core, configured to atomize an aerosol generating substrate to generate an aerosol. The atomization core includes:

a liquid inlet, configured to allow the aerosol generating substrate to enter the atomization core; and an atomization assembly, configured to atomize the aerosol generating substrate, where the atomization assembly includes a heating member and a first liquid guiding member configured to transfer the aerosol generating substrate, and the first liquid guiding member is in liquid communication with the liquid inlet;

the first liquid guiding member includes a first liquid guiding section, a second liquid guiding section, and a partition portion, the partition portion is arranged between the first liquid guiding section and the second liquid guiding section, and a fluid transfer capability of the partition portion is lower than a fluid transfer capability of the first liquid guiding section and/or the second liquid guiding section.

[0006] In some embodiments, the first liquid guiding section, the partition portion, and the second liquid guiding section are arranged along a first direction, and on a cross section perpendicular to the first direction, a cross-sectional area of the partition portion is smaller than a cross-sectional area of the first liquid guiding section and/or the second liquid guiding section.

[0007] In some embodiments, a porosity of the partition portion is less than a porosity of the first liquid guiding section and/or the second liquid guiding section.

[0008] In some embodiments, the atomization core further includes a second liquid guiding member configured to transfer the aerosol generating substrate. The second liquid guiding member is in liquid communication with the liquid inlet. The first liquid guiding member is arranged inside the second liquid guiding member. The second liquid guiding member is configured to transfer, to the first liquid guiding member, the aerosol generating substrate entering through the liquid inlet.

[0009] In some embodiments, the second liquid guiding member is provided with a through hole extending through a side wall of the second liquid guiding member, and a liquid storage groove is defined between the through hole and the atomization assembly.

[0010] In some embodiments, a first groove is formed on an outer side wall of the second liquid guiding member, the first groove forms a part of a vent channel, and the vent channel is in communication with the liquid inlet.

[0011] In some embodiments, the atomization assembly further includes a vent portion. The vent portion forms a second groove. The second groove forms a part of the vent channel. The vent portion is made of a non-cotton material.

[0012] A second aspect of the embodiments of this application provides an atomizer, including a liquid storage cavity and the foregoing atomization core. The liquid storage cavity is configured to store an aerosol generating substrate. The liquid storage cavity is in liquid communication with the liquid inlet.

[0013] In some embodiments, the liquid inlet includes a first liquid inlet and a second liquid inlet. The first liquid inlet is in liquid communication with the first liquid guiding section, and the second liquid inlet is in liquid communication with the second liquid guiding section.

[0014] In some embodiments, the atomizer further includes a separator. The separator is configured to separate the liquid storage cavity into a first sub-cavity and a second sub-cavity. A communication port is defined between the separator and a cavity wall of the liquid storage cavity. The first sub-cavity is in communication with the second sub-cavity through the communication port, the first sub-cavity is in liquid communication with the first liquid inlet, and the second sub-cavity is in liquid communication with the second liquid inlet.

[0015] A third aspect of the embodiments of this application provides an aerosol generating apparatus, including a power supply component and the foregoing atomization core or the foregoing atomizer. The power supply component is electrically connected to the atomization core.

[0016] An embodiment of this application provides an atomization core. An atomization assembly of the atomization core includes a heating member and a first liquid guiding member configured to transfer an aerosol generating substrate. The first liquid guiding member may guide the aerosol generating substrate to the heating member. In this way, the heating member may generate an aerosol by heating the aerosol generating substrate. The first liquid guiding member is arranged to include the first liquid guiding section, the second liquid guiding section, and the partition portion, and the fluid transfer capability of the partition portion is lower than the fluid transfer capability of the first liquid guiding section and/or the second liquid guiding section, which helps reduce a transfer velocity of the aerosol generating substrate between the first liquid guiding section and the second liquid guiding section. In this way, a liquid may be supplied to each of the first liquid guiding section and the second liquid guiding section, to reduce a difference in liquid supply amounts between the first liquid guiding section and the second liquid guiding section, thereby helping alleviate the problem of a significant difference in taste and alleviate the problem of liquid leakage caused by excessive liquid supply to the first liquid guiding section and/or the second liquid guiding section while improving taste stability.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017]

FIG. 1 is a schematic structural diagram of an atomizer according to some embodiments of this application;

FIG. 2 is a cross-sectional view of FIG. 1;

FIG. 3 is a cross-sectional view of FIG. 1;

FIG. 4 is a cross-sectional view of an atomization core according to some embodiments of this application;

FIG. 5 is a schematic structural diagram of a second mounting member according to some embodiments of this application; and

FIG. 6 is a schematic structural diagram of a first mounting member according to some embodiments of this application.

DESCRIPTIONS OF REFERENCE NUMERALS

[0018] 10. Atomization assembly; 11. First liquid guiding member; 111. First liquid guiding section; 112. Second liquid guiding section; 113. Partition portion; 12. Heating member 20; Second liquid guiding mem-

ber; 21. Third liquid guiding section; 22. Fourth liquid guiding section; 24. First groove; 30. First mounting member; 31. Liquid passage port; 40. Second mounting member; 41. Liquid inlet; 100. Atomization core; 200. Mounting base; 300. Housing; 400. Liquid storage cavity; 410. First sub-cavity; 420. Second sub-cavity; 500. Air outlet channel; 600. Separator; 700. Communication port; 1000. Atomizer.

DETAILED DESCRIPTION

[0019] It should be noted that in the case of no conflict, embodiments in this application and the technical features in the embodiments may be combined with each other, and the detailed description in a specific implementation should be understood as an explanation of the purpose of this application and should not be regarded as an improper limitation on this application.

[0020] In the description of embodiments of this application, it should be noted that orientation or position relationships indicated by the terms such as "top" and "bottom" are based on orientation or position relationships shown in FIG. 2, and these orientation terms are merely used for facilitating description of the embodiments of this application and simplifying the description, rather than indicating or implying that the mentioned apparatuses or elements need to have a particular orientation or need to be constructed and operated in a particular orientation. Therefore, the terms should not be understood as a limitation on the embodiments of this application. This application is further described in detail below with reference to the accompanying drawings and specific embodiments.

