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(54) **ATOMIZER AND AEROSOL GENERATING DEVICE**

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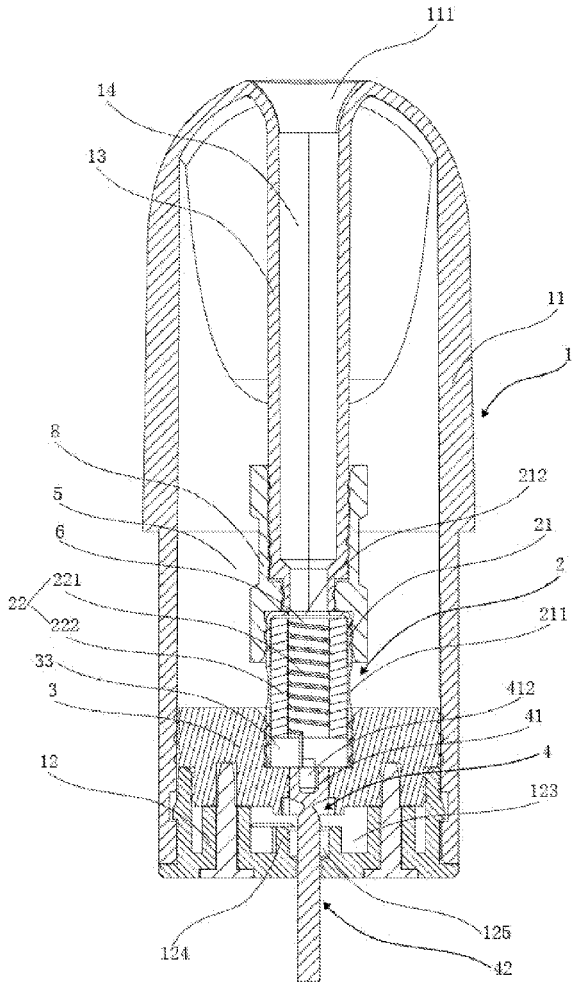
(52) **U.S. Cl.**

CPC ***A24F 40/485*** (2020.01); ***A24F 40/10*** (2020.01); ***A24F 40/42*** (2020.01)

(57) **ABSTRACT**

An atomizer and an aerosol generating device are provided. An atomizing assembly and a sealing seat are provided in an accommodating cavity of a liquid storage member, and the atomizing assembly is supported on the sealing seat, so that the portion of the interior of the liquid storage member other than the atomizing assembly and the sealing seat defines a liquid storage cavity, and an atomizing cavity is provided inside the atomizing assembly. The liquid storage cavity is communicated with the atomizing cavity through a liquid inlet hole. An air inlet hole is formed on the liquid storage member, and an air inlet passage that communicates the atomizing cavity with the air inlet hole is formed on the sealing seat. Before the aerosol generating device is put into use, the air inlet passage is sealed by a plugging assembly.



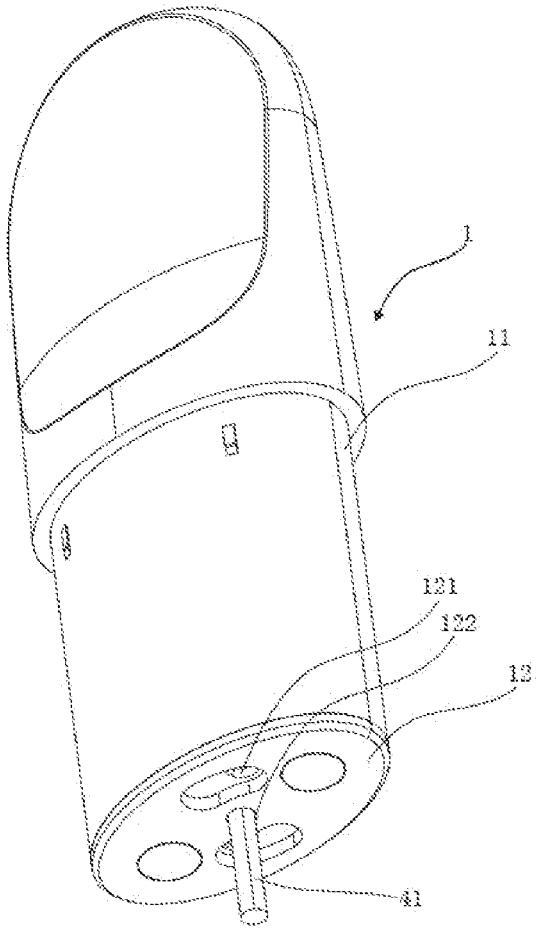


FIG. 1

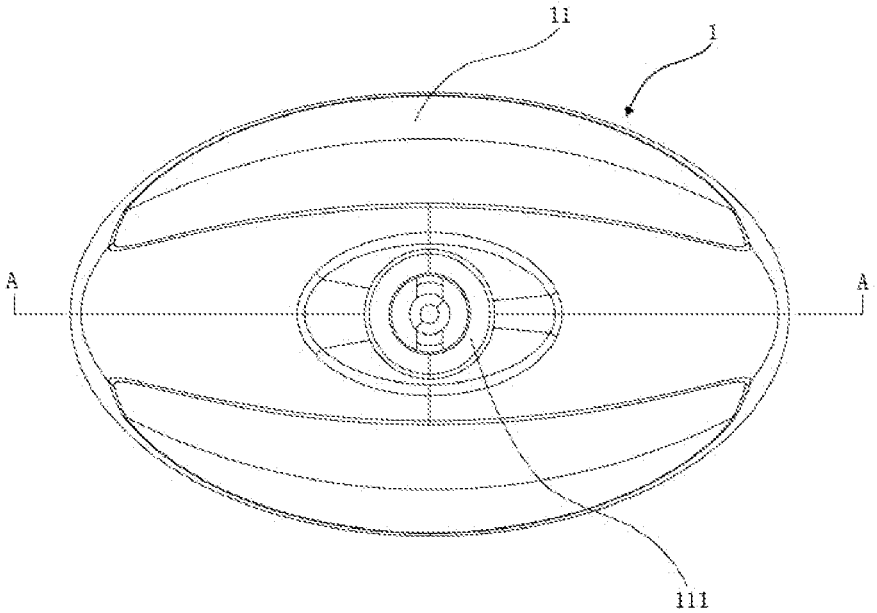


FIG. 2

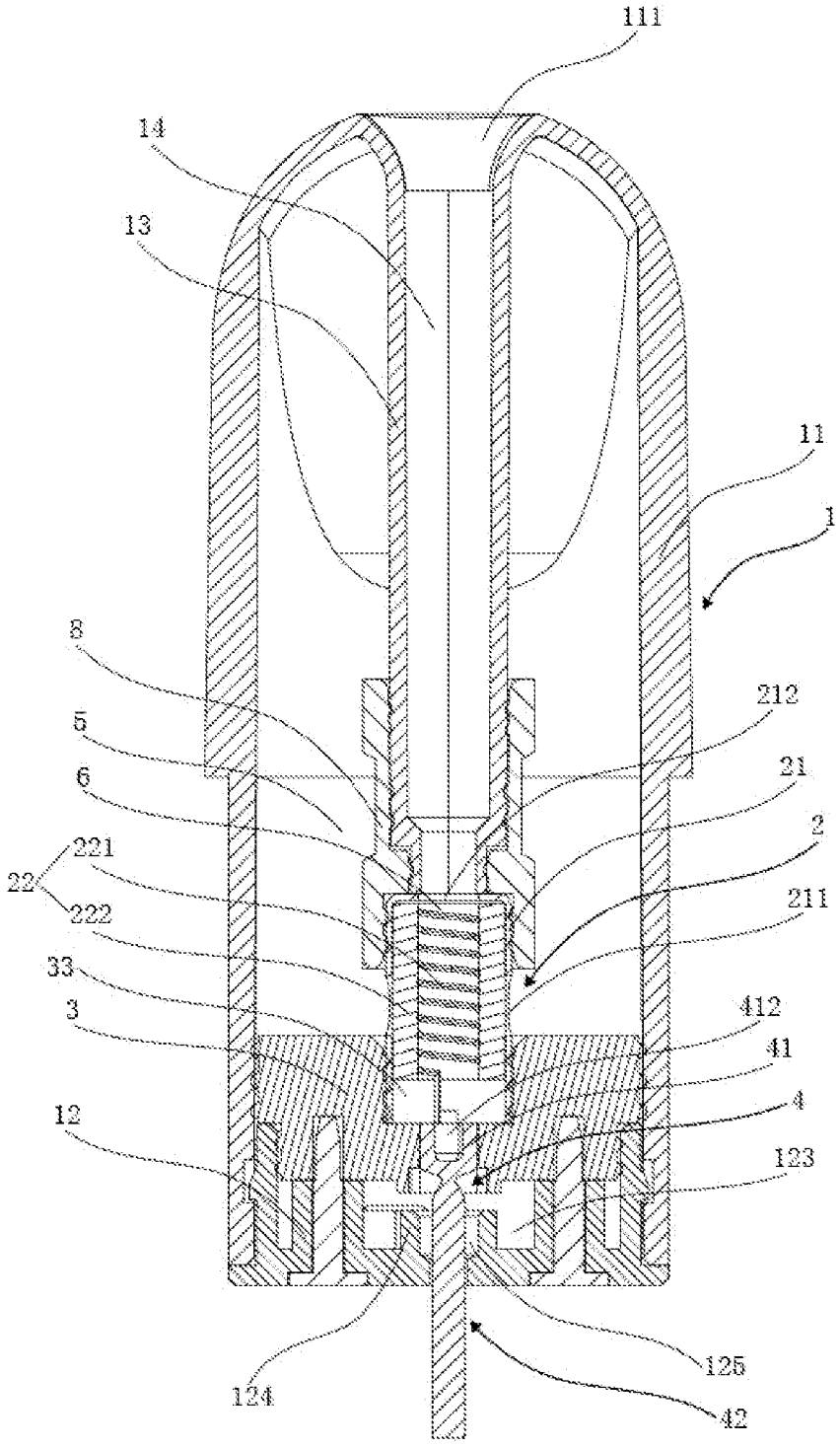

111
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FIG. 3

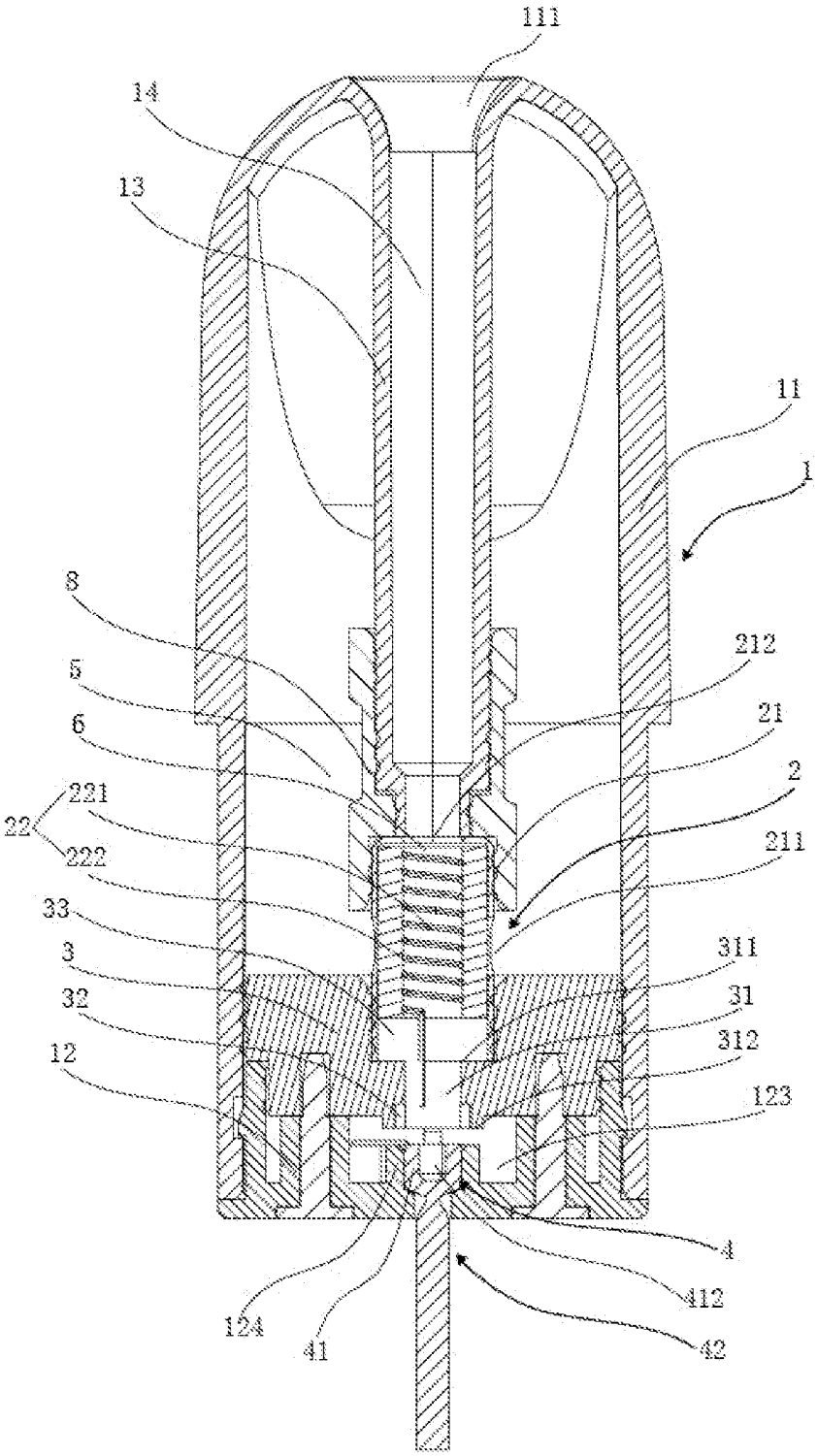
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FIG. 4