[0021] An aspect of the embodiments of this application provides an aerosol generating apparatus. Referring to FIG. 1 to FIG. 3, the aerosol generating apparatus includes a power supply component and an atomization core 100 provided in any of the embodiments of this application or an atomizer 1000 provided in any of the embodiments of this application. The power supply component is electrically connected to the atomizer 1000.

[0022] An aspect of the embodiments of this application provides an atomizer 1000. Referring to FIG. 1 to FIG. 5, the atomizer 1000 includes a liquid storage cavity 400 and the atomization core 100 provided in any of the embodiments of this application. The liquid storage cavity 400 is configured to store an aerosol generating substrate. The liquid storage cavity 400 is in liquid communication with a liquid inlet 41.

[0023] The power supply component is electrically connected to the atomizer 1000, for example, electrically connected to the atomization core 100 of the atomizer 1000. For example, the power supply component is electrically connected to the atomization core 100 through a conductive member of the atomizer 1000.

[0024] In this embodiment, the atomizer 1000 exists

independently of the power supply component. The atomizer 1000 and the power supply component are detachably connected. However, in some embodiments, the power supply component and the atomizer 1000 are encapsulated in a same housing 300, and are relatively non-detachable.

[0025] The power supply component is mainly configured to supply power to the atomizer 1000 and control an operation such as turn-on or turn-off of the entire aerosol generating apparatus. The atomizer 1000 is mainly configured to receive the aerosol generating substrate and atomize the aerosol generating substrate after being powered on. The aerosol generating substrate includes, but is not limited to materials used for medical, wellness, health, and beauty purposes.

[0026] In some embodiments, the atomizer 1000 and the power supply component may be mechanically and electrically connected together along an axial direction. Further, the atomizer 1000 and the power supply component may be connected together in a detachable manner such as a magnetic connection, a threaded connection, and a snap-fit connection. Both the atomizer 1000 and the power supply component may be replaced or upgraded separately, thereby reducing replacement costs and saving user costs. Certainly, in another embodiment, the atomizer 1000 may also be connected to the power supply component in a non-detachable manner.

[0027] Further, the atomizer 1000 and/or power supply component are not limited to being in a shape of a cylinder, or may be in a shape of an elliptic cylinder, a square box, or a polygonal column. For example, in this embodiment, a cross section of a lower end of the atomizer 1000 is substantially elliptical, and a cross section of an upper part of the atomizer 1000 is substantially flat.

[0028] It should be noted that a specific type of the aerosol generating apparatus provided in the embodiments of this application is not limited. For example, the aerosol generating apparatus may be a medical atomization device, or may be an air humidifier, and may further be an atomization device such as an e-cigarette.

[0029] An aspect of the embodiments of this application further provides an atomization core 100. Referring to FIG. 2 to FIG. 5, the atomization core 100 is configured to atomize an aerosol generating substrate to generate an aerosol. The atomization core 100 includes a liquid inlet 41 and an atomization assembly 10. The liquid inlet 41 is configured to allow the aerosol generating substrate to enter the atomization core 100. The atomization assembly 10 is configured to atomize the aerosol generating substrate. The atomization assembly 10 includes a heating member 12 and a first liquid guiding member 11 configured to transfer the aerosol generating substrate. The first liquid guiding member 11 is in liquid communication with the liquid inlet 41. The first liquid guiding member 11 includes a first liquid guiding section 111, a second liquid guiding section

112, and a partition portion 113. The partition portion 113 is arranged between the first liquid guiding section 111 and the second liquid guiding section 112. A fluid transfer capability of the partition portion 113 is lower than a fluid transfer capability of the first liquid guiding section 111 and/or the second liquid guiding section 112.

[0030] For example, referring to FIG. 1 to FIG. 3, the atomizer 1000 further includes an air outlet channel 500. The air outlet channel 500 is configured to discharge the aerosol generated by the atomization core 100 through atomization.

[0031] Herein, the liquid inlet 41 is in communication with the liquid storage cavity 400. The aerosol generating substrate in the liquid storage cavity 400 is guided to the first liquid guiding member 11 through the liquid inlet 41. To be specific, the first liquid guiding member 11 is configured to absorb the aerosol generating substrate. The heating member 12 is configured to heat and atomize the aerosol generating substrate and generate an aerosol.

[0032] For example, a channel is provided inside the first liquid guiding member 11. The heating member 12 is arranged in the channel, to enable the heating member 12 to heat and atomize the aerosol generating substrate on the inner wall of the channel. The channel is in communication with the air outlet channel 500. The generated aerosol is mixed with air entering the channel and then enters the air outlet channel 500 for use by a user.

[0033] For example, a center line of the channel substantially coincides with or completely coincides with a center line of the air outlet channel 500. The channel is directly in communication with the air outlet channel 500, so that the aerosol generated through atomization does not need to be bent before finally reaching the user, thereby reducing aerosol loss and improving taste impact.

[0034] For example, referring to FIG. 3 and FIG. 4, the heating member 12 includes a first heating member and a second heating member. The first heating member and the second heating member may operate alternately, or may operate simultaneously.

[0035] For example, the first heating member and the second heating member are arranged in sequence along a height direction of the atomizer 1000.

[0036] For example, the first liquid guiding section 111, the partition portion 113, and the second liquid guiding section 112 are arranged in sequence along the height direction of the atomizer 1000. In other words, the first liquid guiding section 111 and the second liquid guiding section 112 are respectively located on two ends of the partition portion 113 along the height direction of the atomizer 1000.

[0037] For example, referring to FIG. 3 to FIG. 5, the liquid inlet 41 includes a first liquid inlet and a second liquid inlet. The first liquid inlet is in liquid communication with the first liquid guiding section 111. The second

liquid inlet is in liquid communication with the second liquid guiding section 112. In other words, a liquid is supplied to each of the first liquid guiding section 111 and the second liquid guiding section 112 through the first liquid inlet and the second liquid inlet.

[0038] For example, the first heating member corresponds to the first liquid guiding section 111 and the first liquid inlet, and the second heating member corresponds to the second liquid guiding section 112 and the second liquid inlet. In other words, the first heating member is located in the first liquid guiding section 111, and the second heating member is located in the second liquid guiding section 112.

[0039] In this way, this helps control a liquid supply amount to the first liquid guiding section 111 and the second liquid guiding section 112, thereby helping reduce the difference in taste caused by the alternating operation of the first heating member and the second heating member, and helping shorten the overall wetting duration of the atomization core 100 and alleviate the problem of liquid leakage during puffing at a low liquid level (with use of the aerosol generating apparatus, the remaining amount of the aerosol generating substrate decreases and the highest liquid level of the aerosol generating substrate drops).

[0040] In addition, this further helps alleviate a problem of a slow longitudinal climbing speed of the aerosol generating substrate.

[0041] In the related art, a liquid guiding member is wetted for up to 10 minutes through a liquid inlet. However, the liquid inlet 41 is provided to include the first liquid inlet and the second liquid inlet. The first liquid inlet is in liquid communication with the first liquid guiding section 111, and the second liquid inlet is in liquid communication with the second liquid guiding section 112. When a total liquid inlet area of the liquid inlet 41 is the same, it only needs to take 3 minutes to wet the first liquid guiding member 11 through the first liquid inlet and the second liquid inlet. It can be seen that the atomization core 100 in the embodiments of this application helps reduce the wetting duration for wetting the atomization core 100.

[0042] It should be noted that a specific material of the first liquid guiding member 11 is not limited herein.

[0043] For example, the first liquid guiding member 11 is made of a composite of flax, nylon, and a polyethylene terephthalate (PET) cotton.

[0044] Certainly, the first liquid guiding member 11 may also be made of a high-performance e-liquid storage cotton. This helps improve longitudinal liquid transfer, and then helps alleviate the problem of a significant difference in taste through zoned liquid feeding.

[0045] It should be noted that a quantity of the liquid inlets 41 and a quantity of the heating members 12 are not limited herein. The quantity of the liquid inlets 41 is the same as the quantity of the heating members 12. To be specific, the liquid inlets 41 are in one-to-one correspondence with the heating members 12.

[0046] It should be noted that a specific structure of the heating member 12 is not limited herein. The heating member 12 includes, but is not limited to, a heating sheet, a heating film, a heating mesh, or the like.

[0047] The fluid transfer capability of the partition portion 113 may be lower than the fluid transfer capability of the first liquid guiding section 111. Alternatively, the fluid transfer capability of the partition portion 113 may be lower than the fluid transfer capability of the second liquid guiding section 112. Alternatively, the fluid transfer capability of the partition portion 113 may be lower than the fluid transfer capability of each of the first liquid guiding section 111 and the second liquid guiding section 112.

[0048] Herein, the fluid transfer capability of the partition portion 113 refers to a transfer capability of a fluid in the partition portion 113, and specifically refers to a transfer capability of the aerosol generating substrate in the partition portion 113.

[0049] Similarly, the fluid transfer capability of the first liquid guiding section 111 refers to a transfer capability of the fluid in the first liquid guiding section 111, and specifically refers to a transfer capability of the aerosol generating substrate in the first liquid guiding section 111. The fluid transfer capability of the second liquid guiding section 112 refers to a transfer capability of the fluid in the second liquid guiding section 112, and specifically refers to the transfer capability of the aerosol generating substrate in the second liquid guiding section 112.

[0050] Herein, the fluid transfer capability of the partition portion 113 is arranged to be lower than the fluid transfer capability of the first liquid guiding section 111 and/or the second liquid guiding section 112, which helps reduce the transfer capability of the aerosol generating substrate between the first liquid guiding section 111 and the second liquid guiding section 112.

[0051] An example in which the first liquid guiding section 111 is arranged above the second liquid guiding section 112 is used for description. The arrangement of the partition portion 113 helps improve a situation in which the aerosol generating substrate in the first liquid guiding section 111 flows into the second liquid guiding section 112 under the action of gravity, thereby alleviating the problem of the significant difference in taste.

[0052] In the related art, the aerosol generating substrate in an upper region of the liquid guiding member is relatively less than the aerosol generating substrate in the lower region, which leads to the problem of the difference in taste when the first heating member and the second heating member operate alternately, and may also cause the aerosol generating substrate to flow into a lower region of the liquid guiding member under the action of gravity, resulting in the problem of liquid leakage during puffing.

[0053] In addition, in an embodiment where the total liquid inlet area remains constant, existence of the first liquid inlet may alleviate the problem of an insufficient

longitudinal climbing speed of the aerosol generating substrate on the first liquid guiding member 11. In addition, when the aerosol generating substrate is lower than the first liquid inlet, a liquid inlet area of the liquid inlet 41 is reduced after a liquid level is lowered, and the problem of liquid leakage during puffing caused by the lower liquid level of the aerosol generating substrate may be alleviated to some extent.

[0054] An embodiment of this application provides an atomization core 100. An atomization assembly 10 of the atomization core 100 includes a heating member 12 and a first liquid guiding member 11 configured to transfer an aerosol generating substrate. The first liquid guiding member 11 may guide the aerosol generating substrate to the heating member 12. In this way, the heating member 12 may generate an aerosol by heating the aerosol generating substrate. The first liquid guiding member 11 is arranged to include the first liquid guiding section 111, the second liquid guiding section 112, and the partition portion 113, and the fluid transfer capability of the partition portion 113 is lower than the fluid transfer capability of the first liquid guiding section 111 and/or the second liquid guiding section 112, which helps reduce a transfer velocity of the aerosol generating substrate between the first liquid guiding section 111 and the second liquid guiding section 112. In this way, a liquid may be supplied to each of the first liquid guiding section 111 and the second liquid guiding section 112, to reduce a difference in liquid supply amounts between the first liquid guiding section 111 and the second liquid guiding section 112, thereby helping alleviate the problem of a significant difference in taste and alleviate the problem of liquid leakage caused by excessive liquid supply to the first liquid guiding section 111 and/or the second liquid guiding section 112 while improving taste stability.

[0055] In some embodiments, referring to FIG. 2, the first liquid guiding section 111, the partition portion 113, and the second liquid guiding section 112 are arranged along a first direction, and on a cross section perpendicular to the first direction, a cross-sectional area of the partition portion 113 is smaller than a cross-sectional area of the first liquid guiding section 111 and/or the second liquid guiding section 112.