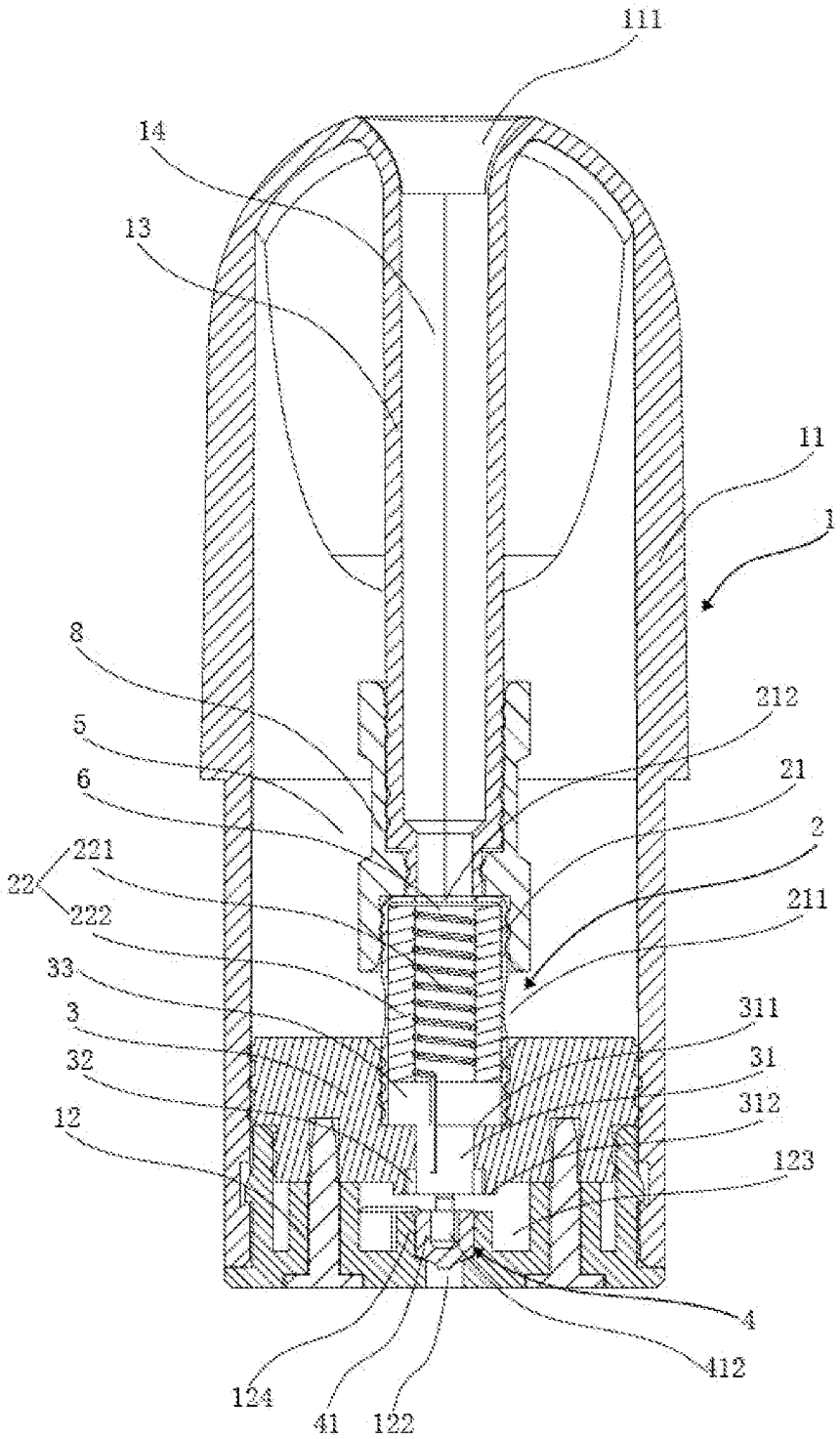
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FIG. 5