[0056] For example, the first direction is a height direction of the atomizer 1000.

[0057] The cross-sectional area of the partition portion 113 may be smaller than the cross-sectional area of the first liquid guiding section 111. Alternatively, the cross-sectional area of the partition portion 113 may be smaller than the cross-sectional area of the second liquid guiding section 112. Alternatively, the cross-sectional area of the partition portion 113 may be smaller than the cross-sectional area of each of the first liquid guiding section 111 and the second liquid guiding section 112.

[0058] In the embodiment, the cross-sectional area of the partition portion 113 is set to be smaller than the

cross-sectional area of each of the first liquid guiding section 111 and the second liquid guiding section 112, thereby reducing the fluid transfer capability of the partition portion 113, and then reducing the transfer velocity of the aerosol generating substrate between the first liquid guiding section 111 and the second liquid guiding section 112.

[0059] In some other embodiments, referring to FIG. 2, a porosity of the partition portion 113 is less than a porosity of the first liquid guiding section 111 and/or the second liquid guiding section 112.

[0060] The porosity of the partition portion 113 may be less than the porosity of the first liquid guiding section 111. Alternatively, the porosity of the partition portion 113 may be less than the porosity of the second liquid guiding section 112. Alternatively, the porosity of the partition portion 113 may be less than the porosity of each of the first liquid guiding section 111 and the second liquid guiding section 112.

[0061] In the embodiment, the porosity of the partition portion 113 is set to be smaller than the porosity of each of the first liquid guiding section 111 and the second liquid guiding section 112, thereby reducing the fluid transfer capability of the partition portion 113, and then reducing the transfer velocity of the aerosol generating substrate between the first liquid guiding section 111 and the second liquid guiding section 112.

[0062] In some embodiments, referring to FIG. 4 and FIG. 6, the atomization core 100 further includes a first mounting member 30. The atomization assembly 10 is mounted to an interior of the first mounting member 30.

[0063] For example, the first mounting member 30 may be a mounting tube. The atomization assembly 10 is mounted to an interior of the mounting tube.

[0064] For example, a liquid passage port 31 is formed on the first mounting member 30.

[0065] For example, one or more liquid passage ports 31 may be provided.

[0066] In some embodiments, referring to FIG. 2 to FIG. 4, the atomization core 100 further includes a second liquid guiding member 20 configured to transfer the aerosol generating substrate. The second liquid guiding member 20 is in liquid communication with the liquid inlet 41. The first liquid guiding member 11 is arranged inside the second liquid guiding member 20. The second liquid guiding member 20 is configured to transfer, to the first liquid guiding member 11, the aerosol generating substrate entering through the liquid inlet 41.

[0067] For example, the second liquid guiding member 20 is sleeved on the outside of the first mounting member 30. The first mounting member 30 is sleeved on the outside of the first liquid guiding member 11. The aerosol generating substrate entering through the liquid inlet 41 is transferred to the first liquid guiding member 11 through the second liquid guiding member 20.

[0068] The arrangement of the second liquid guiding member 20 helps implement control of the aerosol generating substrate on the first liquid guiding member 11,

and helps reduce a situation that an atomization amount is reduced due to the insufficient aerosol generating substrate, and reduce the situation of liquid leakage caused by the excessive aerosol generating substrate.

[0069] In addition, the fluid transfer capabilities of the first liquid guiding member 11 and the second liquid guiding member 20 may be controlled, and a difference in the fluid transfer capabilities may be implemented by controlling a difference in materials, thicknesses, densities, or the like, thereby implementing the liquid supply to the heating member 12.

[0070] For example, referring to FIG. 4, the second liquid guiding member 20 includes a third liquid guiding section 21 and a fourth liquid guiding section 22. The third liquid guiding section 21 and the fourth liquid guiding section 22 are spaced apart from each other. The third liquid guiding section 21 is configured to transfer, to the first liquid guiding section 111, the aerosol generating substrate that enters through the liquid inlet 41. The fourth liquid guiding section 22 is configured to transfer, to the second liquid guiding section 112, the aerosol generating substrate that enters through the liquid inlet 41.

[0071] In other words, the second liquid guiding member 20 includes two independent parts, that is, the third liquid guiding section 21 and the fourth liquid guiding section 22, which transfer a liquid to each of the first liquid guiding section 111 and the second liquid guiding section 112. In this way, this further helps reduce a difference in liquid supply amounts between the first liquid guiding section 111 and the second liquid guiding section 112.

[0072] For example, the second liquid guiding member 20 further includes a separation portion. The separation portion is arranged between the third liquid guiding section 21 and the fourth liquid guiding section 22. A fluid transfer capability of the separation portion is lower than a fluid transfer capability of the third liquid guiding section 21 and/or the fourth liquid guiding section 22.

[0073] Certainly, the second liquid guiding member 20 may also be an integrated structure.

[0074] In some embodiments, referring to FIG. 2 to FIG. 5, the atomization core 100 further includes a second mounting member 40. The second liquid guiding member 20 is mounted to an interior of the second mounting member 40.

[0075] For example, the second mounting member 40 may be a mounting tube. The second liquid guiding member 20 is mounted to an interior of the mounting tube.

[0076] For example, a liquid inlet 41 is formed on the second mounting member 40.

[0077] In some embodiments, referring to FIG. 1 to FIG. 3, the atomizer 1000 includes a housing 300 and a mounting base 200. The atomization core 100 is mounted to the mounting base 200. The mounting base

200 is mounted to the housing 300, and at least part of a structure thereof is located inside the housing 300.

[0078] For example, the second mounting member 40, the mounting base 200, and the housing 300 define a liquid storage cavity 400.

[0079] In some embodiments, the second liquid guiding member 20 is provided with a through hole extending through a side wall of the second liquid guiding member 20. A liquid storage groove is defined between the through hole and the atomization assembly 10.

[0080] In other words, the aerosol generating substrate in the liquid storage cavity 400 can be stored in the liquid storage groove. The aerosol generating substrate can directly contact the atomization assembly 10 through the through hole.

[0081] In this way, this helps further shorten a wetting time of the first liquid guiding member 11, and helps increase a supply speed of the aerosol generating substrate.