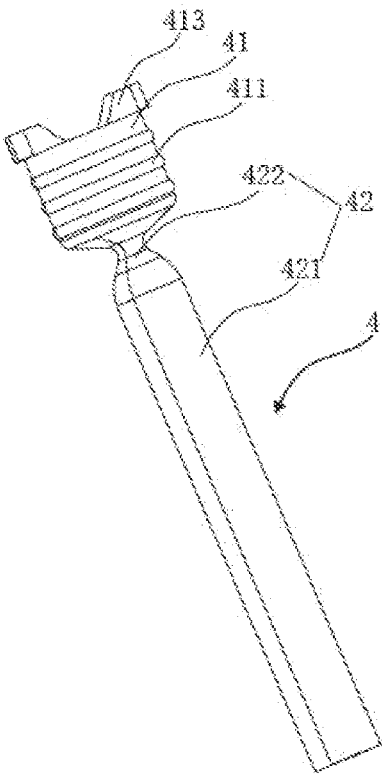

FIG. 6

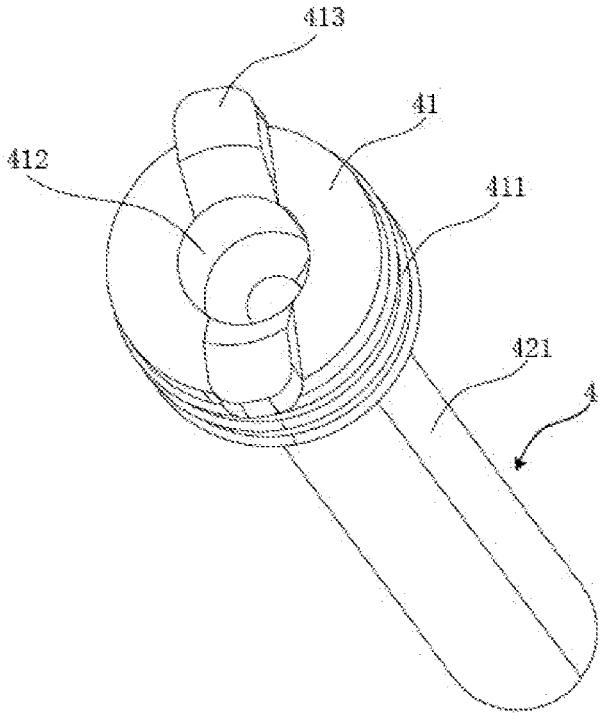

FIG. 7

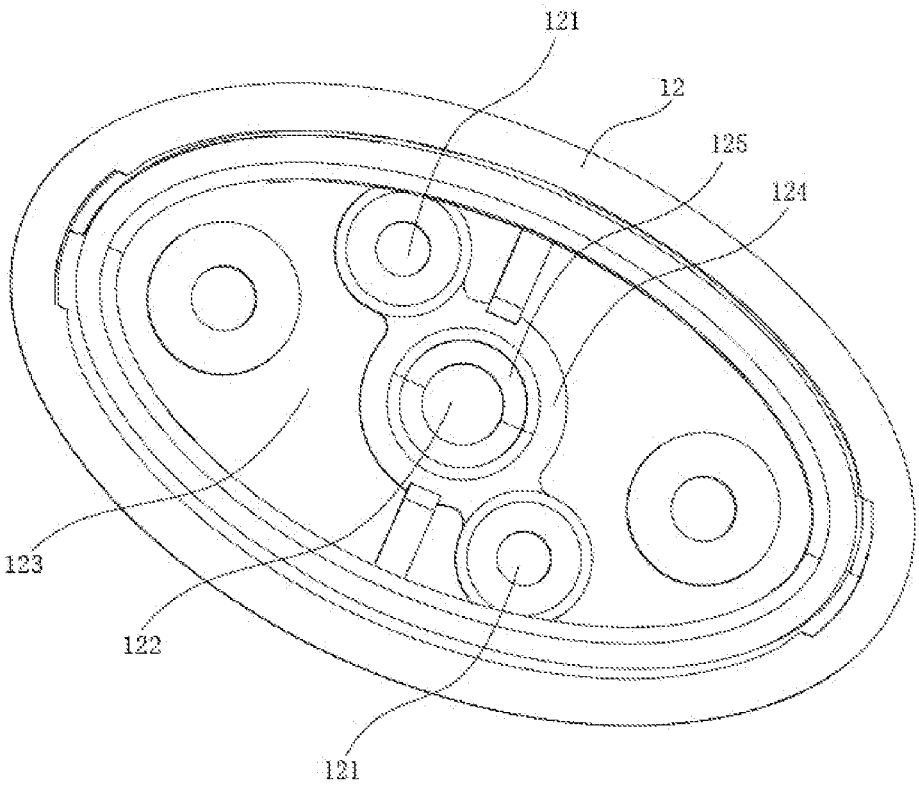

FIG. 8

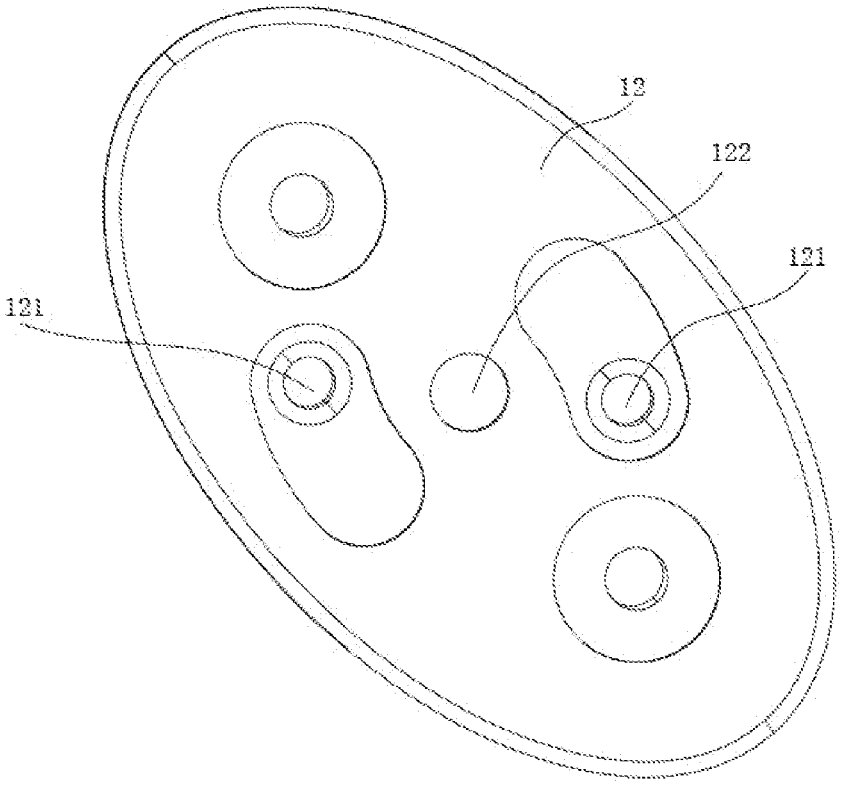

FIG. 9

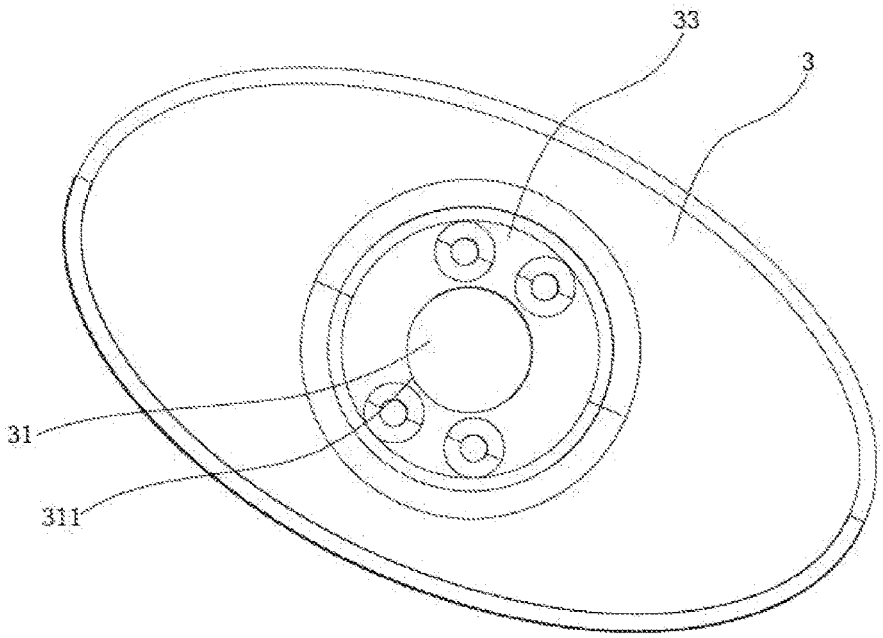

FIG. 10

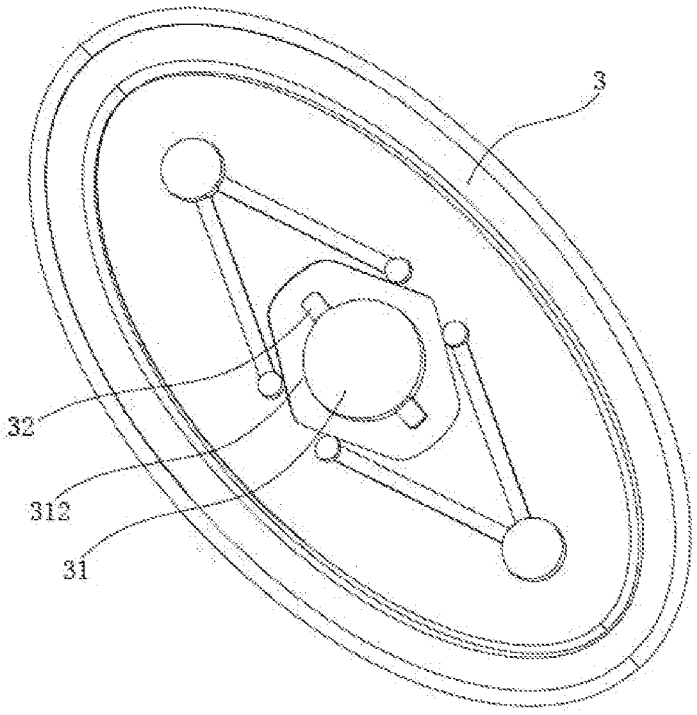

FIG. 11

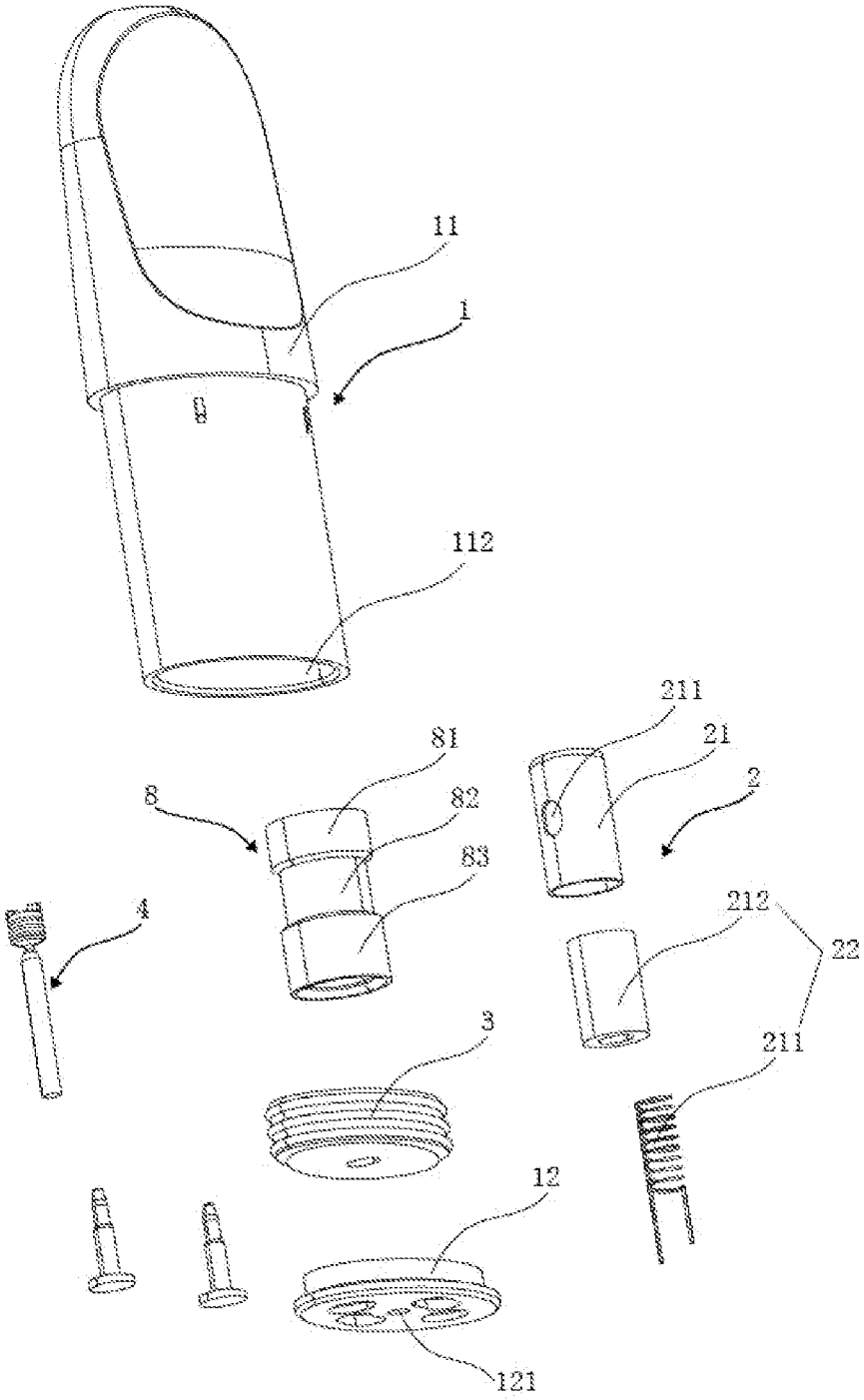

FIG. 12

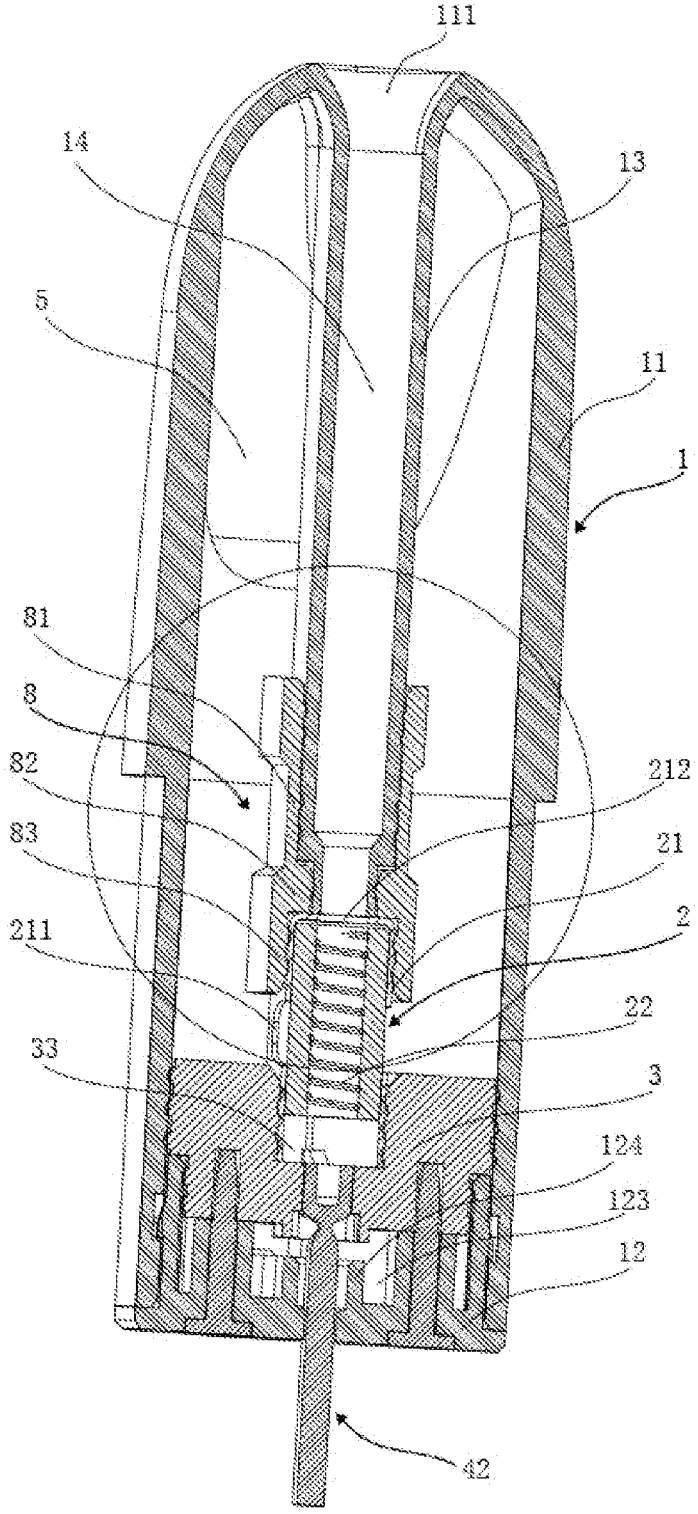

FIG. 13

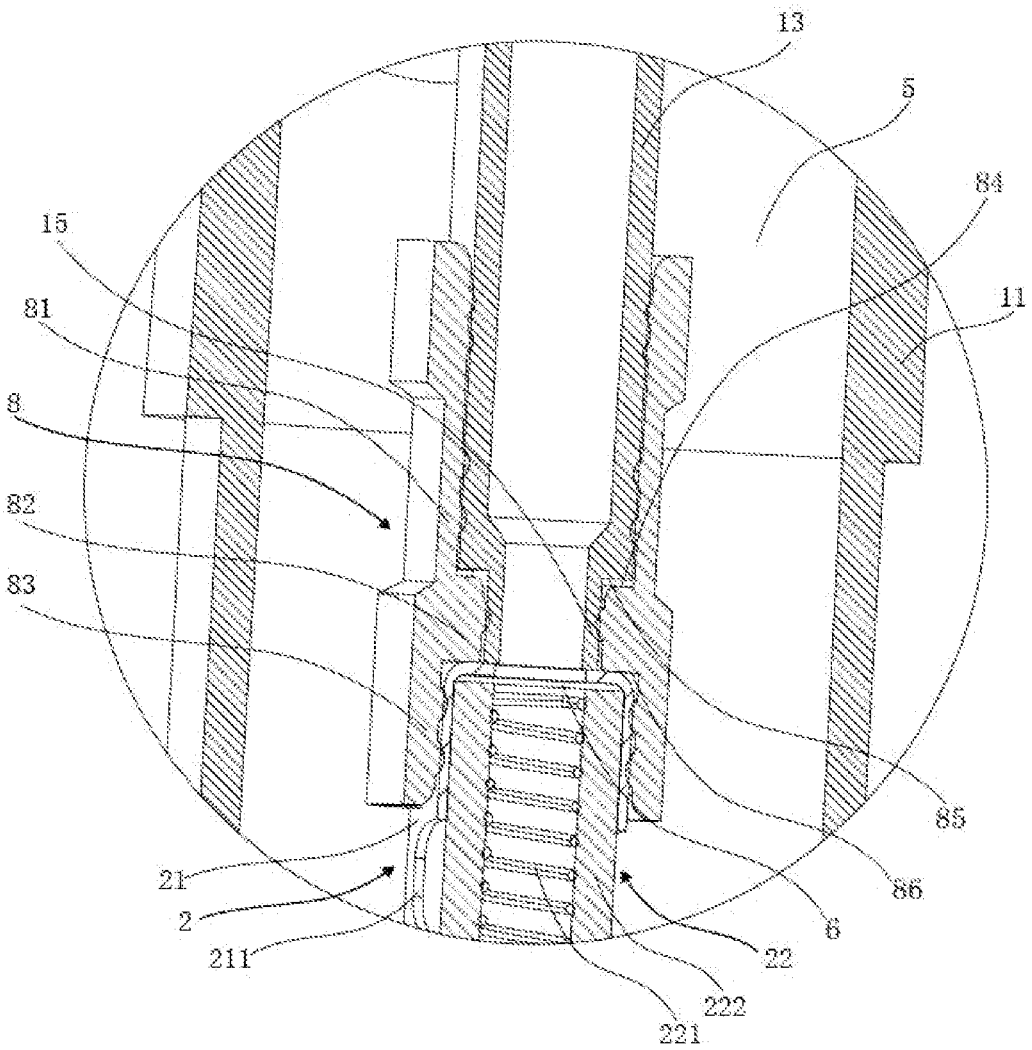

FIG. 14

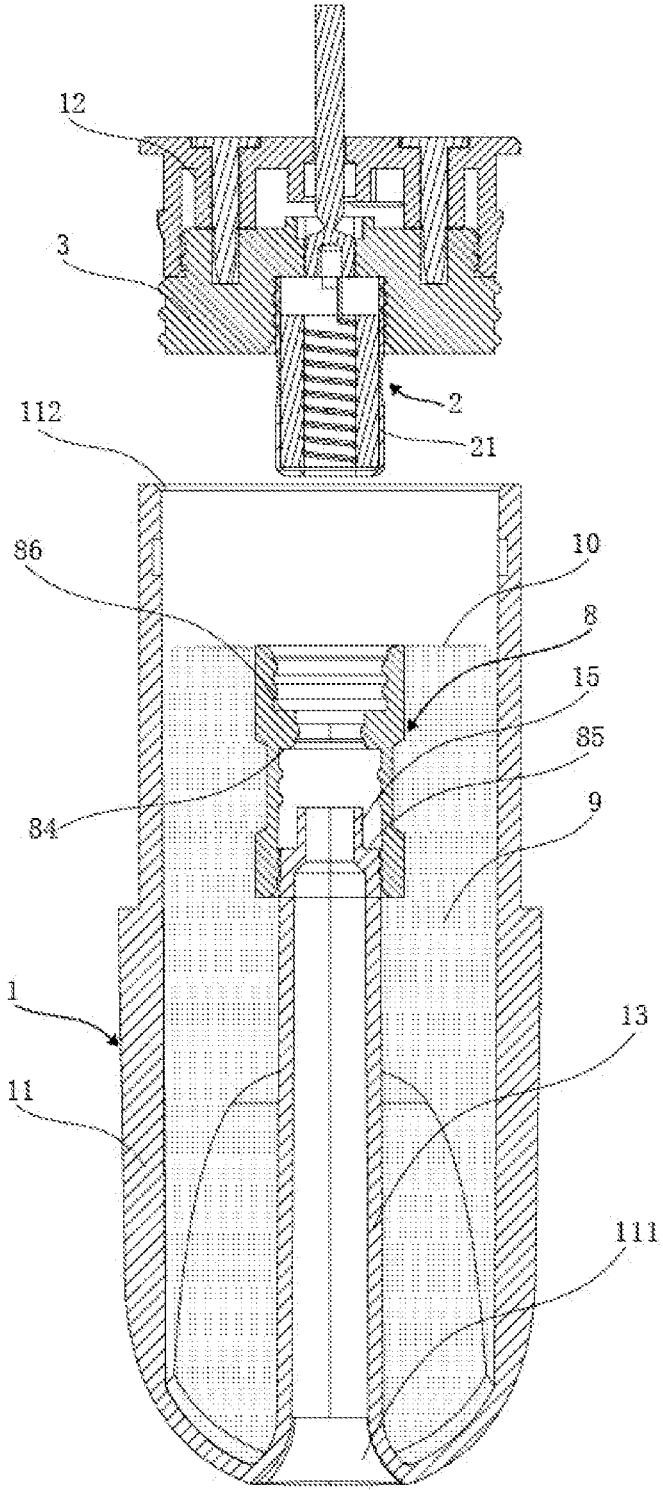

FIG. 15

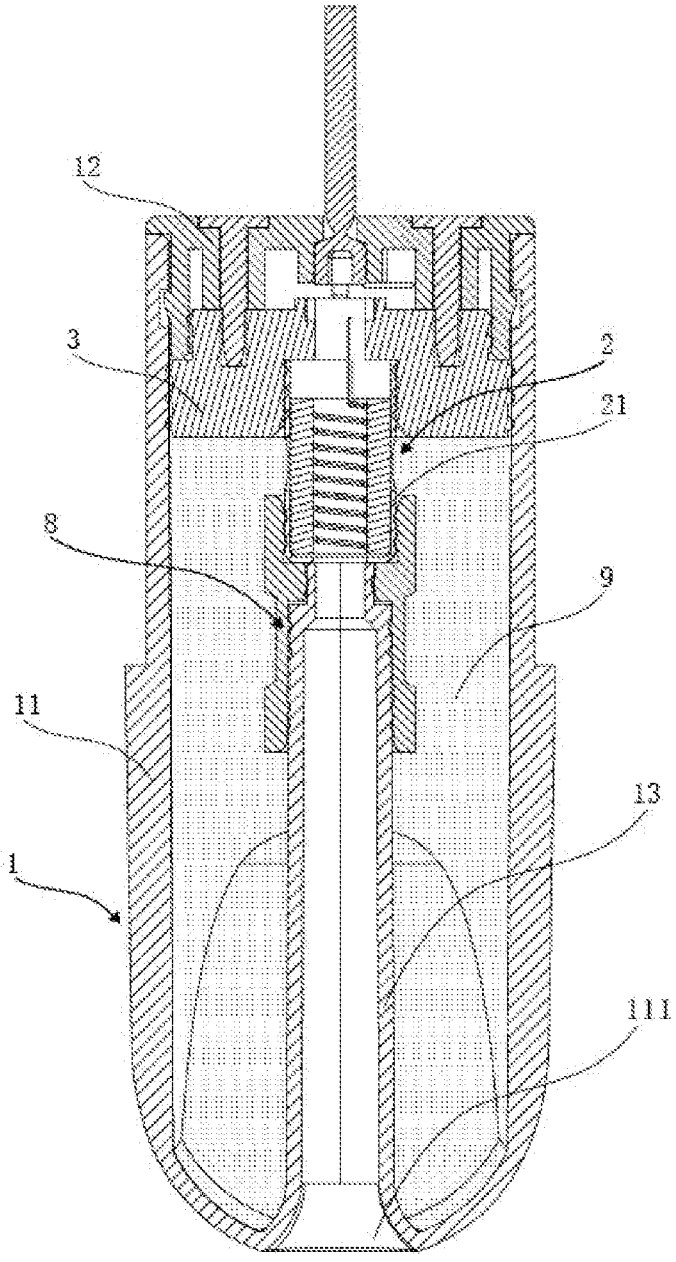

FIG. 16

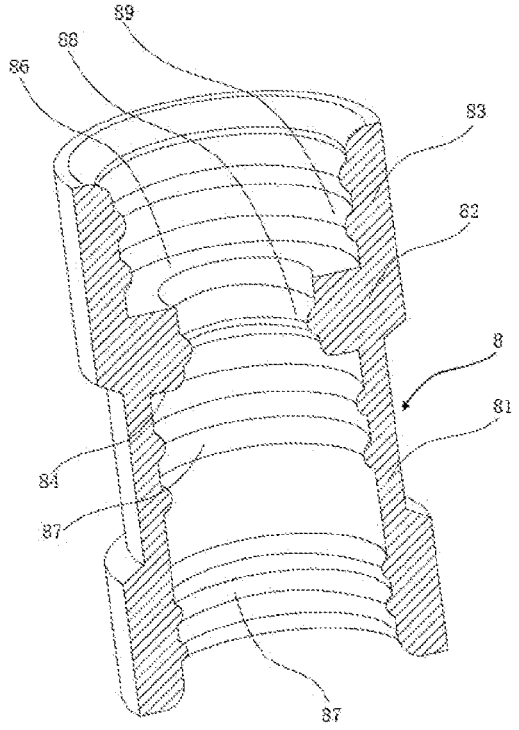

FIG. 17

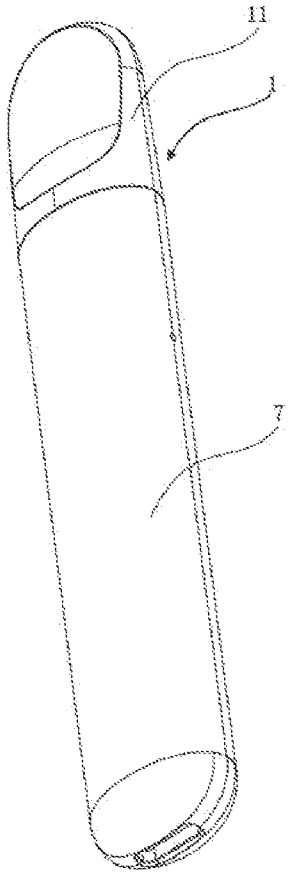

FIG. 18

ATOMIZER AND AEROSOL GENERATING DEVICE

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present disclosure is a continuation-in-part of International Patent Application No. PCT/CN2022/081319, filed on Mar. 17, 2022, which claims priority to Chinese Patent Application No. 202121422230.9, filed on Jun. 24, 2021. All of the aforementioned patent applications are hereby incorporated by reference in their entireties.

TECHNICAL FIELD

[0002] The present disclosure relates to the technical field of simulated smoking, in particular to an atomizer and an aerosol generating device.

BACKGROUND

[0003] The aerosol generating device is a relatively common electronic product that simulates cigarettes. It mainly includes an atomizer that can heat and atomize the aerosol-forming substrate to form smoke and a power supply device that supplies power to the atomizer. Specifically, the atomizer is generally provided with an air inlet hole that is communicated with the atomizing cavity of the atomizer to allow external air to enter the atomizing cavity. Currently, during the transportation of aerosol generating devices or before sale, the aerosol-forming substrate stored inside the atomizer is prone to leakage through the air inlet hole, which not only causes pollution and waste of the aerosol-forming substrate, but also causes a lot of inconvenience to the transportation, storage, sale, and use of the aerosol generating device.

SUMMARY

[0004] Based on the above problems in the prior art, one purpose of embodiments of the present disclosure is to provide an atomizer that seals the air inlet passage through a plugging assembly to prevent the aerosol-forming substrate from leaking through the air inlet hole before the aerosol generating device is put into use.

[0005] In order to achieve the above purpose, the technical solution adopted by this disclosure is to provide an atomizer for an aerosol generating device, including:

[0006] a liquid storage member having an accommodating cavity therein, wherein the liquid storage member is provided with a smoke outlet;

[0007] a sealing seat disposed in the accommodating cavity;

[0008] an atomizing assembly configured to atomize an aerosol-forming substrate to form smoke that can be inhaled by a user, wherein the atomizing assembly is disposed in the accommodating cavity, and the atomizing assembly is supported on the sealing seat, so that the portion of the interior of the liquid storage member other than the atomizing assembly and the sealing seat defines a liquid storage cavity for storing the aerosol-forming substrate, an atomizing cavity that is separated from the liquid storage cavity is provided inside the atomizing assembly, the atomizing assembly is provided with a liquid inlet hole that communicates the liquid storage cavity with the atomizing cavity, the atomizing cavity is communicated with the smoke outlet, the liquid storage member is further provided with an air inlet hole, the sealing seat is provided with an air inlet passage that communicates the atomizing cavity with the air inlet hole; and

[0009] a plugging assembly configured to seal the air inlet passage before the aerosol generating device is put into use.

[0010] Further, the plugging assembly includes a sealing member slidably disposed in the air inlet passage along an axial direction of the air inlet passage and a pulling member configured for pulling the sealing member to remove the sealing member away from the air inlet passage, one end of the pulling member is connected to the sealing member, the liquid storage member is correspondingly provided with an opening for the other end of the pulling member to pass through, and the other end of the pulling member passes through the opening to extend to the outside of the liquid storage member.

[0011] Further, the pulling member is a pulling rod, the pulling rod includes a long rod section extending to the outside of the liquid storage member and a connecting section connecting the long rod section with the sealing member.

[0012] Further, the diameter of the connecting section is smaller than the diameter of the long rod section.

[0013] Further, the liquid storage member includes a main housing having the accommodating cavity and a bottom seat installed at a bottom opening of the main housing, the smoke outlet is formed at the top end of the main housing, the sealing seat is supported on one side of the bottom seat facing the accommodating cavity, a vent tube that communicates the atomizing cavity with the smoke outlet is provided in the main housing, the portion of the interior of the main housing other than the atomizing assembly, the sealing seat and the vent tube defines the liquid storage cavity, the air inlet hole is provided on the bottom seat, the atomizing assembly includes an atomizing cover with an open end supported on the sealing seat, the plugging assembly includes a sealing member slidably disposed in the air inlet passage and a pulling member configured for pulling the sealing member along an axial direction of the atomizing cover to remove the sealing member away from the air inlet passage, one end of the pulling member is connected to the sealing member, the bottom seat is correspondingly provided with an opening for the other end of the pulling member to pass through, and the other end of the pulling member passes through the opening to extend to the outside the main housing.

[0014] Further, the atomizing assembly further includes an atomizing core for generating heat to heat the aerosol-forming substrate when energized, the inner cavity of the atomizing cover forms the atomizing cavity, the atomizing core is disposed in the atomizing cavity, a closed end of the atomizing cover is provided with a smoke guiding hole, the inner cavity of the vent tube forms a smoke guiding passage that communicates the smoke guiding hole with the smoke outlet, the portion of the interior of the main housing other than the atomizing cover, the sealing seat and the vent tube defines the liquid storage cavity, the liquid inlet hole is provided on the side wall of the atomizing cover, the outer contour of the atomizing cover is in a tubular shape, the axial direction of the air inlet passage is parallel to the axial direction of the atomizing cover, a first port of the air inlet passage is communicated with the atomizing cavity, a first

groove for accommodating the sealing member is provided on one side of the bottom seat facing the sealing seat, the first groove communicates the air inlet hole with a second port of the air inlet passage.

[0015] Further, a vent groove is provided on the sealing seat adjacent to the second port of the air inlet passage.

[0016] Further, a protrusion is provided on the bottom seat corresponding to the position of the air inlet passage, the protrusion is located in the first groove, so that the portion of the first groove other than the protrusion forms a liquid reservoir, the opening is provided on the protrusion, the axial direction of the opening is parallel to the axial direction of the atomizing cover, the protrusion is further recessed to form a positioning groove for accommodating and positioning the sealing member, the positioning groove is communicated with the opening.

[0017] Further, one side of the sealing member facing the atomizing cover is recessed to form a second groove.

[0018] Further, after the sealing member is removed away from the air inlet passage, the height of the top open end of the air inlet hole is higher than the height of the top open end of the second groove in the direction from the bottom seat to the smoke outlet.

[0019] Further, the sealing member is provided with a stopping projection for restricting the movement of the sealing member.

[0020] Based on the above problems in the prior art, another purpose of the embodiments of the present disclosure is to provide an aerosol generating device with the atomizer provided in any of the above-mentioned solutions.

[0021] In order to achieve the above purpose, the technical solution adopted by this disclosure is to provide an aerosol generating device, including an atomizer for atomizing an aerosol-forming substrate and a power supply device for supplying power to the atomizer, wherein the atomizer is the atomizer provided in any of the above solutions.