[0082] For example, the liquid storage groove is at least higher than the second liquid inlet. In other words, the liquid storage groove may be higher than the second liquid inlet, or may be higher than the first liquid inlet in addition to being higher than the second liquid inlet.

[0083] Herein, the aerosol generating substrate in the liquid storage groove may be transferred within the first liquid guiding member 11 under the action of gravity after entering the first liquid guiding member 11, thereby further increasing the supply speed of the aerosol generating substrate.

[0084] For example, the liquid storage groove is located between the first liquid inlet and the second liquid inlet. In this way, the liquid storage groove may supply liquid to the first liquid guiding section 111 and the second liquid guiding section 112 simultaneously, thereby increasing the liquid supply amounts of the first liquid guiding section 111 and the second liquid guiding section 112 at the same time.

[0085] In some embodiments, referring to FIG. 2, a first groove 24 is formed on an outer side wall of the second liquid guiding member 20. The first groove 24 forms a part of a vent channel. The vent channel is in communication with the liquid inlet 41.

[0086] The aerosol generating substrate in the liquid storage cavity 400 is guided through the liquid inlet 41 to the atomization core 100 to perform heating and atomization to generate an aerosol. After the aerosol generating substrate in the liquid storage cavity 400 is consumed, the external gas enters the liquid storage cavity 400 through the vent channel, to balance the pressure in the liquid storage cavity 400.

[0087] For example, the part of the vent channel is defined between the groove wall of the first groove 24 and the second mounting member 40.

[0088] For example, the first groove 24 extends along a height direction of the atomizer 1000.

[0089] In some embodiments, the atomization as-

sembly 10 further includes a vent portion. The vent portion forms a second groove. The second groove forms a part of the vent channel. The vent portion is made of a non-cotton material.

[0090] For example, the part of the vent channel is defined between the groove wall of the second groove and the second mounting member 40.

[0091] For example, the vent portion is arranged on the top of the second liquid guiding member 20.

[0092] For example, the second groove bends and extends. The second groove that is bent for communication helps increase the length of the vent channel, thereby helping increase a possibility that the aerosol generating substrate in the liquid storage cavity 400 enters the air outlet channel 500 through the vent channel.

[0093] The vent portion may be made of another material of the non-cotton material, which may be for example an injection molded member, a metal member, a rubber member, or a composite member. In other words, the material of the vent portion is at least different from the material of the first liquid guiding member 11.

[0094] Herein, the material of the vent portion is provided as the non-cotton material, which helps improve stability of the second groove, and improves a change in size of the second groove caused by a factor such as an assembly error, a production error, or stress, thereby helping improve vent stability. In the embodiment, the vent portion forming the second groove that is bent for communication is arranged to form a stable vent channel, which helps improve vent stability, thereby helping improve stability of the liquid supply.

[0095] It should be noted that the vent channel has a plurality of specific structures.

[0096] For example, the vent portion, a gap between the first liquid guiding member 11 and the first mounting member 30, and/or a gap inside the first liquid guiding member 11 form the vent channel.

[0097] For example, the vent portion, a gap between the second liquid guiding member 20 and the second mounting member 40, and/or a gap inside the second liquid guiding member 20 form the vent channel. For example, the vent portion, the gap between the first liquid guiding member 11 and the first mounting member 30, and/or the gap inside the first liquid guiding member 11, the gap between the second liquid guiding member 20 and the second mounting member 40, and/or the gap inside the second liquid guiding member 20 form the vent channel.

[0098] For example, a gap between the second groove and the first liquid guiding member 11 may jointly form the vent channel. Alternatively, the gap between the first liquid guiding member 11 and the first mounting member 30 and the second groove may jointly form the vent channel. Alternatively, the first groove 24 and the second groove may jointly form the vent channel. Alternatively, the gap between the sec-

ond liquid guiding member 20 and the first mounting member 30 and the second groove may jointly form the vent channel. Alternatively, a gap between the second groove and the second liquid guiding member 20 may jointly form the vent channel.

[0099] In some embodiments, referring to FIG. 2 and FIG. 3, the atomizer 1000 further includes a separator 600. The separator 600 is configured to separate the liquid storage cavity 400 into a first sub-cavity 410 and a second sub-cavity 420. A communication port 700 is defined between the separator 600 and the cavity wall of the liquid storage cavity 400. The first sub-cavity 410 is in communication with the second sub-cavity 420 through the communication port 700. The first sub-cavity 410 is in liquid communication with the first liquid inlet. The second sub-cavity 420 is in liquid communication with the second liquid inlet.

[0100] For example, the separator 600 is sleeved on an outer side wall of the atomization core 100. The first sub-cavity and the second sub-cavity are located on two sides of the separator 600 along the thickness direction.

[0101] For example, a part of a peripheral side wall of the separator 600 is recessed to form a notch. The communication port 700 is defined between the notch and the cavity wall of the liquid storage cavity 400.

[0102] Certainly, the separator 600 may be further extended through to form the communication port 700.

[0103] In the embodiment, the separator 600 is arranged, and the liquid storage cavity 400 is separated into the first sub-cavity 410 and the second sub-cavity 420 through the separator 600, so that the separator 600 may have a role in blocking the aerosol generating substrate, to enable the aerosol generating substrate to easily enter the upper one of the first liquid guiding section 111 and the second liquid guiding section 112, thereby reducing the difference in the liquid supply amounts between the first liquid guiding section 111 and the second liquid guiding section 112, and further helping alleviate the problem of the significant difference in taste.

[0104] During assembly, the atomization assembly 10 may be assembled into the first mounting member 30, the second liquid guiding member 20 is assembled into the second mounting member 40, then the first mounting member 30 equipped with the atomization assembly 10 is assembled into the second mounting member 40, to enable the second liquid guiding member 20 to be sleeved on the circumference side of the first mounting member 30, and then the separator 600 is sleeved on the second mounting member 40.

[0105] In the descriptions of this specification, the description of the reference term such as "in an embodiment," "in some embodiments," "in some other embodiments," "in still some other embodiments," or "for example" means that a specific feature, structure, material, or characteristic that is described with reference to the embodiment or the example is included in at least

one embodiment or example of the embodiments of this application. In this application, schematic descriptions of the foregoing terms are not necessarily directed at the same embodiment or example. Moreover, the specific feature, structure, material, or characteristic described may be combined in a proper manner in any one or more embodiments or examples. In addition, a person skilled in the art may combine different embodiments or examples described in this application with features of the different embodiments or examples without mutual contradiction.

[0106] The foregoing descriptions are merely preferred embodiments of this application and are not intended to limit this application. For a person skilled in the art, this application may have various modifications and changes. Any modification, equivalent replacement, or improvement made shall fall within the protection scope of this application.

Claims

1. An atomization core, configured to atomize an aerosol generating substrate to generate an aerosol, wherein the atomization core comprises:

a liquid inlet, configured to allow the aerosol generating substrate to enter the atomization core; and

an atomization assembly, configured to atomize the aerosol generating substrate, wherein the atomization assembly comprises a heating member and a first liquid guiding member configured to transfer the aerosol generating substrate, and the first liquid guiding member is in liquid communication with the liquid inlet; the first liquid guiding member comprises a first liquid guiding section, a second liquid guiding section, and a partition portion, the partition portion is arranged between the first liquid guiding section and the second liquid guiding section, and a fluid transfer capability of the partition portion is lower than a fluid transfer capability of the first liquid guiding section and/or the second liquid guiding section.

2. The atomization core of claim 1, wherein the first liquid guiding section, the partition portion, and the second liquid guiding section are arranged along a first direction, and on a cross section perpendicular to the first direction, a cross-sectional area of the partition portion is smaller than a cross-sectional area of the first liquid guiding section and/or the second liquid guiding section.

3. The atomization core of claim 1 or 2, wherein a porosity of the partition portion is less than a porosity of the first liquid guiding section and/or the

second liquid guiding section.

4. The atomization core of any one of claims 1 to 3, further comprising a second liquid guiding member configured to transfer the aerosol generating substrate, wherein the second liquid guiding member is in liquid communication with the liquid inlet, the first liquid guiding member is arranged inside the second liquid guiding member, and the second liquid guiding member is configured to transfer, to the first liquid guiding member, the aerosol generating substrate entering through the liquid inlet.

5. The atomization core of claim 4, wherein the atomization core further includes a first mounting member, the second liquid guiding member is sleeved on the outside of the first mounting member, and the first mounting member is sleeved on the outside of the first liquid guiding member.

6. The atomization core of claim 4 or 5, wherein the second liquid guiding member is provided with a through hole extending through a side wall of the second liquid guiding member, and a liquid storage groove is defined between the through hole and the atomization assembly.

7. The atomization core of claim 4 or 5, wherein a first groove is formed on an outer side wall of the second liquid guiding member, the first groove forms a part of a vent channel, and the vent channel is in communication with the liquid inlet.

8. The atomization core of any one of claims 1 to 7, further comprising a vent portion, wherein the vent portion forms a second groove, the second groove forms a part of the vent channel, and the vent portion is made of a non-cotton material.

9. The atomization core of claim 8, wherein the atomization core further includes a second mounting member, and the part of the vent channel is defined between a groove wall of the second groove and the second mounting member.

10. The atomization core of claim 8, wherein the vent portion is arranged on the top of a/the second liquid guiding member.

11. An atomizer, comprising a liquid storage cavity and the atomization core of any of claims 1 to 7, wherein the liquid storage cavity is configured to store the aerosol generating substrate, and the liquid storage cavity is in liquid communication with the liquid inlet.

12. The atomizer of claim 11, wherein the liquid inlet comprises a first liquid inlet and a second liquid

inlet, the first liquid inlet is in liquid communication with the first liquid guiding section, and the second liquid inlet is in liquid communication with the second liquid guiding section.

5

- 13.** The atomizer of claim 12, wherein a liquid storage groove is defined between the through hole and the atomization assembly, and the liquid storage groove is at least higher than the second liquid inlet.

10

- 14.** The atomizer of claim 12, further comprising a separator, wherein the separator is configured to separate the liquid storage cavity into a first sub-cavity and a second sub-cavity, a communication port is defined between the separator and a cavity wall of the liquid storage cavity, the first sub-cavity is in communication with the second sub-cavity through the communication port, the first sub-cavity is in liquid communication with the first liquid inlet, and the second sub-cavity is in liquid communication with the second liquid inlet.

15

20

- 15.** An aerosol generating apparatus, comprising a power supply component and the atomization core of any of claims 1 to 10 or the atomizer of any of claims 11 to 14, wherein the power supply component is electrically connected to the atomization core.