[0022] Compared with the prior art, one or more of the above technical solutions in the embodiments of the present disclosure have at least one of the following beneficial effects:

[0023] In the atomizer and aerosol generating device provided in the embodiments of the present disclosure, the atomizing assembly and the sealing seat are disposed in the accommodating cavity of the liquid storage member of the atomizer, the atomizing assembly is supported on the sealing seat, so that the portion of the interior of the liquid storage member other than the atomizing assembly and the sealing seat defines a liquid storage cavity, an atomizing cavity that is separated from the liquid storage cavity is provided inside the atomizing assembly, the atomizing assembly is further provided with a liquid inlet hole that communicates the liquid storage cavity with the atomizing cavity, the liquid storage member is provided with an air inlet hole, and the sealing seat is provided with an air inlet passage that communicates the atomizing cavity with the air inlet hole. Thus, before the aerosol generating device is put into use, it is only required to seal the air inlet passage using the plugging assembly, to block the communication between the atomizing cavity of the atomizer and the air inlet hole of the liquid storage member, which can effectively prevent the aerosol-forming substrate stored in the liquid storage cavity from leaking through the air inlet hole, thereby facilitating the transportation of the aerosol generating device. In this way, it may avoid pollution and waste of the leaking aerosol-forming substrate, and it may also avoid short-circuit damage to electronic components inside a battery caused by liquid leakage from the air inlet hole of the atomizer.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024] In order to explain the technical solutions in the embodiments of the present disclosure more clearly, the drawings that need to be used in the description of the embodiments or prior art will be briefly introduced below. Obviously, the drawings in the following description are only some embodiments of the present disclosure, for those of ordinary skill in the art, other drawings can be obtained based on these drawings without exerting any creative effort.

[0025] FIG. **1** is a schematic three-dimensional structural diagram of an atomizer provided in an embodiment of the present disclosure;

[0026] FIG. **2** is a schematic top view of the atomizer provided in the embodiment of the present disclosure;

[0027] FIG. **3** is a schematic cross-sectional structural diagram along line A-A in FIG. **2**;

[0028] FIG. **4** is another schematic cross-sectional structural diagram of the atomizer provided in the embodiment of the present disclosure;

[0029] FIG. **5** is another schematic cross-sectional structural diagram of the atomizer provided in the embodiment of the present disclosure;

[0030] FIG. **6** is a schematic three-dimensional structural diagram of a plugging assembly provided in the embodiment of the present disclosure;

[0031] FIG. **7** is another schematic three-dimensional structural diagram of the plugging assembly provided in the embodiment of the present disclosure;

[0032] FIG. **8** is a schematic three-dimensional structural diagram of a bottom seat provided in the embodiment of the present disclosure;

[0033] FIG. **9** is another schematic three-dimensional structural diagram of the bottom seat provided in the embodiment of the present disclosure;

[0034] FIG. **10** is a schematic three-dimensional structural diagram of a sealing seat provided in the embodiment of the present disclosure;

[0035] FIG. **11** is another schematic three-dimensional structural diagram of the sealing seat provided in the embodiment of the present disclosure;

[0036] FIG. **12** is an exploded view of the atomizer provided in the embodiment of the present disclosure;

[0037] FIG. **13** is a schematic cross-sectional structural diagram of an atomizer provided in an embodiment of the present disclosure;

[0038] FIG. **14** is a partially enlarged structural diagram of FIG. **13**;

[0039] FIG. **15** is a schematic cross-sectional structural diagram of the atomizer provided in the embodiment of the present disclosure when filling liquid;

[0040] FIG. **16** is a schematic cross-sectional structural diagram of the atomizer provided in the embodiment of the present disclosure after liquid injection;

[0041] FIG. **17** is a schematic cross-sectional structural diagram of a sealing sleeve provided in the embodiment of the present disclosure;

[0042] FIG. **18** is a schematic three-dimensional structural diagram of an aerosol generating device provided in an embodiment of the present disclosure.

[0043] Specifically, the reference signs in the figures are:

liquid storage member 1	positioning hole 33
main housing 11	plugging assembly 4
smoke outlet 111	sealing member 41
bottom opening 112	annular resisting protrusion 411
bottom seat 12	second groove 412
air inlet hole 121	stopping projection 413
opening 122	pulling member 42
first groove 123	long rod section 421
protrusion 124	connecting section 422
positioning groove 125	liquid storage cavity 5
vent tube 13	atomizing cavity 6
smoke guiding passage 14	power supply device 7
connecting tube 15	sealing sleeve 8
atomizing assembly 2	first sleeve section 81
atomizing cover 21	annular sleeve section 82
liquid inlet hole 211	second sleeve section 83
smoke guiding hole 212	first step surface 84
atomizing core 22	second step surface 85
heating wire 221	third step surface 86
liquid guiding member 222	first annular protrusion 87
sealing seat 3	second annular protrusion 88
air inlet passage 31	third annular protrusion 89
first port 311	aerosol-forming substrate 9
second port 312	injection liquid level 10
vent groove 32	

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0044] In order to make the technical problems, technical solutions and beneficial effects to be solved by this disclosure more clear, the disclosure will be further described in detail below with reference to the accompanying drawings and embodiments. It should be understood that the specific embodiments described here are only configured to explain the present disclosure and are not intended to limit the present disclosure.

[0045] It should be noted that when an element is referred to as being "connected to/with" or "disposed in/on" another element, it can be directly on the other element or indirectly on the other element. When an element is referred to as being "connected to/with" another element, it can be directly connected to the other element or indirectly connected to the other element.

[0046] In the description of the present disclosure, it should be noted that, unless otherwise explicitly stipulated and limited, the terms "installed", "mounted" and "connected" should be understood in a broad sense. For example, it can be a fixed connection, a detachable connection, or an integral connection; it can be a mechanical connection or an electrical connection; it can be directly connected or indirectly connected through an intermediate element; it can be the internal connection between two elements or the interaction between two elements. For those of ordinary skill in the art, the specific meanings of the above terms in the present disclosure can be understood according to specific circumstances.

[0047] It should be understood that the orientations or positional relationships indicated by the terms "length", "width", "upper", "lower", "front", "back", "left", "right", "vertical", "horizontal", "top", "bottom", "inner", "outside", etc. are based on the orientations or positional relationships shown in the accompanying drawings. This is only for the convenience of describing the present disclosure and simplifying the description, and does not indicate or imply that the device or element referred to must have a specific orientation, be constructed and operated in a specific orientation. Therefore, it cannot be understood as a limitation of the present disclosure.

[0048] Reference throughout this specification to "an embodiment" or "embodiment" means that a specific feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present application. Thus, the phrases "in one embodiment," "in some embodiments," or "in some of these embodiments" appear in various places throughout this specification, and not all are referring to the same embodiment. In addition, the specific features, structures, or characteristics can be combined in any suitable manner in one or more embodiments.

[0049] Please refer to FIG. **1** to FIG. **12** together, an atomizer provided in an embodiment of the present disclosure is described. The atomizer provided in the embodiment of the present disclosure is suitable for an aerosol generating device. The aerosol generating device can start working by electrically driving the atomizer through its power supply device **7**, the atomizer can atomize the aerosol-forming substrate to form smoke for the user to inhale to achieve the effect of simulating smoking. Please refer to FIG. **1**, FIG. **3** and FIG. **4** together, the atomizer provided in the embodiment of the present disclosure includes a liquid storage member **1**, an atomizing assembly **2**, a sealing seat **3**, and a plugging assembly **4**. The liquid storage member **1** has an accommodating cavity therein. The atomizing assembly **2** can atomize the aerosol-forming substrate to form smoke that can be inhaled by the user. The sealing seat **3** and the atomizing assembly **2** are disposed in the accommodating cavity of the liquid storage member **1**, and the atomizing assembly **2** is supported on the sealing seat **3**, so that the portion of the interior of the liquid storage member **1** other than the atomizing assembly **2** and the sealing seat **3** defines a liquid storage cavity **5** for storing the aerosol-forming substrate. An atomizing cavity **6** that is separated from the liquid storage cavity **5** is provided inside the atomizing assembly **2**. The atomizing assembly **2** is further provided with a liquid inlet hole **211** that communicates the liquid storage cavity **5** with the atomizing cavity **6**. The aerosol-forming substrate in the liquid storage cavity **5** can flow into the atomizing cavity **6** through the liquid inlet hole **211**, and the aerosol-forming substrate entering the atomizing cavity **6** can be heated and atomized by the atomizing core **22** in the atomizing cavity **6** to form smoke. Furthermore, please refer to FIG. **3**, FIG. **4** and FIG. **10** together, the liquid storage member **1** is provided with a smoke outlet **111** that is communicated with the atomizing cavity **6**. The liquid storage member **1** is further provided with an air inlet hole **121** that is communicated with the atomizing cavity **6**. The sealing seat **3** is provided with an air inlet passage **31** that communicates the atomizing cavity **6** with the air inlet hole **121**. Please also refer to FIG. **3**, the plugging assembly **4** can seal the air inlet passage **31** during the transportation or before sale of the aerosol generating device, to block the communication between the atomizing cavity **6** of the atomizer and the air inlet hole **121** of the liquid storage member **1**, which can effectively prevents the aerosol-forming substrate stored in the liquid storage cavity **5** of the atomizer from leaking through the air inlet hole **121**. Please also refer to FIG. **4**, when using the aerosol generating device, it is only needed to use an external force to remove the sealing

of the plugging assembly **4** away from the air inlet passage **31**, that is, the air inlet passage **31** is opened, so that the atomizing cavity **6** of the atomizer is communicated with the air inlet hole **121** of the liquid storage member **1**. Thus, when using the aerosol generating device to simulate smoking, the aerosol-forming substrate in the liquid storage cavity **5** of the liquid storage member **1** flows into the atomizing cavity **6** through the liquid inlet hole **211**, the aerosol-forming substrate entering the atomizing cavity **6** is atomized by the atomizing core **22** of the atomizing assembly **2** to form an aerosol, the user only needs to suck through the smoke outlet **111**. The external air flows into the atomizing cavity **6** through the air inlet hole **121** and the air inlet passage **31** in sequence, and mixes with the atomized aerosol-forming substrate to form smoke that can be inhaled by the user. The smoke flows out through the smoke outlet **111** with a negative pressure airflow generated by the suction, and the user can inhale the smoke through the smoke outlet **111** to achieve the effect of simulating smoking.

[0050] Compared with the prior art, in the atomizer provided in the embodiment of the present disclosure, the atomizing assembly **2** and the sealing seat **3** are disposed in the accommodating cavity of the liquid storage member **1**, the atomizing assembly **2** is supported on the sealing seat, so that the portion of the interior of the liquid storage member **1** other than the atomizing assembly **2** and the sealing seat **3** defines the liquid storage cavity **5**, an atomizing cavity **6** that is separated from the liquid storage cavity **5** is provided inside the atomizing assembly **2**, the atomizing assembly **2** is further provided with a liquid inlet hole **211** that communicates the liquid storage cavity **5** with the atomizing cavity **6**, the liquid storage member **1** is provided with an air inlet hole **121**, and the sealing seat **3** is provided with an air inlet passage **31** that communicates the atomizing cavity **6** with the air inlet hole **121**. Thus, during the transportation and before sale or use of the aerosol generating device, it is only required to seal the air inlet passage **31** using the plugging assembly **4**, to block the communication between the atomizing cavity **6** of the atomizer and the air inlet hole **121** of the liquid storage member **1**, which can effectively prevent the aerosol-forming substrate stored in the liquid storage cavity **5** from leaking through the air inlet hole **121**, thereby facilitating the transportation of the aerosol generating device. In this way, it may avoid pollution and waste caused by liquid leakage from the air inlet hole **121** of the atomizer, and it may also avoid short-circuit damage to electronic components inside a battery caused by liquid leakage from the air inlet hole **121** of the atomizer.

[0051] Please refer to FIG. **3**, FIG. **6** and FIG. **9** together, in some embodiments, the plugging assembly **4** includes a sealing member **41** slidably disposed in the air inlet passage **31** along an axial direction of the air inlet passage **31**, and a pulling member **42** configured for pulling the sealing member **41** to remove the sealing member **41** away from the air inlet passage **31**. One end of the pulling member **42** is connected to the sealing member **41**, and the liquid storage member **1** is correspondingly provided with an opening **122** for the other end of the pulling member **42** to pass through. The other end of the pulling member **42** passes through the opening **122** to extend to the outside the liquid storage member **1**. By adopting the above solution, when using the aerosol generating device, the user only needs to pull the sealing member **41** through the pulling member **42**, so that the sealing member **41** is removed away from the air inlet passage **31**. Thus, the sealing of the air inlet passage **31** by the plugging assembly **4** can be quickly and conveniently removed, to enable the atomizing cavity **6** of the atomizer to be communicated with the air inlet hole **121** of the liquid storage member **1**. When using the aerosol generating device to simulate smoking, the aerosol-forming substrate in the liquid storage cavity **5** of the liquid storage member **1** flows into the atomizing cavity **6** through the liquid inlet hole **211**, the aerosol-forming substrate entering the atomizing cavity **6** is atomized by the atomizing core **22** of the atomizing assembly **2** to form an aerosol, the user only needs to suck through the smoke outlet **111**. The external air flows into the atomizing cavity **6** through the air inlet hole **121** and the air inlet passage **31** in sequence, and mixes with the atomized aerosol-forming substrate to form smoke that can be inhaled by the user. The smoke flows out through the smoke outlet **111** with a negative pressure airflow generated by the suction, and the user can inhale the smoke through the smoke outlet **111** to achieve the effect of simulating smoking. It can be understood that the sealing member **41** can be a columnar or block-shaped sealing silicone member that is completely and slidably disposed in the air inlet passage **31**. The sealing member **41** can also be a sealing silicone plug that is at least partially disposed in one end port of the air inlet passage **31**. Of course, the sealing member **41** can be, but is not limited to, a sealing silicone member or a sealing silicone plug. For example, the sealing member **41** can also be a sealing rubber member or a sealing rubber plug.

[0052] Please refer to FIG. **3** and FIG. **6** together, in some embodiments, the pulling member **42** is in a long rod shape to facilitate pulling the sealing member **41**. It can be understood that the pulling member **42** can be, but is not limited to, a pulling rod. For example, the pulling member **42** can also be a pulling cord or a pulling tab that can pull the sealing member **41** to remove the sealing member **41** away from the air inlet passage **31**. When the pulling member **42** is a long rod-shaped pulling rod, the pulling rod includes a long rod section **421** extending to the outside of the liquid storage member **1** and a connecting section **422** connecting the long rod section **421** with the sealing member **41**. The connecting section **422** is made of a flexible material such that the long rod section **421** can be easily separated from the sealing member **41**, and the length of the long rod section **421** is much longer than the connecting section **422**. By adopting the above solution, the user only needs to pull the sealing member **41** through the long rod section **421** extending out of the liquid storage member **1**, so that the sealing member **41** is removed away from the air inlet passage **31**. Thus, the sealing of the air inlet passage **31** by the plugging assembly **4** can be quickly and conveniently removed, to enable the atomizing cavity **6** of the atomizer to be communicated with the air inlet hole **121** of the liquid storage member **1**. At this time, the user only needs to manually pull apart the long rod section **421** connected to the sealing member **41**, the atomizer can be conveniently assembled on the power supply device **7** for use, which is convenient to operate, simple and practical, thereby preventing the long rod section **421** from interfering with the assembly between the atomizer and the power supply device **7**.

[0053] Please refer to FIG. **3** and FIG. **6** together, in some embodiments, the diameter of the connecting section **422** is smaller than the diameter of the long rod section **421**, which

is helpful for the user to quickly pull apart the long rod section **421** connected to the sealing member **41**.

[0054] Please refer to FIG. **6** and FIG. **7** together, in some embodiments, the outer peripheral surface of the sealing member **41** is provided with a plurality of annular resisting protrusions **411** for elastically resisting the inner wall of the air inlet passage **31**. By elastically resisting the inner wall of the air inlet passage **31** using the annular resisting protrusion **411**; on the one hand, the annular resisting protrusion **411** can play a sealing function similar to a sealing ring to achieve a good sealing effect to the air inlet passage **31**; on the other hand, the contact area between the outer wall of the sealing member **41** and the inner wall of the air inlet passage **31** is reduced, so as to reduce friction, which facilitates the smooth pulling of the sealing member **41** by the pulling member **42** to quickly remove away from the air inlet passage **31**. It can be understood that the number of the annular resisting protrusions **411** on the outer peripheral surface of the sealing member **41** can be set to one, two, or more than three. When the number of the annular resisting protrusions **411** on the outer peripheral surface of the sealing member **41** is set to more than three, the distance between two adjacent annular resisting protrusions **411** can be made equal, which not only enhances the sealing performance, but also enhances the stability of the sealing member **41** when sliding along the inner wall of the air inlet passage **31** to avoid jamming of the sealing member **41**.

[0055] Please refer to FIG. **3** and FIG. **12** together, in some embodiments, the liquid storage member **1** includes a main housing **11** having an accommodating cavity and a bottom seat **12** sealed and installed at a bottom opening **112** of the main housing **11**. The smoke outlet **111** is formed at the top end of the main housing **11**. The sealing seat **3** is supported on one side of the bottom seat **12** facing the accommodating cavity. The atomizing assembly **2** includes an atomizing cover **21** with an open end supported on the sealing seat **3** and an atomizing core **22** for generating heat to heat the aerosol-forming substrate when energized. The inner cavity of the atomizing cover **21** forms the atomizing cavity **6**, and the atomizing core **22** is disposed in the atomizing cavity **6**. A vent tube **13** that communicates the atomizing cavity **6** with the smoke outlet **111** is provided in the main housing **11**. A closed end of the atomizing cover **21** is provided with a smoke guiding hole **212**. The inner cavity of the vent tube **13** forms a smoke guiding passage **14** that communicates the smoke guiding hole **212** with the smoke outlet **111**. Specifically, the vent tube **13** and the atomizing cover **21** are detachably connected through a sealing sleeve **8** made of silicone material to facilitate the overall disassembly, assembly and replacement of the atomizing assembly **2**. The portion of the interior of the main housing **11** other than the atomizing cover **21**, the sealing seat **3** and the vent tube **13** defines the liquid storage cavity **5**. It can be understood that, please refer to FIG. **8** and FIG. **9** together, in some embodiments, in order to ensure the amount of air intake, the liquid inlet hole **211** is provided on the side wall of the atomizing cover **21**, and the air inlet hole **121** is provided on the bottom seat **12**, wherein one or more than two air inlet holes **121** can be provided. By adopting the above solution, when the atomizer is in use, the aerosol-forming substrate in the liquid storage cavity **5** of the liquid storage member **1** enters the atomizing cavity **6** through the liquid inlet hole **211**, and the atomizing core **22** is electrically driven by the power supply device **7** to heat and atomize the aerosol-forming substrate that enters the atomizing cavity **6**. After the external air enters the atomizing cavity **6** from the air inlet hole **121** of the bottom seat **12** and the air inlet passage **31** of the sealing seat **3**, it can quickly mix with the atomized aerosol-forming substrate to form smoke. The smoke is then guided to the smoke outlet **111** by the vent tube **13** along with the negative pressure airflow generated when the user sucks, for the user to inhale. Moreover, the liquid storage member **1** includes a main housing **11** with an accommodating cavity inside and a bottom opening **112** at the bottom, and a bottom seat **12** sealed and installed at the bottom opening **112** of the main housing **11**, so that the atomizing assembly **2** can be conveniently installed in the main housing **11**. It can be understood that the atomizing core **22** may include, but is not limited to, a heating wire **221** that can be energized to generate heat and a liquid guiding member **222** wrapped around the periphery of the heating wire **221** to evenly guide the aerosol-forming substrate to the heating wire **221**. The liquid guiding member **222** can be, but is not limited to, a liquid-conducting cotton. The sealing seat **3** can be, but is not limited to, a sealing member made of silicone with heat insulation, sealing, and insulation properties. It is understood that in other embodiments, the air inlet hole **121** can also be provided on the main housing **11**, and it is only required that the air inlet passage **31** is communicated with the air inlet hole **121**. Of course, in other embodiments, the air inlet hole **121** is provided not only on the main housing **11**, but also on the bottom seat **12**, and it is only required that the air inlet hole **121** of the main housing **11** and the air inlet hole **121** of the bottom seat **12** are each communicated with the air inlet passage **31**, or the air inlet hole **121** of the main housing **11** is communicated with the air inlet passage **31** through the air inlet hole **121** of the bottom seat **12**.

[0056] Please refer to FIG. **3** and FIG. **12** together, in some embodiments, the outer contour of the atomizing cover **21** is in a tubular shape. The axial direction of the air inlet passage **31** is parallel to the axial direction of the atomizing cover **21**. The plugging assembly **4** includes a sealing member **41** slidably disposed in the air inlet passage **31** and a pulling member **42** configured for pulling the sealing member **41** along the axial direction of the atomizing cover **21** to remove the sealing member **41** away from the air inlet passage **31**. One end of the pulling member **42** is connected to the sealing member **41**, and the bottom seat **12** is correspondingly provided with an opening **122** for the other end of the pulling member **42** to pass through. The other end of the pulling member **42** passes through the opening **122** to extend to the outside of the liquid storage member **1**. A first port **311** of the air inlet passage **31** is communicated with the atomizing cavity **6**. A first groove **123** for accommodating the sealing member **41** is provided on one side of the bottom seat **12** facing the sealing seat **3**. The first groove **123** communicates the air inlet hole **121** with a second port **312** of the air inlet passage **31**. By adopting the above solution, the first groove **123** is provided on the side of the bottom seat **12** facing the sealing seat **3**, the sealing member **41** can be directly accommodated in the first groove **123** after being removed away from the air inlet passage **31** under the pulling action of the pulling member **42**, and at this time, the air inlet hole **121** is communicated with the air inlet passage **31** through the first groove **123**. At the same time, after the sealing member **41** is removed away from the air inlet passage **31**, the aerosol-forming substrate leaking from the air inlet passage **31** can be stored in the first groove **123**, to

ensure that liquid will not leak from the air inlet hole **121** during use of the atomizer, thereby improving the user experience.

[0057] Please refer to FIG. **5** and FIG. **11** together, in some embodiments, a vent groove **32** is provided on the sealing seat **3** adjacent to the second port **312** of the air inlet passage **31**, so that when the pulling member **42** is about to pull the sealing member **41** out of the air inlet passage **31**, the vent groove **32** can communicate the atomizing cavity **6** with the first groove **123** and/or the air inlet hole **121**, allowing external air to enter the atomizing cavity **6** through the vent groove **32** to prevent the aerosol-forming substrate in the liquid storage cavity **5** from being sucked out to cause a large amount of liquid leakage due to negative pressure generated in the atomizing cavity **6** during the process when the pulling member **42** pulls the sealing member **41** out of the air inlet passage **31**. It can be understood that one or more than two vent grooves **32** can be provided, and the specific number of the vent grooves **32** can be reasonably selected according to actual use needs, and is not uniquely limited here.

[0058] Please refer to FIG. **4** and FIG. **8** together, in some embodiments, a protrusion **124** is provided on the bottom seat **12** corresponding to the position of the air inlet passage **31**. The protrusion **124** is located in the first groove **123**, so that the portion of the first groove **123** other than the protrusion **124** forms a liquid reservoir. In this way, after the sealing member **41** is removed away from the air inlet passage **31**, the aerosol-forming substrate leaking from the air inlet passage **31** can be stored in the liquid reservoir, to ensure that liquid will not leak from the air inlet hole **121** during use of the atomizer, thereby improving the user experience. Moreover, a liquid-absorbing cotton is provided in the liquid reservoir, so that the liquid collected in the liquid reservoir is absorbed and stored by the liquid-absorbing cotton, which further helps to ensure that liquid will not leak from the air inlet hole **121** during use of the atomizer, thereby improving the user experience. The opening **122** is provided on the protrusion **124**, and the axial direction of the opening **122** is parallel to the axial direction of the atomizing cover **21**. The protrusion **124** is further recessed to form a positioning groove **125** for accommodating and positioning the sealing member **41**, and the positioning groove **125** is communicated with the opening **122**. By adopting the above solution, the positioning groove **125** is provided on the protrusion **124** located in the first groove **123**, and the sealing member **41** can be directly positioned in the positioning groove **125** after being removed away from the air inlet passage **31** under the pulling action of the pulling member **42**, thereby facilitating the rapid pulling apart the long rod section **421** from the sealing member **41**.

[0059] Please refer to FIG. **3** and FIG. **7** together, in some embodiments, one side of the sealing member **41** facing the atomizing cover **21** is recessed to form a second groove **412**, so as to use the second groove **412** to store the liquid leaking through the air inlet passage **31**, which is beneficial to preventing the leaked liquid from flowing to the air inlet hole **121**, thereby further improving the effect of preventing liquid leakage. Moreover, after the sealing member **41** is removed away from the air inlet passage **31**, the height of the top open end of the air inlet hole **121** is higher than the height of the top open end of the second groove **412** in the direction from the bottom seat **12** to the smoke outlet **111**, so that when the user uses the atomizer to inhale the smoke, the leakage from the air inlet passage **31** will not flow to the air inlet hole **121**, which is conducive to blowing away the surrounding condensate by the airflow entering through the air inlet hole **121**, further improving the effect of preventing liquid leakage.

[0060] Please refer to FIG. **6** and FIG. **7** together, in some embodiments, the sealing member **41** is provided with a stopping projection **413** for restricting the movement of the sealing member **41**. By adopting the above solution, the stopping projection **413** is projected on the sealing member **41**, when the sealing member **41** is used to seal the air inlet passage **31**, the stopping projection **413** abuts against the first port **311** of the air inlet passage **31** to remind that the sealing member **41** is assembled in place. After the sealing member **41** is pulled away from the air inlet passage **31** by the pulling member **42**, the bottom of the sealing member **41** is directly positioned in the positioning groove **125**, and the stopping projection **413** abuts against the second port **312** of the air inlet passage **31**, so that the sealing member **41** is fixed in the positioning groove **125**, thereby effectively preventing the sealing member **41** from loosening and shifting.

[0061] Please refer to FIG. **5** and FIG. **10** together, in some embodiments, the sealing seat **3** is provided with a positioning hole **33** for accommodating and positioning the open end of the atomizing cover **21**. The first port **311** of the air inlet passage **31** is communicated with the open end of the atomizing cover **21**, and the diameter of the positioning hole **33** is larger than the diameter of the air inlet passage **31** to form a stepped hole on the sealing member **41**. By adopting the above solution, the sealing seat **3** is provided with the positioning hole **33**, it is only required to accommodate and position the open end of the atomizing cover **21** into the positioning hole **33**, to enhance the stability and sealing effect of the installation of the atomizing cover **21**. Also, the first port **311** of the air inlet passage **31** is communicated with the opening end of the atomizing cover **21**, and the diameter of the positioning hole **33** is larger than the diameter of the air inlet passage **31** to form a stepped hole on the sealing member **41**, and the first port **311** of the air inlet passage **31** is directly used to abut against the open end of the atomizing cover **21**, so that the air inlet passage **31** can communicate the atomizing cavity **6** with the air inlet hole **121** properly.