25

30

35

40

45

50

55

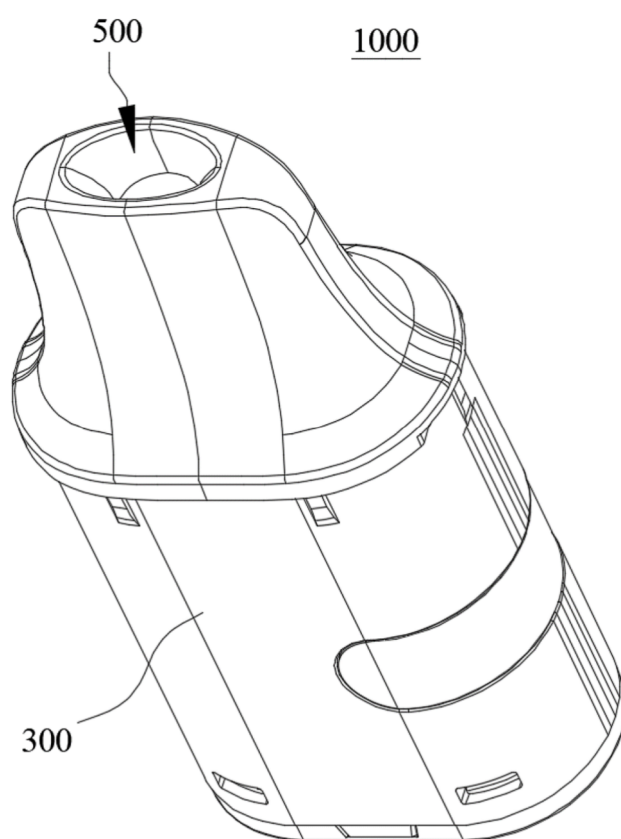


FIG. 1

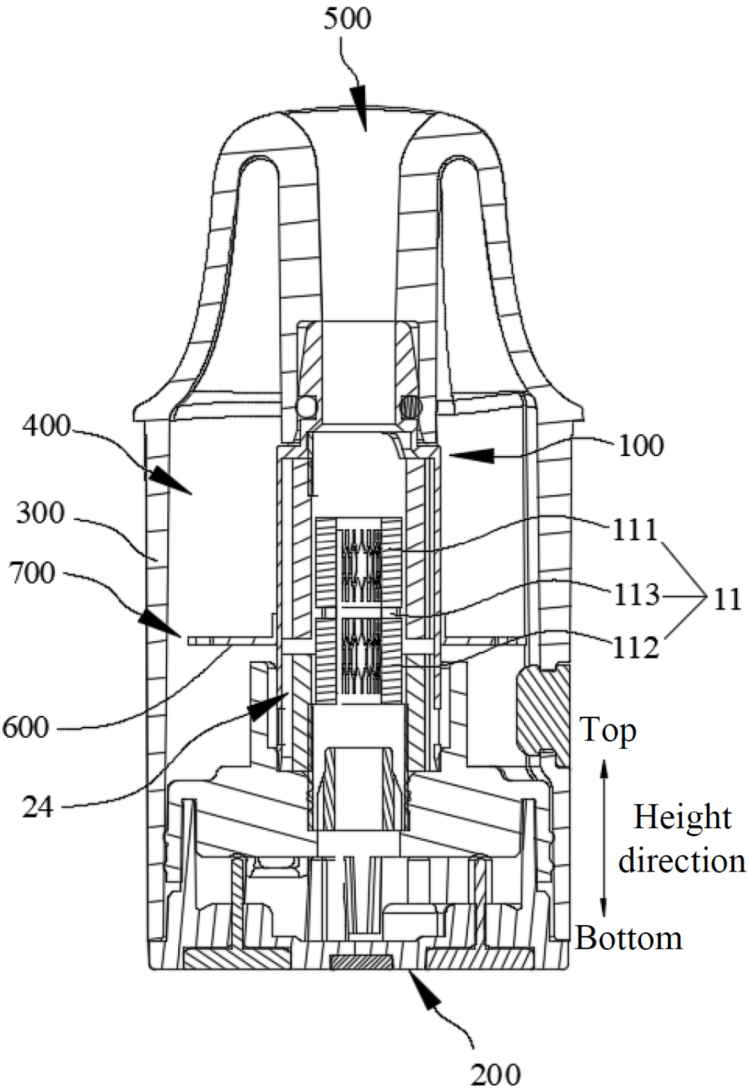


FIG. 2

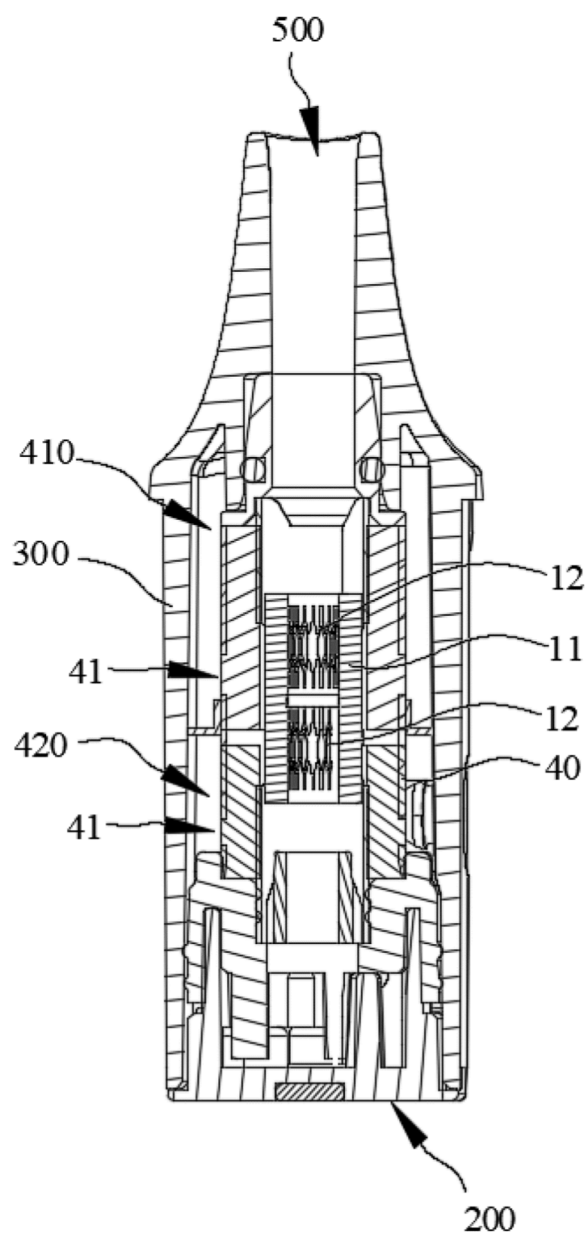


FIG. 3

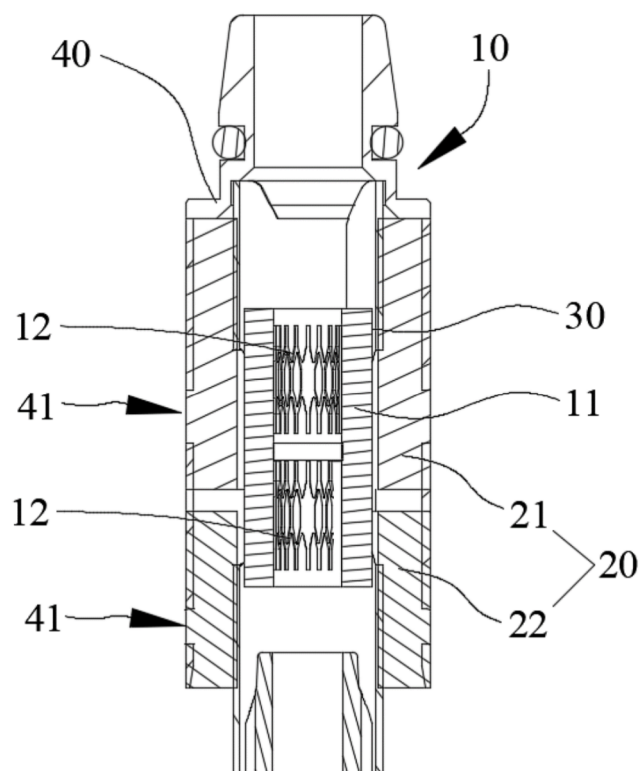


FIG. 4

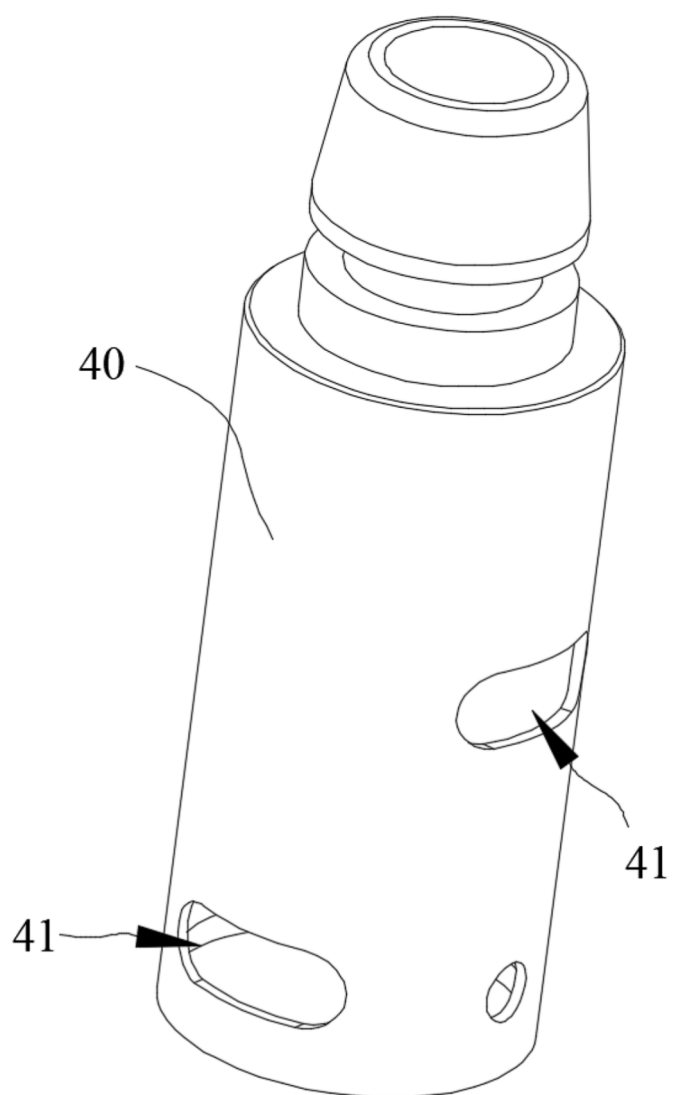


FIG. 5

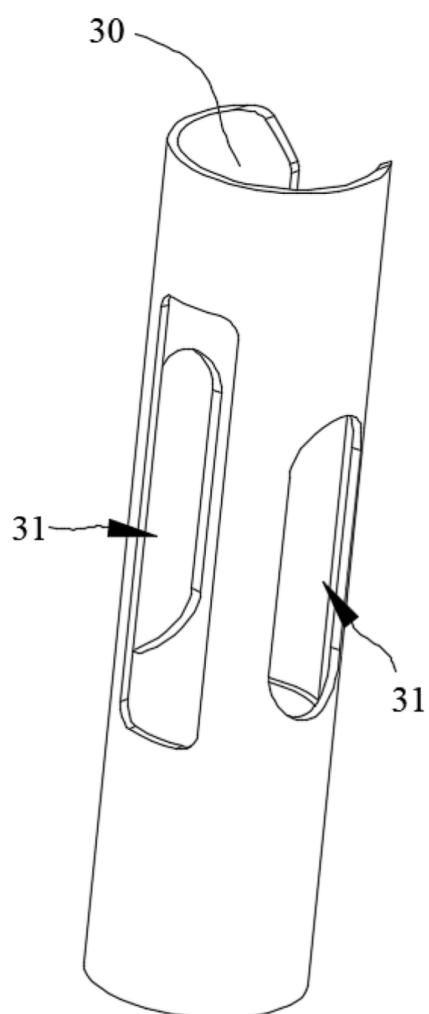


FIG. 6



EUROPEAN SEARCH REPORT

Application Number

EP 26 16 6263

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CN 222 548 599 U (SHENZHEN SMOORE TECHNOLOGY LTD) 4 March 2025 (2025-03-04) * abstract; figures 2,6,7 * * figures 4,5 * * power battery; paragraph [0043] * * liquid storage; paragraph [0044] * * paragraph [0074] * * porosity; paragraph [0079] - paragraph [0081]; figure 7 *	1-15	INV. A24F40/44 ADD. A24F40/10
X	----- CN 218 354 686 U (SHENZHEN JOYETECH ELECTRONIC TECHNOLOGY CO LTD) 24 January 2023 (2023-01-24) * abstract; figures 5,6 * * porosity of different layers; paragraph [0062] *	1,3,11, 15	
X,P	----- EP 4 691 281 A1 (SMOORE INTERNATIONAL HOLDINGS LTD [KY]) 11 February 2026 (2026-02-11) * figures 6,7 * -----	1,2,8,9, 11,15	TECHNICAL FIELDS SEARCHED (IPC) A24F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 8 September 2026	Examiner Schnitzhofer, Markus
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P24C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 26 16 6263

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-09-2026

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 222548599 U	04-03-2025	CN 222548599 U	04-03-2025
		EP 4649842 A1	19-11-2025
		US 20250351876 A1	20-11-2025

CN 218354686 U	24-01-2023	NONE	

EP 4691281 A1	11-02-2026	CN 121465307 A	06-02-2026
		EP 4691281 A1	11-02-2026

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82