[0062] Please refer to FIG. **1** to FIG. **5** and FIG. **12** to FIG. **17** together, an atomizer provided in another embodiment of the present disclosure is described. The atomizer provided in another embodiment of the present disclosure includes a liquid storage member **1**, an atomizing assembly **2**, and a sealing sleeve **8**. The liquid storage member **1** includes a main housing **11** having an accommodating cavity therein, a bottom seat **12** detachably installed at a bottom opening **112** of the main housing **11**, and a vent tube **13** at least partially received in the accommodating cavity. The top end of the main housing **11** is provided with a smoke outlet **111**, and the top end of the vent tube **13** extends to the smoke outlet **111** and is communicated with the smoke outlet **111**. The bottom end of the vent tube **13** extends into the accommodating cavity. The atomizing assembly **2** is configured to atomize the aerosol-forming substrate to form smoke that can be inhaled by the user. The atomizing assembly **2** is supported and fixed on the bottom seat **12**, and the atomizing assembly **2** is accommodated in the accommodating cavity. An atomizing cavity **6** that is separated from the accommodating cavity is provided inside the atomizing assembly **2**. Please

refer to FIG. **13** and FIG. **14** together, the sealing sleeve **8** is slidably sleeved on the bottom end of the vent tube **13**, and under the action of an external force, the sealing sleeve **8** can slide from a first preset position to a second preset position along the axial direction of the vent tube **13**. It can be understood that the first preset position is the position where the sealing sleeve **8** is installed on the vent tube **13** when liquid is injected into the liquid storage cavity **5** through the bottom opening **112** of the main housing **11**. The second preset position is the position where the sealing sleeve **8** is installed on the vent tube **13** when the atomizing assembly **2** is installed in the accommodating cavity. The top end of the main housing **11** refers to the part of the main housing **11** having the smoke outlet **111** or having a mouthpiece installed at the smoke outlet **111**. The bottom end of the main housing **11** refers to the part of the main housing **11** having the bottom seat **12** being installed. The top end of the vent tube **13** refers to the end of the vent tube **13** close to the smoke outlet **111**. The bottom end of the vent tube **13** refers to the end of the vent tube **13** close to the bottom seat **12**. The first preset position and the second preset position are sequentially set along the direction from the bottom seat **12** to the smoke outlet **111**. When installing the atomizing assembly **2** into the accommodating cavity and installing the bottom seat **12** to the bottom opening **112** of the main housing **11**, the atomizing assembly **2** can push the sealing sleeve **8** from the first preset position to the second preset position, and the atomizing cavity **6** is communicated with the bottom end of the vent tube **13**. The portion of the interior of the main housing **11** other than the atomizing assembly **2**, the sealing sleeve **8** and the vent tube **13** defines a liquid storage cavity **5** for storing the aerosol-forming substrate. The atomizing assembly **2** is provided with a liquid inlet hole **211** that communicates the liquid storage cavity **5** with the atomizing cavity **6**. The aerosol-forming substrate in the liquid storage cavity **5** can flow into the atomizing cavity **6** through the liquid inlet hole **211**, and the aerosol-forming substrate entering the atomizing cavity **6** can be heated and atomized by the atomizing core **22** in the atomizing cavity **6** to form smoke.

[0063] Please also refer to FIG. **15**, when injecting liquid (at this time, the atomizing assembly **2** is not installed into the accommodating cavity and the bottom seat **12** is not installed to the bottom opening **112** of the main housing **11**), it is only required to place the main housing **11** in an inverted state with the smoke outlet **111** located below and the bottom opening **112** facing upward, the sealing sleeve **8** is sleeved on the bottom end of the vent tube **13** to cause the sealing sleeve **8** to be located in the first preset position, and the aerosol-forming substrate is filled into the accommodating cavity through the bottom opening **112** of the main housing **11** until the liquid injection level **10** is slightly lower than the end face of the end of the sealing sleeve **8** away from the smoke outlet **111**, or the liquid injection level is flush with the end face of the end of the sealing sleeve **8** away from the smoke outlet **111**. Thereafter, the atomizing assembly **2** is installed into the accommodating cavity of the main housing **11**. Please refer to FIG. **16**, after the atomizing assembly **2** is inserted into the sealing sleeve **8**, the sealing sleeve **8** is pushed from the first preset position to the second preset position by the atomizing assembly **2**, the sealing sleeve **8** moves toward the smoke outlet **111** along with the atomizing assembly **2** until the atomizing cavity **6** of the atomizing assembly **2** is communicated with the bottom end of the vent tube **13**, and the bottom seat **12** is sealed and installed at the bottom opening **112** of the main housing **11**, so that the portion of the interior of the main housing **11** other than the atomizing assembly **2**, the sealing sleeve **8** and the vent tube **13** defines a liquid storage cavity **5** for storing the aerosol-forming substrate. In this way, the liquid storage cavity **5** of the liquid storage member **1** is filled with the aerosol-forming substrate **9**, thereby increasing the amount of liquid injected into the liquid storage space inside the atomizer, effectively reducing the waste of the liquid storage space inside the atomizer, and solving the problem that liquid is difficult to be fully filled into the liquid storage space inside the atomizer of disposable aerosol generating device. To a certain extent, the generation of bubbles in the atomizer during transportation or storage can be reduced or avoided.

[0064] Compared with the prior art, in the atomizer provided in the embodiment of the present disclosure, the vent tube **13** and the sealing sleeve **8** are disposed inside the main housing **11**, the top end of the vent tube **13** is extended to the smoke outlet **111** at the top end of the main housing **11**, the bottom end of the vent tube **13** is extended to the accommodating cavity of the main housing **11**, and one end of the sealing sleeve **8** is slidably sleeved on the bottom end of the vent tube **13**. Then when injecting liquid, it is only needed to place the main housing **11** upside down, the sealing sleeve **8** is installed in the first preset position, and then, the aerosol-forming substrate can be added into the accommodating cavity through the bottom opening **112** of the main housing **11**. Until the injection liquid level is slightly lower than or flush with the end face of the other end of the sealing sleeve **8**, the atomizing assembly **2** is inserted into the other end of the sealing sleeve **8**, the sealing sleeve **8** is pushed toward the smoke outlet **111** through the atomizing assembly **2**, the sealing sleeve **8** moves from the first preset position to the second preset position, the atomizing cavity **6** of the atomizing assembly **2** is communicated with the bottom end of the vent tube **13**, and the bottom seat **12** is sealed and installed at the bottom opening **112** of the main housing **11**, so that the portion of the interior of the main housing **11** other than the atomizing assembly **2**, the sealing sleeve **8** and the vent tube **13** can define a liquid storage cavity **5** for storing the aerosol-forming substrate. In this way, the amount of liquid injected into the liquid storage space inside the atomizer can be increased, thereby effectively reducing the waste of the liquid storage space inside the atomizer, and to a certain extent, the generation of bubbles in the atomizer during transportation or storage can be reduced or avoided.

[0065] Please refer to FIG. **13**, FIG. **14** and FIG. **17** together, in some embodiments, the sealing sleeve **8** includes a first sleeve section **81** for being slidably sleeved on the vent tube **13**, an annular sleeve section **82** for being resisted by the end of the atomizing assembly **2**, and a second sleeve section **83** for being sleeved on the end of the atomizing assembly **2**. The annular sleeve section **82** connects the first sleeve section **81** and the second sleeve section **83** to form the sealing sleeve **8**. The first sleeve section **81** is connected to the annular sleeve section **82**, and the inner diameter of the first sleeve section **81** is larger than the diameter of an annular hole of the annular sleeve section **82**, so as to form a first step surface **84** at the connection position between the first sleeve section **81** and the annular sleeve section **82**. In this embodiment, by adopting the above solution, the sealing sleeve **8** is a silicone member made of silicone material, and it is only required that the first sleeve section **81** is sleeved

on the bottom end of the vent tube **13** and the second sleeve section **83** is sleeved on the end of the atomizing assembly **2**, the sealing sleeve **8** will be hermetically connected to each of the vent tube **13** and the atomizing assembly **2**, thereby preventing leakage of the aerosol-forming substrate. Moreover, the first sleeve section **81** and the second sleeve section **83** are connected through the annular sleeve section **82** to form the entire sealing sleeve **8**, and by the end of the atomizing assembly **2** abutting against the annular sleeve section **82**, the sealing sleeve **8** is driven to move from the first preset position to the second preset position, thereby enhancing the stability and reliability of the movement of the atomizing assembly **2** against the sealing sleeve **8**. In addition, the connection position between the first sleeve section **81** and the annular sleeve section **82** forms a first step surface **84**, and when the sealing sleeve **8** moves to the second preset position, the bottom end face of the vent tube **13** abuts against the first step surface **84** to limit the sealing sleeve **8** in the second preset position and provide a reminding function that the atomizing assembly **2** and the sealing sleeve **8** are installed in place.

[0066] Please refer to FIG. **17**, in some embodiments, a first annular protrusion **87** is provided on the inner wall of the first sleeve section **81** along the circumferential direction of the first sleeve section **81**. In this embodiment, by adopting the above solution, the first annular protrusion **87** on the inner wall of the first sleeve section **81** elastically abuts against the outer wall of the vent tube **13**; on the one hand, the first annular protrusion **87** can play a sealing function similar to a sealing ring, thereby enhancing the sealing performance of the sliding connection between the first sleeve section **81** and the vent tube **13**, and preventing the aerosol-forming substrate from leakage; on the other hand, the contact area between the inner wall of the first sleeve section **81** and the outer wall of the vent tube **13** is reduced, so as to reduce friction. It can be understood that more than two first annular protrusions **87** can be provided, and the more than two first annular protrusions **87** are spaced from each other to further enhance the sealing performance and prevent liquid leakage. Moreover, when more than two first annular protrusions **87** are provided, the more than two first annular protrusions **87** are distributed at the upper and lower sides of the inner wall of the first sleeve section **81**, and when the sealing sleeve **8** moves to the second preset position, the first annular protrusions **87** distributed at the upper and lower sides of the first sleeve section **81** have the function of installation and positioning.

[0067] Please refer to FIG. **14**, FIG. **15** and FIG. **17** together, in some embodiments, the bottom end face of the vent tube **13** is provided with a connecting tube **15** for connecting the atomizing cavity **6** and the vent tube **13**. The connecting tube **15** extends from the bottom end of the vent tube **13** toward the bottom seat **12**. The outer diameter of the connecting tube **15** is smaller than the outer diameter of the vent tube **13** to form a second step surface **85** at the connection position between the vent tube **13** and the connecting tube **15**. The second step surface **85** is configured to abut against the first step surface **84**. In this embodiment, by adopting the above solution, when the sealing sleeve **8** moves to the second preset position, the second step surface **85** formed at the connection position between the vent tube **13** and the connecting tube **15** abuts against the first step surface **84**, so as to limit the sealing sleeve **8** in the second preset position and provide a reminding function that the atomizing assembly **2** and the sealing sleeve **8** are installed in place. Please refer to FIG. **13** and FIG. **14** together, in some embodiments, when the sealing sleeve **8** is installed in the second preset position, the annular sleeve section **82** is sleeved on the connecting tube **15** to provide the function of positioning the sealing sleeve **8**, thereby enhancing the stability of the sealing sleeve **8** when installed in the second preset position.

[0068] Please also refer to FIG. **17**, in some embodiments, a second annular protrusion **88** is provided on the inner wall of the annular hole of the annular sleeve section **82** along the circumferential direction of the annular sleeve section **82**. In this embodiment, by adopting the above solution, the second annular protrusion **88** on the inner wall of the annular hole of the annular sleeve section **82** elastically abuts against the outer wall of the connecting tube **15**; on the one hand, the second annular protrusion **88** can play a sealing function similar to a sealing ring, thereby enhancing the sealing performance of the sliding connection between the annular sleeve section **82** and the connecting tube **15**, and preventing the aerosol-forming substrate from leakage; on the other hand, the contact area between the inner wall of the annular sleeve section **82** and the outer wall of the connecting tube **15** is reduced, so as to reduce friction. It can be understood that more than two second annular protrusions **88** can be provided, and the more than two second annular protrusions **88** are spaced from each other to further enhance the sealing performance and prevent liquid leakage.

[0069] Please refer to FIG. **5**, FIG. **13** and FIG. **14** together, in some embodiments, the atomizing assembly **2** includes an atomizing cover **21** with an open end supported on the bottom seat **12** and an atomizing core **22** for generating heat to heat the aerosol-forming substrate when energized. The inner cavity of the atomizing cover **21** forms the atomizing cavity **6**, and the atomizing core **22** is disposed in the atomizing cavity **6**. A closed end of the atomizing cover **21** is provided with a smoke guiding hole **212**. The bottom end of the vent tube **13** is communicated with the smoke guiding hole **212**. The portion of the interior of the main housing **11** other than the atomizing cover **21**, the sealing sleeve **8** and the vent tube **13** defines a liquid storage cavity **5**. The liquid inlet hole **211** is provided on the side wall of the atomizing cover **21**. When the atomizer is in use, the aerosol-forming substrate in the liquid storage cavity **5** of the liquid storage member **1** enters the atomizing cavity **6** through the liquid inlet hole **211**, and the atomizing core **22** is electrically driven by the power supply device **7** to heat and atomize the aerosol-forming substrate that enters the atomizing cavity **6**. After the external air enters the atomizing cavity **6** from the air inlet hole **121** of the bottom seat **12** and the air inlet passage **31** of the sealing seat **3**, it can quickly mix with the atomized aerosol-forming substrate to form smoke. The smoke is then guided to the smoke outlet **111** by the vent tube **13** along with the negative pressure airflow generated when the user sucks, for the user to inhale. It can be understood that the atomizing core **22** may include, but is not limited to, a heating wire **221** that can be energized to generate heat and a liquid guiding member **222** wrapped around the periphery of the heating wire **221** to evenly guide the aerosol-forming substrate to the heating wire **221**. The liquid guiding member **222** can be, but is not limited to, a liquid-conducting cotton. It can be understood that when the atomizing assembly **2** includes an atomizing cover **21** with an open end supported on the bottom seat **12**, the sealing

sleeve **8** includes a first sleeve section **81** for being slidably sleeved on the vent tube **13**, an annular sleeve section **82** for being resisted by the closed end of the atomizing cover **21**, and a second sleeve section **83** for being sleeved on the closed end of the atomizing cover **21**. The annular sleeve section **82** connects the first sleeve section **81** and the second sleeve section **83** to form the sealing sleeve **8**.

[0070] Please refer to FIG. **14**, FIG. **15** and FIG. **17** together, in some embodiments, the inner diameter of the second sleeve section **83** is larger than the diameter of the annular hole of the annular sleeve section **82**, so as to form a third step surface **86** at the connection position between the second sleeve section **83** and the annular sleeve section **82**. The third step surface **86** is configured to abut against the closed end of the atomizing cover **21**. In this embodiment, by adopting the above solution, after inserting into the second sleeve section **83**, the closed end of the atomizing cover **21** abuts against the third step surface **86** formed at the connection position between the second sleeve section **83** and the annular sleeve section **82**, and the atomizing cover **21** pushes the sealing sleeve **8** to move from the first preset position to the second preset position, thereby enhancing the stability and reliability of the movement of the atomizing assembly **2** against the sealing sleeve **8**.

[0071] Please refer to FIG. **17**, in some embodiments, a third annular protrusion **89** is provided on the inner wall of the second sleeve section **83** along the circumferential direction of the second sleeve section **83**. In this embodiment, by adopting the above solution, the third annular protrusion **89** on the inner wall of the second sleeve section **83** elastically abuts against the outer wall of the atomizing cover **21**, so as to play a sealing function similar to a sealing ring, thereby enhancing the sealing performance of the connection between the second sleeve section **83** and the closed end of the atomizing cover **21**, and preventing the aerosol-forming substrate from leakage. It can be understood that more than two third annular protrusions **89** can be provided, and the more than two third annular protrusions **89** are spaced from each other to further enhance the sealing performance and prevent liquid leakage.

[0072] Please refer to FIG. **13**, FIG. **15** and FIG. **16** together, in some embodiments, the atomizer further includes a sealing seat **3** supported on one side of the bottom seat **12** facing the accommodating cavity. The open end of the atomizing cover **21** of the atomizing assembly **2** is supported and fixed on the sealing seat **3** to form an atomizing cavity **6** in the inner cavity of the atomizing cover **21**. The liquid inlet hole **211** is provided on the side wall of the atomizing cover **21**. In this embodiment, by adopting the above solution, the atomizing cover **21** of the atomizing assembly **2** is supported and fixed on the bottom seat **12** through the sealing seat **3**, thereby enhancing the sealing performance and preventing liquid leakage.

[0073] Please also refer to FIG. **18**, the embodiment of the present disclosure further provides an aerosol generating device. The aerosol generating device provided in the embodiment of the present disclosure includes an atomizer for atomizing an aerosol-forming substrate and a power supply device **7** for supplying power to the atomizer. The atomizer is the atomizer provided in any of the above embodiments, and the atomizer starts working under the electric drive of the power supply device **7** of the aerosol generating device. Since the aerosol generating device provided in the embodiment of the present disclosure has all the technical features of the atomizer provided in any of the above embodiments, it has the same technical effect as the above atomizer.

[0074] The above are only preferred embodiments of the present disclosure and are not intended to limit the present disclosure, any modifications, equivalent replacements and improvements made within the spirit and principles of the present disclosure shall be included in the protection scope of the present disclosure.

What is claimed is:

1. An atomizer for an aerosol generating device, comprising:

a liquid storage member having an accommodating cavity therein, wherein the liquid storage member is provided with a smoke outlet;

a sealing seat disposed in the accommodating cavity;

an atomizing assembly configured to atomize an aerosol-forming substrate to form smoke that can be inhaled by a user, wherein the atomizing assembly is disposed in the accommodating cavity, and the atomizing assembly is supported on the sealing seat, so that the portion of the interior of the liquid storage member other than the atomizing assembly and the sealing seat defines a liquid storage cavity for storing the aerosol-forming substrate, an atomizing cavity that is separated from the liquid storage cavity is provided inside the atomizing assembly, the atomizing assembly is provided with a liquid inlet hole that communicates the liquid storage cavity with the atomizing cavity, the atomizing cavity is communicated with the smoke outlet, the liquid storage member is further provided with an air inlet hole, the sealing seat is provided with an air inlet passage that communicates the atomizing cavity with the air inlet hole; and

a plugging assembly configured to seal the air inlet passage before the aerosol generating device is put into use.

2. The atomizer according to claim **1**, wherein the plugging assembly comprises a sealing member slidably disposed in the air inlet passage along an axial direction of the air inlet passage and a pulling member configured for pulling the sealing member to remove the sealing member away from the air inlet passage, one end of the pulling member is connected to the sealing member, the liquid storage member is correspondingly provided with an opening for the other end of the pulling member to pass through, and the other end of the pulling member passes through the opening to extend to the outside of the liquid storage member.

3. The atomizer according to claim **2**, wherein the pulling member is a pulling rod, the pulling rod comprises a long rod section extending to the outside of the liquid storage member and a connecting section connecting the long rod section with the sealing member.

4. The atomizer according to claim **3**, wherein the diameter of the connecting section is smaller than the diameter of the long rod section.

5. The atomizer according to claim **1**, wherein the liquid storage member comprises a main housing having the accommodating cavity and a bottom seat installed at a bottom opening of the main housing, the smoke outlet is formed at the top end of the main housing, the sealing seat is supported on one side of the bottom seat facing the accommodating cavity, a vent tube that communicates the

atomizing cavity with the smoke outlet is provided in the main housing, the portion of the interior of the main housing other than the atomizing assembly, the sealing seat and the vent tube defines the liquid storage cavity, the air inlet hole is provided on the bottom seat, the atomizing assembly comprises an atomizing cover with an open end supported on the sealing seat, the plugging assembly comprises a sealing member slidably disposed in the air inlet passage and a pulling member configured for pulling the sealing member along an axial direction of the atomizing cover to remove the sealing member away from the air inlet passage, one end of the pulling member is connected to the sealing member, the bottom seat is correspondingly provided with an opening for the other end of the pulling member to pass through, and the other end of the pulling member passes through the opening to extend to the outside the main housing.

6. The atomizer according to claim **5**, wherein the atomizing assembly further comprises an atomizing core for generating heat to heat the aerosol-forming substrate when energized, the inner cavity of the atomizing cover forms the atomizing cavity, the atomizing core is disposed in the atomizing cavity, a closed end of the atomizing cover is provided with a smoke guiding hole, the inner cavity of the vent tube forms a smoke guiding passage that communicates the smoke guiding hole with the smoke outlet, the portion of the interior of the main housing other than the atomizing cover, the sealing seat and the vent tube defines the liquid storage cavity, the liquid inlet hole is provided on the side wall of the atomizing cover, the outer contour of the atomizing cover is in a tubular shape, the axial direction of the air inlet passage is parallel to the axial direction of the atomizing cover, a first port of the air inlet passage is communicated with the atomizing cavity, a first groove for accommodating the sealing member is provided on one side of the bottom seat facing the sealing seat, the first groove communicates the air inlet hole with a second port of the air inlet passage.

7. The atomizer according to claim **6**, wherein a vent groove is provided on the sealing seat adjacent to the second port of the air inlet passage.

8. The atomizer according to claim **6**, wherein a protrusion is provided on the bottom seat corresponding to the position of the air inlet passage, the protrusion is located in the first groove, so that the portion of the first groove other than the protrusion forms a liquid reservoir, the opening is provided on the protrusion, the axial direction of the opening is parallel to the axial direction of the atomizing cover, the protrusion is further recessed to form a positioning groove for accommodating and positioning the sealing member, the positioning groove is communicated with the opening.

9. The atomizer according to claim **8**, wherein one side of the sealing member facing the atomizing cover is recessed to form a second groove.

10. The atomizer according to claim **9**, wherein after the sealing member is removed away from the air inlet passage, the height of the top open end of the air inlet hole is higher than the height of the top open end of the second groove in the direction from the bottom seat to the smoke outlet.

11. The atomizer according to claim **9**, wherein the sealing member is provided with a stopping projection for restricting the movement of the sealing member.

12. The atomizer according to claim **5**, wherein the atomizer further comprises a sealing sleeve, the sealing sleeve is slidably sleeved on the bottom end of the vent tube, and when installing the atomizing assembly into the accommodating cavity and installing the bottom seat to the bottom opening of the main housing, the atomizing assembly pushes the sealing sleeve to move from a first preset position to a second preset position along the axial direction of the vent tube.

13. The atomizer according to claim **12**, wherein the sealing sleeve comprises a first sleeve section for being slidably sleeved on the bottom end of the vent tube, an annular sleeve section for being resisted by the end face of one end of the atomizing assembly, and a second sleeve section for being sleeved on the one end of the atomizing assembly, the annular sleeve section connects the first sleeve section and the second sleeve section to form the sealing sleeve.

14. The atomizer according to claim **13**, wherein the inner diameter of the first sleeve section is larger than the diameter of an annular hole of the annular sleeve section, so as to form a first step surface at the connection position between the first sleeve section and the annular sleeve section;

the bottom end face of the vent tube is provided with a connecting tube, the connecting tube extends from the bottom end of the vent tube toward the bottom seat, the outer diameter of the connecting tube is smaller than the outer diameter of the vent tube to form a second step surface at the connection position between the vent tube and the connecting tube;

the inner diameter of the second sleeve section is larger than the diameter of the annular hole of the annular sleeve section, so as to form a third step surface at the connection position between the second sleeve section and the annular sleeve section;

when the sealing sleeve moves to the second preset position, the second step surface abuts against the first step surface, and the third step surface abuts against the end face of the one end of the atomizing assembly.

15. An aerosol generation device, comprising an atomizer for atomizing an aerosol-forming substrate and a power supply device for supplying power to the atomizer, wherein the atomizer is the atomizer according to claim **1**.

16. An atomizer for an aerosol generating device, comprising:

a liquid storage member having a liquid storage cavity configured for storing an aerosol-forming substrate, wherein the liquid storage member is provided with a smoke outlet and an air inlet hole;

a sealing seat disposed in the liquid storage member, wherein the sealing seat is provided with an air inlet passage;

an atomizing assembly disposed in the liquid storage member and configured to atomize the aerosol-forming substrate to form smoke, wherein an atomizing cavity is provided inside the atomizing assembly, the atomizing assembly is provided with a liquid inlet hole that communicates the liquid storage cavity with the atomizing cavity, the atomizing cavity is communicated with the smoke outlet;

a plugging assembly configured to seal the air inlet passage to block the communication between the atomizing cavity and the air inlet hole before the aerosol generating device is put into use, wherein the plugging assembly is slidable relative to the sealing seat, when the aerosol generating device is put into use, the plugging assembly is caused to be removed away from

the air inlet passage such that the air inlet passage communicates the atomizing cavity with the air inlet hole.

17. The atomizer according to claim **16**, wherein the plugging assembly comprises a sealing member slidably disposed in the air inlet passage and a pulling member configured for pulling the sealing member to remove the sealing member away from the air inlet passage, one end of the pulling member is connected to the sealing member, and the liquid storage member is provided with an opening for the other end of the pulling member to pass through and extend to the outside the liquid storage member, when the aerosol generating device is put into use, an external force is used to pull the pulling member to enable the sealing member to slide in the air inlet passage and finally be removed away from the air inlet passage.

18. The atomizer according to claim **17**, wherein the pulling member is a pulling rod, the pulling rod comprises a long rod section extending to the outside of the liquid storage member and a connecting section connecting the long rod section with the sealing member, and the diameter of the connecting section is smaller than the diameter of the long rod section.

19. The atomizer according to claim **17**, wherein the liquid storage member comprises a main housing having the liquid storage cavity and a bottom seat installed at a bottom opening of the main housing, the sealing seat is received in main housing and supported on the bottom seat, a vent tube that communicates the atomizing cavity with the smoke outlet is provided in the main housing, the opening and the air inlet hole are provided on the bottom seat.

20. The atomizer according to claim **19**, wherein a protrusion is provided on the bottom seat corresponding to the position of the air inlet passage, the protrusion is recessed to form a positioning groove for accommodating and positioning the sealing member, the positioning groove is communicated with the opening, the sealing member is directly positioned in the positioning groove after being removed away from the air inlet passage.

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